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PIETRO GIANOTTI'S LE GUIDE DU COMPOSITEUR: A REWORKING OF RAMEAU'S "L'ART DE LA BASSE FONDAMENTALE"

An Annotated Translation and Critical Edition of Part I

by

Lauren M. Longo

VOLUME I

A dissertation submitted to the Graduate Faculty in Music
in partial fulfillment of the requirements for the degree of
Doctor of Philosophy, The City University of New York

1997

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27 June 1997
Date

Philip Lambert (PL)
Chair of Examining Committee

7/2/97
Date

Allan W. Atlas (AA)
Executive Officer

Charles Burkhart

Raymond Erickson

Rufus Hallmark

Joel Lester

Bruce MacIntyre
Supervisory Committee

THE CITY UNIVERSITY OF NEW YORK

:::

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Abstract

PIETRO GIANOTTI'S LE GUIDE DU COMPOSITEUR:
A REWORKING OF RAMEAU'S "L'ART DE LA BASSE FONDAMENTALE"

An Annotated Translation and Critical Edition of Part I

by

Lauren M. Longo

Advisor: Professor Joel Lester

This dissertation provides an English translation of the first section of Pietro Gianotti's Le Guide du compositeur published in Paris, 1759. Gianotti provided a publication that sought to teach any musical beginner how to compose. Though Gianotti's Guide was by no means the first method to address the growing hunger for detailed knowledge on all matters musical in the middle of the eighteenth century, his contribution is perhaps far more significant in its association with a much more famous personage: Jean Philippe Rameau. In the preface of his work, Gianotti stated that his Guide was the result of studies with Rameau. Though many authors claimed to have studied with the master, Gianotti's was no empty boast.

In an article in Music Theory Spectrum (1987), Thomas Christensen reported on manuscript drafts discovered in the D'Alembert archive of the Institut de France. Christensen not only proved these drafts to be Rameau's; he surmised that this manuscript, "L'Art de la basse fondamentale" (MS 2474), served as the textbook draft for a six-month-long composition course that Rameau offered between 1737 and 1744. In a later "Communication" to Music Theory Spectrum (1990), he revealed Pietro Gianotti's Le Guide du compositeur (1759) to be the published reworking of Rameau's "L'Art de la basse fondamentale."

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The presence of two extant drafts of material for Part I of Rameau's "L'Art de la basse fondamentale," a section which teaches the fundamental bass method without introducing dissonance, affords the unique opportunity to glimpse Rameau's changing pedagogical presentation of ideas. This study focuses on Part I exclusively with a view to comparing in detail Gianotti's printed version of Rameau's ideas with Rameau's original thoughts as revealed in the two drafts. Thus, this dissertation provides a critical edition that not only transmits Gianotti's work in English translation, but also cites the corresponding passages of Rameau's two drafts in English translation alongside Gianotti's in a three-column format. Critical assessment of the presentation of ideas from each author's point of view follows each of Gianotti's 15 chapters in editorial commentaries. Volume II of the critical edition also furnishes a full transcription of each manuscript draft of Rameau's first section of "L'Art."

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ACKNOWLEDGEMENTS

Little did I know that a course in the history of theory would literally change my life, for it was in Professor Joel Lester's class that I was introduced to Rameau's theories. Somehow, Joel Lester brought Jean Philippe Rameau to life in that seminar room. Though Rameau did not quite tap me on the shoulder in that room, soon after this course my reading preferences started to change—for some reason I kept gravitating toward articles about the history of theory. Clearly, Lester's enthusiasm for the subject was contagious! It should come as no surprise then that he would be the one to suggest this project as a dissertation topic. I cannot begin to count the ways that he has helped to see this project through completion. I could quote Gianotti by saying:

> If I have succeeded at acquiring some knowledge, I owe it to [Professor Lester]. The work that I present today is the result of studies that I made under his eyes. His attention has deigned to guide me...

But this would not adequately express the impact of his steadfast support, comprehensive knowledge of the field, keen editorial eye, and generous nature.

I would also like to thank Thomas Christensen in a special way for so graciously making the manuscript microfilm of "L'Art de la basse fondamentale" available to me. Without his pathbreaking research linking Gianotti's Composer's Guide with Rameau's unpublished "Art of the Fundamental Bass" and his encouragement to continue the study of these works, this dissertation would not have been possible.

My readers made invaluable contributions to this project as well. I am indebted to Professor Rufus Hallmark for proofreading French transcriptions of the manuscript, unsnarling many a tangled passage in translation, and for shedding light on editorial procedures. I am particularly grateful to Professor Raymond Erickson for providing a

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sounding board for ideas concerning layout early on in the project and for sharing his particular expertise in this field. I would also like to thank Professors Bruce MacIntyre and Philip Lambert for serving on my committee and for reading this dissertation so attentively. Most of all, I would like to thank Professor Charles Burkhart for his untiring assistance in the preparation of the final draft of this dissertation. His careful attention to detail in matters grammatical, French, and theoretical sharpened my critical thinking and writing skills tremendously and truly benefited the dissertation in innumerous ways.

As any dissertationist knows, the journey is not easy by any means. My parents and friends provided such loving support all throughout this journey. I want to thank my Dad for always being there—whether I needed to test a theory, a turn of phrase, or express some pent-up frustration. Our coffee breaks together not only provided nurture but refreshment for the soul. I want to thank my Mom for encouraging my musical hopes and dreams right from the start when she fought for me to take my first piano lesson and for making my dreams of going to the land of Rameau come true. I am particularly grateful to my best friend Nancy Benenson for her positive outlook throughout the whole adventure and to Monsignor Carl Hinrichsen, Sister Luigia, and the Sisters of St. Joseph of Chestnut Hill for their prayers and continuous encouragement.

Without the assistance of two libraries, the sources for this study would not be available. For this reason, I wish to express gratitude to Mireille Pastoureau of the Bibliothèque de l'Institut de France for granting official permission to use "L'Art de la basse fondamentale" (MS 2474) and the Music Division of the New York Public Library for the Performing Arts Astor, Lenox and Tilden Foundations for use of Le Guide du compositeur (Mus. Res. Gianotti *MI). I would also like to thank Tim Savage of the New York Public Library's Copy Services for his assistance in producing a camera-ready print of Gianotti's Le Guide du compositeur for this dissertation.

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INTRODUCTION

GIANOTTI AND THE GIANT: THE STORY BEHIND THE AUTHORS AND THEIR WORKS

As history unfolds, individuals are assigned either the mantle of immortality or the shroud of mediocrity. It is genius that proclaims the immortal and the lack of genius that, more often than not, reveals the mediocre. Unfortunately, these extreme classifications sweep the contributions of each individual under the carpet of vague abstraction; for, in the shadow of a giant, the strides of many an individual contributor go unrecognized—and through this approach, even the unique characteristics of the giant are not often reflected accurately. Such is the tale of Jean Philippe Rameau and Pietro Gianotti.

It is easy to see how the mantle of immortality would rest comfortably on Rameau's shoulders, for his contributions are many. As composer, Rameau is probably most celebrated for his operas. Though Rameau's operas are not performed as frequently today as they were in his lifetime, his keyboard and chamber works find a place in many a recital program. Rameau's legacy, however, is not strictly confined to concert halls; his spirit lingers in the halls of our venerable music schools where students start to understand the complex system that is music theory. It is his unique contribution to theory that has been perhaps more far-reaching than his work as composer.

Rameau's meteoric rise to fame as theorist started with the appearance of his Traité de l'harmonie of 1722. Though virtually unknown as theorist prior to this publication, Rameau literally shook the very foundations of the musical world by formulating a new system to explain how music worked.[1] He called this system the "fundamental bass," an

[1] René Suaudeau claims that as teacher, Rameau was quite respected and was held in high esteem before his move to Paris and the subsequent publication of the Traité in 1722. See René Suadeau's Introduction à l'harmonie de Rameau (Clermont-Ferrand: Ecole Nationale de Musique de Clermont-Ferrand, 1960).

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idea that was to launch a revolution in musical thought.[2] As innovative as Rameau's system was, it did not appear in isolation; rather, it was merely one of a variety of approaches that continued to flood a market hungry for musical knowledge.

Though Rameau proclaimed a new idea in the Traité, he, unlike many of his contemporaries (C.P.E Bach and Johann David Heinichen to name a few), rooted his new method in the long-standing theoretical tradition of his predecessors.[3] In citing famous theoretical forefathers such as Gioseffo Zarlino (1517-1590) and Marin Mersenne (1588-1648), as well as philosopher and geometrician René Descartes (1596-1650), Rameau not only gave credit where credit was due, but he subtly presented his new theory as an outgrowth of their investigations. Rameau was no superficial name dropper; he truly believed his theory to be a perfection of what had gone before:

> It is chiefly to restore the noble emulation that once flourished that I have ventured to share with the public my new researches in an art to which I have sought to give all its natural simplicity; the mind may thus understand its properties as easily as the ear perceives them.
>
> No one man can exhaust material as profound as this. It is almost inevitable that he will forget something, despite all his pains; but at least his new discoveries, added to those which have already appeared on the same subject, represent so many more paths cleared for those able to go further.[4]

---

[2] Dahlhaus posits that it is Rameau who provided a precedent for the study of harmony as a specific division of the discipline of music theory, one later adopted in force by 18th and 19th century theorists such as Riemann and Sechter. See "Ist Rameaus *Traité de l'harmonie* eine Harmonielehre?," Musiktheorie 1/2 (1986), 123-27.

[3] One of the authors most frequently cited by Rameau is Gioseffo Zarlino (1517-1590), most known for his Istitutioni harmoniche of 1558. For background on the relevance of Zarlino's ideas for eighteenth century theoretical thought, see the first chapter "Zarlino and His Legacy" in Joel Lester's Compositional Theory in the Eighteenth Century (Cambridge, Massachusetts: Harvard University Press, 1992.)

[4] Preface, Traité, translated as the Treatise on Harmony by Philip Gossett (New York: Dover, 1971), xxxiv.

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Even though Rameau was not shy in promoting the value of his new system, he was quick to advertise his work as building upon the past—albeit as an improvement. As an heir to theoretical traditions, Rameau presented his new ideas from both vantage points of *musica theorica:* speculative and practical theory. In order to truly appreciate his contribution to music theory, it is necessary to examine just how Rameau's work fits in the continuum of musical thought.

Prior to Rameau, music theorists studied music from two distinct vantage points. Some theorists' interests were strictly limited to studying and contemplating how music was ordered sound. To put it simply, authors writing in this tradition hailing as far back as Aristotle would concentrate on the scientific aspect of sound; they observed and recorded the various intervals arising through divisions of the monochord and represented these findings in the form of arithmetic ratios or proportions. Before the standard of equal temperament (the system where each one of the twelve tones of the scale is proportionately equidistant from the next), theorists would correlate the fluctuations in the divisions of intervals to the multitude of tunings or temperaments in practice. These kinds of investigations into the acoustical phenomena of sound fell under the category of theory called *musica theorica* or *speculativa.*

Other theorists made the performance and composition of music their concern. This branch of inquiry was known as *musica prattica* or *poetica.* Two specific methodological approaches fell under this branch of theory. One approach was counterpoint, the art of writing one note against another, or several notes against one note. In this style of writing, consonances predominated and the use of dissonance was carefully controlled. This was the oldest method of teaching composition, a tradition that had its roots in the discussions of discant in thirteenth century treatises and which continued to prevail well into the eighteenth century. It was this approach that theorists such as Johannes Tinctoris (Liber de arte contrapunti - 1477) and Gioseffo Zarlino (Istitutioni harmoniche - 1558) used to teach

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contrapuntal composition, a style which reached its apex in the hands of such composers as Josquin des Prez and Giovanni da Palestrina.

Another theoretical approach in the practical realm of applied composition sprouted from changes in musical performance practices around the year 1600: thoroughbass. With the advent of opera, music writing changed to fit the needs of the dramatic idiom. In contrast to composers of the *prima prattica* tradition, composers in the new *seconda prattica* style used dissonance freely to enhance the dramatic affect of particular words. In fact, as vehicles for dramatic expression and artistic interpretation, words became all important. Since the multilinear textures of the *prima prattica* tended to obscure the intelligibility of the text, a new texture evolved in the hands of *seconda prattica* composers—one that simplified means to a single melodic line supported by a bass line and chords. That this new idea was the vanguard of musical expression is no exaggeration; with it, however, came the need to spread the word on exactly how to perform it.

Performance of this new form was particularly challenging for the chord player in the ensemble, for the chords were not written out, but merely suggested through figures or numbers which indicated the intervals to be played above the given bass note—hence the term "figured bass" for the notation. Sometimes, however, when handed a bass line without figures, the chord player would have to rely on his own skill in supplying appropriate chords. The need to know more about this kind of music spawned a plethora of thoroughbass approaches; among the most notable were Francesco Gasparini's L'armonico pratico al cimbalo (1708), François Couperin's Regle pour l'accompagnement (undated), Friedrich Erhard Niedt's Musicalische Handleitung (1700-1721), and Johann David Heinichen's Der General-Bass in der Composition (1728).[5]

The use of figured bass and the *seconda prattica* of emancipated dissonance that it represented grew to epic proportions, even infiltrating the realm of sacred music; but the

[5] Lester provides a comprehensive survey of both counterpoint and thoroughbass methods in chapters 2 and 3 of Compositional Theory, 26-89.

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older contrapuntal compositional style representing the *prima prattica* coexisted with the new—especially in sacred works. In fact, the most popular and accessible counterpoint manual to address this older style of writing appeared but three years after Rameau's Traité: Johann Joseph Fux's Gradus ad Parnassum (1725)—a method that composers of the Classical period such as Joseph Haydn, Wolfgang Amadeus Mozart, and Ludwig van Beethoven knew and used. It is in this atmosphere, amidst the continuing stream of publications in various methodologies that Rameau's groundbreaking fundamental bass approach made its mark.

Rameau's Fundamental Bass and its Impact on Theory

What is Rameau's "fundamental bass?" What is its relevance to harmony as we know it? Being unfamiliar with the term "fundamental bass," many a modern musician would probably hesitate to offer a definition, but these same musicians would not hesitate to define "harmony" as the study of chords, or perhaps more specifically as the study of voice-leading from chord to chord—one of the first tasks in theory that a serious musician undertakes. Those who could offer a definition of "fundamental bass," however, would probably offer a very simple explanation: the fundamental bass is the root of a chord.

Now, when prompted about the general applications of this idea to harmony, the willing participant would probably admit that locating the fundamental bass of a chord indeed has a harmonic benefit: it creates a vertical prototype, a chord constructed of thirds in close position above a specific root which serves as a model for finding the chord scrambled in any inversion. But the harmonic significance of the fundamental bass concept is not interval inversion—Rameau did not invent the triad; he was not even the first to discuss inversion of the triad's members, for that matter.[6] Rather, the harmonic

[6] Several theorists such as Johannes Avianius (? - 1617) and Johannes Lippius (1585-1623) presented the idea of the triad in root form as the source of its inversions. See Lester's discussion "Triadic Inversions Before Rameau" in Compositional Theory, 96-100.

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significance of Rameau's fundamental bass idea lies in the incontrovertible nature of the chord as a unique entity tied to a specific root, a root that has an equally specific function in relation to other roots in a succession.

Rameau's concept of the fundamental bass is far more than a simple means of chord identification then; knowing the root of a chord is just the tip of the iceberg, for identifying chord roots is just the first step in a complex process of understanding how chords relate to one another. The idea of classifying chords according to some kind of hierarchical system (the fundamental, in this case) stands in stark contrast to the way chords are presented in thoroughbass methods. For the continuo player reading thoroughbass, chords are merely a by-product: the realization of a sea of figures. Though the player may come to recognize that some characteristic figures warrant certain typical resolutions, on the whole, the player only learns the chord formulae governed by a multiplicity of rules through constant repetition. Even the *regle de l'octave*, a system which provided a prototypical chord for use on each scale degree of the octave, was yet another formula to follow.[7]

It is Rameau's fundamental bass which ultimately simplified the multifarious rules of thoroughbass practice. Rameau reduced the various chords in usage, chords that could be figured in numerous ways, to two basic chord types: the consonant triad (made up of root, third, and fifth) and the dissonant seventh chord (the consonant triad with yet another third forming a seventh with the root).[8] Furthermore, by showing how most dissonances

---

[7] For more information on the *regle de l'octave*, see Thomas Christensen's "The *Règle de l'octave* in Thorough-Bass Theory and Practice," Acta Musicologica, 64/2 (1992), 91-117.

[8] Michel-Paul-Guy de Chabanon, a contemporary and disciple of Rameau most known for his literary contributions, points to this very idea in his Éloge de M. Rameau (Paris, 1764). He shows how Rameau's theory not only simplified the many rules in practice, but provided the very framework to explain how music functioned:

> Music theory was just all Art, all Science, its luminous Philosophy had neither distinguished the principles [of it] nor reasoned the results [of it]; it could be compared to the language of the people which [possessed] neither a syntax nor a grammar: one filled the student's memory with a throng of chords, and the only rule given to employ them was that the second note of the key bore such and such of

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could be explained as chord sevenths which would resolve to consonant triads by step, he reduced chord-to-chord relationships to a single principle.[9] Rameau was thus the first theorist to explain how chords built on roots interacted with each other. He did much more than this though, for his explanation of relationships at the chord level also blossoms into an awareness of the function of chords at larger levels of phrase and key. In this sense, his fundamental bass approach reveals the dynamics of composing, for he not only shows how specific roots form a succession, but how successions form sections, and how sections form a piece.

By starting with the concept in its incipient form (the fundamental bass and its implied triad), Rameau continually builds the idea into a system that explains relationships at various stages and on many different levels. As such, Rameau's fundamental bass is not just a series of chord roots, but a hierarchical investigation into the way these roots interact on the note level, phrase level, and section level. In sum, it is not hard to see the relationship between Rameau's fundamental bass theory and the harmonic theory that we learn today, for each method examines the way chords function to produce a unique and coherent artistic whole.

> these chords, the fourth such and such other [chords]; and so on for all the notes of the scale: this is what one calls the *rule of the octave*; a complicated method which tires the memory, [which] offers nothing to the mind, which had disgusted many in the study of composition.
>
> Mr. Rameau, bearing the light in this darkness and order in this chaos, saw only two chords in the whole of Music: the one *consonant* and the other *dissonant*, because in breaking down everything that usage had introduced in Music, he saw that they could be reduced to two chords only; the one called the *perfect chord*, the other the *seventh*..

Éloge, 44-45, translation mine.

[9] Lester shows how Rameau, in devising this new theory, actually relies historically on Zarlino's rule for resolving major dissonances upward and minor dissonances downward. In just one chord, the dominant-seventh (with the characteristic dissonant seventh), Rameau explains the resolution of the tritone in this way: the leading tone or major dissonance resolves upward while the seventh of the chord or minor dissonance resolves downward by step. See Compositional Theory, 106-7.

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Rameau's Theoretical Writings as a Reflection of his Speculative and Practical Interests

Rameau was no stranger to the theoretical tradition that preceded him—his interests lay in both the speculative and practical divisions of music and his writings throughout his lifetime reflected these interests. It should come as no surprise, then, that he blended both the speculative and practical sides of theory in his first published work, the Traité de l'harmonie of 1722, a work divided into four books. In fact, in the Traité, Rameau used explanations rooted in the speculative tradition to substantiate the idea of the fundamental bass as a practical method. For example, in the first two books, Rameau explains how certain intervals arising from specific divisions of the string produce the octave, fifth, and major third of the fundamental sounded by the whole string—a concept that modern readers would identify as the second through fourth partials of the harmonic series. He then shows these particular string divisions (the third, fifth, and octave) to be components of the *accord parfait* or perfect chord, the consonant chord that each fundamental bears implicitly. Rameau then introduces the seventh chord. He forms this chord of dissonance by adding a third to the consonant triad. With these two basic chords, the consonant triad and the dissonant seventh, Rameau reveals his basic idea of tonal motion: progression from a dissonance to a consonance. By showing the progression of a dissonant seventh chord to a consonant triad over a fundamental bass that descends by fifth, he offers the perfect cadence as the prototype for this idea.

Having provided a scientific explanation for the idea of the fundamental bass in his first two books of the Traité, Rameau turns to the practical approach for the third and fourth books of the treatise. He devotes a book to each division of practical theory: composition and accompaniment. In the composition book, Rameau mixes the basics with complexities: the reader finds information on the notation of clefs, notes, meter, and scales as well as discussions of the fundamental succession, chord progressions, use of dissonance, modulation and key, voice leading, and stylistic matters such as imitations and fugues. In the accompaniment book, Rameau puts forth his idea of the fundamental bass as a means of

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simplifying the realization of figures. He attempts to show the reader how to begin to classify chords through the fundamental bass principle and through an understanding of the typical fundamental progressions put forward in the previous books. Unfortunately, his method becomes very much like the thoroughbass approaches he is trying to escape. Through lack of an organized approach, both of Rameau's practical applications of the fundamental bass concept in books 3 and 4 turned out to be inaccessible for general readership.

Rameau's fundamental bass theory soon spread like wildfire after the publication of the Traité in 1722, increasing Rameau's renown far and wide and exerting far-reaching influence on subsequent writers.[10] Though it would seem that the Traité had catapulted its famed author to the halls of the great, the illustrious mantle did not yet rest comfortably on Rameau's shoulders. Unfortunately, Rameau's theory was not well understood. Part of the problem stems from Rameau's difficulty in presenting his own ideas, a personal shortcoming that seemed to pervade much of his writing. Rameau's continual revision of his own theories was another obstacle for his readers. Throughout the course of a lifetime, Rameau issued no fewer than seven published treatises on music, treatises which provide a testament to Rameau's changing views on specific aspects of his theory. Christensen includes a helpful table which divides these major works into two basic categories (practical and theoretical) (see Table A- 1):[11]

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[10] Lester points out that the discussion of inversions in thoroughbass manuals such as Heinichen's Der General-Bass in der Composition (1728) and David Kellner's Treulicher Unterricht im General-Bass (1732) were most likely influenced by Rameau's Traité. Rameau's theories continued to exert influence at the end of the eighteenth century: Daniel Gottlob Türk's thoroughbass manual Kurze Anweisung zum Generalbaßspielen (1791) still used inversional methods, and traces of Rameau's theory even existed in a well known detractor's composition manual, Johann Philipp Kirnberger's Die Kunst des reinen Satzes (1771-79)--see Lester's discussion of Rameau's influence in Compositional Theory, 92-94. For more information on Kirnberger's ideas of Rameau's theory, see Cecil Powell Grant's article "The Real Relationship between Kirnberger's and Rameau's Concept of Fundamental Bass," Journal of Music Theory 21/2 (1977), 324-338.

[11] This chart is found in Thomas Christensen's "Rameau's 'L'Art de la basse fondamentale'," Music Theory Spectrum 9 (1987), 34. A slightly different version occurs in Rameau and Musical Thought in the Enlightenment (Cambridge: Cambridge University Press, 1993), 41.

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Practical Works	Date	Theoretical Works
"Clermont" MSS	(before 1722)	
Traité de l'harmonie (bks. 3 & 4)	1722	Traité de l'harmonie (bks. 1&2)
	1726	Nouveau système de la musique théorique
Dissertation sur les differentes méthodes de l'accompagnement	1732	
Génération harmonique (ch. 18)	1737	Génération harmonique
"L'Art de la basse fondamentale" MS	1737-44?	
	1750	Démonstration du principe de l'harmonie
	1752	Nouvelles réflexions
Code de musique pratique	1760	
	1763-4	"Vérités également ignorées et interessantes" MS

Table A- 1: *Chart of Rameau's major writings divided into practical and theoretical categories by Christensen, "Rameau's 'L'Art,'" 34.*

Aside from the Traité de l'harmonie and the Génération harmonique, works in which Rameau blended both practical and theoretical approaches, Rameau tended to swing from one pole to the other in his writings over the course of a lifetime. Some problems from both the speculative and practical divisions of theory were more problematic for him than others—the justification of the minor triad (speculative), the irregular cadence (practical),

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and the use of supposition[12] versus suspensions (practical), to name but a few.[13] These problems prompted Rameau continually to reexamine these issues throughout his lifetime. Though most of Rameau's detractors would see his wavering stances as a flaw, Rameau's proponents would turn this minus into a plus, preferring to see Rameau's constant revisions as a continual search for truth in the explanation of musical phenomena.

"L'Art de la basse fondamentale"

One particular unpublished work, the manuscript "L'Art de la basse fondamentale," appears under the practical heading in Christensen's chart. In his critical edition of the writings of Rameau, Erwin Jacobi first pointed out the existence of this manuscript in the d'Alembert papers housed in the Institut de France.[14] Even though the title page of this manuscript bears no attribution, Jacobi was able to deduce the author and approximate date of the work from specific clues in the manuscript's opening paragraph:

> After having announced my discovery that the principle of harmony and of all our faculties in music lies in one single

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[12] In tonal theory, all dissonance can be viewed as displacement of consonance. When a dissonance is formed through the movement of one voice against another that remains constant, a suspension results. Normally, this dissonant member resolves by step. In a suspension, the dissonant member can be explained as delaying or suspending the consonant resolution. Thus, it can be considered a temporary displacement of the consonant harmony which is to follow or a melodic disturbance over **one implied chord**.

Rameau saw that dissonances that were described traditionally as suspension formulas (i.e. the ninth in a 9-8 suspension and the eleventh in a 4-3 suspention) had something in common with the dissonant seventh of our dominant-seventh chord (a minor dissonance): these dissonances always resolved downwards by step. Since Rameau used the resolution of the seventh in the perfect cadence as his model to explain this phenomenon, he needed to give each chord (the chord of dissonance and the chord of resolution) its own fundamental bass. Thus, in Rameau's theory of supposition, the ninth or eleventh acted as a chord seventh above a fundamental bass that was actually a third or fifth above the actual sounding bass of the chord. For Rameau, the actual sounding note (i.e. the basso continuo) "supposed" or displaced the true fundamental bass of the chord.

[13] Christensen explains Rameau's wavering positions on the irregular cadence and the supposition versus suspension issue in detail—see Rameau and Musical Thought, 118-129.

[14] Erwin Jacobi, ed., The Complete Theoretical Writings of Jean-Philippe Rameau, VI (N.p.: American Institute of Musicology, 1967-72), XLV-XLVI.

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> tone [i.e. the fundamental tone with all its overtones and their relationships]; after having cleared the way for it [i.e. the principle] in what I call the **Basse fondamentale**; after having shown its relationship through numerous experiments: traité de l'harmonie, nouveau sisteme, generation harmonique 172 2. and 3., I finally undertook [the task] of deriving a Méthode for composition and accompaniment, even for teaching how to read music, entitled L'Art de la Basse fondamentale.[15]

Since the compositional Méthode follows the three cited works, Jacobi could approximate the position of this work in Rameau's writing career: it must have been written after the last work cited above, the Génération harmonique of 1737 and before the next known printed treatise, the Démonstration du principe de l'harmonie of 1750. As further proof of the manuscript's attribution, Jacobi pointed to Rameau's own note of this Méthode in the preface of his Démonstration: "it was for the same reason and at more or less the same time that I had again to abandon a Méthode of composition already at an advanced stage; but I have handed it to a person very capable of turning it to his profit and to that of the Public."[16]

A critical assessment of the Méthode's contents was provided by Thomas Christensen.[17] Through both internal and external evidence, Christensen not only proved the author to be Rameau, he narrowed the manuscript's dating to a five-year period where Rameau exclusively focused on teaching composition. Christensen suggested that "L'Art" was probably the text for a six-month composition course advertised by Rameau in several Parisian periodicals at the end of 1737. Piecing together the date of the advertisement with

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[15] Ibid., XLV, translation is Jacobi's.

[16] Ibid., XLVI, translation is Jacobi's.

[17] In 1987, Christensen published his findings on this Méthode in "Rameau's 'L'Art de la basse fondamentale'," Music Theory Spectrum 9 (1987), 18-41.

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the knowledge of Rameau's five-year hiatus in opera composition, Christensen telescopes the time frame of the work to c. 1739-1744.[18]

"L'Art de la basse fondamentale" is of tremendous import for many reasons. As a draft of a practical work developed some time in the 1740s, it lies at the midway point between Rameau's Traité de l'harmonie, his earliest work, and the Code de musique pratique, his latest work, a practical compendium which applied the fundamental bass to singing, accompanying, and composing. Since "L'Art" is the only practical work that appears after the Génération and before the Code, it serves as a window to Rameau's position on certain ideas that appear much later in definitive form in the Code.[19]

Though "L'Art" provides a valuable glimpse of Rameau in the hidden years and thus fills a gap in the study of his works, it has a far more significant value: it is the only work designed purely as a composition manual without any trace of speculative theory. It is in this work that we have a unique opportunity to view Rameau as pragmatic teacher and composer, for through his copious examples and asides, Rameau literally guides the student through the process of composing—a process which was never revealed in detail in any of his other theoretical works.

"L'Art" was not the first of Rameau's works to discuss composition. It was, however, the fruit of Rameau's continuing efforts to apply his fundamental bass theory to practical matters. The work that immediately precedes "L'Art" is the Génération harmonique of 1737. Like the Traité, Rameau's Génération offers both speculative and practical presentations of the fundamental bass. However, unlike the Traité, which comprised an equal division of speculative and applied theory between the first two and last two books respectively, the Génération, a work dedicated to the members of the Académie

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[18] Ibid., 20.

[19] Christensen points to the fact that Rameau's views on modulation and suspension in "L'Art" (topics that lie outside the scope of this study) clearly anticipate those published in the Code twenty years later. See "Rameau's 'L'Art,'" 33.

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Royale des Sciences in Paris, devoted more time and attention to speculative matters. As can be surmised by the dedication, this work was intended for a scientific audience, an audience whose sole interest was an explanation of the fundamental bass in terms of its derivation from the properties of sound.[20] In fact, the only genuine practical discussion of composition emerges in chapter XVIII, "Of Modulation in General, with a Summary of the Rules for Composition, and for Finding the Fundamental Bass under a Given Melody, "a chapter that follows discussions of the origins of harmony, consonances and dissonances, modes, temperament, supposition, suspension, and many other related topics.

Rameau's discussion of composition in chapter XVIII of the Génération is just what its title purports: a summary of compositional rules. Rameau's concise coverage of the topic in a single chapter has both pluses and minuses for the reader. Since Rameau omits the numerous complexities introduced in the Traité, chapter XVIII is an infinitely easier read—a definite improvement over his first publication. This very omission of detail, on the other hand, fails to supply the information requisite to the actual process of composing.[21] Also, since this particular chapter occurs as the culmination of the treatise, it is doubtful that the beginner would have the patience and endurance to bear with all the scientific explanations that precede and lead up to this one practical chapter. For these reasons, this particular summary, a good one at that, does not a composition manual make.

Another practical work appeared between the Traité and the Génération: the Dissertation sur les différentes méthodes de l'accompagnement of 1732. Though this work was strictly a keyboard method, it too included an application of fundamental bass principles—this time, through the fingers. Unlike Rameau's treatment of accompaniment in

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[20] In this treatise Rameau does not explain his speculative theory through string ratios as in the Traité, but introduces a new concept of sound: sound emanating from the **corps sonore** or sonorous body, that is, any instrument (even voice or a pipe) that sets sound vibrations in motion.

[21] Rameau was well aware of this difficulty and directed the reader to his Traité and Nouveau système for more particulars on topics such as cadences and mode.

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book IV of the Traité, in the Dissertation Rameau gives the player models that have already been realized according to his new fundamental theory. And, he presents this idea through a purely mechanical approach conveyed through his own notation, a notation which actually shows which fingers are to move in certain progressions. For instance, according to Rameau's system, a letter designates the tonic and its triad, an "x" indicates the "leading tone chord" (a dominant seventh), and the numbers a "chord of the third and fourth" (a subdominant seventh), to name but a few symbols. Dots indicate how many fingers are to descend by step from one chord to another. The two-dot or two-finger motion indicates the most perfect progression where the dissonant seventh chords resolve by step beneath a fundamental bass which descends a fifth. Deborah Hayes describes a typical example of Rameau's notation in the preface of her English translation of this work:

> A short phrase, for example, would begin with "x" because that chord has to go to its tonic chord, creating a final cadence...The longest phrases, he notes (pages 56-57), begin with "$\frac{4}{3}$"; the chord would be followed by several two-finger motions ("$\frac{4}{3}$: : : : x C" would mean IV ^{7} - vii ^{7} - iii ^{7} - vi ^{7} - ii ^{7} - V ^{7} - I in C-major).[22]

Through this approach, the player acquires the sound of correct fundamental progressions and soon learns the finger patterning that develops through repetition of these models. Hayes identifies the greatest distinction between this work and traditional continuo approaches:

> In the second and longest section, the "Plan of the New Method," Rameau shows that the accompanist need only a few chords and a few fingering patterns to play any continuo realization. This is perhaps the most startling point he makes: that no matter what notes, figures, or signs make up a basso continuo, they are only designating a few basic chords, usually presented in the same order within a phrase,

[22] Deborah Hayes, trans., "Dissertation on the Different Methods of Accompaniment," by Jean-Philippe Rameau, (Ann Arbor: University Microfilms, 1974), v.

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> but simply used in various "forms" or inversions, and transposed to various (temporary) keys. It is significant that in contrast to continuo methods, in which chords are named according to the intervals of the notes above the bass, in Rameau's method the chords are named according to the scale degrees they contain, or the relation of the chord notes to the tonic.[23]

By injecting the fundamental bass and its inherent hierarchy into a continuo method, Rameau undoubtedly enlightened many a keyboard accompanist. However, since his rote approach still resembled many of the other continuo methods on the market, it is unlikely that this work guided a keyboard player/composer in using the fundamental bass as a compositional tool.

From this summary of the practical antecedents to "L'Art," we return to Rameau's first work, the Traité de l'harmonie. Though Rameau did provide a guide to composition in the third book of the Traité, this book is unsuccessful as a practical compositional method. In presenting the role of the fundamental bass in self-contained topics, Rameau does not give the reader a good idea of how to use the fundamental bass in the actual process of composing. His lessons are rule-oriented. As a result, an insight into the function of the fundamental bass as a systematic approach throughout a piece is lacking. Take his presentation of seventh chords, for example. After explaining that an added third above the perfect chord forms a dissonant seventh chord, Rameau proceeds to tell the reader where this kind of chord can be used:

> For the present, the seventh chord may be used only on bass notes which are preceded and followed by an ascending fourth or a descending fifth.
>
> The dissonant interval of this chord, which is the seventh, should be prepared and resolved by a consonant interval; i.e. the note forming the seventh with the bass must be preceded and followed by a third. The third which precedes or prepares the seventh should occur on the same degree or on the same line as the seventh which follows; the

[23] Ibid., iv.

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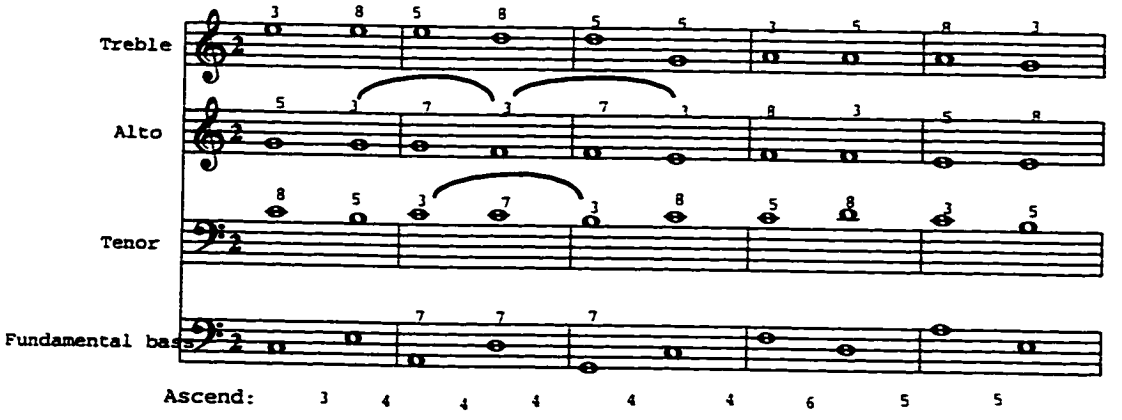
> third which follows or resolves the seventh should always be found by descending diatonically after this seventh.
>
> The first seventh must always be heard on the first beat of a measure and must consequently be prepared on the second beat of the preceding measure; remember that the first seventh is that one which was not immediately preceded by another.[24]

A little further on, Rameau provides an example (see Ex. A-1) of the movement of upper voices in this progression, about which he writes:

> In the upper parts, the seventh is always found between two 3s; thus 3 7 3. The first seventh is always prepared on the second beat or by the second note of a measure C.
>
> Resolving the seventh by having it descend to the third, as we are obliged to do, upsets the progression of the part which we have said should ascend from the fifth to the third when the bass ascends a fourth. As this part may also descend to the octave, however, we must certainly give it this progression when the seventh occurs, since the seventh should always descend to the third. As the progression of the seventh may not be changed, we must change the progression of the fifth A.[25]



Example A - 1: *Rameau's example in ch.6, Bk.III of the Traité (ex. III.25, p.214 in Gossett)*

[24] Book III, ch. 6, Art. I., Gossett, 213.

[25] Ibid., 214-15.

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Suffice it to say that this process would be particularly daunting for a musical beginner or a dilettante seeking to use the method as a quick means to compose. Compare Rameau's presentation of this idea in the Traité with that in "L'Art:"

> One can form a seventh from a subject note. [This note] should generally have formed a consonance previously, to wit: the third, the fifth, or the octave with the result that it is then common to the chords of two different fundamental notes. This obvious connection [**liaison**] where the same note is common to two successive chords is called preparation with regard to dissonance. As a result, when saying that a dissonance is prepared, it means that the same note which forms it should have formed a consonance previously from which it follows that it should belong to two different fundamental notes. This dissonance should always be followed by descending stepwise. One calls this resolving the dissonance.[26]
>
> (II/2/1-f. 98[r-v])

Thus, in "L'Art," the reader receives a very basic explanation of events, an explanation general enough to cover a variety of situations. Moreover, the budding composer actually sees this basic information applied to a simple context. This is the kind of example that a beginner would likely encounter in the process of composing. Though "L'Art" sheds light on a hitherto dark period in Rameau's theoretical writings, its true significance lies in that it is his first manual of composition.

Gianotti and his Composer's Guide

While it might be supposed that members of Rameau's composition school disseminated his applied fundamental bass theory obliquely through teaching, one particular student, Pietro Gianotti, made a more direct contribution. In 1759, Gianotti published his re-casting of "L'Art de la basse fondamentale" under his own name as Le Guide du compositeur in 1759. Once more, we have Thomas Christensen to thank for

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[26] Translation mine.

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pointing out the connection between these two works.[27] Through a careful comparison of the two works, Christensen revealed that the Guide and "L'Art" not only share the same external tripartite organization, they relay the same content. Christensen also points out that Gianotti's published Guide contains the very musical examples that are missing from Rameau's manuscript—for only Rameau's description of these examples survives in the text of "L'Art."

Why would Rameau, the renowned composer, musician, and established writer on all things theoretical, allow Gianotti to publish this work? And how did Gianotti gain access to "L'Art"? Rameau's early interaction with Jean d'Alembert provides a piece of the puzzle.

In 1749, Rameau read a draft of the Démonstration du principe de l'harmonie before the Royal Academy of Sciences. During this occasion, he met Jean d'Alembert. D'Alembert subsequently produced a favorable review of this paper and decided to embark upon producing a more comprehensive summary of Rameau's ideas. In order to help d'Alembert, Rameau entrusted him with "L'Art de la basse fondamentale." This is how "L'Art" survived among the d'Alembert papers. And, in 1752, d'Alembert published Elémens de musique théorique et pratique suivant les principes de M. Rameau. The overwhelming success of this work made Rameau's ideas accessible to a large audience. However, Christensen points out that d'Alembert did not use "L'Art" as his source for this work—he summarized chapter 18 from Génération instead. While d'Alembert had plans for the future revision of "L'Art," he never attempted it.[28] Rameau had to turn to another redactor for help.

Enter Pietro Gianotti. Unfortunately, we know very little about Gianotti save the fact that he was an Italian musician (born in Lucca), a teacher, and a composer who made

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[27] Thomas Christensen, in "Communication," Music Theory Spectrum 12 (1990), 276-77.

[28] For details on this, see Christensen, "L'Art," (1987), 20-21.

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Paris his home sometime after 1728. What scant biographical knowledge we have of him can be pieced together from sporadic documentary evidence of his employment and publications.

As a performer, Gianotti was active in Parisian musical life playing double bass in the Paris Opera orchestra from 1739 to 1758, receiving a pension for this activity as well. He is also mentioned in a 1751 personnel list for the Concert Spirituel orchestra and had one of his six sonatas for two violins played there in 1749. Given his experience as a string player, it comes as no surprise that the bulk of his compositions were for string ensembles.[29] His own list of his works, given in the catalog after the table of contents of the Guide, is shown in Plate A- 1:

CATALOGUE

DES OUVRAGES DE M. GIANOTTI.

I^re. Œuvre. SONATES à violon ſeul, avec la baſſe, 12 liv.
II. Sonates à violon ſeul, avec la baſſe, 12 l.
III. Sonates en trio pour deux violons & la baſſe, 7 l.
IV. Sonates en trio pour deux violons & la baſſe, 7 l.
V. Sonates pour la flûte, avec la baſſe, 4 l. 10 ſ.
VI. Sonates en trio pour deux violons, avec la baſſe, 9 l.
VII. Sonates à deux violons, ſans baſſe, 6 l.
VIII. Les ſoirées de Limeil, pièces pour les vielles, muſettes, violons, &c. 4 l. 4 ſ.
IX. Sonates en trio pour deux violons & la baſſe, 9 l.
L'école des filles, cantatille à voix

[29] In the article on "Gianotti" in the New Grove Dictionary of Music and Musicians, Michelle Fillion groups works by instrumentation and provides approximate publication dates as well. Fillion also lists works known to be lost.

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ſeule, avec accompagnement de violon, 1 l. 16 ſ.

X. Sonates en trio pour deux violons, & la baſſe, 9 l.

XI. Sonates à deux violons ſans baſſe, 6 l.

XII. Sonates à deux violoncelles, ou deux violles, &c. . 6 l.

XIII. Sonates en trio pour deux violons, & la baſſe, 7 l.

XIV. Les petits concerts de Daphnis & Chloé, ſonates en trio pour les vielles, muſettes, &c. 6 l.

XV. Concertini à quatre parties, 7 l. 4 ſ.

XVI. Nouveaux duo pour deux violons, ou deux pardeſſus de viole, 6 l.

XVII. Les amuſemens de Terpſicore, en ſix ſonates en trio, 6 l.

Ces Œuvres ſe vendent chez M. le Clerc le cadet, rue S. Henry, entre la rue du Roule & la rue de l'Arbre-ſec, à l'image ſainte Geneviève, au premier ſur le devant.

APPROBATION

Plate A- 1: *Gianotti's list of his works in Le Guide du compositeur, 311-12.*

The quantity of Gianotti's work suggests that he was both a busy and enterprising composer. His pieces were also published and readily available for purchase at M. le Clerc.[30] The famed compiler of the multi-volume Biographie universelle des musiciens et

[30] According to RISM, most of these works (except op. 9 and 16) were printed at Le Clerc, and were engraved by women.

Aside from Ballard, which held the royal privilege, the two main Parisian publishing houses at this time were Charles-Nicolas Le Clerc and Jean-Pantaléon Le Clerc. Charles-Nicolas Le Clerc only engraved and sold works that he himself commissioned. His brother, Jean-Pantaléon Le Clerc, however, became associated with the distributor Boivin until 1753. Composers who had their works published by Boivin and Jean-Pantaléon Le Clerc therefore paid for the engraving themselves. Cotte lists Boivin and Le Clerc as the publishers for Gianotti's op. 1, 4, 7 and Le Clerc as the publisher for op. 3, 5, and 8; whereas RISM cites Boivin and Le Clerc as the publishers for all the works except op. 9 and 16. Though some of Gianotti's works were printed in the *Journal de Musique* and the *Mercure de France*, from the evidence above, it would seem that Gianotti financed the majority of his publications himself, a fact that might lead us to believe that there was not a great demand for his music. In their articles on Gianotti in the New Grove Dictionary of Music and Musicians and MGG, Michelle Fillion and Roger Cotte mention two editions of the Guide, that of 1759 published by Durand and Le Clerc and another in 1775 published by Taillard, an edition that is not cited by Eitner or RISM. For more information on publications in eighteenth century France, see Music Printing and Publishing, D. W. Krummel and Stanley Sadie eds., (New York: W.W. Norton, 1990).

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bibliographie générale de la musique, F.J. Fétis, acknowledged Gianotti's teaching prowess, but nonetheless declared that "all his compositions show little genius."[31]

Gianotti's contribution as a composer seems, by some accounts, to be overshadowed by his authorship of the Guide and his renowned teaching abilities.[32] Gianotti was also an editor of Alberto Gallo's 12 Sinfonie opp.1, 2 (Paris, n.d.) and the Sinfonie...dei più celebri autori d'Italia (Paris, c. 1745). It is perhaps Gianotti's broad general musical experience which enabled him to organize and present Rameau's complex theories in an accessible format for beginners.

Gianotti's legacy as a teacher survives only in Le Guide du compositeur (Paris: Durand, 1759); his other treatise, Méthode abrégée d'accompagnement à la harpe et au clavecin (1764), once listed in the subscription catalog of Le Clerc, is lost. Every biographical sketch of Gianotti, however scant, mentions his teaching influence and cites

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[31] *Toutes ces compositions annoncent peu de génie.* F.J. Fétis, "Gianotti," Biographie universelle des musiciens et bibliographie générale de la musique, 2nd. ed. 10 vols. (Paris, 1874), III, 479. The articles on Gianotti in Eitner's Quellenlexicon, MGG and the New Grove's Dictionary all pick up this quote.

[32] Johann Nikolaus Forkel (1749-1818), the famed historian, first biographer of J.S. Bach, and bibliographer of writings on music, cites Gianotti primarily as author of the Composer's Guide, a work which "is becoming very respected and principally occupies itself with finding the fundamental bass of each composition." Aside from this statement, Forkel mentions that Gianotti was a contrabass player in the Paris Opera. His brief paragraph on Gianotti occurs in the section "Literature on the rules of harmony," J.F. Forkel, Allgemeine Literatur des Musik, (Leipzig, 1792) facsimile edition (Hildesheim: Georg Olms Verlag, 1962), 336.

Jean-Benjamin Laborde (1734-1794), a composition pupil of Rameau, violinist, composer of dramatic works and libretti, is perhaps best known as commentator on eighteenth century French music. In his four-volume Essai sur la musique ancienne et moderne, Laborde does not include Gianotti in the list of French or Italian composers, but lists him in the section "French authors who have written on music." Laborde's tribute is a bit more flattering:

> GIANOTTI, Contrabassist in the Opera, he entered there in March 1739. He died in 176... & published an esteemed composition treatise entitled: the Composer's Guide, 1759. He had studied the fundamental bass system extensively and taught it with much clarity; this was one of the best masters of composition of his time.

In M. de (Jean-Benjamin) Laborde Essai sur la musique ancienne et moderne, 4 vols., reprint of (Paris: P.D. Pierres, 1780), (New York: AMS Press, 1978), III, 621.

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his most famous pupil as Monsigny, whose fame as a composer of opéra comique was established by Le déserteur of 1769.[33]

In the preface of the Guide, Gianotti expresses his motivation for writing the Guide as a desire to reveal his own views on teaching and the current state of musical instruction at that time. He writes:

> One will find neither dissertations nor erudition here; I write only for practical musicians. I try to point out a simple and easy way for them. What has been done for the other sciences, for languages, for example, I dare to attempt for music. My book is strictly a grammar that I believe necessary. Nothing is more important than uniformity in the manner of teaching. Nothing is better at smoothing out the difficulties in schools than always following the same rules and employing the same expressions. What disadvantages do not result from different methods employed by different teachers?
>
> Provincial schools have at their head, without a doubt, capable masters: but, permit me to say that in these schools, a dangerous abuse reigns. One follows arbitrary rules there; each master has his own [rules], often in opposition to those of another.
>
> If it so happens that in the course of ten years a school comes to change [its] master three or four times, as one sees often, the students' heads become filled with a host of vague opinions—very well left to the mercy of uncertainty and contradiction for the rest of their lives. On the contrary, if the ideas had always been presented to them in the same form, one would in the end succeed in altering even the least favorable dispositions. And what progress would the students not make whom nature had fortunately endowed?
>
> Do not be mistaken: one can be a superior genius and [still] not know how to teach. I do not mean to offend the masters of whom I speak. I aspire to be useful to them; I feel sure that they will find my work a [successful method] that will make [their teaching] easier: this is my principal aim. If my book can make easier the lessons that they are

---

[33] Pierre-Alexandre Monsigny (1729-1817) is perhaps best remembered for his contributions to comic opera. Though Monsigny's only formal musical studies were with Pietro Gianotti, together with Grétry and Méhul, Monsigny formed the famed triumvirate of composers of French comic opera in the middle of the century. He was pensioned by the Opéra-Comique in 1798. In 1800, he succeeded Piccinni as Inspector of Musical Education and Grétry as a member of the Institute in 1813. Paule Druilhe, "Monsigny," The New Grove Dictionary of Music and Musicians, 20 vols. ed. Stanley Sadie, (London: Macmillan, 1980).

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> charged with giving students, they will find more time to contribute to the glory of art through their labors.[34]

In this passage, Gianotti tells us what he considers important in a method. Through phrases such as "I write only for practical musicians," and "I try to point out a simple and easy way for them," we see that Gianotti is only concerned with imparting useful musical knowledge. It is clear that the student will not find speculative discussions in this work—for it is a "grammar." Apparently, Gianotti feels that many musical masters have sown the seeds of confusion through their haphazard teaching styles. Pointing to the most pervasive problem, methodological inconsistency, he offers his practical method as an antidote. Gianotti was not the first, however, to recognize the need for a consistent approach; in theory, Rameau had already integrated all the various compositional methods through a central idea: the fundamental bass. Rameau was quite aware of his pioneering role—a quote from his preface to the Code illustrates this feeling:

> We have all become musicians by means of this faithful guide [the help of the ear], which by a considerable passage of time suggested the different harmonic routes of which we are in possession until now when I have finally discovered the principle from it; a principle which served only to tear the rules of harmony from confusion, giving it, in practice, the title **Basse fondamentale**[35]

Rameau and Gianotti shared a common hope of turning the musical tide; for Rameau, it was changing the way people thought about music through the creation of a comprehensive theoretical system, and for Gianotti, it was changing the way music was currently being taught. Some of Rameau's other beliefs also surface in Gianotti's preface as well. In the preface of the Traité, Rameau reveals his preference for reason over experience:

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[34] Guide, Preface, vi-viii.

[35] Code, Preface, xiv-xv, translation mine.

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> Even if experience can enlighten us concerning the different properties of music, it alone cannot lead us to discover the principle behind these properties with the precision appropriate to reason. Conclusions drawn from experience are often false, or at least leave us with doubts that only reason can dispel.[36]

> Persons of taste and outstanding ability in this field will no longer fear a lack of the knowledge necessary for success. In short, the light of reason, dispelling the doubts into which experience can plunge us at any moment, will be the most certain guarantee of success that we can expect in this art.[37]

Gianotti's discussion of musicianship reveals the same values:

> One risks going astray when one allows oneself to be guided by a false light presented by presumption and received in ignorance. To throw some notes randomly on paper, [notes] to which one gives the name of chords; slavishly to follow not the rules, but a routine taught in the past, proceeding by trial and error following teachers who have learned it the same way—this is to usurp the name musician. To study art in its fundamental principles, to disentangle its path, and the succession of sounds; to distinguish the appropriate progression for the subject, to find the source, the varieties, and the position of different chords—such is what one should call truly being a musician.
>
> The true musician prefers reason to caprice; he knows how to see the why, the when, the how; these are not vain subtleties, these are the essentials of the art.[38]

In another paragraph, Gianotti talks of science:

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[36] Traité, Preface, Gossett, xxxiii.

[37] Ibid., xxxiv.

[38] Gianotti, Guide, Preface, iv.

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> The most brilliant ideas, the happiest facility, all the gifts of nature put together do not make a science. In order to succeed, a deep study of principles and good models is required: it is necessary to learn and learn well.[39]

Gianotti's statement reflects the idea that music is not totally experiential in nature: the art of music hails from the application of known principles. Hence, it is a science. Here again he is influenced by Rameau, who some thirty-seven years earlier, had traced his awareness of the scientific principle beneath his musical study in perhaps his most renowned methodological utterance:

> Music is a science which should have definite rules; these rules should be drawn from an evident principle; and this principle cannot really be known to us without the aid of mathematics. Notwithstanding all the experience I may have acquired in music from being associated with it for so long, I must confess that only with the aid of mathematics did my ideas become clear and did light replace a certain obscurity of which I was unaware before. Though I did not know how to distinguish the principle from the rules, the principle soon offered itself to me in a manner convincing in its simplicity. I then recognized that the consequences it revealed constituted so many rules following from this principle. The true sense of these rules, their proper application, their relationships, their sequence (the simplest always introducing the less simple, and so on by degrees), and finally the choice of terms: all this, I say, of which I was ignorant before, developed in my mind with clarity and precision. I could not help thinking that it would be desirable (as someone said to me one day while I was applauding the perfection of our modern music) for the knowledge of musicians of this century to equal the beauties of their compositions.[40]

There is no doubt that Rameau influenced Gianotti's thoughts on music. But then Rameau's theories were very influential throughout the eighteenth century. The real

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[39] Ibid., v.

[40] Traité, Gossett, xxxv.

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connection between "L'Art" and the Guide surfaces in a specific comment that Gianotti makes in his preface:

> But, these principles according to which one should proceed, where do we find them? A gentleman, (Mr. Rameau), whose name alone evokes praise, was very capable of establishing them. Content to expound his system clearly, to disclose it, and demonstrate its usefulness, he believed it possible to dispense with the details.
>
> The creative genius produces, expounds, persuades. His view passes with rapidity over small objects; he leaves to others the care of grasping them, of making the connections.
>
> If I have succeeded at acquiring some knowledge, I owe it to Mr. Rameau. The work that I present today is the result of studies that I made under his eyes. His attention has deigned to guide me. The reputation he enjoys, the respect that all of Europe pays him, authorizes my confidence.[41]

While Gianotti does not come right out and say that the Guide is the published version of "L'Art," he does admit that this work is the result of his studies with Rameau. Christensen suggests that Gianotti, as a contrabass player in the Paris Opera orchestra, probably had plenty of opportunities to get to know Rameau.[42] As composer, performer, and teacher, Gianotti had a lot in common with Rameau. It would stand to reason that the emigré would seek out the illustrious master for more detailed explanations of his theory and its practical applications to the realm of teaching and composition.

The Guide is valuable not only for presenting Rameau's practical methodology; it reveals the way Gianotti imparted this methodology as well. As mentioned earlier, Rameau had problems both expressing and organizing his ideas. One can only imagine the difficulty Gianotti must have had trying to present this material in an accessible format—a

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[41]Gianotti, Guide, preface, v-vi.

[42] Christensen, "Communication," 1990, 277.

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format for beginners no less! Gianotti's task as redactor was monumental, for he had not only to sift through Rameau's rambling prose for the basic concepts, but to reorder the progression of these ideas as well. In this respect, Gianotti is not just an editor of Rameau's work. He did not provide a critical edition; he provided a useable edition. In this respect, he more than merited displaying his name on the cover for providing a successful presentation of Rameau's pedagogy in a clear and consistent manner—even if he did not fully grasp all the ramifications of certain ideas. Though Gianotti may have received the shroud of mediocrity as composer, as teacher and redactor he well deserves his niche in music history. It is his Guide that reveals another intriguing facet of the figure bearing the illustrious mantle of immortality, a facet overshadowed by the predominant view of the giant as a sterile theoretician preoccupied with abstract speculative ideas: for it is the pen of Gianotti that transmits Rameau's contributions as teacher and pragmatic composer.

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THE NATURE OF THE SOURCES

"L'Art de la basse fondamentale"
MS 2474, Bibliothèque de l'Institut de France (d'Alembert Archive)

As a manuscript source, Rameau's "L'Art de la basse fondamentale" presents certain challenges for the modern reader. Unlike a printed source in which the letters and words are uniformly consistent because of the set type used in printing, the writing in a manuscript varies in quality. This is due to the highly individual flair of the scribe's own penmanship. Thus, transcribing the contents of a manuscript entails a process of decoding graphological idiosyncracies peculiar to a given scribe. An understanding of these variations will come to light through a brief note-taking analogy.

Depending upon the amount of paper, the pace of the speaker, and the general physical state of the note-taker, handwriting can vary widely from day to day—even from situation to situation. Two different notes under different sets of circumstances often vary in size, relative intensity (the pressure of the ink on the paper), and, most importantly for the reader of these notes, the amount and types of shortcuts or abbreviations used by the note-taker. Anyone who has had to rely on another's brief telephone memo will grasp the analogy immediately: names can often get misspelled, numbers can appear in different sequences, and abbreviations might be downright indecipherable. For all of these reasons, transcription of any manuscript source presents some special difficulties because the reader must learn the personal mannerisms of the writer. A sample sentence from "L'Art" will illustrate some of the difficulties peculiar to this particular source:

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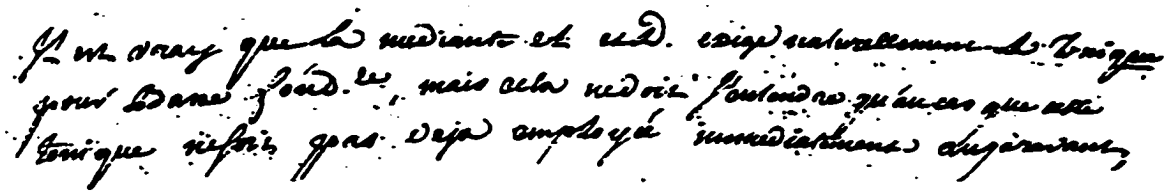

Figure B - 1: *Writing sample from "L'Art" on I/1/1f. 16r*

"Il est vray que la mediante A etD. exige naturellement la Tonique pour Basse fond.le mais cela **nedoit** s'entendre qu'au cas que cette tonique **nesoit** pas deja employée immediatement auparavant..."

(I/1/f.16r)

Even though the handwriting of this source is in a compact legible script that is fairly consistent throughout the work, this script is marked by individual characteristics. In this example, the scribe tends to elide certain words together (see the words in boldface above). Thus "nedoit" and "nesoit" above should read "ne doit" and "ne soit" in a regularized transcription. Orthography is another general challenge. Since spelling had not yet become fully consistent in the eighteenth century, older versions of French words such as "vray" in the example above for the modern "vrai" abound. Our phone memo analogy points to another frequent graphological anomaly: variant abbreviations. In "L'Art," the abbreviation for the term "fundamental bass" occurs in several different ways. While the abbreviation "Basse fond.le" is by far the most common, other variants such as "B.se fond.le", "Bsse fondals" and even "B.f." appear throughout the work.

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Compared with printed sources, manuscript sources also vary in the ordering and numbering of pages. Manuscripts of this sort are often collections of large sheaves of paper that are gathered together in specified ways. Each page surface is called a folio. The folio, like a printed page, usually has writing on both sides of the paper, i.e. recto and verso. Perhaps the most unusual factor for a twentieth-century reader accustomed to modern book binding is the gathering technique used for organizing these loose sheaves of paper. This particular manuscript was assembled from larger pieces of paper or bifolios, that were then folded to form four writing surfaces (essentially two folios with a recto and verso side each).

Rameau's "L'Art" encompasses 77 1/2 bifolios, yielding the equivalent of 310 pages. Christensen points out that the first page of each bifolio bears a number on the top center of the page.[1] Later in the nineteenth century, the bifolios of this work were gathered and bound with another unknown manuscript on the history of music. The librarian then renumbered "L'Art" by placing a number on the upper right corner of each folio (the recto side)—resulting in 155 folios. Each of these folios measures 35 by 23 cm. in size. All references in this study, as in Christensen's, follow the later folio numbering.

Christensen also does not believe the handwriting to be Rameau's. The handwriting varies throughout the manuscript, appearing smaller and more angular in certain sections than in others. In several sections, the script loosens considerably. These variations in writing style are not contained within a specific section or draft; they are dispersed rather unequally throughout the whole manuscript without any seeming rationale. In all likelihood, Rameau probably had a scribe make copies of his notes to assist d'Alembert in the preparation of Elemens. Unfortunately, since graphology is beyond the scope of this study, it remains for another to investigate this particular aspect.

Other than some redundancies, for instance, the appearance of a word or phrase at the bottom of one folio repeated at the top of the next—there are few errors. While some

[1] All these details were uncovered by Christensen—see "Rameau's 'L'Art.'" footnote 15, 21.

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editorial corrective means are used, such as the striking of lines and the use of word insertions above a line, they are the exception rather than the rule. For these reasons, this manuscript seems to be a fair copy of another source, a source which presumably was Rameau's. All of these particular attributes are the simplest and most evident differences between a manuscript and printed source; other departures require a more invasive comparison of content.

Like Rameau's "L'Art," Gianotti's Le Guide du compositeur contains 310 pages of text. However, this seeming congruence is misleading. While Gianotti conveys the same basic information as Rameau in the same amount of pages, he improves upon the original source in several ways. First of all, Gianotti dispenses with many of Rameau's asides, asides which contain details that often distract the reader from the main idea of the lesson. Additionally, Gianotti often reorders the presentation of topics both internally within a chapter and externally from chapter to chapter. This reordering results in a better pedagogical presentation of ideas. To understand Gianotti's departure from the original source, we need to investigate the layout of "L'Art" first.

Organization

Rameau divides "L'Art" into three basic sections: understanding the fundamental bass under a given melody using only consonances (part I), understanding the fundamental bass under a given melody adding dissonances (part II), and understanding the fundamental bass's relationship to the basso continuo and the various licenses that can arise through its application (part III). Each section is self-contained, comprising lessons that introduce a specific aspect of the fundamental bass within the context of the sectional division— for example, the relationship of the basso continuo with the subject (lesson 7 in the third section). Sometimes the topic of the lesson is large enough to warrant several subdivisions of the information: Rameau calls these subsections "Articles." Under the lesson heading "Methods of knowing the key in the subject" (lesson 12 of the first section),

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for example, there are six different subsections or articles: 1. "Concerning the leading tone and accidentals that consequently produce sharps, flats and naturals" 2. "Concerning the doubt that one should learn to develop for the leading tone of major keys" 3. "Concerning the appropriate intervals for revealing the key of the subject" 4. "Finding the fundamental bass of all pauses [i.e. 'cadences'] naturally from which follows the knowledge of key" 5. "Method of knowing successive keys through their reciprocal relationships" and 6. "Concerning the precise moment where the key changes and concerning the fundamental succession in a similar case." Each "article" introduces a particular aspect of the general topic covered in the lesson. An example section generally follows each lesson, serving as a specific musical illustration of points covered in the lesson. Usually, Rameau includes an "Explication" section for each of the article divisions as well. Unfortunately, in "L'Art," only the verbal text explaining these examples survives, for the actual music is lost.

The Drafts

What can paradoxically be viewed as the most perplexing and the most intriguing aspect of "L'Art" is the presence of various drafts of specific sections. There are three drafts alone of the preface and two complete drafts of Section I (on consonances). Section II (on dissonances) also has two drafts, but they are unequal in scope: the first draft is very short and is incomplete in comparison to the second—which is considerably more comprehensive in treatment. Section III (on the basso continuo) exists in only one version.

This dissertation aims to provide a comprehensive translation and study of the first section of Gianotti's Guide. Following Rameau's organization of material in "L'Art," Gianotti restricts his study of the fundamental bass to a consonant framework in section I. Rameau's presentation of the fundamental bass within the confines of consonance is unique to "L'Art;" since the basic thrust of Rameau's theory centered on the dynamics of the perfect cadence (stepwise resolution of the dissonant seventh to a consonance over a descending fifth in the fundamental bass), dissonance was an operative force in all his other

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treatises. Thus, in this first section of the Guide, Gianotti actually reveals for the first time in print Rameau's conception of the fundamental bass without the prime mover: dissonance. Without dissonance, Gianotti could transmit from the first section of "L'Art" other issues in detail that Rameau merely outlined in his other treatises, namely: the idea of connection [**liaison**] at many different levels—not only from chord to chord, but from phrase to phrase, and from key to key. From the first section of "L'Art" (and the Guide) we also receive Rameau's explanation of various types of tonics ("passing" tonics, "implied" tonics, and "foreign" tonics) that operate on different levels to promote this sense of connection. Moreover, the presence of two complete drafts of the material of the first section provides a unique opportunity to view Rameau's revisions of his own presentation of ideas and to compare these versions with Gianotti's definitive rendition.

Generally, drafts provide an opportunity to view the shifts in thinking and reordering in the process of revision. What is retained and what is stricken from a definitive version reveals what is truly important to the author. Most times, drafts of the same material are quite similar and vary only in style, not content. But when drafts of the same material vary significantly in approach, they are extremely valuable for reflecting the author's changing view of methodology. This is the case here. Even though the drafts of Section I are roughly the same number of pages and convey the same basic content, they are not parallel in the coverage and ordering of topics. Hence, through these divergent readings, we have an extremely precious insight into Rameau's teaching methodology.

There are various inconsistencies between the drafts.[2] While most topics appear in both drafts, they do not always appear under the same lesson number between the drafts. For example, lesson 8 in draft 1, "Concerning cadences or pauses in the subject and in the fundamental bass," does not occur until lesson 13 in draft 2. Likewise, lesson 16 in draft 1, "Concerning the possibility of dividing a subject note into two values in order to facilitate the prescribed fundamental succession," does not appear until lesson 18 in draft 2.

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[2]For a complete comparison between the drafts of Section I of "L'Art," consult the Appendix, pp. 501-5.

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Sometimes the reverse is true: a topic in draft 2 occurs in a lesson before its corresponding counterpart in draft 1, hence the information in lesson 8 in the second draft, "Concerning the fundamental succession by second and by third," occurs as lesson 9 in the first draft. These are but a few examples.

There are other more telling discrepancies. Some lessons are peculiar to a single draft. The topic of lesson 2 in draft 2, "Concerning consonances, their inversion, and their position relative to the note expressed," does not have a counterpart in the first draft. And lesson 13 in draft 1, "Concerning the passage of one tonic to another..." does not have an equivalent in the second draft. There are also seeming gaps between the drafts: draft 1 does not include a second or seventh lesson and draft 2 does not include a fourth lesson. The numbering of lessons is not always consistent either. In the first draft, Rameau assigns numbers to some lessons but not to others: thus lessons 1-9 are numbered, lessons 10-15 are unnumbered, lesson 16 is numbered and lessons 17-21 are unnumbered. To a certain extent, this is the case in the latter part of the second draft as well. The first 19 lessons are consistently numbered, but the subsections (articles) of lesson 19 start to exhibit some irregular numbering. This irregular numbering then infiltrates the succeeding lesson headings from what should be lessons 20 through 24. What led to this inconsistency? Is it purely scribal error? Did Rameau lose track of his ordering? As can be expected, a combination of factors have come into play. Some inconsistencies have more significance than others: a comparison with the way Gianotti ordered Rameau's information will shed light on some of these issues.

Le Guide du compositeur

While the content of Rameau's text survives in various drafts, Gianotti's, by contrast, survives in one definitive version. This definitive version also includes an added bonus: 39 pages of musical examples appended at the end of the book. These are the very

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musical illustrations missing from "L'Art." Gianotti's Guide also maintains a tripartite division similar to Rameau's, separating the material as follows: Section I— "The Composer's guide containing certain rules for finding the fundamental bass of all possible melodies using only consonances," Section II— "The Composer's guide containing certain rules for finding the fundamental bass of all possible melodies adding dissonances," and Section III— "The Composer's guide containing certain rules for finding the fundamental bass of the chromatic and enharmonic genres; with two particular chapters which teaches the origin and the practice of supposition and suspension. The basso continuo above the fundamental [bass] in the examples of these two chapters is added in order to create a complete demonstration of the rules that it contains." Section I has 15 chapters (as opposed to the 21 lessons in draft 1 and 24 lessons in draft 2 of "L'Art"), Section II has 8 chapters (as opposed to the 3 lessons in draft 1 and the 18 lessons of draft 2 of "L'Art"), and Section III has 7 chapters (like the 7 chapters in "L'Art).

In terms of format, Gianotti also follows Rameau's subdivisions within the three main sections, breaking down specific concepts into manageable topics. Only the terminology differs between the two: thus Rameau's "lessons" have become Gianotti's "chapters" and Rameau's "Explication" or example sections have become Gianotti's "Observations on this example." These "Observations," as in Rameau's source, always appear at the end of a sectional division. Gianotti even retains Rameau's "Article" subdivisions. For instance, in his fifth chapter, Gianotti introduces the different fundamental progressions of the tonic by devoting a subsection (article) to each route.

Aside from deviations in the number of chapters from draft to draft and from each respective draft to the printed source, Gianotti's work resembles Rameau's in size, scope, and format. The consideration of these factors, though, might lead to the false assumption that Gianotti consistently follows Rameau's organization. To understand the true nature of the student's work as a reflection of the teacher's model, one question must be considered: does Gianotti provide a hybrid version of Rameau's drafts or does he rely predominantly

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on a single draft? While the answer to this question is never simple, one example will point out a predominant approach throughout the first section of the Guide. The topic mentioned above, the various fundamental progressions of the tonic (Gianotti's chapter 5), happens to occur in both drafts of "L'Art": as lesson 9 in draft 1 and as lesson 8 in draft 2. The table below compares the way that the section headings appear for the corresponding material across the board:

Gianotti: Chapter 5	**Rameau: Lesson 9/dr.1**	**Rameau: Lesson 8/dr.2**
Concerning the Various Fundamental Progressions of the Tonic	Concerning the Fundamental Succession of the Tonic by Ascending Second and Descending Third	Concerning the Fundamental Succession by Second and by Third
Article I—Concerning the Progression of the Tonic by Ascending Second	Article I—Concerning the Ascending Second	
Observations on this example	*Explication*	
Article II—Concerning the Progression of the Tonic by Descending Third	Article II—Concerning the Descending Third	
Observations on this example	*Explication*	
Article III—In Ambiguous Cases, the Progression of Descending ThirdShould Be Preferred to the Ascending Second; Which Gives Rise to the Necessity of Marking the Various Possible Fundamental Basses with Custodes	Article III—Concerning the Preference for the Third Over the Second From Which Arises the Ambiguity Between These Two Successions and the Necessity of Marking the Various Possible Fundamental Basses	
Observations on this example	*Explication*	

Table B- 1: *Table comparing section headings for sources parallel to Gianotti's Chapter 5*

Gianotti's version is almost a replica of Rameau's first draft version: in content, organizational approach, length, and even stylistic expression. Not only do they share the

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same divisional subheadings, they also include example sections after each subdivision. A tally of page numbers confirms similar coverage (as evidenced by the amount of space devoted to the topic) between the two sources: Gianotti's version runs from pp. 13-24 (12 pages of text) while Rameau's first draft version runs from folios 13^{r} to 17^{r} (i.e. at least 10 pages of text); this figure does not even account for the larger size of the folio in comparison to the printed page. By comparison, Rameau's second draft version (lesson 8), is written on essentially half a folio (the first two lines of the lesson occur on the bottom of f. 52^{r} and the rest occurs on half of f.52^{v}). Also note the similarity in phraseology and wording between Gianotti's and Rameau's first-draft version; as will be seen in the course of this study, this is much more than a coincidence.

Gianotti's Reorganization of "L'Art"

Gianotti's Guide improves upon "L'Art" in many ways. The most salient feature of the Guide is its organization. Gianotti's ordering of topics within a sectional division not only improves the reading of this work, it has a far-reaching impact on the way the fundamental bass is taught because it introduces concepts in a logical sequence. Organization was not Rameau's strength—but it was Gianotti's. This study uncovers and compares these differences between the authors with a view to examining the effects of this organization (or lack thereof) on the way the concepts are imparted. Before looking at this aspect chapter by chapter, though, a brief introduction is in order.

Gianotti and Rameau are definitely two different people: as thinkers, teachers, and authors. They each have distinct priorities in their teaching. Rameau is more concerned with conveying the general ideas behind his theory; as a result, he has problems with the details. Gianotti, coming from the opposite perspective, is more concerned with the ordering of details and their mode of presentation; unfortunately, he sometimes does not see the implications of concepts at a higher level. These methodological differences color the whole of each work.

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In the first two sections of both works, Gianotti and Rameau agree on the basic organizing principles: consonances (section I) and dissonances (section II). But even in these sections, their paths diverge. Perhaps the most noticeable differences in organization, however, surface in the final sections of each work. Rameau limits his third section to the discussion of the basso continuo and the licenses (i.e. freedoms) that may arise. Gianotti has a different focus: he includes discussions of chromatic and enharmonic keys (concepts that Rameau had already introduced in the second section concerned with dissonances) along with the basso continuo. Both approaches have merit. Both Rameau and Gianotti include the basics of dissonance in the second section: resolution of the seventh, syncopations, the diminished seventh chord, and double employment of the dissonance in chords on the supertonic and subdominant, to name but a few concepts. Rameau, however, takes the basics one step further by including a discussion of chromatic and enharmonic keys in this section. This choice effects two consequences: it applies the details of dissonance to the larger realm of keys and it frees Rameau to focus strictly on the basso continuo in the last and final section. Gianotti, on the other hand, having discussed the basics in the second section, chooses to devote the last section to complex issues—whether they surface in chromaticism, enharmonicism, or figures in the basso continuo.

From these different organizations of the material, we glimpse the distinct personalities and talents of each author. Rameau sees the big picture; he sees how one concept has an overarching effect on different levels. He has vision. Unfortunately, since Rameau sees the interconnections of ideas, he does not separate what is basic from what is complex. This is where Gianotti steps in. Gianotti does have the talent of sifting the pedagogical wheat from the chaff—even though he may not glimpse the nexus of ideas from Rameau's grand perspective. Because of this narrower focus, Gianotti is able to set down a more logical progression of ideas proceeding from the simple to the complex. On the surface, these third section deviations might appear to be rather insignificant, more a matter of personal taste on the part of the authors than methodology. A reevaluation of the

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lesson headings in the first section of "L'Art," however, will prove otherwise (see the chart in the Appendix, pp. 501-5—especially lessons 19 through 24 in draft 2).

Rameau has problems limiting all the ramifications of his ideas to specific sectional divisions. Hence, already in the first section on consonance he starts to introduce concepts that require an understanding of dissonance—notably the ideas of double employment, supposition, and suspension in the second draft.[3] With the exception of a brief introductory definition of syncopation, Gianotti maintains the integrity of his first section by restricting his presentation of the fundamental bass within the confines of consonance. This is one of the reasons he is able to reduce the 20-odd lessons of each draft of section I in "L'Art" to 15 chapters in his own first section.

Rameau's problem with consistency is not just confined to the sectional level; it is just as pervasive at the lesson level. Through his different ordering of the material, Gianotti helps to create a cohesive flow of ideas out of a quagmire of musical thought. For, generally, Gianotti introduces the basics first and then adds the complications later. His approach can be likened to a carefully attended garden where the visitor only encounters cultivated flowers. Unfortunately, by comparison, Rameau's garden reflects the more natural untended state of growth, where one simultaneously finds flowers and weeds—but also the insight of genius.

The Comparison of Sources and Its Bearing on Pedagogy

Gianotti's reorganization of Rameau's material is most evident in the first part of the Guide, where he includes a section devoted to the basics of music before proceeding to the more abstract concept of the fundamental bass in chapter 1. In this section, which he labels the "Preliminary Introduction," he introduces intervals, scales, keys, and a brief

[3] Christensen brings up this point in "L'Art," 1987, 22.

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discussion concerning the relative weight of beats in a measure (this is where he also briefly describes syncopation). The fact that he does not include an introduction to notation in this section, however, suggests that he expected the student to read music—to have an understanding of the duration of notes and their relative position on a staff at the very least. Aside from this expectation, Gianotti, good teacher that he is, assumes that the student knows very little. In this introductory section, his aim is to provide a basic music vocabulary that he can draw upon in more abstract applications later.

What a contrast in Rameau! It takes Rameau seven lessons to convey what Gianotti does in the preliminary introduction and first chapter. This is not the only problem. Concepts are sporadically dispersed throughout the lessons without regard to adhering to the topic listed in the lesson heading. While we have become aware of Rameau's problems containing ideas within the confines of a predetermined sectional boundary, this problem affects the lesson level as well.

Aside from the preface, the very first lesson that the student encounters in "L'Art" is entitled "Scale/s of degrees or diatonic and harmonic intervals."[4] In the section Additional Sources to Chapter I, the reader can compare the variant versions of lesson 1 (pp. 85-87). Both drafts introduce three scales which are divided into two categories: the diatonic scale (the scale of tones and semitones, as we know it) and two harmonic "scales" (scales whose units are not tones and semitones, but thirds and fifths). In both drafts, Rameau also introduces the term "diatonic, " defining it as "the smallest degrees or intervals natural to the voice"—i.e., making it synonomous with "conjunct" or "stepwise." At first, this seems like an acceptable definition, but it is somewhat problematic. Rameau uses previously undefined terms to explain another unknown term. Thus, so far, the reader has not encountered the term "degree" or "interval"; to use a mathematical analogy, it would be like saying, "find z" in the equation "x + y = z"—without knowing what any variable

[4] The title in draft 1 reads: "Scale of degrees, or diatonic and harmonic intervals," as compared to the version in draft 2: "Scales of degrees or diatonic and harmonic intervals."

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is. One could probably infer from the context that these are the smallest musical units, but this is only an assumption. The reader is assumed to be able to read music, but there are various levels of reading music. If Rameau sees a need to define and explain what a scale is, he certainly should explain the terminology of its components in a similar vein.

Contrast Rameau's approach with that of Gianotti, who includes the same information in his preliminary introduction. Gianotti's first section of the preliminary introduction, like Rameau, is devoted to presenting the three scales (the diatonic scale and the two harmonic scales by thirds and fifths). Gianotti's first sentence, however, defines the term "interval":

> The interval in music is the distance from one note to the other. There are two types: the *diatonic* interval and the *harmonic* interval.

Gianotti then classifies the interval as being either "diatonic" (stepwise) or "harmonic" (larger) before he even talks about the placement of these units in a scale because it is the size of the unit (an interval that is either a tone, third, or fifth, in this case) which determines the classification of the next larger unit (the diatonic scale, the harmonic scale by thirds, or the harmonic scale by fifths). This manner of presentation not only defines the smallest components first before introducing the next largest unit which contains the smallest units, it prepares the reader for other types of "diatonic" and "harmonic" divisions: namely the scales. This clearly makes more pedagogical sense than Rameau's presentation.

Rameau has the same pedagogical problem relating the smaller harmonic units, thirds, to a larger unit, the chord. After presenting the scale by thirds and fifths, Rameau says the following:

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Draft 1:

These two latter scales show all the degrees or harmonic intervals. Thirds should be recognized as the smallest harmonic intervals.

All chords proper to the fundamental bass are made up of the smallest harmonic intervals within the span of an octave: two thirds form a fifth and three thirds form a seventh when one compares the first note with the last.

(I/1/1-f.7v)

Draft 2:

These two latter scales show the harmonic degrees or intervals. Thirds are the smallest harmonic degrees which make up all the chords in the span of an octave. Two thirds form a fifth, and three thirds form a seventh.

(I/1/2-f.47v)

Like the term "interval" discussed previously, "chord" is not defined here. Even though Rameau comes a little closer to describing the components of a chord in the second draft version, he does not provide a text definition. The student might be able to ascertain the concept of chord from the components spelled out in the examples which follow this text:

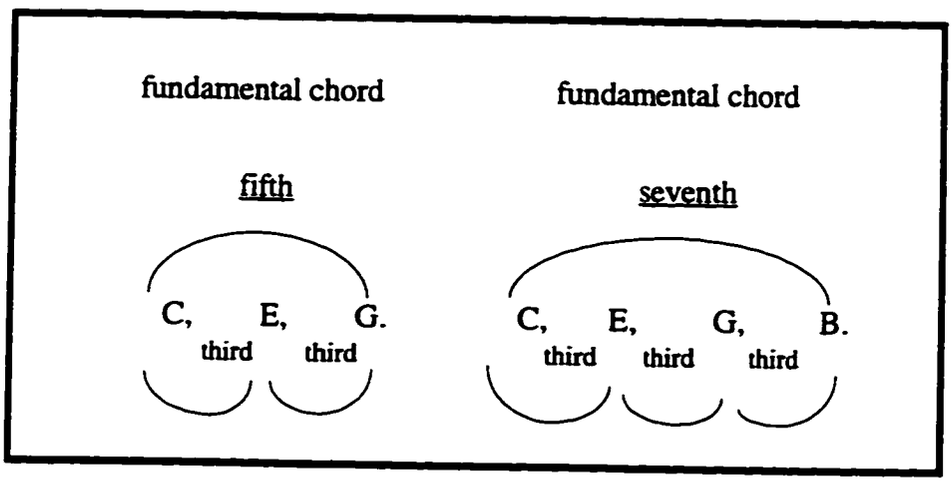

Figure B - 2: *Rameau's illustrations of both kinds of fundamental chord arranged by thirds*

But once more, this is only an assumption on Rameau's part. Meanwhile, in the quotation from the first draft above, another undefined term has crept in: "fundamental bass." When Rameau says "All the chords proper to the fundamental bass are made up of the

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smallest harmonic intervals within the span of an octave," he is once again introducing two undefined variables, "chord" and "fundamental bass." Rameau must have been somewhat aware of his difficulty because later in the second draft of lesson 3, called "Concerning the fundamental bass and its harmony or chord," he provides a definition of the fundamental bass alone: "The fundamental bass consists of any note with its third, fifth, and octave always implied." This is a vast improvement over the rather rambling description of the term "fundamental" that first occurs in draft one of lesson 1:

> All this together is called the perfect or fundamental chord: however, sometimes one calls a single interval a chord. Everything which bears the name fundamental supposes that of the [actual sounding] bass [i.e. the basso continuo] at the same time: for example, the note, or fundamental tone, that is to say, the note or sound that is the fundamental bass; the fundamental chord, that is to say the fundamental bass with its third, its fifth, and its octave; the succession or fundamental progression, that is to say succession, or progression of a fundamental bass, where each note is always felt to bear its own fundamental chord.
>
> (I/1/1-f.8r)

This quote is probably the best example of Rameau's writing and pedagogical shortcomings because he mixes in a variety of undefined or semi-defined terms here: "chord," "interval," "fundamental," "progression," and "succession." Remember that this paragraph is extracted from the first lesson, purported to discuss the "Scale of degrees of diatonic and harmonic intervals" only. Gianotti must have been keenly aware of Rameau's deficiencies, because his version specifically remedies these problems effectively—delaying definition of the terms "fundamental bass" and "chord" until his first chapter after the preliminary introduction:

> The fundamental bass is the principle and the foundation of harmony.
>
> Harmony is the union of many sounds arranged in thirds within the span of an octave: this is called a chord.
>
> (Gianotti, Sect.I/Ch.1,¶ 1-2)

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The Ordering of Topics

Gianotti's task as redactor was far from simple. As mentioned earlier, Gianotti's first chapter alone encompasses topics which Rameau scatters throughout the first seven lessons of "L'Art." In fact, Gianotti's preliminary introduction section and first chapter stem from as many as nine different sources in Rameau, owing to the appearance of material in different drafts. Gianotti's reorganization of the material, therefore, offers the opportunity to contrast and evaluate the pedagogical progression of ideas yielding a better understanding of both Gianotti and Rameau as teachers.

Each draft of Rameau's "L'Art" presents a slightly different ordering of the material. Since our discussion is currently confined to the material that directly corresponds to Gianotti's preliminary introduction and first chapter, only the first seven lessons are examined here. Rameau's first seven lessons encompass folios 7^{r} to 12^{r} in the first draft and f.47^{r} to f.51^{v} in the second draft. The lesson headings alone reveal a different progression of thought in each draft.

Draft 1:	**Draft 2:**
Lesson 1: Scale of Degrees, or Diatonic and Harmonic Intervals	Lesson 1: Scales of Degrees or Diatonic and Harmonic Intervals
	Lesson 2: Concerning Consonances, Their Inversion, and Their Position Relative to the Note Expressed
Lesson 3: Concerning the Mode or Key and the Fundamental Notes Which Compose It	Lesson 3: Concerning the Fundamental Bass and Its Harmony or Chord
Lesson 4: Concerning the Names the Fundamental Bass Notes Should Bear and Those of the Subject Under the Title of Known Notes	
Lesson 5: Method of Finding a Fundamental Bass Under a Given Subject and Its Most Perfect Succession	Lesson 5: Concerning the manner of finding the fundamental bass under a given melody

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Draft 1:

Lesson 6: Concerning the Measure, Its Beats, Syncopation, and the Value of Fundamental Notes in Each Measure

Article
1. the Measure
2. Syncopation
3. the Fundamental Bass and Syncopation

Draft 2:

Lesson 6: Concerning the Distinction of Beats of the Measure, Syncopation, the Value of Fundamental Notes in Each Measure, and the Breve

Lesson 7: Concerning the Name That Each Note of the Fundamental Bass Should Bear

There are various incongruities between the drafts. The conspicuous gaps (the absence of a second and seventh lesson in draft 1 and the absence of a fourth lesson in draft 2) are probably the most apparent differences. Certain topics remain in the same slots across the board, namely the introduction of scales in lesson 1, the means of finding a fundamental bass under a given subject/melody in lesson 5, and the discussion of the measure and syncopation in lesson 6. But other topics appear in different slots, namely "names of the fundamental bass notes and subject notes," appearing as lesson 4 in the first draft, and "of the name that each fundamental bass note should bear," occurring as lesson 7 in draft 2. These discrepancies raise many questions about the drafts in general: Why are there gaps? Why are the sequences of ideas different? Was draft 2 a revision of draft 1?

In order to evaluate the ordering of ideas in the two drafts, we must first consider why Rameau actually wrote this material twice. Does one version improve upon the other in style? in progression of ideas? in clarity? While there is no definitive answer to these questions, some internal and external clues do support the fact that the second draft is indeed a later source or revision of the material in the first draft. On the whole, in the first section of the work (on consonances) the writing in draft 2 seems more like a summary of the corresponding information in draft 1—recall the definition of "fundamental bass" in

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lesson 3 of draft 2 in comparison to the rambling definition of lesson 1 in the first draft (mentioned on p. 44). There are other signals.

Consult the table comparing the contents of each draft in the Appendix (pp. 501-5). Starting with lesson 5 in the first draft, every lesson has an example section labeled "Explication." While the actual musical illustrations of these sections are not extant, the text of the "explications" describe the musical illustrations in great detail. In the second draft, these "Explication" sections only surface with the introduction of topics concerning dissonance—topics which do not fall within the predetermined scope of the first section. Thus, in lessons 6-18 of the second draft, Rameau does not have specific "Explication" sections. In their place, he inserts markers labeled "Ex.^{e}," which refer to an example that is not even described in text. From the presence of these markers, a draft-writing theory emerges. Rameau, attempting to revise his earlier material by writing more of a summary of the topics, refers to examples he has already worked out in a previous version through shorthand markers. When considering a definitive version, then, he would consult the first draft to insert the missing illustrations. The fact that the "Explication" sections start to appear only in connection with "dissonant" topics in the second draft confirms this hypothesis. Since Rameau had not included material on dissonance in the first draft within the confines of the first section of consonances, this "dissonant" material has no precedent. Therefore, Rameau is forced to provide the examples as he goes along.

There are other clues. In the first draft, the actual handwriting is continuous—the "Explication" sections follow their relative lessons without any space gaps. The second draft, however, is another story. On f. 58^{r}, for example, there is a marginal entry at the bottom left of the folio "Blanc pr expliquer les Ex.^{es}" or "Space left in order to explain the examples." This entry is accompanied by approximately two inches of space at the foot of the folio. Space is also allotted at the top of the corresponding verso, approximately three inches of space, before the handwriting continues. Large spaces also appear between lessons 17 and 18 on folio 60^{v} and between lessons 18 and 19 on folio 61^{r}. Another

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interesting marginal annotation occurs on the bottom of f. 61^{v}: "Il manque icy un cahier tout entier" or "An entire notebook is missing." The next page provides the first "Explication" section of the second draft in lesson 19. This comment throws a proverbial fly into the ointment. Taken literally, it could indicate the loss of a whole section or notebook. Or, it could possibly contradict the theory that Rameau would refer to examples that previously appeared in the first section because it might imply that the materials containing the examples were simply missing. On the other hand, if a scribe were just copying the contents from Rameau's original copy, the scribe might not know how to account for the sudden appearance of an "Explication" section (on the next folio and continued throughout the following lessons), and just chalk up the previous missing example(s) to a missing notebook. Whatever the rationale, this marginal annotation supports the fact that the second draft is not as complete as the first.

Another factor signals the evolution of the second draft from the first: changing abbreviations of the term "fundamental bass" itself. The term "fundamental bass" undergoes several abbreviations before settling into a consistent form throughout the manuscript. In the first draft, until f. 11^{v}, the scribe does not abbreviate it—thus it appears written out as "Basse fondamentale." The first abbreviation occurs as "B^{sse} fond.^{ale}" on f. 12^{r}. A little further on, the term appears as "B.^{se} fond.^{le}" on f. 22^{v} and as "Basse fond.^{le}" on f. 23^{r}. On f. 26^{v} and f. 39^{v}, it is once more spelled out completely as "Basse fondamentale." However, from f. 28^{v} on, the abbreviation starts to appear systematically as "Basse fond.^{le}." In the second draft, aside from the one variant, "B.f." on f. 50^{r}, the term consistently appears as "Basse fond.^{le}"—this abbreviation is also consistent throughout both drafts of section II and the three drafts of the Preface (which is often the last thing to be written). Assuming that the scribes accurately transcribed the abbreviations in Rameau's drafts without introducing any alterations, we see the process of achieving a consistent abbreviation for a significant term throughout the work—the fundamental bass. To return to our note-taking analogy from the beginning of this section, this process is

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quite natural. Anyone who has taken class notes for a period of time will probably have variations in the initial abbreviations of specific terms that arise. As these terms tend to occur more often throughout the course, a systematic abbreviation is settled upon. Thus, it is very probable that Rameau abbreviated this term a few different ways when first setting his ideas down on paper. As he progressed, he then decided upon a definitive short-hand form in the course of his writing. The change in abbreviations alone would not be enough evidence to confirm the evolution of draft 2 from draft 1. Considering it in combination with the fact that "Explication" sections in the second draft only appear in connection with discussions of dissonance, however , lends support to the theory that the first draft preceded the second. A closer look at the orderings of material between the drafts should continue to prove this theory correct.

After the presentation of scales in chapter one, both drafts diverge. The absence of the second lesson in the first draft is downright puzzling. Another related problem is the absence of the fourth lesson in the second draft. In both cases, the writer seems to be unaware of the problem—for there are no corrective editorial means used such as the striking out of headings or numberings. This is most surprising on folio 48^{v} of the second draft, where the absence of a lesson is more noticeable because the headings of lessons 3 and 5 occur on the same page without any gaps or spaces between them. The absence of a second lesson in the first draft is less striking because it occurs after a very long version of the first lesson. Given the numbering problems in the latter part of the second draft, it is not inconceivable to believe that this is a persistent problem on Rameau's part. If Rameau forgot to include the second lesson in the first draft and then supplied it in the revision of his work (draft 2), it would seem to indicate that he was aware of the omission only upon revision of his earlier work. Since he did not revise the second draft, he might not have been aware of the lapse in numbering between the third and fifth lessons. This could have happened for several reasons. Rameau could have written the third lesson at one sitting and the fifth at another. Or perhaps a detail such as numbering was not a priority for him

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because he was more interested in setting his ideas to paper. The significance of the omissions lies not in their root cause but in the way they color another progression of thought. In this respect, the inclusion of a second lesson in the second draft provides more than additional material—it provides a vital link in a reevaluation of pedagogy.

Each draft has a unique flow of ideas. This flow is determined by the presentation of material in the first two consecutive lessons (lessons 1 and 3 in draft 1 and lessons 1 and 2 in draft 2). In draft 1, for instance, Rameau integrates elements on both horizontal (melodic) and vertical (chordal) planes. In the horizontal approach, pitches are connected one by one to form a melody; in the vertical approach, pitches are superimposed to create composites (intervals or chords) where the pitches are heard together simultaneously.

In both drafts of the first lesson, Rameau begins by introducing the horizontal element: scales. After he introduces the diatonic form of the scale, he progresses to the harmonic forms, arranged in thirds and fifths. How quickly the horizontal presentation of the harmonic scales turns to the vertical in draft 1:

> These two latter scales show all the degrees or harmonic intervals. Thirds should be recognized as the smallest harmonic intervals.
>
> All chords proper to the fundamental bass are made up of the smallest harmonic intervals within the span of an octave: two thirds form a fifth and three thirds form a seventh when one compares the first note with the last.
>
> (I/1/1-f. 7v)

It is clear that Rameau constructed these scales to display the units most useful to his theory: thirds and fifths. Thus, the scale of fifths also becomes useful for a particular reason—finding the most perfect intervals for the fundamental succession :

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> The most perfect succession of the fundamental bass is made up of the fifths given in the third scale. And these fifths additionally provide sharps and flats.
>
> (I/1/1-f.7v-8r)

While Rameau includes these ideas in both versions of lesson 1, in draft 1 specifically, he emphasizes the practicality of the scalar constructs for accessing vertical elements quickly.

> The second scale by thirds gives the order of the fundamental chords in three consecutive notes, without including the octave, which one can dispense with for the reasons already given. Thus, as soon as this scale is familiar, one no sooner thinks of a note than the two that follow it immediately come to mind. If one thinks of G, for example, G, B, D will come to mind at the same time. By this means, the fundamental chord of any note will be known.
>
> (I/1/1-f. 8r)

Rameau continues this approach in the next lesson that follows in the first draft: lesson 3. In this lesson, he discusses the concept of key. Contrary to what the modern reader might suppose, this discussion does not focus on the twelve different available keys (what Rameau would call "transposed keys"). That topic is delayed until lesson 10. Instead, Rameau defines "key" as all the diatonic notes contained within the boundary of a designated note and its octave. The emphasis assigned to the designated note, the tonic, is significant. The tonic begins to assume a central role in the diatonic scale. In the following passage, Rameau presents the fifth above the tonic (the dominant-tonic) and the fifth below the tonic (the subdominant) as the two opposite poles of the tonic:

> The note upon which any key revolves is called the tonic. The tonic associates itself with its two fifths to form a fundamental succession with them. In the key of C, for example, these two fifths are F and G. The fifth below C, which is F, can be imagined as its fourth by means of inversion. Thus, the fourth and the fifth of the tonic are equally its two fifths: the one below and the other above.
>
> (I/3/1-f. 8v)

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In this model, Rameau essentially places three pitches in a horizontal plane (an extension of the melodic model first used in the introduction of scales). When Rameau first introduces the diatonic and harmonic forms of the scales in the first lesson, he refers to traveling these scales in only two basic directions: forwards and backwards. Here, he introduces a new perspective: radiating from a single point in opposite directions. At this point, Rameau quickly integrates the vertical construct again by forming chords on each of these three pitches (the tonic, dominant-tonic, and subdominant).

> Each of these three notes is a fundamental and consequently bears its own fundamental chord: with C goes C E G from the right; with G, G B D; and with F, F A C. These three chords comprise exactly all the notes of the three scales which compose the key of C either in the diatonic or the harmonic order.
>
> (I/3/1-f.8^{v})

It is the integration of the melodic and vertical perspectives which makes the progression of ideas in the first draft so interesting. Rameau continues this thought process in lesson 4, "Concerning the name that notes of the fundamental bass should bear and those of the subject under the title of known notes." In this lesson, he builds on two concepts that he has already introduced: the use of the harmonic scale as a quick access for information (from lesson 1) and the new perspective gained from radiating outward from a specified point (lesson 3).

> From now on, one must only think of the fundamental notes of each key by the designations which characterize them; so that in speaking of a tonic, one might be able to immediately imagine what its dominant-tonic and subdominant should be.
>
> (I/4/1- f. 8^{v}-9^{r})

> The third scale gives the three fundamentals of each key in three consecutive notes. The first of these notes is the subdominant, the middle [note], the tonic, and the third [note] the dominant-tonic. One can arrange them in this way.
>
> (I/4/1- f. 8^{v})

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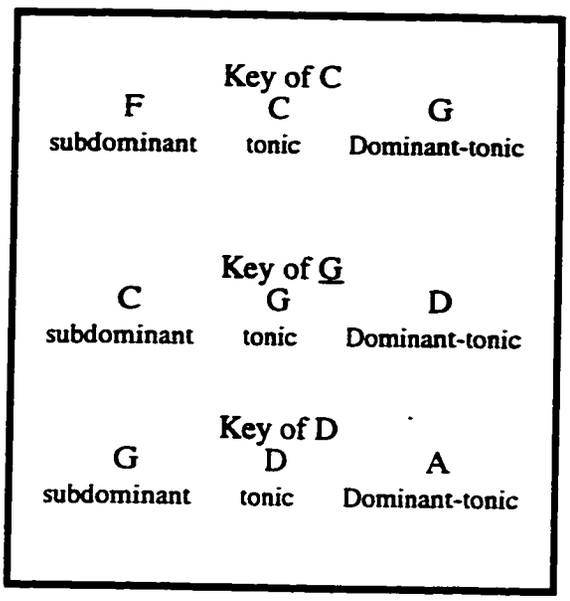

Figure B - 3: *Rameau's illustration of fundamentals in lesson 4, draft 1, f. 8v*

Rameau is now using the harmonic scale by fifths as a means of obtaining the three prime fundamentals of a key quickly. He also merges this concept with the new ordering of these fundamentals. Note that in the arrangement in the diagram above, the tonic is in the middle, flanked by its fifths on either side. Having introduced this material, he progresses to the next level by saying that all keys a fifth away share common fundamentals:

> Through this account, one sees that all keys a fifth away from each other have two common fundamental notes which lend themselves mutually to each other, as are C and G. C and G are equally fundamental from each side with this difference: in the key of C, G is dominant-tonic; and in the key of G, C is subdominant.
>
> (I/4/1- f. 8^{v})

In this first draft version, Rameau is successful at linking larger concepts together. The flow of ideas from lesson to lesson is not only unique in presentation, but coherent. Unfortunately, this approach is not without its problems. As I have pointed out previously, Rameau is not adept at handling details. Specifically, in the first draft version,

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he introduces too many terms without sufficient explanation and mixes in too many details at once (recall the excerpt from the first draft of lesson 1 on p. 51 where he throws together the terms "chord," "interval," "fundamental," "progression," and "succession" in the same context without providing a sufficient definition of each term). This is also evident in the contents of lesson 3 in the first draft. For instance, without stating that there can be many keys in a piece, Rameau jumps ahead by saying that the opening and ending key of a piece is the "principal" key. In the discussion of the fundamental succession at the end of the lesson, for example, where "the tonic associates itself with its two fifths," Rameau mentions inversion as an afterthought: "the fifth below C, which is F, can be imagined as its fourth by means of inversion. Thus, the fourth and the fifth of the tonic are equally its two fifths: the one below and the other above" without having introduced this general concept previously. This inability to adhere to the topic presented in the lesson heading results in confusion for the student unacquainted with fundamental bass theory. In his second draft, Rameau tries to remedy these problems.

Through the inclusion of a second lesson on interval inversion in his second draft, Rameau provides a vital link between the concept of harmonic units in the scales of lesson 1 and chords in lesson 3. He also links certain elements on a much subtler level by using the octave boundary of the scale in the first lesson as a frame for the inversion of intervals in the next. The concept of inversion, in turn, is another link in understanding the nature of chords and their relationship to the fundamental bass. The understanding of interval inversion is crucial here, for without a theory of inversion, there would only be a succession of chords in root position—a concept which would nullify the whole premise of the fundamental bass.

Rameau favors the vertical organization of musical elements in draft 2. Even though he starts with the same horizontal or melodic presentation of scales in the first lesson, the focus becomes the components (the intervals and chords), not the two opposite poles a fifth above and below the tonic found in the scalar context. After the introduction

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of inversion in lesson 2, Rameau opens lesson 3 with a definition of fundamental bass: "The fundamental bass consists of any note with its third, fifth, and octave always implied. For example, in imagining C for the fundamental bass, it is necessary to imagine C E G at the same time without even thinking about it etc." From this definition, the reader has a good start in comprehending the basic concept of the fundamental bass. So far so good. Unfortunately, Rameau confuses the issue by bringing in the concept of inversion:

> Through the same reason, the fourth is inverted from the fifth and the seventh from its second.[5]
>
> It is necessary to keep this inversion very much in mind in the fundamental succession which we will soon discuss. Not to be overly concerned with it, it suffices to imagine the name of the note which forms the interval that one needs, therefore placing it indifferently above or below the note to which it is compared. Since one knows, for example, that G forms a fifth of C no matter where one places it—either above or below C—it is always G and that suffices.
>
> (I/3/2-f.48v)

In the paragraph above, Rameau expresses two related but different concepts in the same breath. First, he wants the reader to know an interval and its inversion simultaneously. Then he shifts gears by suggesting that a pitch will always maintain its original identity in comparison to another note. In this case, G will always be a fifth (above) C—even if it occurs as a fourth below. While this is a related concept, it is not the same concept as interval inversion per se. Part of the problem arises from the way the example follows the phrase "it suffices to imagine the name of the note which forms the interval that one needs, therefore placing it indifferently above or below the note to which it is compared." Saying that a fourth is the inversion of a fifth is a far cry from expressing that the interval above the note of comparison will not be the same note name when the same intervallic

[5] This statement is especially confusing out of context. In the preceding passage, Rameau instructs the reader to associate a third and fifth above a given note, thus forming a fundamental bass complete with its chord. In this statement concerning inversion, Rameau is using the process of association to link the two ideas—he wants the reader to immediately recognize that a fourth is inverted from the fifth and a seventh from the second in the same way that his fundamental notes imply a chord above.

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distance is maintained below the note of comparison. Once more, Rameau skips some steps and has problems imparting details.

In some respects, Rameau, in his second draft version, makes the introduction of the fundamental bass a bit more accessible for the musical beginner. First of all, because the first lesson contains less information than its counterpart in the first draft, it offers less opportunity for confusion. Its very conciseness makes it easier to read. This conciseness of the second draft also allows Rameau to stick within the predetermined confines of each lesson. Even though Rameau still has not mastered introducing each concept one step at a time, compared with the profusion of information in draft 1 (specifically lesson 1), his second version is a considerable step in the right direction. Rameau's definition of the "fundamental bass" in lesson 3 is particularly successful because it is general enough to allow envisioning the concept in a variety of contexts and yet clear and specific in its detail.

Where Rameau's second draft gains in conciseness, however, it loses in continuity. The first draft version is more successful in this respect. Despite the numerous drawbacks due to its rambling nature and lack of focus, it reveals Rameau's connection of ideas on a higher level. In this version, Rameau truly leads the reader to connect concepts from lesson to lesson. Each new detail directly impacts the next. It is Rameau's unique integration of the horizontal (melodic) and vertical (chordal) elements in this particular draft that makes this an interesting and extremely valuable pedagogical method.

Gianotti had a keen awareness of Rameau's problems—he also knew how to fix them. His first aid centered on two basic revisions: placing ideas in a logical progression and providing simple definitions for concepts as they surfaced. His definitions alone were a vast improvement; unlike Rameau, he was careful to define a new concept using terminology that was already covered—he did not define a new variable with an equally new variable. Most of Gianotti's editorial contributions can only be ascertained through careful comparison with the corresponding sources in "L'Art," for he often recasts

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Rameau's ideas in different wording. As mentioned earlier, Gianotti's most striking contribution—his ordering of topics—is perhaps most evident in the preliminary introduction section. Gianotti knew how to break down information and how to teach it logically. Thus, by presenting the musical fundamentals in a separate section, he was able to provide a sound footing before introducing the abstract concept of the fundamental bass in chapter 1.

One might argue, as perhaps Rameau did, that beginners need not know everything at once in order to understand the concept of the fundamental bass. Topics such as the transposition of scales (keys), the measure, and syncopation of beats are not directly applicable to the workings of the fundamental bass and therefore would have their application later. However, there is much to be said for having these topics presented at the outset in an introductory section like Gianotti's. With this format, readers are not frustrated by a term thrown at them unexpectedly; they can also refer back to a topic that is clearly organized in a specific introductory section when questions arise in the course of study. Since Gianotti presents the basics first, he does not have to worry about the kind of omissions so common in Rameau's version. Moreover, a twentieth-century pedagogue would not attempt to introduce a concept as complex as the fundamental bass without assuming that the students were already conversant in the musical elements of intervals, scales, rhythm, and meter.

The way that each author organizes the information is telling, for each of them reveals specific pedagogical priorities as their particular method unfolds. While Gianotti's printed version is perhaps the best in terms of pedagogical presentation, Rameau's second draft organization most clearly reflects the better conceptual version. As stated earlier, by including the lesson on interval inversion, Rameau provides a conceptual prerequisite to the true understanding of the fundamental bass. Without this specific information, the fundamental bass is just a another formula to be followed, not an actual principle. Rameau may be unfocused presenting the particulars, but he is very clear presenting the underlying

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concepts. This might explain why the lesson concerning the names of the fundamental bass notes (lesson 7, draft 2) occurs after the third and fifth lessons concerning the fundamental bass and its harmony (lesson 3, draft 2) and its proper usage under a given melody (lesson 5, draft 2); to Rameau, the names of the fundamental bass notes are less important than knowledge of its nature and function.

Gianotti's possible influence on Rameau

Throughout his long career, Rameau was constantly revising his theories. He was always in search of a better approach and continued to publish his changing ideas right up to the last decade of his life. Rameau's last publication with a practical approach, the Code de musique pratique of 1760, synthesized methods of singing, accompaniment, and composition. In a sense, it was a culmination of a lifetime of musical thought, integrating ideas about accompaniment from the Dissertation sur les differentes méthodes d'accompagnement pour le clavecin ou pour l'orgue (1732) and composition from the Génération harmonique ou traité de musique théorique et pratique (1737) and the "L'Art de la Basse fondamentale" (c. 1740). Christensen has pointed out that many discussions thought to be new to the Code actually had roots in "L'Art." It is even possible that Rameau adapted a particular format from Gianotti's version of "L'Art."

The first chapter of the Code resembles Gianotti's preliminary introduction of the Guide. As in the Guide and the first lesson of "L'Art," Rameau starts with the scale, showing diagrams of the diatonic and harmonic partitioning. In this work, Rameau posits the derivation of all musical elements from the scale (an approach similar to his integrating linear and vertical elements in the first draft of lesson 1 in "L'Art"):

> In effect, the consonances, dissonances and their inversion, the order of sharps and flats, transposition, the fundamental sounds of the mode or key, cadences, that is to say the natural succession of these same fundamental sounds from which more or less perceptible pauses develop, and every modulation in harmony as much as melody, the characteristic succession of tonics—in one word, everything

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> is contained in these scales except for the chromatic and enharmonic [forms].[6]

Even though Rameau's ideas have not changed much, their appearance has. Rameau covers all musical basics here in the three articles of the first chapter: the concept of octave equivalence, consonances and their inversion, a definition of interval, the function of sharps, flats and naturals, clefs, and transpositions. He even devotes a section to a music reading system linking the five fingers of the hand with the five lines of the staff. Like the preliminary introduction in the Guide, this initial chapter precedes all the specific approaches (singing, accompaniment, and composition) in the book.

It is most probable that Gianotti would have shown Rameau his reworking of "L'Art" before publication in 1759. Though Rameau introduced such basics as scales, intervals (and their inversion), clefs, meter, and all aspects of melodic and rhythmic notation in the first chapter of his very first publication (the Traité of 1722) before presenting the fundamental bass in the second chapter, he abandoned this organization in his subsequent treatises. Having recently seen the beauty and logic of Gianotti's method, he most likely decided to return to this layout in the Code. After all, it is not difficult to recognize good organization when one sees it. In his preface to the Guide, Gianotti expresses his indebtedness to his teacher, Rameau—in this case, perhaps Rameau actually learned something from the student.

---

[6] Translation mine.

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THE EDITION AND ITS CRITICAL APPARATUS

Purpose and Scope:

The dissertation aims to provide a good translation of Gianotti's Le Guide du compositeur for the English reader. It also compares this work with its direct source, Rameau's "L'Art de la basse fondamentale," with a view toward analyzing how Rameau taught fundamental bass theory and how his ideas appeared via Gianotti. To do this comparison effectively, it has been necessary to confine this study to the presentation of the first section of Gianotti's Guide, the section that deals with the fundamental bass in the context of consonances only. The presence of two complete drafts of this material in Rameau's "L'Art" not only affords the unique opportunity to view Rameau's changing perspective in the writing of his work, but to see how Gianotti adapted these ideas in his printed version. To shed light on matters that need further explanation, it cites various passages in Rameau's other treatises, notably the Traité de l'harmonie and the Code de musique pratique. All translations of the Code are mine while all translations of the Traité are taken from Philip Gossett's version, Treatise on Harmony (New York: Dover, 1971).

Structure:

Since Gianotti's Le Guide du compositeur is the main source for this study, the format here follows the chapter divisions in Gianotti's work. Gianotti's Preliminary Introduction and 15 chapters of the first section appear in translation in Volume I. Each of Gianotti's chapters is followed with an "Editorial Commentary" by the present author explaining the differences between the variant readings in "L'Art" for that particular chapter. Volume II of this dissertation is divided into two parts. The first part provides the printed source of Le Guide du compositeur as well as the printed musical examples that

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serve as illustrations for the "Observations on this Example" sections found in each chapter. The second part of volume II provides the transcribed text of all the parallel passages in "L'Art."

Format:

Gianotti often expresses Rameau's ideas with Rameau's phrasing; he sometimes even uses Rameau's words. In order to facilitate the comparison of Gianotti's version with these corresponding passages in "L'Art," the text appears in a three-column format where possible: placing Gianotti's text in the left column, Rameau's first draft version in the center, and Rameau's second draft version in the right column.

This particular format is not without drawbacks. First of all, it is not always feasible to maintain because of inconsistencies in the manuscript drafts themselves. For example, some passages exist in one draft only. Gianotti also confounds the problem through his reorganization of ideas that stem from various sources dispersed between the drafts. As a result, the resulting passages drawn from "L'Art" often do not reflect the original flow of ideas in Rameau's corresponding lessons. Thus, I have given precedence to the comparison of ideas between both authors in their varied expression of the actual content in "L'Art." Since Gianotti's version is the prime focus of this study, the translation preserves the integrity of his original progression of ideas.

Citations of "L'Art":

For reference purposes, a shorthand quickly conveys the derivation of sources in "L'Art." A Roman numeral designates the main section of the work (on the left), an Arabic number shows the lesson number (in the middle), and another Arabic number specifies the draft number (on the right). All of these numbers are separated by slashes. Thus, when referring to the first draft of lesson 4 in the first section on consonances, it appears as I/4/1; the second draft of lesson 7 in section 1 appears as I/7/2.

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Editorial Procedures:

The Composer's Guide

Gianotti's paragraph indentation is followed consistently in the translation to facilitate comparison with the original printed source. I have numbered these paragraphs to make citations easier. The initial paragraph of a chapter always starts with the Roman numeral one. Paragraphs in the example sections continue the numbering started in the main body of the chapter while article divisions receive a new numbering within each subsection. Article divisions and any other sectional divisions appear as they do in the original source.

The punctuation within the internal structure of paragraph divisions in both sources has often been changed to clarify ideas without distortion. Gianotti's sentences are often very long, sometimes extending as far as a whole paragraph. He frequently relies on the use of semicolons to separate clauses in these long sentences. For purposes of clarity, these clauses often occur as separate sentences in this translation. This policy is likewise applied to Rameau's sentences.

Some problems arise from the nature of the French language in comparison to English. In French, since all nouns are masculine or feminine, it can be hard in English to be sure which noun a relative pronoun refers to—especially when the sentences are long and contain many clauses. To clarify the situation, this translation replaces the relative pronoun with the actual noun referred to in brackets [ ]. Brackets are also used liberally in providing an understandable reading of Rameau's text, for it must be remembered that "L'Art" was not a definitive treatise ready for publication, but a rather unfinished work in progress. As a result, editorial brackets also indicate the insertion of additional words required in English to convey the French idea. This enables the reader immediately to know which words are not found in Gianotti's or Rameau's expression.

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Despite long, complicated sentence structure, Gianotti's printed version is very clear. Orthography is never a problem. I have maintained his italicization and capitalization throughout the translation. I have also maintained his use of a special symbol such as * as footnote designations in the Guide to distinguish his remarks from mine appearing in Arabic numerals. When Gianotti and Rameau refer to scale degrees, they use the solmization syllables: ut, re, mi, fa, sol, la, si. I have opted to substitute the corresponding letter names C D E F G A B in hopes of eliminating any hindrance that these syllables might cause for the modern reader.

The Art of the Fundamental Bass

Most of the procedures used in the Guide apply to "L'Art." Because of the nature of a manuscript source, however, there are some special difficulties. Even more than in the printed source, spellings reflect the lack of standardization in the French language in this period. Thus, in the transcription of the French, some words will appear in an older spelling—such as "vray" for the modern "vrai." Also, the older spelling of imperfect tenses prevails (thus, "se declaroit" represents the more modern form "se declarait," for example.) Diacritical marks in the transcription also reflect the original source.

There are instances where the scribe of the manuscript repeats a word or phrase. These repetitions are preserved only in the transcription and noted by [sic]; they do not appear in the English translation. Sometimes, due to the handwriting, words are indecipherable. In these cases, I have had to make an educated guess using the context as a guide. These guesses appear in brackets { } only in the transcriptions, not in the translations. The scribe also uses abbreviations—some are consistently applied (such as "&c." for "etc.") and others are not (such as the abbreviation for "fundamental bass" which, as we saw earlier, appears as "Basse fond.^{le}," "B.^{se} fond.^{le}," "B^{sse} fond^{als}," and

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even "B.f."). The transcription reflects the original source whereas the translation dispenses with the abbreviation, supplying the full term instead.

Unfortunately, the terms in "L'Art," such as the names of scale degrees, are not consistently emphasized. Most times, they appear underlined. Even in the context of a single sentence, some terms may be underlined while seemingly equivalent terms are not. My transcription and translation reflects the emphasis given in the original source—as a result, the terms are inconsistent, even in local contexts. Very often, titles of lessons between the drafts are close but not exact. They can vary by as little as a plural "s"—compare the titles in the first lesson for example: "Scale of degrees or diatonic and harmonic intervals" in draft 1 versus "Scales of degrees or diatonic and harmonic intervals" in draft 2. Rather than regularize these aberrations, I have also maintained them throughout my edition.

Throughout "L'Art," Rameau includes various diagrams (of scales, chords, keys etc.). In the original manuscript, these diagrams are not labeled as figures, numbered, or set off from the surrounding text in any way, shape, or form. When I incorporate these diagrams into my tabular format, however, I have used computer graphics (boxes), to enclose each individual diagram. These boxes are strictly editorial and do not appear in the original manuscript; they are simply used to highlight the diagram and separate it from other examples or text.

Theoretical Terminology:

As can be expected, in both the Guide and "L'Art," there is a lot of specialized terminology. Throughout, terms will appear in the nearest English equivalent first, followed by the original French word in boldface and enclosed brackets. For example, the term *marche* would appear as "progression" [**marche**]. Rameau's terminology is not always the same as the closest modern equivalent, though. What we call a "dominant," Rameau calls the "dominant-tonic." This resemblance seems simpler that it actually is

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because Rameau's terminology does more than define a concept—it actually represents the function of the term. For instance, he does use our term "dominant," but it refers to a slightly different concept in his theory. To Rameau, the term "dominant-tonic" only refers to the dominant that precedes the "tonic" as opposed to a "simple dominant" which he uses to refer to any seventh chord that can occur anywhere in a chain of dominants. The simple "dominant" is not tied to a particular scale degree where the "dominant-tonic" is: it is always the tonic's upper fifth. Our "leading tone" is called the *note sensible* or "sensitive note" by Rameau. Actually, both terms reflect function. Our term is used because the raised seventh degree "leads" to the tonic. Rameau calls the same pitch the "sensitive note" for a similar reason: it is "sensitive" precisely because it indicates the tonic. While I use Rameau's terms "dominant" and "dominant-tonic" to differentiate the function of each element, I substitute our modern term "leading tone" consistently for the *note sensible* since it is an equivalent expression. Rameau refers to the note above the dominant-tonic as the *sus-dominante*; this is translated as "superdominant."

The Examples

The example sections that follow each of Gianotti's chapters are labeled "Observations on this Example." In these sections, both Gianotti and Rameau refer to the letter names used as reference points as *guidons*; I have translated this term as "guidemarks." All letters used as example references in these sections will appear followed by a period such as: A., B., C., etc.—even though Gianotti does not follow this procedure in his printed work. This notation will avoid potential confusion with scale degree letters substituted for ut, re, mi, etc. The reader should be advised that both authors also use the term *guidon* to refer to fundamental bass options marked in the examples with wavy lines. I have supplied the word "custos" for these references in these cases.

Many of Rameau's guidemarks do not match Gianotti's in later sections of "L'Art."

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In reconstructing the examples, where possible, I have placed Rameau's guidemarks in Gianotti's example in italics and transmitted Gianotti's original guidemarks in boldface.

The reader is reminded that the bass line of the examples is not the actual sounding bass or continuo bass, but a structural construct that reflects the skeletal nature of the fundamental bass. Therefore, seeming parallel fifths or octaves are not a breach of musical rules but a happenstance of following Rameau's prescribed formulae for fundamental bass progression.

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THE CRITICAL EDITION OF PART I

THE COMPOSER'S GUIDE

CONTAINING

Reliable rules for finding the fundamental bass of all possible melodies in all genres of music, first through consonances and then through dissonances. [This method] includes the most certain means for having success in the recognition and knowledge of key in the subject, [a skill] which is one of the greatest difficulties in composition.

A useful work for the knowledge and practice of composition and accompaniment

by

Mr. GIANOTTI

PARIS
DURAND, Foin St.
Mr. LE CLERC, S. Honoré St.
between Roule and Arbre-Sec Sts.
{at the statue of St. Genevieve, the first on the front}

M. D C C. L I X.

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PREFACE

In a century as enlightened as ours, the arts ought necessarily to be raised in our consideration to the point at which we see them in France. There, music acquires a new level of favor each day. The great [aristocrats, nobility] love it, protect it, and cultivate it. Philosophers make it an object of their speculations. The predilection [for music] is extended even to all professions. But the more the nation manifests its love for music, the more it is important to give [the people] reliable rules for acquiring an understanding of it. Let us admit it. Music is well understood only by a small number of true musicians who have come to grasp its principles only by hard work and profound reflection.

One risks going astray when one allows oneself to be guided by a false light presented by presumption and received in ignorance. To throw some notes randomly on paper, [notes] to which one gives the name of chords; slavishly to follow not the rules, but a routine taught in the past, proceeding by trial and error following teachers who have learned it the same way—this is to usurp the name musician. To study art in its fundamental principles, to disentangle its path, and the succession of sounds; to distinguish the appropriate progression for the subject, to find the source, the varieties, and the position of different chords—such is what one should call truly being a musician.

The true musician prefers reason to caprice; he knows how to see the why, the when, the how; these are not vain subtleties, these are the essentials of the art. One should be wary of taking the caprices of an overheated imagination for the effects of genius. I pity an author who allows himself to be thus swept away. If by misfortune he happens to be applauded, he believes himself already an expert; but his triumph is short lived. What is to be feared is that one see him crown his aberration!

The most brilliant ideas, the happiest facility, all the gifts of nature put together do not make a science. In order to succeed, a deep study of principles and good models is required: it is necessary to learn and learn well.

But, these principles according to which one should proceed, where do we find them? A gentleman, (Mr. Rameau), whose name alone evokes praise, was very capable of establishing them. Content to expound his system clearly, to disclose it, and demonstrate its usefulness, he believed it possible to dispense with the details.

The creative genius produces, expounds, persuades. His view passes with rapidity over small objects; he leaves to others the care of grasping them, of making the connections.

If I have succeeded at acquiring some knowledge, I owe it to Mr. Rameau. The work that I present today is the result of studies that I made under his eyes. His attention has deigned to guide me. The reputation he enjoys, the respect that all of Europe pays him, authorizes my confidence.

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One will find neither dissertations nor erudition here; I write only for practical musicians. I try to point out a simple and easy way for them. What has been done for the other sciences, for languages, for example, I dare to attempt for music. My book is strictly a grammar that I believe necessary. Nothing is more important than uniformity in the manner of teaching. Nothing is better at smoothing out the difficulties in schools than always following the same rules and employing the same expressions. What disadvantages do not result from different methods employed by different teachers?

Provincial schools have at their head, without a doubt, capable masters: but, permit me to say that in these schools, a dangerous abuse reigns. One follows arbitrary rules there; each master has his own [rules], often in opposition to those of another.

If it so happens that in the course of ten years a school comes to change [its] master three or four times, as one sees often, the students' heads become filled with a host of vague opinions—very well left to the mercy of uncertainty and contradiction for the rest of their lives. On the contrary, if the ideas had always been presented to them in the same form, one would in the end succeed in altering even the least favorable dispositions. And what progress would the students not make whom nature had fortunately endowed?

Do not be mistaken: one can be a superior genius and [still] not know how to teach. I do not mean to offend the masters of whom I speak. I aspire to be useful to them; I feel sure that they will find my work a [successful method] that will make [their teaching] easier: this is my principal aim. If my book can make easier the lessons that they are charged with giving students, they will find more time to contribute to the glory of art through their labors.

The title of my book announces its design. To teach [one] to find the fundamental bass of any given melody in all kinds of music—this is the end that I put forward. I begin with consonances. This subject will take up the first section. In the second [part], I treat the same material with dissonances. The third [part] will give rules for finding this same fundamental bass through both consonances and dissonances in the chromatic and enharmonic forms and [also] a treatise on supposition and suspension. This last concern will give me the opportunity to say a word in passing about the basso continuo, anticipating the book in which I treat this material thoroughly and which I am working on at present. First, I put forth the most simple principles, those of consonances. They [the principles] become more complicated later in proportion to the lights that the first [principles] have provided. Connected in this way, these principles form a chain which the slightest interruption could turn awry, perhaps even into error. Therefore, it is necessary to read [everything] consecutively and take care, above all, that a known truth not cause [one] to forget those [truths] which have led up to this, or which have preceded it. The first and most trivial [truth] may have its application at the end of the work.

Each chapter is a lesson, each lesson is supported by an example, and each example is explained by related observations. But the care that I have taken for the reader would be wasted if one passed from one chapter to another before being in full command of what preceded.

After having accounted for my aim, my plan, and my method, I will acknowledge yet another end I set myself. Some persons endeavor to belittle the method of the fundamental bass. Some accuse it of inadequacy; others of uselessness. Still others find bizarreness in it. Each finally speaks worse of it, in proportion, perhaps, to how little he understands it. I hope that my method will serve as an answer to all these reproaches. One will find the solution of all one's difficulties [once] one deigns to examine it without partiality, to study it, to contemplate it, and to delve into it deeply. One will see the means

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of succeeding in this; [they] are simple, easy, and sure—it is Mr. Rameau who has discovered them.

In addition to this treatise, and the one of the basso continuo that I have announced, I intend to give yet another particular treatise which would contain some rules for taking care of trios and quartets. The works put together will form a complete treatise of composition.

I dare say that my book will permit one to do without a teacher—as long as one is initiated in music.

Indeed, once one is certain of the perfection in the fundamental bass under melodies than one will have imagined, one will be, at the same time, [certain] of all harmony, and the paths that consonances and dissonances should take. Genius does the rest.

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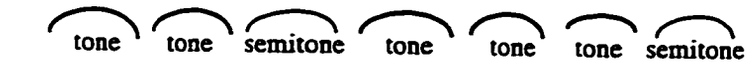
PRELIMINARY INTRODUCTION

SECTION I

Concerning Intervals.

The interval in music is the distance from one note to the other. There are two types: the *diatonic* interval and the *harmonic* interval.

Ladder or scale of diatonic intervals



C D E F G A B C, octave.

This ladder or scale contains an *octave* in its range. This octave is composed of eight diatonic notes which form five *tones* and two *semitones*. Indicated above are the intervals formed from one [note] to the next. This interval is also called a second, and is distinguished by *major* and *minor* [forms]. In beginning this ladder or scale from right to left, [starting] on the last note and finishing on the first, one will find all the intervals of a *seventh*. But this is not the place to speak of this *dissonance* [the seventh].* For the time being, it suffices to know: that ascending a second, or descending a seventh; ascending a seventh or descending a second are equivalent expressions. This is the sole object of this observation.[1]

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* *See the second part [section], where dissonance is discussed.*

[1] Gianotti is alluding to the concept of interval inversion within the octave boundary here. Rameau explains this in Lesson 2/2 (Additional Sources to Chapter I, pp. 89-90). See the commentary on chapter 1 for discussion.

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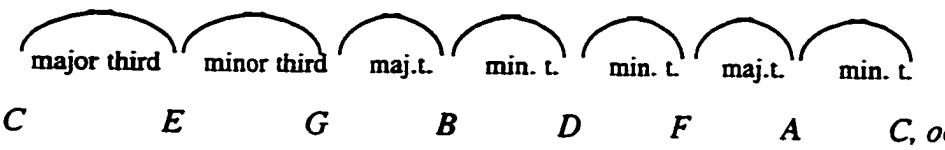
The Harmonic Intervals

The smallest harmonic interval is the *third*. The third composed of two tones is called major; it is minor when it is only composed of a tone and a semitone.

First Scale of harmonic intervals, by thirds



One will note in this scale that ascending a *third* or descending a *sixth*, ascending a *sixth* or descending a *third* is the same thing.

Second scale of Harmonic Intervals, by Fifths

In order not to tire the reader by precepts which cannot yet be applied, we will speak only of the actual *fifth* here.

It is composed of two *thirds*: the one *major*, the other *minor*; that is to say, of three *tones* and a *semitone*. This interval, when it is complete, is called the *perfect chord*, to which one joins the *octave* of the first *sound*, if one wishes.

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These fifths provide more: all the *sharps* and *flats* which enter in the transposed keys [**tons transposés**]; which will be the subject of the third section [of this introduction].

This ladder offers a series of consecutive descending *fourths*, and beginning from right to left; from which it follows that, ascending a *fifth* or descending a *fourth*, and *vice versa*, are synonomous expressions.

These three ladders or scales cannot be made too familiar, since they contain all the possible intervals, and all the chords proper to the fundamental bass. The second [scale] above all [the harmonic scale by fifths], in the order of these scales, is the most useful. It is necessary to become accustomed early to thinking not only about a single note but also to have the two thirds which accompany it come to mind at the same time. If one thinks about *C* for example, it is necessary that *C-E-G* occurs together with the idea. We cannot recommend this practice enough. One will recognize [its] usefulness by what follows.

SECTION II

Concerning the key or mode, and the different names that one gives the various diatonic intervals*

The *key* [**ton**][2] or *mode* is a succession of *sounds* arranged in relation to an an arbitrarily selected *pitch*. Thus, the key of *C*, for example, which is contained in the three preceding scales, either in the diatonic order or harmonic order, is the one upon which one had formed a melody which is proper to this key.

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* *One will always make use of this name for designating the modes.*

[2] In order to distinguish between the two uses of the word *ton*, Rameau establishes the system of using the capital "T" [**Ton**] to designate mode or key from use of the small "t" [**ton**] to designate the interval of a second —(Lesson 3/1, opening paragraph—see Additional Sources to Chapter I, p. 91).

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The key is *major* or *minor*; *major* when its third is major, that is to say, composed of two tones; *minor* when its third is minor, or composed of a tone and a semitone.

All the notes contained in the span of an octave of this arbitrarily chosen key can belong to it and bear different names.

The principal note, the one chosen to be the foundation of the mode, is called the *tonic*, the second note, *supertonic* &c, as in the following scale arbitrarily begun on *C*.

Designation of notes of the scale

Tonic	/ Supertonic /	Mediant /	Subdominant /
C	D	E	F
Dominant-tonic/	Superdominant /	Leading tone	
G	A	B	

This designation is used equally for melody notes and bass notes. We will always use them in the course of this work.

SECTION III

Concerning natural and transposed keys and the order and nature of sharps, flats, and naturals

The key of *C* is the only natural [key] and the *model of major keys*. That of *A*, is the model of the minor [keys]. The others are called *transposed*. In order to make [the transposed keys] conform to their models, [or] in order to fix or vary their genre of major or minor, one is obliged to place *sharps* or *flats* next to the *clef*. The sharp raises the note a

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semitone, the flat lowers [the note] by a semitone, and the natural returns it to its natural state.

The sharps or flats which are at the clef influence all the notes upon which they are placed. All the sharps that are not at the clef, and that occur in a piece of music, are called accidentals. They affect only the note that follows them, or at least do not extend their power beyond the measure where they are placed.

The sharps are placed in the order of ascending *fifths*, the first on *F*, the second on *C*. One will immediately find the continuation by recalling the third scale beginning on *F*.

The first flat is placed on *B*; the second on *E*, [continuing] in this manner by descending fifths. The same scale reversed or taken backwards presents the order of all the flats beginning on *B*.

We have said that except the key of *C* major and the key of *A* minor all the others were called transposed [keys]. They have been given this name because, for convenience, it is the custom, good or bad, of transposing all the major keys into that of *C* and all the minors into that of *A*..*

But this transposition might be almost unfeasible, or at least more difficult, if one did not know the number of sharps and flats that should enter into the different keys and constitute their genre. A table of these is given [below], particularly necessary since not all musicians agree on this matter, some placing the correct number of them, others placing less.

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* *The most ordinary method of transposing, is calling si the note upon which one places the last sharp of the clef and fa the note upon which one places the last flat, and then supposing next a clef relative to this change.*

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TABLE OF SHARPS

Major Keys	Relative minor keys	Number of sharps
G	E	1. F
D	B	2.F, C
A	F sharp	3.F, C, G
E	C sharp	4.F, C, G, D
B	G sharp	5.F, C, G, D, A
F sharp	D sharp	6.F, C, G, D, A, E

TABLE OF FLATS

Major keys	Relative minor keys	Number of flats
F	D	1.B
B flat	G	2.B,E
E flat	C	3.B,E,A
A flat	F	4.B,E,A,D
D flat	B flat	5.B,E,A,D,G

One equally simple and solid rule confirms the tables that we have just given: in the major keys it is necessary [to have] as many sharps or flats in the key signature as the diatonic scale of the key contains in ascending; and in the minor keys, as many as it contains in descending.

At first glance one will notice that in these two tables the tonic of the major keys always forms a minor third with the [tonic of] the minor key which correponds to it and [shares] the same number of sharps or flats. In the next [section], we will expand upon the important relationships [between these keys] which have given them the name relative.

But before finishing this section it is apt to make an observation, the omission of which could cause confusion or uncertainty. It is that the minor keys, when rising diatonically from their fifth to the octave in the same intervals as their relative major, are

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obliged to take two sharps which are not placed next to the clef, and therefore one calls [these] accidentals. See the example at the end of the introduction.

SECTION IV

Concerning the measure and syncopation

One can reduce the different measures in use to two [types]: the measure of two beats and that of three beats. [The measure] of four beats should be considered as being composed of two measures of two beats.

The first beat of any measure is called strong, the other [beats] weak.* Thus, in a measure of two beats, there is a strong beat and a weak [beat]; in the measure of four beats, two strong beats and two weak [beats]; in that of three beats, a strong beat and two weak [beats]. But one must notice that, in this last measure, the third beat can be considered a strong beat relative to the second [beat], as long as the note that forms it does not continue through the strong beat of the following measure.

Every note that belongs to two different beats is syncopated or felt to syncopate. It is especially [felt to syncopate] when it belongs to two different measures without completely filling these two measures. Such would be a note that, beginning on a weak beat of a measure, would finish on the strong beat of the following measure, or, that, beginning on the weak part of a beat, would finish on the strong part of the following [beat], or, that, beginning on the last half of a beat, would continue through the following beat.

Concerning this it is necessary to conclude that: 1) a note that would completely fill one, two, or three measures, would not be syncopated, 2) the syncopation has two different values proportionate to the two different beats that it comprises, 3) a note which contains the two weak beats of a measure in three, and finishes on the strong beat of the

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* *One calls the strong beat that of striking [downbeat], and the weak beat that of lifting [upbeat].*

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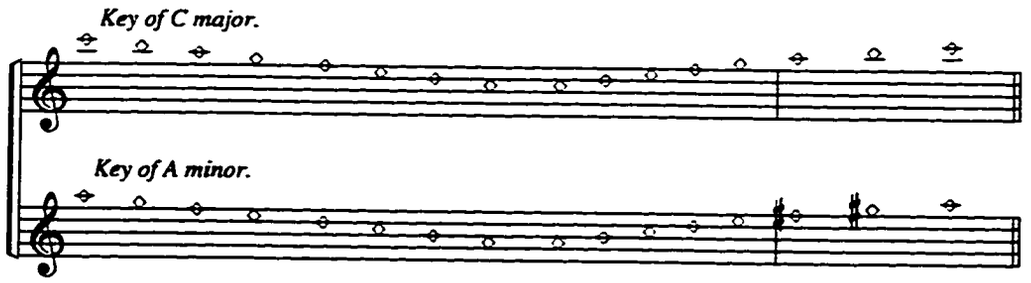
following measure, is felt to syncopate, 4) one of the places where one can create a syncopation is the two weak beats of a triple measure, since we have already said that the third [beat] could be regarded as a strong beat relative to the second, [and] 5) in the proposed cases, the syncopation, though it may not be marked with a tie, subsists of it no less, and requires two different fundamental notes. All this is essential and will soon have its application.

After this introduction, which we have believed indispensable for preparing the reader for the true understanding of the fundamental bass, we will now proceed to that matter. But one should not lose sight [of the fact] that this first section is devoted solely to consonances.

This precaution suffices in order to forestall all the quibbling that could be made about certain principles, definitions or divisions more or less susceptible to extension, restriction, or [further] discussion.

EXAMPLE.



Observations on this Example

One sees in this example that—in order to render the interval from E to F of the minor key equal to that of G to A of the major key and that of F to G of the minor equal to that of A to B of the major—it is necessary to add two accidental sharps, the one for F, the other for G, the leading tone of the key, which should never be more than an interval of a

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semitone from the tonic. Notice also that the diatonic degrees of the minor key are the same descending as those of the major. This observation will have its application in its proper place.

End of introduction

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THE COMPOSER'S GUIDE

CONTAINING
CERTAIN RULES FOR FINDING THE FUNDAMENTAL BASS
OF ALL POSSIBLE MELODIES THROUGH CONSONANCES

PART ONE

CHAPTER I

The Fundamental bass, its harmony and its most perfect progression

Gianotti:

1 The fundamental bass is the principle and the foundation of harmony.

2 Harmony is the union of many sounds arranged in thirds within the span of an octave: this is called a chord.

3 The fundamental bass is the succession of the lowest notes of the chords that it comprises.

Rameau: draft 1

I/1/1-f.8[r]

Everything which bears the name fundamental supposes that of the [actual sounding] bass [i.e. the basso continuo] at the same time: for example, the note, or fundamental tone, that is to say, the note or sound that is the fundamental bass; the fundamental chord, that is to say the fundamental bass with its third, its fifth, and its octave; the succession or fundamental progression, that is to say succession, or progression of a fundamental bass, where each note is always felt to bear its own fundamental chord.

Rameau: draft 2

4 These chords are consonant or dissonant. This first section only concerns consonant chords. They are called "consonant" because they are formed of sounds which join together agreeably.

I/2/2-f.47[v]-48[r]

Consonances are the third, the fourth, the fifth, the sixth and the octave

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5 The second ladder or scale, *section I*, contains all the consonant chords which are proper for the fundamental bass. Two thirds, which are the smallest of the harmonic intervals, form a fifth; and this is called the *perfect chord*. The octave of the first sound can be added to the perfect chord, if so desired. This chord is allocated especially to every tonic note or every implied tonic.

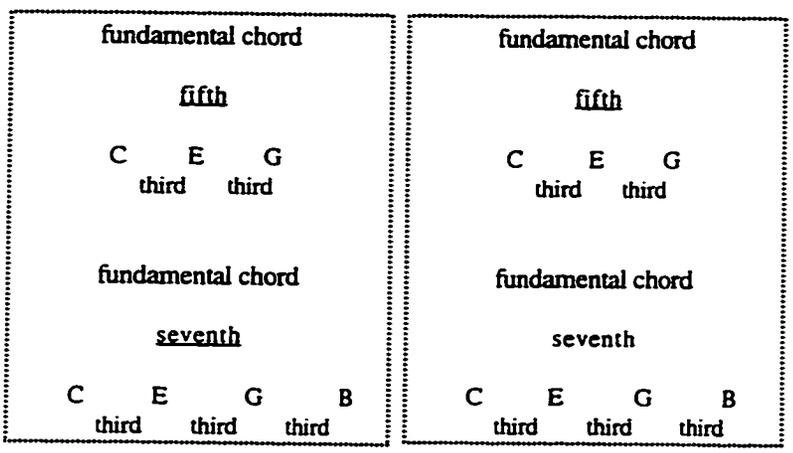
I/1/1-f. 7r

Thirds should be recognized as the smallest harmonic intervals.

All chords proper to the fundamental bass are made up of the smallest harmonic intervals within the span of an octave: two thirds form a fifth and three thirds form a seventh when one compares the first note with the last.

I/1/2-f. 47r

Thirds are the smallest harmonic degrees which make up all the chords in the span of an octave. Two thirds form a fifth, and three thirds form a seventh.



I/1/1-f.8r

All this together is called the perfect or fundamental chord: however, sometimes one calls a single interval a chord.

I/1/1-f.8r

One implies the octave nonetheless in the very name of the note taken as fundamental bass.

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	I/1/1-f.7^{r}-8^{r}	I/1/2-f.47^{v}
6 The most perfect progression of the fundamental bass is in the third [of the three scales] of the introduction, that is to say, the [scale] by fifths, either ascending or descending.	The most perfect succession of the fundamental bass is made up of the fifths given in the third [of the three] scales. And these fifths additionally provide sharps and flats.	The most perfect succession of the fundamental bass is made up of the fifths [in the third of the three scales]. And these fifths additionally provide the order of sharps and flats.
7 In order to form a fundamental progression, the tonic joins forces with its two fifths: the one above, and the other below. In the key of *C*, for example, the tonic is *C*, its dominant-tonic *G* is its fifth above, and its subdominant *F* is its fifth below. One can imagine the fifth below the tonic as its fourth above by means of inversion. Thus, the fourth and the fifth above the tonic are equally its two fifths.	I/3/1-f. 8^{v} The note upon which any key revolves is called the tonic.[1] The tonic associates itself with its two fifths to form a fundamental succession with them. In the key of C, for example, these two fifths are F and G. The fifth below C, which is F, can be imagined as its fourth by means of inversion. Thus, the fourth and the fifth of the tonic are equally its two fifths: the one below and the other above.	

[1] The wording of this statement is awkward: *La note sous la quelle roule quelque Ton que ce soit s'appelle tonique*. This assigns the tonic an assertive role because it still retains its primacy even though it is not forced to appear as the first note of the scale (see my discussion of this point in the Editorial Commentary to chapter 1.)

By expressing this concept the way he does, Rameau continues to impress upon the reader the flexibility of scales. Rameau's advice in both drafts of lesson 1 (see the section Additional Sources to Chapter I, pp. 85-7) recommending the memorization of these scales both in ascending and descending order. From the following specified advice in I/1/1-f.7^{r}, Rameau emphasizes the fact that a scale can start anywhere in the continuum of pitches: "Whichever note one takes for the first of this scale, the next ascending note will be the second, the next the third, and so forth." Rameau's approach in "L'Art" is a lot more open-ended than in the Traité (Book 3, chapter 4) where he says: "We choose a note which we call the tonic, by which the bass should begin and end; this note determines the progression of all those contained within its octave." In "L'Art," Rameau releases the tonic from the confines of the octave boundary referred to in his earlier definition. This broad approach is consistent with the flexibility in thinking emphasized in the initial lessons of the first draft.

Rameau also uses the word *roule* in the same context in lesson 7/2, the lesson on fundamental bass names—see footnote 5 in lesson 7/2—Additional Sources to Chapter I, p. 93.

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8 Each one of these three notes [the tonic, the subdominant and the dominant-tonic] is a fundamental, and bears its own third and fifth, that is to say, the perfect chord; and these three perfect chords—the tonic, dominant-tonic, and subdominant— comprise all the notes of the three scales in the introduction which make up the key of *C*. From this it follows that there can be only these three primary fundamental sounds in each key: namely the tonic and its two fifths. From this also comes the necessity of memorizing the two last scales of the introduction: the third [the scale of fifths] for immediately finding the three primary fundamental sounds of any key and the second [by thirds] for finding their perfect chords. If one thinks about the tonic *C* for instance, *E* and *G*, which form the perfect chord with it, and *G-B-D* and *F-A-C* which are its two fifths with their perfect chords, should come to mind at the same time.

I/3/1-f.8v

Each of these three notes is a fundamental and consequently bears its own fundamental chord: with C goes C E G from the right; with G, G B D; and with F, F A C. These three chords comprise exactly all the notes of the three scales which compose the key of C either in the diatonic or the harmonic order.

I/1/1-f.8r

The second scale by thirds gives the order of the fundamental chords in three consecutive notes, without including the octave, which one can dispense with for the reasons already given. Thus, as soon as this scale is familiar, one no sooner thinks of a note than the two that follow it immediately come to mind. If one thinks of G, for example, G, B, D will come to mind at the same time. By this means, the fundamental chord of any note will be known.

I/3/2-f. 48v

The fundamental bass consists of any note with its third, fifth and octave always implied. For example, in imagining C for the fundamental bass, it necessary to imagine C E G at the same time without being too concerned about it etc.

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Additional Sources to Chapter I

Editors Note:

Gianotti draws the information in his first chapter and Preliminary Introduction from a variety of Rameau's sources distributed throughout the first seven lessons of "L'Art." In fact, Gianotti condenses the material of the first chapter from six of Rameau's lessons:

Lesson 1 (both drafts): "Scale/s of degrees or diatonic and harmonic intervals"

Lesson 2/2: "Concerning consonances, their inversion and their position relative to the note expressed"

Lesson 3/1: "Concerning the mode or key and the fundamental notes which compose it"

Lesson 3/2: "Concerning the fundamental bass and its harmony or chord"

Lesson 4/1: "Concerning the names the fundamental bass notes should bear and those of the subject under the title of known notes"

Lesson 7/2: "Concerning the name that each note of the fundamental bass should bear"

It is through an understanding of these six sources that Rameau's presentation and view of the fundamental bass emerge—a view that is slightly different in many respects from the perspective given by Gianotti in his first chapter. Since I refer to these sources throughout my commentary on chapter I, I include the English translations of Rameau's lessons here as **Additional Sources to Chapter I.** Lessons 1 and 3 are presented in a two-column format (one for each draft version) for comparison purposes. Unlike the presentations of lessons 1/1-2, 2/2, and 3/1-2, lessons 4/1 and 7/2 on Fundamental Bass Names are not presented equally in a continuous format. The presentation follows the flow of content in the second draft (7/2), therefore the content of 4/1 appears in blocks of passages parallel to the continuous second-draft version. Folio indications not only announce the location of each excerpt in the manuscript, but serve to delineate each excerpt as a section, for translations are continuous within each division headed by a folio designation. The reader is reminded that transcriptions of each lesson appear in a continuous format in Volume II.

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Lesson 1

1/1: Scale of degrees or diatonic and harmonic intervals

1/2: Scales of degrees or diatonic and harmonic intervals

Draft 1
Scale of degrees or diatonic and harmonic intervals

Draft 2
Scales of degrees or diatonic and harmonic intervals

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f. 7r

The scales which follow should [be] memorized in ascending as well as descending [forms], beginning and ending them on any note.

These scales are written in ascending order; for the descending order, one has only to follow them backwards from the last note, called the octave, to the first

First scale in diatonic degrees

	tone	tone	semitone	tone	tone	tone	semitone
C	D	E	F	G	A	B	C
first note	second	third	fourth	fifth	sixth	seventh	octave

This first scale is that of the smallest degrees or intervals natural to the voice: these [intervals] are called diatonic—and we will always refer to them this same way. Above the name of each note, one finds the interval formed from one note to the next; and below, the name of the degrees that each forms in relation to the first degree.

f. 47r

It is necessary to have the three scales which follow firmly in mind, in ascending as well as descending [forms]. Even before anything else, it is necessary to know them from memory, beginning and ending them on any note.

These scales are written in ascending order; for the descending order, one has only to follow them in reverse, from the last note, called the octave, to the first.

First Scale
of diatonic intervals

	tone	tone	semitone	tone	tone	tone	semitone
C	D	E	F	G	A	B	C
first note	second	third	fourth	fifth	sixth	seventh	octave

This first scale is that of the smallest degrees or intervals natural to the voice: these [intervals] are called diatonic.

The names of these notes occupy the middle line. Above, one finds the name of the interval formed from one [note] to the next; or below, the name of the interval formed in relation to the first.

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f. 7v

The difference between these tones and semitones which interlace in this scale need not occupy us too much for the present: the natural order makes it perceptible without one's thinking about it. One will notice only that there are never more than two semitones in the span of an octave composed of eight diatonic notes.

Furthermore, one does not naturally sing three [whole] tones in a row—except when one supposes a pause on the note which ends the first [whole tone], the fifth in the scale. Thus, the semitone comes naturally after one or two tones.

He who does not know how to differentiate a tone from a semitone solely by ear, should doubt his ability to follow us, unless he just wishes to grasp the basic theory until his ear is formed, for it is only a matter of habit.

Whichever note one takes for the first of this scale, the next ascending note will be the second, the next the third, and so forth.

f. 47v

The difference between these tones and semitones interlaced in this scale need not occupy us too much for the present: the natural order makes it perceptible without one's thinking about it. But it is necessary, at least, to be able to imagine it through the aid of the ear—to break them down by saying: this one is a tone, this, a semitone. If not, it would be necessary to wait until [this skill] were developed enough for it to be only a matter of habit before wanting to give oneself to the practice of composition; therefore accompaniment would be a false means of succeeding at this.

Moreover, one notices that there can never be three [whole] tones in a row except when one supposes a pause to the first [whole tone], as one should suppose on the note which makes a fifth in the preceding scale.

Second Scale by thirds	Second Scale by thirds
C, E, G, B, D, F, A, C	C, E, G, B, D, E, A, C
Third scale by fifths	Third scale by fifths[1]
C, G, D, A, E, B, F, C	C, G, D, E, B, E, C

[1] Apparently, the scribe in the second draft has omitted "A" between "D" and "E" here.

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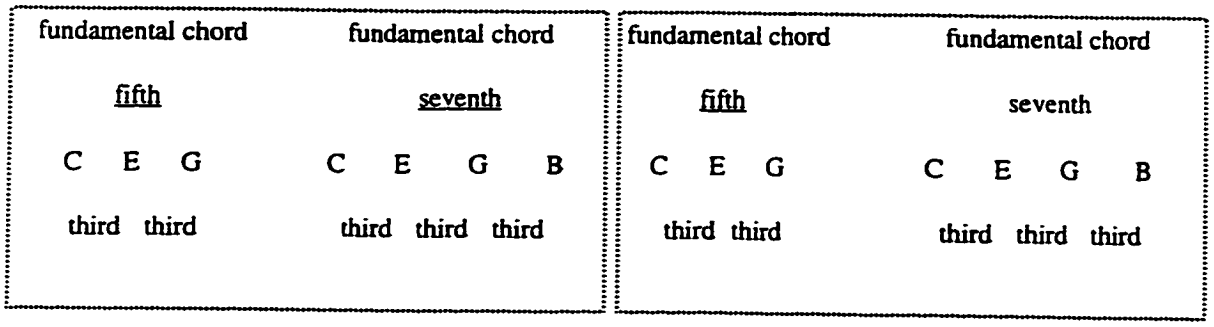
These two latter scales show all the degrees or harmonic intervals. Thirds should be recognized as the smallest harmonic intervals.

All chords proper to the fundamental bass are made up of the smallest harmonic intervals within the span of an octave: two thirds form a fifth and three thirds form a seventh when one compares the first note with the last.

These two latter scales show the harmonic degrees or intervals. Thirds are the smallest harmonic degrees which make up all the chords in the span of an octave. Two thirds form a fifth, and three thirds form a seventh.



The most perfect succession of the fundamental bass is made up of the fifths given in the third scale. And these fifths additionally

[f. 8]

provide sharps and flats.

One implies the octave nonetheless in the very name of the note taken as fundamental bass.

The most perfect succession of the fundamental bass is made up of the fifths [in the third scale]. And these fifths additionally provide the order of sharps and flats.

All this together is called the perfect or fundamental chord: however, sometimes one calls a single interval a chord. Everything which bears the name fundamental supposes that of the [actual sounding] bass [i.e. the basso continuo] at the same time: for example, the note, or fundamental tone, that is to say, the note or sound that is the fundamental bass; the fundamental chord, that is to say the fundamental bass with its third, its fifth, and its octave; the succession or fundamental progression, that is to say succession, or progression of a fundamental bass, where

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each note is always felt to bear its own fundamental chord.

The second scale by thirds gives the order of the fundamental chords in three consecutive notes, without including the octave, which one can dispense with for the reasons already given. Thus, as soon as this scale is familiar, one no sooner thinks of a note than the two that follow it immediately come to mind. If one thinks of G, for example, G, B, D will come to mind at the same time. By this means, the fundamental chord of any note will be known.

A note above the octave or above the first note, is always the same in the adjacent octave.

One should see by this that one must not pass too lightly over the scales of the first lesson. The following [discussions] will demonstrate this necessity yet more strongly.

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Lesson 2

2/2: Concerning consonances, their inversion and their position relative to the note expressed

f. 47ᵛ-48ʳ

Consonances are the third, the fourth, the fifth, the sixth and the octave but the third and the fifth contain all of these at the nearest octave.[2]

The octave is always the note expressed for the bass, except when carried to one or several octaves above—this is immaterial in practice.

The inversion of the third gives the sixth and that of the fifth gives the fourth. This inversion consists of transposing the order of two notes in comparison bearing above the one which is below. This transposition is occasioned by the octave. [Using] the first scale, one can instruct oneself by comparing one of the notes in the middle to the first [note] and to its octave. D, for example, which makes a second on one side, makes a sixth [sic] [seventh][3] from the other [side] and F, which makes a fourth on one side, makes a fifth from the other [side]. The rest follow suit where one still finds the same inversion between the same intervals.

Through the knowledge of this inversion, the sixth below can always be taken for the third above, and the fourth below for the fifth above, or the opposite: especially when it is only a matter of the succession from one note to another.

---

[2] Rameau is trying to simplify matters here by telling us that all consonances can be reckoned from the third and fifth by means of inversion within the confines of an octave. Thus, within the octave boundary, inversion of the third yields the sixth and inversion of the fifth yields the fourth. In this way, Rameau subtly prioritizes the components of the fundamental chord, the third and fifth, over other consonances and over other intervals in the scale.

[3] From the context here, it is clear that this should be a "seventh" rather than a "sixth."

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For example, if one wishes to pass to the fifth of C, which is G, it is the same to take this G at the fifth above C or at the fifth [sic] [fourth][4] below.

When one speaks of an interval, one always supposes it above the note expressed. For example, the fifth of C is G and not F which is the fifth below, and so forth.

This supposition comes from [the fact] that the note expressed is always perceived as the lower; from which [it proceeds that] the part of music it occupies is called Bass.

When one speaks of an interval below the expressed note, it is necessary to specify it by saying the fifth below, the third below etc.

If, however, one said in general, the fifths, the thirds of such a note, one would then understand them to be the [fifth and third] below as well as the [fifth and third] above.

FOLIO 49bis

Concerning consonances, their inversion and their position relative to the note expressed[5]

The third and the fifth give all the consonances. It is true that the third produces the sixth through its inversion the same as the fifth produces the fourth through its [inversion]. This is clearly understood by changing the order of the two notes that one compares, that is to say, by placing above the one which was below. For example, if one takes the third A C in the second scale where C is above A, one sees in the first [scale] to the contrary, a sixth from C to A because C is below.

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[4] This is an error. Rameau means to say the "fourth below"—see the commentary of this lesson at the beginning of chapter 1.

[5] This brief version on the inversion of intervals appears to be inserted after the fifth lesson in the second draft. Presumably, Rameau tried his hand at another more concise version of the material that appeared on ff. 47v-48r.

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Lesson 3

3/1: Concerning the mode or key and the fundamental notes which compose it

3/2: Concerning the fundamental bass and its harmony or chord

Draft 1
Concerning the mode or key and the fundamental notes which compose it

Draft 2
Concerning the fundamental bass and its harmony or chord

We shall always use the word key [**Ton**] instead of mode to follow usage. And, in order to avoid confusion of this word with the one that designates the interval of a second, we use a capital "T" when it signifies mode.

The key consists of any note whatever with which one includes all the diatonic notes enclosed in the span of its octave—from which one says the key of C, the key of D and the key of E etc.

For example, the key of C is completely contained in each of the three scales,

f. 8v

the first of which gives its diatonic degrees.

The key upon which one starts and finishes a piece is called the Principal.

The note upon which any key revolves is called the tonic. The tonic associates itself with its two fifths to form a fundamental succession with them. In the key of C, for example, these two fifths are F and G. The fifth below C, which is F, can be imagined

The fundamental bass consists of any note with its third, fifth, and octave always implied. For example, in imagining C for the fundamental bass, it is necessary to imagine C E G at the same time without even thinking about it etc. Through the same reason, the fourth is inverted from the fifth and the seventh from its second.

It is necessary to keep this inversion very much in mind in the fundamental succession which we will soon discuss. Not to be overly concerned with it, it suffices to imagine the name of the note which forms the interval that one needs, therefore placing it indifferently above or below the note to which it is compared. Since one knows, for example, that G forms a fifth of C no matter where one places it—either above or below C—it is always G and that suffices.

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as its fourth by means of inversion. Thus, the fourth and the fifth of the tonic are equally its two fifths: the one below and the other above.

Each of these three notes is a fundamental and consequently bears its own fundamental chord: with C goes C E G from the right; with G, G B D; and with F, F A C. These three chords comprise exactly all the notes of the three scales which compose the key of C either in the diatonic or the harmonic order.

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A Comparison of Excerpts from Lessons 4/1 and 7/2 concerning Fundamental Bass Names

Lesson 4

4/1: Concerning the Names the Fundamental Bass Notes Should Bear and Those of the Subject Under the Title of Known Notes

Lesson 7

7/2: Concerning the Name That Each Note of the Fundamental Bass Should Bear

Draft 1
Concerning the name that notes of the fundamental bass should bear and those of the subject under the title of known notes

Draft 2
Concerning the name that each note of the fundamental bass should bear

---

f. 8v

The fifth of the tonic is called the dominant-tonic and its fourth subdominant.

f. 50v

One already knows that the note upon which the key revolves, C for the present, is called the tonic.[6] The fifth of this tonic, G, is called the dominant-tonic and its fourth, F, is called the subdominant.

f. 8v-9r

From now on, one must only think of the fundamental notes of each key by the designations which characterize them; so that in speaking of a tonic, one might be able to immediately imagine what its dominant-tonic and subdominant should be.

f.50v-51r

From now on, one must distinguish the fundamental bass notes by these designations alone—provided that one knows what the tonic is. The two others [the dominant-tonic and the subdominant] always ought to come to mind, for they are relative to this tonic.

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[6] In this opening statement, as in 3/1, Rameau uses the verb *rouler*: *On scait deja que la notte sur la quelle roule le ton et qui a present ut sappelle tonique*. The use of this specific word sheds light on the large-scale function of the tonic not only as a determinant of key, but a key center; it is not just a pitch which sets the scale in motion.

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f. 8v

The third scale gives the three fundamentals of each key in three consecutive notes. The first of these notes is the subdominant, the middle [note], the tonic, and the third [note] the dominant-tonic. One can arrange them in this way.

Key of C:		
F	C	G
subdominant	tonic	Dominant-tonic
Key of G		
C	G	D
subdominant	tonic	Dominant-tonic
Key of D		
G	D	A
subdominant	tonic	Dominant-tonic

In this order, one will notice that when F is tonic, it is necessary to add a flat to B and when B is tonic, it is necessary [to add] a sharp to F.
Through this account, one sees that all keys a fifth away from each other have two common fundamental notes which lend themselves mutually to each other, as are C and G. C and G are equally fundamental from each side with this difference: in the key of C, G is dominant-tonic; and in the key of G, C is subdominant.

f. 51r

The third scale gives the order of dominants and subdominants in succession. For example: in saying C, G, D, A, etc. one recognizes G as the subdominant of D and C as the subdominant of G, F as the subdominant of C etc. One can arrange as such

F	C	G	C	G	D
subd.	tonic	Dom.	subd.	tonic	Dom.

all the notes of the 3rd scale in order to extract the fruit [of it] by means of studying the ability to immediately imagine the dominant and subdominant of any tonic that occurs, noting that when B is tonic, F should be sharped and that when F is tonic, B should be flatted.

Through this, one sees that two same notes a fifth or fourth away from one another lend themselves mutually of assistance: if one is in the key of C, G is therefore the dominant tonic of this C; and, if on the contrary, one is in the key of G, C is therefore the subdominant of this G.

One must not pass lightly over such remarks. Since it is necessary to have so much in mind, as well as all that had preceded, one must not be obliged to reflect a moment in order to remember these things; when it is a matter of being interested in the name of an object, one object distracts from the other and nearly always throws confusion into one's ideas.

One ought not count on memory too much, since one would know too much to keep running through everything that one should know before going too far. The idea

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of combinations of relationships ought to guide us for the present much more than the talents of those who are given them are too often based. Let us absolutely forget about [these details] until the time when it will be prescribed to place them in our work.

f. 9r

The melody notes that we will call the subject should be imagined only as thirds, fifths, and octaves of the fundamental bass without ever giving them the designations suitable to this fundamental bass alone. Among [all] the notes of the subject, one principally distinguishes the third of the tonic, and the [third] of the dominant-tonic from [all the other notes].
The third of the tonic is called the mediant and [the third] of the dominant-tonic, the leading tone. One should always regard them as known notes which generally indicate their fundamental bass. The mediant requires the tonic for a fundamental bass and the leading tone requires the dominant-tonic. Consequently, when examining the subject, assuming that the key will already be known, it is always necessary to try to distinguish the mediant and the leading tone [from the others there] because their fundamental basses will be known at the same time. Besides forming a third of the dominant tonic, the leading tone is also always a semitone below[7] the tonic or its octave such as B is to C. In the following, we will also have supertonics and superdominants that are equally relative to the subject and to the fundamental bass. Their degree of relationship to the tonic is easy to recognize: the supertonic is the second [above][8] the tonic or its octave and the superdominant is the second above the dominant-tonic or its octave.

One must never give the names proper to the fundamental bass to the melody; one ought to consider [the melody notes] only as thirds, fifths, or octaves of this fundamental bass. Otherwise, ambiguity will arise sometimes. If one takes the melody note as if it were the fundamental without thinking about it, one consequently imagines the harmony of this melody note and one sometimes becomes suddenly disoriented through this imperceptible misunderstanding.

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[7] The passage actually reads: *un demi ton au dessus de la tonique ou de son octave* which would be a semitone above the tonic. It is clear from the context here that the word *dessus* is mistaken for *dessous* meaning "below."

[8] The word *dessous* ("below") should be *dessus* ("above") here: *...la sutonique est la seconde au dessous de la tonique, ou de son octave.*

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Editorial Commentary on Preliminary Introduction & Chapter I

Comparison of the pedagogy of Gianotti and Rameau presents something of a challenge in this initial chapter. While Gianotti concentrates his focus, dealing with only "The Fundamental bass, its harmony and its most perfect progression" in this specific chapter, Rameau distributes various concepts related to the fundamental bass throughout several lessons in both drafts. The corresponding sources in "L'Art" for this chapter are: 1) both drafts of lesson 1, "Scale of degrees or diatonic and harmonic intervals;" 2) lesson 2/2, "Concerning consonances, their inversion and their position relative to the note expressed;" 3) lesson 3/1, "Concerning the mode or key and the fundamental notes which compose it;" 4) lesson 3/2, "Concerning the fundamental bass and its harmony or chord;" 5) lesson 4/1, "Concerning the names the fundamental bass notes should bear and those of the subject under the title of known notes;" and 6) lesson 7/2, "Concerning the name that each note of the fundamental bass should bear." Translations of all these relevant lessons in "L'Art" appear in translation in the section Additional Sources to Chapter I on pp. 84-95.

In many respects, Gianotti's approach is much clearer and appears more highly organized on several different levels than Rameau's approach in "L'Art." His Preliminary Introduction is a good example of sectional organization. It contains four sections, each devoted to a specific topic. Visually, it is not only attractive, but extremely easy to follow because it provides the facts in a clear, compact format. This then serves as a future resource for the quick access of desired information. What is more, Gianotti sticks to the topic at hand and rarely introduces material that does not lie within the given boundary of each sectional division. Gianotti is also careful to define each element as it arises before proceeding to its use in a new context. In this way, he presents terms and concepts in a logical progression. A good example is the relationship of the material in the preliminary introduction to the introduction of the fundamental bass in chapter 1. Gianotti is able to

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limit his discussion of the basics in his first section so that he can then apply these rudiments to the larger concept of the fundamental bass in his first chapter. This is good pedagogy. But organization is not totally lacking in Rameau's version. Through Rameau's diffusion of information, a distinct organization emerges—organization of concepts. Herein lies the difference between Gianotti and Rameau: organization of facts versus organization of concepts.

There are three main areas where Rameau and Gianotti exhibit underlying differences in approach: interval inversion, the inseparability of the fundamental note and its chord, and the use of scales as a springboard for teaching fundamental bass theory. Since Gianotti covers scales in the Preliminary Introduction section, some of the material involving this topic lies outside the predetermined scope of his first chapter. Even though the investigation of scale methodology seems unrelated to fundamental bass presentation, Rameau's approach proves otherwise.

The Scales

Gianotti follows Rameau by beginning his method with the introduction of scales. That Gianotti begins his in a preliminary introduction section does not detract from this fact. This initial commonality of approach, however, also becomes a point of departure—for Rameau's presentation of concepts is dynamic where Gianotti's is static.

Consider the way each teacher presents scales. In the realm of scales, Gianotti and Rameau present the same facts and basically share the same approach; it is the way that they relate the ideas that sets them apart. The opening paragraph sets the stage for the direction each author will take. In both drafts of lesson 1, Rameau begins with a specific command: memorize these scales "beginning and ending them on any note." Knowing the scales literally backwards and forwards is important too, for Rameau directs how to read the scale

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in descending form from the given ascending order. The diagram of the diatonic scale then follows.[1]

Unlike Rameau, Gianotti does not provide any commandments. Instead, he precedes his diagram of the first scale with a simple definition of "interval," expressing it as the distance between one note and another. He then proceeds to qualify two different types of interval: the diatonic and harmonic. After presenting a diagram of the "scale of diatonic intervals" which includes the names of the notes as well as the ordering of tones and semitones, he tells us specifics: 1) the octave has eight diatonic notes—which can be broken down into five tones and two semitones and 2) these intervals can also be called "seconds," which can be broken down into either major or minor types. Thus far, Gianotti deals in specifics, consistently defining each element as it arises. These definitions seem somewhat clinical in comparison to Rameau's approach.

Thus, while Gianotti and Rameau offer the same diagrams of the diatonic and harmonic scale models, their different views concerning the nature of the elements described only become apparent from the text and examples which surround these diagrams. The variant approaches, initiated in the presentation of scales, have far-reaching influence on the presentation and flow of other ideas in succeeding sections.

The most significant difference in presentation concerns the introduction of the fundamental bass, a topic that is central to both Gianotti and Rameau. In their scale lessons (lesson 1 in both drafts of "L'Art" and section I of the preliminary introduction in the Guide), both Rameau and Gianotti provide diagrams of the 3 types of "scales": the diatonic scale and the two "scales" by harmonic intervals (by thirds and fifths). Gianotti continues with the model he had initiated in his presentation of the diatonic scale: he defines each element before proceeding to the next larger unit. In this case, he introduces the third as the smallest harmonic interval and distinguishes two types—major and minor. This approach

[1] For Rameau and Gianotti, the "diatonic" scale refers to a scale constructed in whole and half steps. Specifically, both authors give only the major scale patterning here: whole, whole, half, whole, whole, whole, half.

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is consistent with his initial presentation of the concept "interval," where he also defined the term before breaking it down into two types—the diatonic and the harmonic. The diagrams of scales by thirds and fifths then follow. After these diagrams, Gianotti elucidates the concept of fifth:

> In order not to tire the reader by precepts which cannot yet be applied, we will speak only of the actual *fifth* here.
>
> It is composed of two *thirds*: the one *major*, the other *minor*; that is to say, of three *tones* and a *semitone*. This interval, when it is complete, is called the *perfect chord*, to which one joins the *octave* of the first *sound*, if one wishes.

This discussion typifies Gianotti's whole approach. Items are continually introduced as the sum of parts. There are definite benefits to this approach, for the uninitiated reader can assimilate facts much more readily than complex concepts. Gianotti also helps impart these facts consistently and logically by linking their progression coherently. However, this approach also has disadvantages. Even though Gianotti carefully links each definition, each small unit is finite in scope. While each unit contributes to the sum that is the next part, because the definition is a fixed term, it remains inherently closed. Rameau's seemingly unorthodox and unorganized approach presents each unit as an idea that is at liberty to be combined with others of the same scope. A small example will illustrate how the progression of fixed definitions hampers the interaction of ideas on larger levels.

Gianotti misses one small element in his presentation: the differentiation of a tone from a semitone. After the diagram of the diatonic scale and before the diagrams of the harmonic scales appear, Rameau devotes a considerable amount of space in both drafts to the discussion of distinguishing by ear a tone from a semitone. Aside from being experiential in approach, this very discussion centers around learning to sing tones and semitones in set scale patterns. After telling the reader not to worry about the ordering of whole tones and semitones in the scale, Rameau says:

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Draft 1:

Furthermore, one does not naturally sing three [whole] tones in a row—except when one supposes a pause on the note which ends the first [whole tone], the fifth in the scale. Thus, the semitone comes naturally after one or two tones.

(I/1/1-f. 7ᵛ)

Draft 2:

Moreover, one notices that there can never be three [whole] tones in a row except when one supposes a pause to the first [whole tone], as one should suppose on the note which makes a fifth in the preceding scale.

(I/1/2-f. 47ᵛ)

This advice would probably be very confusing to the beginner, for up to this point, the reader has only seen an example of the diatonic scale starting and ending on the principal note in the ordering whole-whole-half-whole-whole-whole-half as shown in Rameau's first diagram. What Rameau does not say is that three whole tones outline a tritone, an unnatural interval that one would avoid singing initially.[2] Rameau's aside then requires an understanding of the structure of the scale as a patterning of specific whole tone groups punctuated by semitones. Recall that the student has problems differentiating a tone from a semitone in the first place. In order to truly understand what Rameau is getting at (the traditional division of the scale into two basic groupings, the fifth formed by scale degrees 1-5 and the fourth formed by scale degrees 5-8), the student has to be able to: 1) differentiate a whole tone from a semitone 2) recognize a grouping of 3 whole tones in the diatonic scale and 3) realize that this 3-tone grouping does not occur at the beginning of the scale. While the reader might pick up the fact that the whole tones appear in groups of 2 + 3 in ascending the scale and 3 + 2 descending the scale, it is very unlikely that the beginner would think of starting to sing a scale from the middle where the three whole tones naturally occur.

By mentioning the pause on scale step 5, Rameau isolates the whole tone grouping that appears from scale steps 4-7. When he gives this specific clue, he is telling us that the

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[2] Thomas Christensen interprets this observation a bit further. He posits that: "The upper tetrachord of a scale is heard as belonging to the dominant mode. This is why musicians instinctively feel a pause at scale degree 5 when ascending the scale." Rameau and Musical Thought, 196. For the background and ramifications of this shift, see his chapter on "Mode and modulation."

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three-whole-tone grouping can occur—but only in the context of the middle of the scale. Thus, Rameau really wants to tell the beginner not to start singing a scale with the three whole steps, but with two. Unfortunately, he jumps ahead here without sufficient explanation because by including this information, he essentially talks about a bigger issue: dividing the scale into two sections.

This approach is far more complex than teaching a set ordering of intervals. By presenting this material here, Rameau qualifies his earlier dictum about memorization; he does not want the student just to memorize facts (the scale as a fixed series of whole and half steps within an octave frame) without internalizing the rationale behind the facts. For Rameau, it is more important for the student to be able to recognize and sing (internalize) the scale construction starting on any note. Thus, Rameau focuses on the larger concept in his pedagogy: he first advocates recognizing the grouping of whole tones in sets of twos and threes and then tells the reader that a scale does not start with the three-tone grouping. Through this example, Rameau allows for understanding the scale as a continuum of pitches that can extend in any direction. Rameau first hints at this concept in the opening paragraph when he stresses memorization of the scales in ascending and descending order, beginning and ending on any note.

Rameau is more successful at this integration of ideas in his first-draft version of the first four lessons. Besides treating scales in lesson 1/1, Rameau also introduces a plethora of terms concerning the term "fundamental" in a single paragraph:

> All this together is called the perfect or fundamental chord: however, sometimes one calls a single interval a chord. Everything which bears the name fundamental supposes that of the [actual sounding] bass [i.e. the basso continuo] at the same time: for example, the note, or fundamental tone, that is to say, the note or sound that is the fundamental bass; the fundamental chord, that is to say the fundamental bass with its third, its fifth, and its octave; the succession or

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> fundamental progression, that is to say succession, or progression of a fundamental bass, where each note is always felt to bear its own fundamental chord.
>
> (I/1/1-f.8r)

From this hodgepodge, the reader can ascertain that the term "fundamental" has a very general application: it can indicate an interval, a chord, a bass note with an implied chord, a succession of bass notes, and conceivably a succession of bass notes with their implied chords. For the beginner, this definition of the fundamental bass might not be the best introduction to the idea precisely because it is too general. Part of the problem resides in the fact that the "fundamental bass" is not that easy to define, specifically because it involves a web of relationships. For Gianotti, the fundamental bass is just "the principle and the foundation of the harmony" or the "succession of the lowest notes of the chords that it comprises." For Rameau, however, it is much more than this since he understands the fundamental bass as an idea that actually generates all aspects of music. The fundamental bass is always present—it is just implied in various guises in the music whether it be a single note, an interval, a full chord, or the progression of these chords. Even though Rameau's definition seems rambling and unfocused, his description conveys the interrelation of musical elements under the umbrella of the fundamental bass. While the specific implications of this paragraph regarding the fundamental bass will be covered later on, one general characteristic comes into view: Rameau lays out all his cards at once. As a result, each idea is a thread that can be woven at a much later date into a variety of fabrics. One such fabric is the concept of key.

In lesson 3/1, the next lesson that follows the first lesson in draft 1, Rameau weaves a couple of threads from the definition in 1/1 into the fabric of key. Here, in his inimitable fashion, Rameau throws out some more ideas—namely, the local level of key and the larger level of key throughout a piece:

> The key consists of any note whatever with which one includes all the diatonic notes enclosed in the span of its

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> octave—from which one says the key of C, the key of D and the key of E etc.
>
> For example, the key of C is completely contained in each of the three scales, the first of which gives its diatonic degrees. The key upon which one starts and finishes a piece is called the Principal.
>
> (I/3/1-f. 8[r-v])

In the first paragraph, Rameau once more keeps the definition of key general enough to allow applying the concept of key to any starting pitch. Most modern readers with limited musical knowledge would probably first think of key on a larger scale—the key of a piece, for instance, or a change of key within a piece. Note that Rameau introduces key on a local level first and then proceeds to define the "Principal" key of a piece later. It is the local level which is germane to Rameau's discussion here. He then uses this thread to weave another fabric: the fundamental succession.

Before he can introduce the fundamental succession, though, he must introduce the concept of tonic primacy at the local level of key. He does this in one sentence: "The note upon which any key revolves is called the tonic." Interestingly enough, Rameau does not refer to the tonic as the "first note of the scale;" rather, he says that the key "revolves" upon it. This descriptive comment is significant, for once again Rameau communicates the idea of key without any conceptual restrictions. This means of expression allows the tonic the power to exert influence over the pitches in its dominion without being forced to appear as the first note of the scale—thus, in Rameau's model, the tonic retains its primacy regardless of its actual position in a particular context. From this picturesque definition, the tonic could appear in a variety of formats such as:

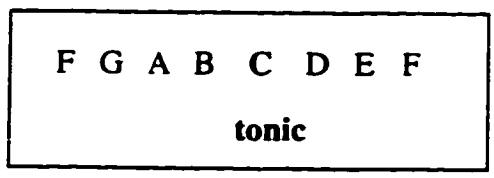

Figure 1- 1: *The tonic in the midst of the scale*

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or:

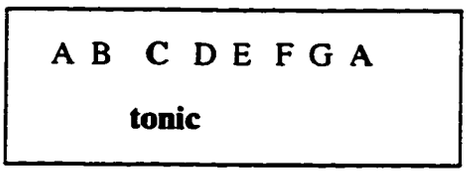

Figure 1- 2: *Another view of the tonic in the midst of the scale*

and not have its function hampered by its position—implied in the next fixed model:

Figure 1- 3: *The tonic appearing as boundary points for the scale*

Thus, through his descriptions of ideas rather than definitions of terms, Rameau continues to maintain the flexible conception of scale that he introduced in lesson 1.

After establishing the tonic's primacy in the key, Rameau introduces the fundamental succession:

> The tonic associates itself with its two fifths to form a fundamental succession with them. In the key of C, for example, these two fifths are F and G. The fifth below C, which is F, can be imagined as its fourth by means of inversion. Thus, the fourth and the fifth of the tonic are equally its two fifths: the one below and the other above.
>
> (I/3/1-f. 8v)

In this model, Rameau radiates outward by fifth from a central point, the tonic. Its two poles are the dominant-tonic (above the tonic) and the subdominant (below the tonic). By presenting the tonic as the primary indicator of key, Rameau has a reference point. From this reference point, he can progress to relationships within a key, radiating out from the

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focal point, the tonic, to its two fifths.[3] This mode of presentation not only sets up a relational model, it projects a level of pitch hierarchy right away. In draft 1, Rameau assigns chords to each of these reference points only after presenting this fundamental succession:

> Each of these three notes is a fundamental and consequently bears its own fundamental chord: with C goes C E G from the right; with G, G B D; and with F, F A C. These three chords comprise exactly all the notes of the three scales which compose the key of C either in the diatonic or the harmonic order.
>
> (I/3/1-f. 8v)

Rameau presents a smooth progression of concepts in the first draft. In this way, he integrates the scalar model of pitches (horizontal thinking) with the chordal model (vertical thinking). His emphasis on the scale as a continuum of pitches in lesson 1 provides the requisite setting for the idea of the fundamental succession; this, in turn serves as a framework for the construction of fundamental chords on these specific reference points.

---

[3] Rameau's view of the tonic as a center between two poles in "L'Art" is an extension of the way he presents the tonic in the Génération harmonique. Christensen shows how Rameau's view of the tonic in the Génération reflects a shift in scientific thought from the the mechanistic philosophy where matter impacts matter to the Newtonian theory of gravity:

> ...just as Newtonian theory shifted attention away from the *impact* of matter to the *attraction* of matter, so too did Rameau begin to define tonal motion less by the concatenation of dissonant dominant chords above the fundamental bass than by the attractive quality of the tonic. One could almost reduce this to a simplified formula: in the *Traité*, Rameau was concerned mainly with the function of "dominants," while in the *Génération harmonique* he was concerned with the function of the tonic. In other words, whereas the primary tonal forces described in the *Traité* originate in dominant harmonies by means of the percussive agitation of dissonance, in the *Génération harmonique* the primary tonal force resides with the tonic by means of its power to generate, coordinate, and draw all dominant subfunctions.

Ibid., 190.

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Gianotti adopts many aspects of this first-draft model, but his approach does not integrate these ideas as successfully as Rameau. Like Rameau, he introduces the concept of a focal point in the scale and allows this focal point to be arbitrarily selected by the composer:

> The *key* [**ton**] or *mode* is a succession of *sounds* arranged in relation to an an arbitrarily selected *pitch*. Thus, the key of *C*, for example, which is contained in the three preceding scales, either in the diatonic order or harmonic order, is the one upon which one had formed a melody which is proper to this key.
>
> The key is *major* or *minor*; *major* when its third is major, that is to say, composed of two tones; *minor* when its third is minor, or composed of a tone and a semitone.
>
> All the notes contained in the span of an octave of this arbitrarily chosen key can belong to it and bear different names.
>
> The principal note, the one chosen to be the foundation of the mode, is called the *tonic*, the second note, *supertonic* &c.
>
> (Preliminary Introduction/Sect. II, xvj-xvij)

Although Gianotti does not distort any of Rameau's concepts, his presentation stresses other points. First of all, Gianotti does not immediately name the central pitch of the scale the "tonic"; instead, he names the two types of scales—major and minor (as he classified the two types of interval and the two types of thirds in section I). Even though Gianotti eventually conveys the primacy of the tonic here, he uses this concept to launch a presentation of scale degree names instead of a discussion of function. Presumably, since a discussion of function would involve the term "fundamental," Gianotti waits to present this topic in his first chapter. Thus, it is only in the seventh paragraph of the first chapter concerning the fundamental bass that Gianotti uses Rameau's model of the fundamental succession from lesson 3/1—**only after** presenting the definitions of "fundamental bass" (¶ 1), "harmony" and "chord" (¶ 2-5), and the most perfect intervals for the fundamental succession (¶ 6):

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> In order to form a fundamental progression, the tonic joins forces with its two fifths: the one above, and the other below. In the key of *C*, for example, the tonic is *C*, its dominant-tonic *G* is its fifth above, and its subdominant *F* is its fifth below.

Gianotti does convey Rameau's idea accurately here; but because he presents the idea in a long line of facts, the idea itself loses prominence. This stylistic problem dilutes the impact of the ideas in the final paragraph of chapter 1 as well. In this paragraph, Gianotti gives an excellent summary of the ideas dispersed throughout numerous lessons in the first draft of "L'Art", namely: the prominence of three "primary fundamental sounds" in each key, the appearance of perfect chords on these specific points, the importance of the scales for immediately finding the three primary pitches of a key, and the chords built on these fundamental notes:

> Each one of these three notes [the tonic, the subdominant and the dominant-tonic] is a fundamental, and bears its own third and fifth, that is to say, the perfect chord; and these three perfect chords—the tonic, dominant-tonic, and subdominant— comprise all the notes of the three scales in the introduction which make up the key of *C*. From this it follows that there can be only these three primary fundamental sounds in each key: namely the tonic and its two fifths. From this also comes the necessity of memorizing the two last scales of the introduction: the third [the scale of fifths] for immediately finding the three primary fundamental sounds of any key and the second [by thirds] for finding their perfect chords. If one thinks about the tonic *C* for instance, *E* and *G*, which form the perfect chord with it, and *G-B-D* and *F-A-C* which are its two fifths with their perfect chords, should come to mind at the same time.

However, once again, Gianotti's relation of these ideas as a summation relates the facts—not a connection and progression of ideas.

Aside from presenting the facts, Gianotti does convey some of Rameau's advice concerning the memorization of scales. For instance, in the last paragraph of his first chapter, Gianotti adopts the memorization of scales for locating the three fundamental

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pitches of a key (using the scale by fifths that Rameau used in lesson 4/1 and 7/2 to find three consecutive fifths) and for building triads on these fundamental pitches (using the scale of thirds to find the three consecutive thirds of the desired triad that Rameau advised in lesson 3/1). All of these specific applications stem from Rameau's first statements in lesson 1: memorize these scales "beginning and ending them on any note."

Sometimes, though, Gianotti's assimilation of Rameau's recommendations regarding this aspect introduces some problems. Like Rameau, he speaks of reading the diatonic scale backwards "from right to left" in the first section of the preliminary introduction; however, instead of placing this dictum in the context of memorization as Rameau does in both versions of lesson 1, Gianotti introduces the fact that the compass of these notes (*B* to *C*, reading from right to left) forms a seventh, a dissonance—a topic to be discussed in the second section of the treatise. While Gianotti casually refers to the relationship between a given note and the first note of the scale through this specific example of a seventh, he does not include the relative distance that each progressive degree forms from the first note of the scale as Rameau does in the diagrams of the diatonic scale in both drafts (see the ordinal designations below the first scale). Again, this extra detail in Rameau's version reveals the subtle emphasis given to the tonic of the key: for each successive note is related to it.

Gianotti gets into more trouble briefly trying to account for this "dissonance" of a seventh resulting from the compass of notes in retrograde. As a result, he follows this comment with a concept that is even more problematic—intervallic inversion:

> In beginning this ladder or scale from right to left, [starting] on the last note and finishing on the first, one will find all the intervals of a *seventh*. But this is not the place to speak of this *dissonance* [the seventh]. For the time being, it suffices to know: that ascending a second, or descending a seventh; ascending a seventh or descending a second are equivalent expressions. This is the sole object of this observation.

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Unfortunately, by stating that ascending a second is the same as descending a seventh and vice-versa, he gives no explanation of this inversional phenomena.

The Inversion of Intervals

The topic of inversion is particularly troublesome for Gianotti precisely because he relies on Rameau's first draft for his preliminary introduction and first chapter. The passing references to inversion that occur in lessons 1 and 3 of the first draft version of "L'Art" appear without any explanation of the concept—and to this extent, the first draft version is somewhat flawed. As mentioned earlier, only Rameau's second draft version includes a second lesson devoted to the topic of inversion. Even though Rameau's presentation of inversion in 2/2 leaves a lot to be desired, it does introduce a valuable concept that is crucial for the understanding of this topic: the octave boundary. Since this is the only available information on this topic in "L'Art," the content of 2/2 is explored at this particular time.

This lesson finds Rameau battling the same pedagogical dragons. Here, the main problem is the ordering of ideas. Rameau starts the lesson by listing the following as consonances: the third, fourth, fifth, sixth and octave. He then states that "the inversion of the third gives the sixth and that of the fifth gives the fourth. This inversion consists of transposing[4] the order of two notes in comparison bearing above the one which is below." While Rameau has given a definition of "inversion," he has confused the order of information. The reversal of sentence order would have made much more sense: 1) "inversion consists of transposing the order of the two notes in comparison bearing above the one which is below;" 2) "the inversion of the third gives the sixth and that of the fifth gives the fourth."

[4] Here, the word "transposing" is not the same as our modern musical equivalent, which implies a change of key. Rameau uses the word to express a change of position between intervals.

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This lack of organization continues—for the student would also not yet understand that the octave is the boundary for this flipping of intervals. As can be expected, this is the next statement that Rameau introduces after the definition of inversion: "This transposition is occasioned by the octave. [Using] the first scale, one can instruct oneself by comparing one of the notes in the middle to the first [note] and to its octave." Once again, a better pedagogical order would be: 1) "transposition is occasioned by the octave. [Using] the first scale, one can instruct oneself by comparing one of the notes in the middle to the first [note] and to its octave;" 2) "inversion consists of transposing the order of two notes in comparison bearing above the one which is below;" 3) "the inversion of the third gives the sixth and that of the fifth gives the fourth."

The example which follows the statement on transposition within the octave is also a little confusing. Rameau states: "D, for example, which makes a second on one side, makes a sixth [sic] [seventh] from the other [side] and E, which makes a fourth on one side, makes a fifth from the other [side]. The rest follow suit." From the second example, the inversion of a fourth and fifth, it is clear that Rameau is talking about the inversion of intervals within an octave frame. However, the second half of the first example is incorrect. Certainly D is a second from one pole (C), but it is not a "sixth" from the other; rather it is a seventh. Either Rameau forgot that he was using C as the reference point on the other end, or it is a copying error. This example is much clearer in Book 3 of the Traité:

> Considering the scale in this way, we see that D forms a second with the first C, and that the second C forms a seventh with this D; that E forms a third with the first C, and that the second C forms a sixth with this E; that F forms a fourth with the first C, and that the second C forms a fifth with this F; finally, that G forms a fifth with the first C and a fourth with the second C. We could continue in the same manner. By this means we perceive that one interval is always born of another; for if we take another note as the first degree, placing it at the beginning and end of the scale, we need only make the observations there that we have just made with regard to C in order to find the same results, i.e.,

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> that the second of the first note will always become the seventh of the octave of this first note, etc.[5]

After this juncture in lesson 2, Rameau tries to point out some ramifications of inversion within an octave framework.

Rameau's version reads:

> (1) Through the knowledge of this inversion, the sixth below can always be taken for the third above, and the fourth below for the fifth above, or the opposite: especially when it is only a matter of the succession from one note to another.
>
> (2) For example, if one wishes to pass to the fifth of C, which is G, it is the same to take this G at the fifth above C or at the fifth [sic][fourth] below.
>
> (3) When one speaks of an interval, one always supposes it above the note expressed. For example, the fifth of C is G and not F which is the fifth below, and so forth.[6]

The first statement follows the line of thinking that has been presented thus far. Statement (2) is a bit more problematic and is clarified to a certain extent by statement three. By telling the reader to assume a given interval **above** the reference note in the third statement, Rameau is not just stating common policy. He is really disclosing another hidden issue: the fourth, as inversion of the fifth can be a substitute for the fifth, but is not equal to the fifth. In this context, Rameau's last statement "the fifth of C is G and not F which is the fifth below" not only points to a problem in the second statement above but also hints at the difference in function between the tonic's upper fifth (the dominant-tonic) and its lower fifth (the subdominant). Rameau discusses this hazy issue in the second book of the Traité:

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[5] Treatise on Harmony, Gossett, Book III, Ch. I , 191. I have changed the solfege syllables to letter names in the translations here.

[6] The parenthetical numbering of these statements is mine.

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> What we say about the fifth should also be understood to apply to the fourth, which always represents it. Those whose voices are deep enough naturally descend a fifth at endings, while those who cannot do so ascend a fourth. This is clear proof of the power of the octave, which is always present in either of the sounds forming it, and of the relationship between the fourth and the fifth arising from the division of the octave. The fifth is always preferred whenever the voice allows, but nothing is destroyed by substituting the fourth for it.[7]

Rameau might very well have meant statement (3) as a simple caution for the student: do not confuse the upper fifth G with the lower fifth F—a confusion which apparently slipped into his previous statement (2). In the second statement, Rameau should have said "it is the same to take this G at the fifth above C or at the **fourth** below" for here he is speaking of the term G remaining constant whether it appears above the tonic as a fifth or below the tonic as a fourth. This idea is referred to later in lesson 3/2 when Rameau says:

> it suffices to imagine the name of the note which forms the interval that one needs, therefore placing it indifferently above or below the note to which it is compared. Since one knows, for example, that G forms a fifth of C no matter where one places it—either above or below C—it is always G and that suffices.
>
> (I/3/2-f.48v)

The ramifications of the statement become clear only when the student starts to write his own fundamental bass—an issue that is not a concern yet.

The student reading this lesson would probably understand the concept of interval inversion and the caveats involved even though the flow of ideas is rather unstructured. As pointed out above, changes in organization could have made the subtleties easier to grasp. In this respect, it is curious that Gianotti did not revise and include this lesson in his version—for its content provides a valuable link for an understanding of the inversion of chords and the writing of a fundamental bass.

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[7]Gossett, op. cit., Book II, Ch. I, 60.

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Unfortunately, even in draft 2, Rameau does not do a good job linking these two ideas even on a small scale. While Rameau's inclusion of interval inversion definitely flavors the content of the following lesson, the "fundamental bass and its harmony or chord," he has problems specifically relating the concept of inversion to the fundamental succession. Since this third lesson is so brief and the sequence of expression is so germane to the discussion, I quote the whole of the lesson (3/2) here:

> The fundamental bass consists of any note with its third, fifth and octave always implied. For example, in imagining C for the fundamental bass, it is necessary to imagine C E G at the same time without even thinking about it etc. Through the same reason, the fourth is inverted from the fifth and the seventh from its second.
>
> It is necessary to keep this inversion very much in mind in the fundamental succession which we will soon discuss. Not to be overly concerned with it, it suffices to imagine the name of the note which forms the interval that one needs, therefore placing it indifferently above or below the note to which it is compared. Since one knows, for example, that G forms a fifth of C no matter where one places it—either above or below C—it is always G and that suffices.
>
> (I/3/2-f. 48v)

There is no problem understanding the definition of "fundamental bass" in the opening paragraph. The problem arises in the last sentence of the paragraph where Rameau says "Through the same reason, the fourth is inverted from the fifth and the seventh from its second." The meaning of this statement only becomes clearer upon reading the following paragraph. In this statement concerning the inversion of intervals, Rameau is referring to the process of association that the musician makes when considering certain musical concepts. He wants the composer to know that the fourth is the inversion of the fifth as rapidly as he knows the construction of a triad above a given fundamental bass note. If the composer had to construct these details every step of the way, the process of composing would be quite tedious.

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By throwing in this casual reference to inversion, Rameau attempts to connect the concept of interval inversion to the forthcoming discussion of the fundamental succession. An explanation is required. In this last paragraph, Rameau tries to prepare the composer for anticipated problems in writing a fundamental succession—unfortunately, he is too vague here. Because of the concept of interval inversion, G, for example, can appear either above or below C: the difference being an interval of a fourth below the pitch used as a reference point (C in this example) or the interval of a fifth above the pitch used as a reference point. When determining which direction a bass line should take, the composer has to decide whether to take G to C as a leap of an ascending fourth (approaching C from below) or whether to take G to C as a leap of a descending fifth (approaching C from above). This is the application of the concept of intervallic inversion on the horizontal plane, that is, the writing of a single fundamental bass line. This is also the problem that Rameau gets into in his presentation of the horizontal poles of the tonic and its two fifths in the first-draft version of this corresponding lesson when he says:

> The tonic associates itself with its two fifths to form a fundamental succession with them. In the key of C, for example, these two fifths are F and G. **The fifth below C, which is F, can be imagined as its fourth by means of inversion. Thus, the fourth and the fifth of the tonic are equally its two fifths: the one below and the other above.**
>
> [emphasis added]

Without an understanding of interval inversion, this concept cannot be adequately understood—especially by the beginner. Gianotti, primarily following the first-draft version, falls victim to the same trap. In the seventh paragraph of chapter 1, he presents Rameau's model of the tonic surrounded by its upper and lower fifths. Because he refers to the subdominant as the "fifth below" the tonic, his model does not yet assume any inherent functional preference for the fifth above the tonic as dominant-tonic over the fifth below as subdominant—an issue that was raised in lesson 2. Unfortunately, Gianotti does

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not clearly state that the designated name for a note remains the same even when its relative position to the tonic changes. By avoiding this issue, he reinforces the static nature of the model of the tonic and its two poles, the upper and lower fifths.

Through the idea of interval identification in draft two, where the interval retains its identity and, more importantly, retains its initial function in relation to the tonic, its function remains constant even though its relative position might change, i.e., whether it occurs above or below the tonic. This idea allows the composer the freedom to determine the course of a bass line. Since it is open-ended in this respect, it promotes an active rather than a static stance. While the relevance of this idea does not actually enter the picture yet, its implications provide a contrasting view of tonal events at this stage of the work.

The Inseparability of the Fundamental Root and its Chord

Rameau's advice concerning memorization does not apply only to scales; it also applies to immediate identification of the three primary fundamental notes of a key (4/1 and 7/2) and to the fundamental notes and the triads they bear (1/1, 3/1 and 3/2). In the last paragraph of his first chapter, Gianotti emphasizes the relation of all these concepts deriving from the memorization of the two harmonic scales:

> Each one of these three notes [the tonic, the subdominant and the dominant-tonic] is a fundamental, and bears its own third and fifth, that is to say, the perfect chord; and these three perfect chords—the tonic, dominant-tonic, and subdominant— comprise all the notes of the three scales in the introduction which make up the key of *C*. From this it follows that there can be only these three primary fundamental sounds in each key: namely the tonic and its two fifths. From this also comes the necessity of memorizing the two last scales of the introduction: the third [the scale of fifths] for immediately finding the three primary fundamental sounds of any key and the second [by thirds] for finding their perfect chords. If one thinks about the tonic *C* for instance, *E* and *G*, which form the perfect chord with it, and *G-B-D* and *F-A-C* which are its two fifths with their perfect chords, should come to mind at the same time.

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In his concluding paragraph, Gianotti sums up a basic idea that surfaces in "L'Art" specifically in lessons 1/1, 3/1 and 3/2: each fundamental note carries a chord made up of the third and the fifth above it. While Gianotti does not distort the concept, he fails to convey the underlying abstract idea of the inseparability of the fundamental root and its chord. From two specific passages in "L'Art," Rameau suggests that there is more to this concept than meets the eye. Thus, in the now familiar quotation from the end of 1/1, Rameau says:

> All this together is called the perfect or fundamental chord: however, sometimes one calls a single interval a chord. Everything which bears the name fundamental supposes that of the [actual sounding] bass [i.e. the basso continuo] at the same time: for example, the note, or fundamental tone, that is to say, the note or sound that is the fundamental bass; the fundamental chord, that is to say the fundamental bass with its third, its fifth, and its octave; the succession or fundamental progression, that is to say succession, or progression of a fundamental bass, where each note is always felt to bear its own fundamental chord.
>
> (I/1/1-f.8[r])

Though this paragraph seems a convoluted expression of all things fundamental, Rameau captures in it the idea that the fundamental bass is somewhat of an abstract concept because the term "fundamental" can apply to a single note, an interval, or a chord. Through this discussion of the term "fundamental," an important underlying idea surfaces: the inseparability of the fundamental root and its chord. This idea is central to Rameau's theory, for without the idea of associating a chord with its fundamental root, a succession of roots (fundamental succession) would be reduced to just a meaningless succession of notes. Hence the terms "fundamental chord," "fundamental progression," and "fundamental succession" are not only interrelated; they stem from the same central concept.

What is not said is the fact that the fundamental note **implies** a chord even if the chord does not actually appear. Rameau hints at this in the paragraph from 1/1 quoted above when he says "Everything which bears the name fundamental supposes that of the

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[actual sounding] bass [i.e. the basso continuo] at the same time..."[8] The word *supposer* in French can mean "suppose" or "imply." In this respect, by using this word Rameau can either be referring to the fact that the fundamental bass "supposes" the actual sounding bass note—meaning that if a chord member other than the root appears in the actual written bassline, the actual fundamental is always implied **or** he simply means that every term which includes the concept "fundamental" always implies and includes the fundamental note itself.

Rameau clarifies this idea later in the second draft of lesson 3. In this definition of "fundamental bass" in lesson 3/2, he uses the word *sousentend* which means "imply":

> The fundamental bass consists of any note with its third, fifth and octave always **implied**. For example, in imagining C for the fundamental bass, it is necessary to imagine C E G at the same time without even thinking about it etc..[9]

Conceptually, by using the word "imply" (*sousentend*), Rameau takes the student a step further; for it is more of an abstract concept to understand that a fundamental always has a chord associated with it—even if it does not actually appear in the music. Gianotti's version, "Each one of these three notes [the tonic, the subdominant and the dominant-tonic] is a fundamental, and bears its own third and fifth, that is to say, the perfect chord," asserts this concept as a fact; hence, it leaves no room for reversing the process (implying the chord when only a fundamental is present). He comes closer to Rameau's expression when he says: "If one thinks about the tonic C for instance, E and G, which form the perfect chord with it, and G-B-D and F-A-C which are its two fifths with their perfect

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[8] *Tout ce qui porte le nom de fondamental* ***suppose*** *celuy de Basse au meme tems...* The bold emphasis here is mine.

[9] *La Basse fond*^{te} *consiste dans une note quelqonque avec les quelle on* ***sousentend*** *toujours sa tierce, sa quinte, et son octave, par exemple en imaginant ut pour Basse fond.*^{te} *il faut se representer en meme tems ut, mi, sol, sans s'y occuper &c* The bold emphasis here is mine.

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chords, should come to mind" because he is suggesting the idea of **implying** the chord when the fundamental note is the only element present.

Both in this chapter and the preliminary introduction, Gianotti's method is valuable for presenting the facts and the major ideas of Rameau's theories in an orderly progression. In this respect, it is very accessible for the musical beginner. Only a closer comparison with the corresponding sources of "L'Art," though, reveals its weaknesses in the realms of scale pedagogy, interval inversion, and inseparability of the fundamental note from its chord. By presenting concepts as facts or definitions, it inherently locks these ideas in a fixed setting and fails to promote the interaction of these ideas on larger levels. To Rameau, the fundamental bass concept is an extensive web of connections. Even though he might not weave all the threads of the web in a coherent manner, the web itself represents a structure that integrates all the elements in a unique design.

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CHAPTER II

Rules for finding the fundamental bass of a given melody in a single key

Gianotti:

1 Our first examples will always be in the key of *C* major. We have preferred it to the other keys since it is the only natural [key] which admits neither *sharps* nor *flats*.

2 For the present, the subject* [**sujet**] should form only the third, the fifth, or the octave of the fundamental note which will agree with one of these consonances. At the appropriate time, we will add dissonance to the perfect chords of the dominant-tonic and subdominant. This will be the subject of the second part [of the Guide].

Rameau: draft 1

I/5/1-f.9^{v}

Our first examples will always be in the key of C

I/4/1-f. 9^{r}

The melody notes that we will call the subject should be imagined only as thirds, fifths, and octaves of the fundamental bass without ever giving them the designations suitable to this fundamental bass alone. Among [all] the notes of the subject, one principally distinguishes the third of the tonic, and the [third] of the dominant-tonic from [all the other notes].

I/5/1-f.9^{v}

For the present, one should only concern oneself with the perfect chord composed of the third, the fifth and the octave of the fundamental bass.

Rameau: draft 2

I/5/2-f.48^{v}

The first key in which one should begin to instruct oneself is the key of C

I/7/2-f. 51^{r-v}

One must never give the names proper to the fundamental bass to the melody; one ought to consider [the melody notes] only as thirds, fifths, or octaves of this fundamental bass. Otherwise, ambiguity will arise sometimes. If one takes the melody note as if it were the fundamental without thinking about it, one consequently imagines the harmony of this melody note and one suddenly becomes disoriented through this imperceptible misunderstanding sometimes.

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* *This term will always be used to designate the uppermost voice.*

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3 But, before proceeding further, it is good to observe that when examining the subject, assuming that the key will already be known, it is necessary to try to distinguish the mediant and the leading tone [from other subject notes there] because the fundamental bass of these two notes will be known at the same time. The mediant demands the tonic for the fundamental bass and the leading tone demands the dominant-tonic.

I/4/1-f.9^{r}

The third of the tonic is called the mediant and [the third] of the dominant-tonic, the leading tone. One should always regard them as known notes which generally indicate their fundamental bass. The mediant requires the tonic for a fundamental bass and the leading tone requires the dominant-tonic. Consequently, when examining the subject, assuming that the key will already be known, it is always necessary to try to distinguish the mediant and the leading tone [from the others there] because their fundamental basses will be known at the same time. Besides forming a third of the dominant tonic, the leading tone is also always a semitone below[1] the tonic or its octave such as B is to C. In the following, we will also have supertonics and superdominants that are equally relative to the subject and to the fundamental bass. Their degree of relationship to the tonic is easy to recognize: the supertonic is the second [above][2] the tonic or its octave and the superdominant is the second above the dominant-tonic or its octave.

I/9/2-f. 52^{r-v}

The third of the tonic distinguishes itself from the others by the designation mediant and the third of the dominant tonic distinguishes itself by the designation leading tone. [The purpose of these names] not only serves to mark them better, but also [designates them] as the most sensitive, especially the last.

I/9/2-f. 52^{r-v}

sometimes the mediant can serve as fifth to the fundamental note where the tonic descends a third, but this can only happen in order to avoid the syncopation in the fundamental bass or in order to follow a new route of dominants which is not a concern yet.

Let us take care to notice henceforth this mediant and this leading tone in order to give to each its fundamental bass, to wit: the tonic to the mediant and the dominant-tonic to the leading tone. As soon as one looks over a melody whose key is known, one must take care to find each of these two notes that we shall call in the following the "known notes of the melody" or simply "known notes." Besides being the third of the dominant tonic, the leading

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[1] The passage actually reads: *un demi ton au dessus de la tonique ou de son octave* which would be a semitone above the tonic. It is clear from the context here that the word *dessus* is mistaken for *dessous* meaning "below."

[2] The word *dessous* ("below") should be *dessus* ("above") here: *la sutonique est la seconde au dessous de la tonique, ou de son octave*.

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tone is also always a semitone below the tonic or its octave.

4 Since every piece of music should begin and end on the principal note of the key, one runs no risk of a mistake giving the tonic *C* as a fundamental bass for the first subject note.

I/5/1-f. 9^v

Our first examples will always be in the key of C; and since it is right that every piece of music begins and ends on the principal note, for the present, one will not be able to make a mistake by first placing the tonic C under the first note of the subject.

It is no less necessary to examine whether the subject actually starts on one of the notes contained in the tonic chord in order to be certain of what one has done.

I/5/2-f.48^v-49^r

The first key in which one should begin to instruct oneself is that of C; and since the melody can first begin only on either C itself or E or G, one should be assured that the fundamental bass can begin on the same C as well.

5 Next, one will determine in which chord of the three fundamental notes the second note of the subject happens to be. If [the second note] happens to be in the tonic chord, one will retain [the tonic in the fundamental bass]. If it is under the influence of the dominant-tonic or the subdominant chord, one will pass to one or to the other of these two fundamental notes, and from there, one will return to the tonic. Of course, for its part, the subject should submit to this fundamental progression.

I/5/1-f.9^v

As long as the subject continues with notes contained in the tonic chord already employed [root, third or fifth], one will always retain [the tonic in the fundamental bass]: but if [the subject] passes to other notes, for its part, this tonic should then pass to its dominant-tonic or to its subdominant.

I/5/2-f.49^r

If the melody continues with notes still belonging to the same harmony, one repeats proportionately the same C in the fundamental bass and as soon as the melody passes to another note, this fundamental bass should pass equally from C to another note.

I/5/1-f.10^r

In order to know which of the two [chords], the dominant-tonic or the subdominant, the subject requires after the tonic, one first imagines the [fundamental note] that one wishes with its chord. If it is G, for example, one says G B D with the result that if one of these notes is in the subject, the G will have been correctly imagined. Instead,

I/5/2-f. 49^r

As soon as one is obliged to abandon C in the fundamental bass, one should imagine G or F there. Then one sees whether the note in the melody belongs to the harmony of G or of F, placing then in the fundamental bass, the one of the two which fits this [melody] note's harmony.

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if neither is found, it is F which will be the fundamental. There is no middle ground. Therefore, the subject will not fail to give one of the notes of the chord of F, to wit: F, A, or C.

I/5/2-f. 49r

Therefore, if one finds D in the melody, for example, and one imagined placing F below this D after C in the fundamental bass, one sees at first that this D is not in the harmony of F; it was therefore G which should have been imagined after C [in the fundamental bass]. There is no middle ground since only G or F can succeed C; moreover, in imagining the harmony of G, one finds G B D there etc.

6 In passing, let us notice the privilege of the tonic, which is the only one of the three fundamental notes which passes wherever one wishes, depending on what the subject requires. Instead,the dominant-tonic and subdominant should never follow each other; not only because they would interrupt the progression by fifths, but also because, through this progression, they would hinder harmonic connection. This connection, indispensable in every musical piece from the beginning to the end, consists of notes common to chords of different fundamental notes which follow each other by fifth; as between the octave of the tonic and the fifth of the subdominant; and between the octave of the dominant-tonic and the fifth of the tonic.

I/5/1-f.9r

Having started on the tonic C, the fundamental bass can pass equally to its dominant-tonic, G, or to its subdominant, F . From this, one should begin to surmise that the tonic passes where one wishes it. It is the subject then which directs it.

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7 Now, this community of notes could cause some difficulty in the case where the choice between two fundamental notes appears arbitrary, [specifically] under a subject note which would be common to [both] their chords. But the required fundamental progression by fifths would clear up difficulty—provided that one did not persist in retaining the subdominant under its fifth, *C*, when this fifth is followed diatonically.

I/5/1-f. 10ᵛ

The necessity of the fundamental succession [to progress] by fifth makes this ambiguity disappear—as long as one still did not persist in retaining the subdominant F under the fifth, C, when this fifth is followed by step. For if the diatonic note neighbors of C, the octave of the tonic, belong to the chord of the dominant-tonic, and if this dominant-tonic cannot follow the subdominant, it is consequently necessary that this one yields its place to the tonic in the case where it is a matter of difficulty.

I/5/2-f. 49ᵛ

For example, when one used F in the fundamental bass, if the melody gives G next, one well sees that this G can belong only to the harmony of C—since F should necessarily pass to C in the fundamental bass.

8 Finally, by carefully considering the subject notes and knowing the perfect chords of the three basic fundamental notes perfectly, one will easily recognize that:

1. two notes on consecutive diatonic degrees can never belong to the same fundamental note

I/5/1-f.10ᵛ

Two notes on diatonic degrees as C to D or [C] to B can never belong to the same fundamental note. Moreover, one can imagine that the neighbor notes of the tonic or of its octave belong to the dominant-tonic chord and that the neighbors of [the tonic's] fifth belong to the chord of its subdominant.

I/5/2-f.49ᵛ

All notes [related by] conjunct degrees each require a new fundamental bass note whereas all those [related by] disjunct degrees can belong to the same fundamental note.

I/5/2-f.49ᵛ

Imperceptibly, one develops small local rules, for example, as one can say here: the closest neighboring degrees of C [i.e., B and D] in the melody always belong to the fundamental note G and the closest neighboring degrees of G [i.e., F and A] always belong to the fundamental note F .

2. since fundamental chords are composed of thirds and fifths, the subject notes which follow similar intervals, that is to say, which progress by thirds or fifths, can all belong to the same fundamental note; and although the opposite might happen, the suspicion of it is less legitimate. *See example 1, plate 1.*

I/5/1-f.10ʳ

...since chords are composed of thirds and fifths whose inversion gives sixths or fourths, it should follow that if the subject progresses by similar consonances, they can all very well belong to the same fundamental note; not that the the contrary might not happen often, but the suspicion of it is not less legitimate: on the other hand,

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this is always certain.

Observations on this example

In order that the subject march by diatonic intervals [seconds], each of its notes has its own particular fundamental bass. When it progresses by consonant intervals [thirds and fifths] as at the letters [marked] A., they are contained in the chord of the same fundamental note. When the opposite happens, as at B., for example, it is obvious. If one had retained the subdominant under the note C., [the subdominant] would have been followed (contrary to the rule) by the dominant-tonic, which ought to be used under the note at D. Now this progression would interrupt the one by fifths and would impede the connection of harmony.

I/5/1-f. 10v

Everywhere in this example, one sees that each one of the diatonic notes of the subject has its own fundamental bass.

If two or four notes of this subject progress by consonant intervals as at A. and at C.; they are then contained in the chord of the same fundamental bass and when the opposite happens, as at B., this is quite obvious.

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Editorial Commentary on Chapter II

From the title alone, the reader of Gianotti's second chapter would expect to find some simple rules for setting a fundamental bass to a given melody. Gianotti does not disappoint, for he provides just what the title implies—a series of rules culminating in two basic rules at the end of the lesson (see ¶ 8). There is one problem: composing a fundamental bass is not quite as simple as Gianotti's title would lead the reader to believe. Gianotti provides most of the rules that Rameau teaches in both drafts of lesson 5. But in his zeal to provide a succinct summary of Rameau's instruction, Gianotti omits the rationale behind these rules. As a result, Gianotti's reader lacks the requisite background for correct application of these rules. What is more, in thinking that the composition of a fundamental bass can be reduced to a series of rules, the student subliminally receives the wrong message, a message that leads to a false sense of security. Only Rameau reveals the compositional process behind the rules. He alone shows the compositional process for what it is—a method of determining the best solution in the face of several possibilities.

Throughout all of "L'Art," the reader gets a strong sense that Rameau sees the big picture and how elements interact. In Rameau's world, all the elements are related; hence, his theory uses ideas to integate newer thoughts at higher levels. Each idea becomes a bridge to a new expression. One of the main differences between Rameau's approach and Gianotti's is relational thinking, the ability to connect ideas on various levels: Rameau demonstrates it, Gianotti does not. Though Gianotti saves the beginner endless forays into forests of digression, his shortcuts bypass important landmarks—landmarks which Rameau uses to provide a conceptual framework for the relation of ideas. It is through these very digressions that Rameau helps the student see the forest, not just the trees. This particular chapter gives us ample opportunity to explore this difference between the authors.

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The Sources

Gianotti draws the bulk of his second chapter from both drafts of Rameau's fifth lesson. He also relies on some of Rameau's other lessons for references concerning the relation of subject notes to the fundamental bass. Gianotti's second chapter is therefore a distillation of the following sources:[1]

4/1- "Concerning the names the fundamental bass notes should bear and those of the subject under the title of known notes"

5/1- "Method of finding a fundamental bass under a given subject and its most perfect succession"

5/2 - "Concerning the manner of finding the fundamental bass under a given melody"

7/2 - "Concerning the name that each note of the fundamental bass should bear"

9/2 - "Concerning the mediant and the leading tone."

Gianotti culls some important ideas from these lessons, but he also discards plenty. In fact, the material that Gianotti omits often provides the greatest illumination on Rameau's teaching, for in these lessons lie the very asides that not only provide practical suggestions for working the supplied exercises, but the rationale that fills in Gianotti's gaps. Much of the detailed information on note names that Rameau includes in 4/1, 7/2, and 9/2 does not appear either in Gianotti's watered-down version in the Preliminary Introduction (section II) or chapter 2. Though Rameau also does not include this information in either draft of his fifth lesson, Rameau's presentation of this material has a direct bearing on his teaching in lesson 5.

[1] The translations of Lessons 4/1 and 7/2 appear in the section Additional Sources to Chapter I, pp. 93-95.

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Intervals as indicators of function

Rameau's title for each version of the fifth lesson implies that the melody and fundamental bass are separate entities. However, through his teaching in additional lessons, namely 4/1, 7/2, and 9/2, he constantly points out the interrelationship between subject and fundamental bass. Even when Rameau and Gianotti seem to be relating a similar story, the slight variations in detail between the authors are telling. For example, compare Gianotti's relation of events with Rameau's (see ¶ 2 and 3). Both Rameau and Gianotti relay the same information: melody or subject notes are only considered thirds, fifths, or octaves of the fundamental bass. Since the reader already knows from previous discussion that there are only three fundamental notes (the tonic, the subdominant, and the dominant-tonic) in each key and that the fundamental also implies a chord, the association of a subject note with a fundamental bass is not a new idea here. What is new, however, is the idea of particular subject note that indicates an equally specific fundamental bass option. Note that Gianotti only adopts a portion of Rameau's first draft information. Unfortunately, Gianotti omits the very information that explains the comment "the mediant demands the tonic for the fundamental bass and the leading tone demands the dominant-tonic" (¶ 3). Missing from Gianotti's statement is the tertiary relationship of each subject note to its respective fundamental bass—a point that Rameau explains consistently in 4/1 and 9/2.

In "L'Art," Rameau highlights the distance of a third between the subject and fundamental bass, using this specific distance to relate the mediant to the tonic and the leading tone to the dominant-tonic. It is no coincidence that this particular interval has played an important role up to this point—as a basic element in the harmonic scale by thirds introduced in lesson 1 and as a component of the perfect chord. The third, already a significant idea in previous lessons, is used to determine a new relationship with the fundamental: the delineation of function. Here, the third is relegated to the domain of the

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subject or melody, but it is intimately tied to its root, the fundamental. In 9/2 Rameau refers to both the mediant and the leading tone as "sensitive notes":

> The third of the tonic distinguishes itself from the others by the designation mediant and the third of the dominant tonic distinguishes itself by the designation leading tone. [The purpose of these names] not only serves to mark them better, but also [designates them] as the most sensitive, especially the last.
>
> (I/9/2-f. 52r-v)

An eighteenth century French musician would have been quite familiar with the term *note sensible*, literally "sensitive note." Most of the time, this term refers to what we call the "leading tone." As I have pointed out previously in the introduction, both the modern and older terms indicate function.[2] Our "leading tone" predominantly "leads" to the tonic. Rameau's "sensitive note" is called "sensitive" precisely because it demands special treatment. This specific pitch generally provides telling information: the tonic is coming. In this setting, the concept of the mediant and leading tone as "known notes" makes more sense—for once the reader knows that these subject notes are always thirds of the fundamentals, the concept of knowing the fundamental through the subject note is just reversing the process of association. Once again, since the student has already learned to associate a triad with a fundamental in the first lesson, for example, the idea of association as a procedure is not new here, but its application to this fresh material is. In this way, Rameau not only links concepts, he connects ideas through similar pedagogical procedures.

Rameau continues to define other subject notes by means of a specified interval. In 4/1, Rameau uses the interval of a second to relate new subject notes to the fundamental notes:

---

[2] See "The Edition and its Critical Apparatus," p. 65.

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> In the following, we will also have supertonics and superdominants that are equally relative to the subject and the fundamental bass. Their degree of relationship to the tonic is easy to recognize: the supertonic is the second [above] the tonic or its octave and the superdominant is the second above the dominant-tonic or its octave.
>
> (I/4/1-f. 8v)

Rameau also defines the leading tone by the same distance. In both 4/1 and 9/2, he points out that the leading tone is not only a third above the dominant-tonic, but is also simultaneously a semitone below the tonic:

I/4/1:

Besides forming a third of the dominant tonic, the leading tone is also always a semitone below the tonic or its octave such as B is to C

(I/4/1-f. 8v)

I/9/2:

Besides being the third of the dominant tonic, the leading tone is also always a semitone below the tonic or its octave.

(I/9/2-f. 52v)

These are more than mere facts: Rameau is careful to link these relationships to function. It is precisely this awareness of function that sets Rameau apart from Gianotti. In the third paragraph, Gianotti conveys the correct facts but lacks a convincing rationale:

> it is necessary to try to distinguish the mediant and the leading tone [from other subject notes there] because the fundamental bass of these two notes will be known at the same time. The mediant demands the tonic for the fundamental bass and the leading tone demands the dominant-tonic. (¶ 3)

Without the rationale, the advice falls flat because it is too vague—especially the resultant clause "because the fundamental bass of these two notes will be known at the same time." How? Why? Unfortunately, these questions are only answered by another fact, not an explanation. What Gianotti's version gains in brevity, it loses in comprehensiveness.

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Rameau's Presentation of Note Names and its bearing on Lesson 5

Gianotti does understand Rameau's idea that the fundamental bass and subject are inherently connected, for at the end of his chapter, he condenses the meat of Rameau's lesson into two distinct points (see ¶ 8):

> 1. two notes on consecutive diatonic degrees can never belong to the same fundamental note
>
> 2. since fundamental chords are composed of thirds and fifths, the subject notes which follow similar intervals, that is to say, which progress by thirds or fifths, can all belong to the same fundamental note

Gianotti's summation here is important in many ways. It is not only a conclusion; it captures the basic idea of the lesson: that movement in the melody line is directly related to the fundamental bass. However, it raises a particular question: if Gianotti understood the underlying idea, what makes his expression of this idea different from Rameau's?

Composition, like construction of a building, is a process that requires a large-scale plan. This large-scale plan necessarily also influences the details. It is Rameau's vision of how all the materials work together to build a cohesive whole that set him apart from Gianotti, for only Rameau's blueprints truly guide the reader through the process of construction. He alone understands where the true foundation really lies.

Both Gianotti and Rameau use the same blueprints in this lesson: they use the same materials, provide the same steps for selection of the fundamental bass, and even present the steps in the same ordering. Unfortunately, though, Gianotti primarily presents events in this lesson strictly from the vantage point of the subject. In the second paragraph, Gianotti delineates the subject from the fundamental bass by telling us that the subject forms thirds, fifths, and octaves of the fundamental bass. Though he points to the mediant and leading tone as specific indicators of particular fundamentals, he does not supply any information to explain this comment. Instead, he jumps right into applying the facts to a musical piece (¶ 4). It is only in paragraphs 5-8 that his focus shifts to what is really

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controlling events: the fundamental succession. This is the concept which is the heart of the matter for Rameau.

Through his detailed presentation of scale degrees in lessons 4/1, 7/2, and 9/2, Rameau fills in the gap left by Gianotti. More specifically, Rameau's presentation in these lessons places scale degrees in the context of the fundamental succession—not strictly as subject components. In lessons 4/1 and 7/2, which are closely related in scope and content, Rameau not only emphasizes the three fundamentals themselves, he reveals important aspects of their spatial relationship by fifth. By presenting the information in this particular way, he paves the way for applications of this model to other topics later on. For this reason, in order to understand the framework of lesson 5, Rameau's approach in 4/1 and 7/2 must be discussed first.

Through the discussion of proper terminology, Rameau distinguishes the fundamental bass from the subject by function in 4/1 and 7/2. He does this by reintroducing the relationship of the upper and lower dominants to the tonic. These particular harmonic reference points are also essential to the concept of key; for even though Rameau has not yet talked of the resolution of the dissonant seventh in the dominant-tonic, it is the fundamental bass motion by fifth which articulates the tonic and thus establishes a key. For now, Rameau is careful to point out that only these three specific reference points constitute the fundamental bass—the remaining scale degrees are relegated to the domain of the subject. The melody notes are literally subject to the reigning fundamental bass notes since they are only considered as thirds and fifths of it. Hence, by its nature, the fundamental bass is the prime source and the governing force of all that happens above it.

Another related concept develops from this theory: the interrelation of notes in keys a fifth apart. The fundamental notes of one key are not only common tones in the key a fifth away, they also function as different fifth relations in the new key. For example, when the key ascends a fifth, the dominant-tonic of the first key becomes the new tonic and the

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former tonic becomes the new subdominant. This change of function in common fundamentals expands the motion by fifths beyond the confines of one key and thus makes travel to any key eventually possible as long as these connections are maintained.

Even though Rameau presents the tonic and its two fifths in both drafts, he displays them in slightly different ways. The examples in both drafts accurately represent each dominant's spatial relationship to the tonic (in terms of upper and lower positioning). In 4/1, Rameau provides a "snapshot" of the tonic in a central position flanked by its dominants on each side. He provides the "snapshot" in three different keys:

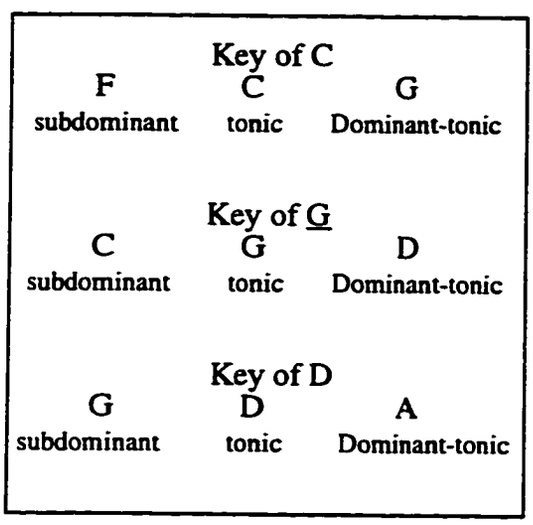

Figure 2- 1: *Rameau's model of three fundamentals in I/4/1*

Rameau's example in 7/2, however, is an improvement over that of 4/1 because it attempts to place the model of the tonic flanked by its two fifths anywhere in the continuum of fifths.

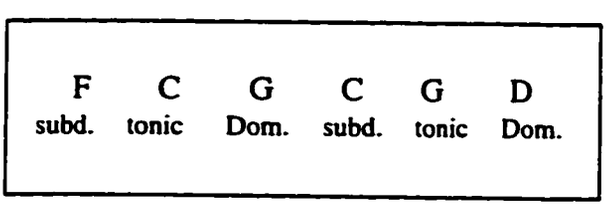

Figure 2- 2: *Rameau's model of three fundamentals in I/7/2*

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Now, in the commentary that precedes this example, Rameau says:

> The third scale gives the order of dominants and subdominants in succession. For example: in saying C, G, D, A, etc. one recognizes G as the subdominant of D and C as the subdominant of G, F as the subdominant of C etc. One can arrange as such
>
> | F | C | G | C | G | D |
> |---|---|---|---|---|---|
> | subd. | tonic | Dom. | subd. | tonic | Dom. |
>
> all the notes of the 3rd scale in order to extract the fruit [of it] by means of studying the ability to immediately imagine the dominant and subdominant of any tonic that occurs
>
> (I/7/2-f. 51')

The example in the text ("C-G-D-A"), an excerpt from the third scale by fifths (presented in lesson 1), does not match the example that accompanies it (see Figure 2). This inconsistency points to the dissimilarity between listing fifths in a scale format and creating a contextual frame for the recognition of the tonic and its upper and lower fifths. In effect, by showing only the fifths extending from C to C in the third scale (lesson 1), Rameau provides a boundary for the endless progression of fifths. Because this ordering of fifths occurs in a fixed format, one thinks of traversing it in one direction at a time—either forward (for ascending fifths) or backward (for ascending fourths).

The ordering of the tonic and its lower and upper fifths in three keys in 4/1, however, only maps fundamentals in a non-scalar context. This mapping provides a telephoto shot of the larger picture of fifths with the tonic focused in the center. From a central focal point, one must then direct attention outwards in two different directions. Lesson 7/2 attempts to show the interaction of fundamentals in the "snapshot" of 4/1 in a scalar context—but does so rather clumsily. Through the discussion of the "C-G-D-A" example in the text, Rameau points out that G is not only the dominant-tonic of C, it

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becomes a tonic when compared with its dominant-tonic, D. Thus, the example shows two tonics (C and G), flanked by their fundamentals a fifth away in succession. What Rameau intends to point out, but has difficulty illustrating, is the fact that G can be both dominant-tonic in relation to C as well as a tonic itself; C, a tonic in the first scenario, can also be a subdominant of the tonic G. Perhaps it would have been better to show it like this:

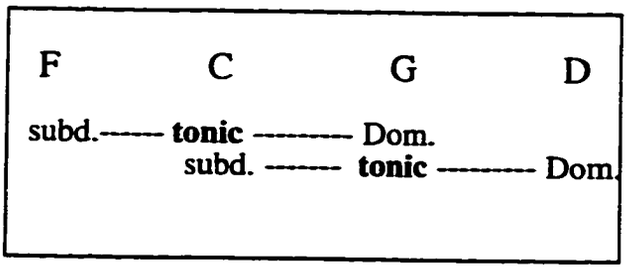

Figure 2- 3: *A proposed revision of Rameau's example in I/7/2*

Though the repetition of the C and G in Rameau's example from 7/2 precludes it from appearing as a scale of fifths, it is through this very repetition that Rameau attempts to combine the fundamental mapping reminiscent of 4/1 with the continuous nature inherent in the scale by fifths introduced in the first lesson. Through the combination of text and example in 7/2, we see what Rameau is getting at. His concluding remark about quickly locating the subdominant and dominant of any tonic in the third scale clarifies the idea: he wants the reader to be able to use the scale as a reference to access immediately any desired tonic and its corresponding dominants. He also wants the reader to be flexible enough to imagine the relative positioning of the fundamentals (a fixed element) on any point in the continuum of fifths (a flexible element).

Rameau integrates several elements to provide a spatial model of the tonic and its two fifths that can be applied to any context, but he reveals much more. Through this approach, he has also set the stage for several ideas that flow from this model: the idea of common tones between notes a fifth away (fundamentals here) and the primacy of the tonic

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in the model of the three fundamentals. Rameau builds on these specific ideas in lesson 5. A relatively inconspicuous remark at the end of 7/2 links the sets of lessons:

> One must never give the names proper to the fundamental bass to the melody; one ought to consider [the melody notes] only as thirds, fifths, or octaves of this fundamental bass. Otherwise, ambiguity will arise sometimes. If one takes the melody note as if it were the fundamental without thinking about it, one consequently imagines the harmony of this melody note and one sometimes becomes suddenly disoriented through this imperceptible misunderstanding.
>
> (I/7/2-f. 51r)

Rameau, realist that he is, recognizes the confusion that can plague the beginning composer; his advice is a means of remedying this situation. If we read between the lines, though, his advice reveals an underlying preoccupation with function. In this passage, he inadvertantly refers to the roles of the fundamental bass and the subject. The supposed problem occurs when the reader assumes a melody note to be a fundamental bass and then builds a triad upon that note. In this scenario, the subject, which is usually dependent upon the fundamental bass, becomes a fundamental bass and assumes an active role—actually moving the harmonic course of events to an unexpected domain. Right here, in this analogy, we have Rameau assigning the fundamental bass an active role and the melodic element a dependent stance. This idea has great impact on the progression of events in lesson 5.

Pedagogy in Lesson 5

Rameau's opening paragraphs of lesson 5 reveal an extremely literal expression of the chosen title, for in these passages Rameau tells the beginner exactly where to write each line of music: the melody[3] is written on the upper staff and the fundamental bass is written directly below it on its own staff. In truth, both authors provide preliminary information

[3] In 5/1, Rameau refers to the melodic line as the "subject" [**sujet**] whereas in 5/2 he calls it the "melody" [**chant**].

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before beginning the actual process of selecting fundamental bass notes for a given subject in ¶ 4. In the first three paragraphs, Gianotti outlines the concept of triadic components of a chord as melodic materials where Rameau immerses the student in the process of writing. The way that each instructor starts the lesson reveals each teacher's relative pedagogical strengths and weaknesses.

As teacher, Rameau likes to fill in the details. Certain passages convey an image of Rameau's teaching in action. The opening of this lesson (discussed later in *The Pedagogical Asides*) is just one such passage. But this opening sets the tone for the whole of the lesson, for Rameau walks the student through the process where Gianotti concisely conveys the facts. Unlike Gianotti, Rameau often gives reasons for his rules (see ¶ 4). For instance, Rameau does not want the student to follow blindly the rule of assigning a tonic fundamental to the first subject note of a piece. In 5/1, he advocates doublechecking to make sure that the actual subject note is contained in the tonic chord. Through this additional advice, Rameau reinforces the triadic connection between the subject and the fundamental bass. More importantly, he shows that the subject is inseparably wedded to its fundamental here, the tonic. This mental exercise then paves the way for the next application: reversing this process to find the fundamental bass of the second note.

The process of determining the fundamental bass of the second note of the melody is a little more involved, for the composer has to sift through several options. Both Gianotti and Rameau advise the composer to think about the second subject note as a member of a triad (see ¶ 5). The next step is to figure which of the three fundamental notes is the actual root of the triad. If the fundamental is the tonic, it is retained (from the first note of the piece); if not, there are two more options: the subdominant or the dominant-tonic. Only Rameau walks the student through the process of selection at this point:

I/5/1:

f. 10^r

As soon as the subject no longer consists of the notes of the tonic chord, it will certainly provide one from the

I/5/2:

f. 49^r

As soon as one is obliged to abandon C in the fundamental bass, one should imagine G or F there. Then one sees

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dominant-tonic or subdominant chord, since the chords of these three fundamental notes contain all the diatonic [notes] of the key.

In order to know which of the two [chords], the dominant-tonic or the subdominant, the subject requires after the tonic, one first imagines the [fundamental note] that one wishes with its chord. If it is G, for example, one says G B D with the result that if one of these notes is in the subject, the G will have been correctly imagined. Instead, if neither is found, it is F which will be the fundamental. There is no middle ground. Therefore, the subject will not fail to give one of the notes of the chord of F, to wit: F, A, or C. In order not to make a blunder, and in order to keep the object in sight, one places a point in place of the imagined fundamental until one is assured of the [note] that fits in the fundamental bass.

whether the note in the melody belongs to the harmony of G or of F, therefore placing in the fundamental bass, the one of the two which fits this [melody] note's harmony.

When one knows the scale by thirds well, one has no sooner imagined C than its harmony C E G should come to mind at the same time: with G: G,B,D will come to mind in the same way, and with F: F, A, C.

Therefore, if one finds D in the melody, for example, and one imagined placing F below this D after C in the fundamental bass, one sees at first that this D is not in the harmony of F; it was therefore G which should have been imagined after C [in the fundamental bass]. There is no middle ground since only G or F can succeed C; moreover, in imagining the harmony of G, one finds G B D there etc.

One only needs to place a point in place of the note that one imagines for the fundamental bass, so that always having an eye on this point, one occupies oneself only with the harmony of this note in order to see whether the melody note belongs.

f. 49[v]

After having employed G under the D of the melody, if this melody does not continue with notes belonging to the same harmony of this G, notes which can only be G, B, or D, of necessity, this G of the fundamental bass needs to return to C and the melody can only conform to it.

What we say of G should equally apply to F—since G and F should equally return to C. One only needs to place a point in place of the note that one imagines for the fundamental bass so that always having an eye on this point, one occupies oneself only with the harmony of this note in order to see whether the melody note belongs.[4]

[4] This passage actually appeared crossed out on the bottom of f. 49[r]. It reappears in the body of text cited above on f. 49[v].

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In both drafts, Rameau not only teaches the process of selection, he subtly reveals which part is more important. He advises the student to think of a possible fundamental first (in this case, either the subdominant or the dominant-tonic). Imagining a triad above the hypothetical fundamental yields some options for the melody. It is only at this point that Rameau advises comparing the supposed triadic options with the actual note in the melody. If the pitch matches one of the options, the choice of fundamental was correct; if not, the process is repeated with the other fundamental note option.

In this situation, Rameau does not start by examining the subject; he turns to the fundamental bass first. This is a bit surprising because in this lesson, it is the melody that is already provided—not the fundamental bass. Usually, the process of solving a problem involves using a known variable (the subject in this case) to find what is unknown (the fundamental bass). That Rameau turns to the fundamental bass first is no accident. Rameau revealed a similar agenda in the last paragraph of 7/2 (see p. 96). This view has deep pedagogical roots.

The consideration of the third note is the methodological point of departure for Rameau and Gianotti. While both agree in procedure, only Rameau provides the contextual framework for understanding the nature of the decision—for the issue really centers on the primacy of the tonic and the importance of the fundamental progression by fifths. Both Gianotti and Rameau point out that if the second note's fundamental bass was either the subdominant or the dominant-tonic, the next fundamental note must be the tonic. While Gianotti does refer to this point by saying "In passing, let us notice the privilege of the tonic, which is the only one of the three fundamental notes which passes wherever one wishes, depending on what the subject requires" (¶ 6). This is precisely the problem: Gianotti just notices this concept—he does not explain it.

Rameau's presentation of events shows the subtle shift between the subject and the fundamental bass at this juncture:

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I/5/1:

f.9^v

It is no less necessary to examine whether the subject actually starts on one of the notes contained in the tonic chord in order to be certain of what one has done.

As long as the subject continues with notes contained in the tonic chord already employed [root, third or fifth], one will always retain [the tonic in the fundamental bass]: **but if [the subject] passes to other notes, for its part, this tonic should then pass to its dominant-tonic or to its subdominant.**

[emphasis added]

I/5/2:

f.49^r

...since the melody can first begin only on either C itself or E or on G, one should be assured that the fundamental bass can begin on the same C as well

If the melody continues with notes still belonging to the same harmony, one repeats proportionately the same C in the fundamental bass and **as soon as the melody passes to another note, this fundamental bass should pass equally from C to another note.**

[emphasis added]

The two drafts convey the same information up to this point. The only difference is the text in boldface above: the first draft version mentions the dominant-tonic and subdominant specifically where the second draft offers more possibilities. This difference does not alter the main point here, though. In both passages, Rameau looks at the subject first. He only transfers his vision to the fundamental bass later on when considering the second note. Here, the opening melody note is controlling the determination of a fundamental bass precisely because it is the **tonic** harmony.

This shift in power between the subject and the fundamental bass within the first three notes is directly related to the presentation of the three fundamental notes in 4/1 and 7/2 (in Additional Sources to Chapter I, pp. 93-5). Recall that in each of these lessons, Rameau placed the tonic in the center of the diagram. This tonal center is flanked by its fifths on each side, the dominant-tonic (the fifth above) and the subdominant (the fifth below). Before Rameau even presents the diagrams, he advises associating the tonic with its two fifths:

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I/4/1:

f. 8ᵛ-9ʳ

From now on, one must only think of the fundamental notes of each key by the designations which characterize them; so that in speaking of a tonic, one might be able to immediately imagine what its dominant-tonic and subdominant should be.

I/7/2:

f.50ᵛ-51ʳ

From now on, one must distinguish the fundamental bass notes by these designations alone—provided that one knows what the tonic is. The two others [the dominant-tonic and the subdominant] always ought to come to mind, for they are relative to this tonic.

Rameau prioritizes the tonic through these comments. He does not say: "memorize all three equally" indirectly, he says "memorize the **tonic** and its two fifths." In lesson 5, Rameau takes this idea a step further. Unlike Gianotti, he introduces the whole procedure of selecting fundamentals with a review of the three basic fundamentals in a key:

I/5/1:

f. 9ᵛ

One already knows that there are only three basic fundamental notes in a key: the tonic, the dominant, and the subdominant. Moreover, one knows that these three notes are a fifth away from one another as F $^{\text{fifth}}$ C $^{\text{fifth}}$ G in the key of C .

I/5/2:

f. 49ʳ

Since there are only three fundamental notes in the key of C: F, C, G, C can therefore pass only to F or to G; and since F as well as G cannot succeed each other and since they are not a fifth away from one another, they can only consequently return to C.

To Rameau, knowing the three fundamentals is just the first step to understanding the whole process. In addition to this fact, the student must also recall the primacy of the tonic in this structure and recognize that these fundamentals are a fifth away from each other. The fifth relationship between these fundamentals, alone, is very significant; for it directly impacts two related ideas here: the most perfect progression of the fundamental bass and the common tones between fundamentals a fifth apart. Even though Rameau does not present each one of these ideas individually in a logical format, through his discussion,

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he integrates these ideas to illustrate some of the complexities of selecting a fundamental bass beneath a given melody.

Compare Gianotti's comments in chapter 1 (¶ 6 & 7) with Rameau's in 5/1:

Gianotti:

The most perfect progression of the fundamental bass is in the third [of the three scales] of the introduction, that is to say, the [scale] by fifths, either ascending or descending.

In order to form a fundamental progression, the tonic joins forces with its two fifths: the one above, and the other below. In the key of *C*, for example, the tonic is *C*, its dominant-tonic *G* is its fifth above, and its subdominant *F* is its fifth below. One can imagine the fifth below the tonic as its fourth above by means of inversion. Thus, the fourth and the fifth above the tonic are equally its two fifths.

Rameau:

One already knows that there are only three basic fundamental notes in a key: the tonic, the dominant, and the subdominant. Moreover, one knows that these three notes are a fifth away from one another as F $^{\text{fifth}}$ C $^{\text{fifth}}$ G in the key of C. Now it only remains to understand that the most perfect fundamental succession is precisely that by these fifths and that one ought for the moment, be concerned only with this one called fifth [or] fourth, as already specified. (I/5/1-f. 9v)

By saying that the progression by fifths is the "most perfect" as a first statement, Gianotti implies that there are several other ways that a fundamental bass can progress. In contrast, Rameau makes a similar statement as the last in a series of facts. By telling the reader that there are only three fundamentals and that these fundamentals themselves are related by the fifths, he leads the reader not only to see the connection between all these elements but believe that the progression by fifths is the predominant one.

Both Gianotti and Rameau also inadvertently bring up the fact that the progression by fifths also includes travelling in the opposite direction, by fourths. What they do not directly mention here is the concept "inversion." It is not very surprising that Rameau would remedy this problem in his second draft of the material where he includes a second lesson devoted to the topic of inversion. Thus, in 5/2, he says:

> The fundamental bass, then, can only progress by fifth; keeping in mind the inversion by means of which the fifth supposes the fourth. (I/5/2-f. 49r)

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So far, despite the way the details are conveyed, Gianotti and Rameau are in basic agreement. It is the difference in detail, however, that makes Rameau's fifth lesson the better version, for only Rameau's version integrates several related ideas: the relationship of fundamentals a fifth from each other, the common tones that arise between these fundamentals, and the impact of these ideas on the interaction of the subject with the fundamental bass.

The Impact of the Fifth as a Dynamic Force

To Rameau, the interval of a fifth is significant in its own right, for in the harmonic series, aside from the octave of the fundamental, it is the next most prominent sound. However, In "L'Art," Rameau introduces this interval in a scalar context, a horizontal context—not as a vertical component occurring in the resonance of a sounding note as in the Traité. Even though he occasionally highlights the vertical aspect of this interval as a component in the perfect chord, he primarily uses the fifth in a linear context. Thus, Rameau introduces this interval in a scale format in lesson 1, and then continues to use it on a horizontal plane to frame the tonic on both sides in lessons 4/1 and 7/2.

Rameau presents a new facet of the fundamental succession in each lesson. In 4/1, he takes a more static "snapshot" of the tonic surrounded by its two dominants. But this "snapshot" is not as static as it seems. Rameau sets up an interesting model here, a model that can be likened to a seesaw. The tonic sits at the fulcrum of this seesaw, at a point of balance, of rest; it has the capability to exert influence, to set things into motion. As can be surmised, the dominants are the poles of the seesaw; they are usually involved in returning the kinetic energy set in motion. Even though Rameau did not use this specific analogy, his model in lesson 7/2 more closely approaches its dynamic nature in that it presents the tonic and two fifths' potential for changing keys and setting musical events in motion. In 7/2, the fundamental succession is capable of shifting to another key through the shared

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common tones (fundamentals here) which maintain a connection, yet function differently in a new environment.

In lesson 5, Rameau provides yet another view of the fundamental succession—this time, in action. The fundamental bass is far more than a horizontal bass line by fifths, it is the source of activity determining the course of melodic events. Here, he uses the mandated progression by fifth to govern the way fundamentals interact with the melody. He takes the fifth that was first introduced in a horizontal format (the third scale) and expands its application to actually solve what is a vertical phenomenon: the interaction between a melody note and the fundamental bass. Thus, in both drafts, Rameau prohibits the dominant-tonic succeeding the subdominant (or the reverse situation) specifically because it is not a fifth progression:

I/5/1:

f. 9^v

Having started on the tonic C, the fundamental bass can pass equally to its dominant-tonic, G, or to its subdominant, F. From this, one should begin to surmise that the tonic passes where one wishes it. It is the subject then which directs it.

It is not the same with the dominant-tonic or the subdominant. These two fundamental notes can never succeed each other—since far from being a fifth away from each other, they are, on the contrary, a second away. Therefore, each of them should pass to the tonic and for now the subject must be supplied for it.

Let us note carefully, therefore, that if the subject decides the succession of the tonic since it can proceed either to the dominant-tonic or the subdominant, [the subject] should, on the contrary, submit to

I/5/2:

f. 49^r

Since there are only three fundamental notes in the key of C: F, C, G, C can therefore pass only to F or to G; and since F as well as G cannot succeed each other and since they are not a fifth away from one another, they can only consequently return to C. For the present, this is what all the mystery of the fundamental succession consists of: C passes to F or to G, and G or F returns to C.

f. 49^v

After having employed G under the D of the melody, if this melody does not continue with the notes belonging to the same harmony of this G, notes which can only be G, B, or D, of necessity, this G of the fundamental bass needs to returns to C and the melody can only conform to it.

What we say of G should equally apply to F—since G and F should equally return to C. One only needs to place a point in place of the note that one imagines for the fundamental bass, so that always having an

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the succession prescribed for these last two fundamental notes—so that after having employed one of the two, one is certain that it is necessary to pass to the tonic.	eye on this point, one occupies oneself only with the harmony of this note in order to see whether the melody note belongs.

While both drafts present the same information, only draft 1 explains how this rule affects the interaction of roles of the subject and fundamental bass. As a fundamental, the tonic has the freedom to progress wherever it wishes because it can move by fifth to either dominant: the one below (subdominant) or the one above (the dominant-tonic)—without disturbing the motion by fifths. On the contrary, when the motion progresses from the subdominant or the dominant-tonic, the next note must be the tonic in order to maintain the motion by fifths. If the dominant-tonic were to follow the subdominant or vice-versa, it would be a progression by step, not by fifth. When the threat of this step progression is imminent, the prescribed fundamental bass motion by fifth must be followed—thus, barring extension of the same harmony, the only option after the dominant-tonic or the subdominant is the tonic. From 5/1, we begin to understand the hierarchy involved: nothing must prevent the fundamental succession from its most perfect progression. If the threat of this occurs, the student is advised to give the prescribed progression of the fundamental bass precedence—otherwise, the subject influences the choice of fundamental bass.

Gianotti gives another reason for this preference: the fundamental succession by fifths provides harmonic connection [**liaison**] between notes. In paragraph 6, Gianotti links these concepts succinctly:

> In passing, let us notice the privilege of the tonic, which is the only one of the three fundamental notes which passes wherever one wishes, depending on what the subject requires. Instead, **the dominant-tonic and subdominant should never follow each other; not only because they would interrupt the progression by fifths, but also because, through this progression, they would hinder harmonic connection. This connection, indispensable in every musical piece from the beginning to the end,**

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> **consists of notes common to chords of different fundamental notes which follow each other by fifth**; as between the octave of the tonic and the fifth of the subdominant; and between the octave of the dominant-tonic and the fifth of the tonic.
>
> [emphasis added]

Even though Gianotti does not adequately explain the shift in control between the subject and the fundamental bass here, he does convey an idea that Rameau only suggests in lesson 5—that the succession by second in the fundamental bass does not support the retention of common tones between chords. Once again, Gianotti understands the underlying concept, and, in this case, he is able to relate it to the discussion at hand appropriately.[5] In a way, Gianotti fills in the gaps here, for unlike Rameau, he actually defines what a common tone is (see ¶ 6) and relates this concept to the progression of chords throughout an entire piece. Unfortunately, while he hints at the fact that common tones provide the vital link between the integration of melodic (horizontal) and harmonic (vertical) elements, he takes the point no further on this level. He does follow Rameau in presenting the ramifications on a more local level: how a melody note that has the possibility of belonging to two different fundamental basses can cause some ambiguity in the selection process. Thus, while Gianotti clearly conveys certain ideas well, namely that a common tone can belong to two chords a fifth apart, and that a single melody note can imply more than one fundamental bass option, he has problems explaining the impact of the fundamental progression by fifth on the situation. He has problems explaining this very issue because, up to now, his approach has focused primarily on melodic events.

Even though Gianotti uses the same building materials as Rameau, such as the scales by thirds and fifths, the three primary fundamentals of a key, the construction of chords upon these fundamentals and even the model of the tonic with its two fifths—he

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[5] Gianotti covers the topic "harmonic connection" [**liaison**] in detail in chapter 9. The corresponding lesson in "L'Art" is 14/1.

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fails to meld these ideas and ground them into the foundation of a structure. In this chapter, like Rameau, Gianotti relates triadic elements directly to a specific fundamental bass; unlike Rameau, he concentrates on the materials themselves, the triadic elements (the mediant and the leading tone, and intervallic components of a triad) instead of the source of the building activity, the fundamental bass. This perspective prevents him from exploring the consequences of selecting one specific fundamental bass over another.

Rameau does not define the term "common tone" here. Perhaps he did not see the need to do so, given his discussion of common fundamentals in the realm of key in lessons 4/1 and 7/2. What is more important to him here is the impact that the correct progression of the fundamental bass by fifth has on the solution of a problem. Both Gianotti and Rameau refer to a specific example which must be solved through the correct progression of the fundamental bass by fifth (emphasized in boldface below):

Gianotti:	**Rameau: draft 1**	**Rameau: draft 2**
	I/5/1-f. 10v	**I/5/2-f. 49v**
7 Now, this community of notes could cause some difficulty in the case where the choice between two fundamental notes appears arbitrary, [specifically] under a subject note which would be common to [both] their chords. But the required fundamental progression by fifths would clear up difficulty—provided that one did not persist in retaining the subdominant under its fifth, *C*, when this fifth is followed diatonically.	The necessity of the fundamental succession [to progress] by fifth makes this ambiguity disappear—as long as one still did not persist in retaining the subdominant F under the fifth, C, when this fifth is followed by step. For, if the diatonic note neighbors of C, the octave of the tonic, belong to the chord of the dominant-tonic, and if this dominant-tonic cannot follow the subdominant, it is consequently necessary that this one yields its place to the tonic in the case where it is a matter of difficulty.	For example, when one used F in the fundamental bass, if the melody gives G next, one well sees that this G can belong only to the harmony of C—since F should necessarily pass to C in the fundamental bass.

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Gianotti gives this short shrift, but Rameau explains what is happening in 5/1. Since C can be the fifth of F as well as the octave of C, it can possibly have two different fundamentals, C or F. However, if the student opts for F as a fundamental bass below the C in the melody and the next melody note is a D or a B, the fundamental bass would be forced to harmonize either of these melody notes with a G in the fundamental bass; a stepwise progression in the fundamental bass would therefore result (F to G). To avoid this progression, Rameau advises harmonizing the C in the melody with the tonic as a fundamental bass. Once again, the right of the fundamental bass to progress by fifth overrides any other factor.

Vertical vs. Horizontal Views

Gianotti's summary at the end of the chapter captures the main force of the lesson: that melody notes are directly related to the fundamental bass. His condensation of the rules into two distinct points has pluses and minuses. Even though he arrives at the same bottom line as Rameau, he still reveals his own slant on the topic through his phraseology: couching both rules in the subject's domain. Gianotti's second rule is more descriptive than it is explanatory. Given his emphasis on the subject's role as an indicator of the fundamental bass (a vertical factor), it comes as no surprise that he relates the movement in the subject by thirds and fifths (a horizontal factor) to the vertical components of a fundamental chord. Unfortunately, though, he does not provide the underlying rationale for rule 1: why the fundamental bass must change at every stepwise move in the subject. Only Rameau connects these ideas.

Unlike Gianotti, Rameau roots his explanation in the fundamental bass. In both drafts, he gives examples that clarify the issue. He starts with a specific fundamental, C. If there is C in the melody and the melody progresses by step, the pitches can either be B (down a step) or D (up a step). Either of these notes would have to be harmonized with the fundamental G: hence, the original fundamental (C) would have to go to G next. He then

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extends this example to G saying that the melodic neighbors of G (F and A) would belong to the fundamental on F. Hence, he shows why it is necessary to change the fundamental bass when the melody moves by step. Since Rameau has continually emphasized the inseparability of the fundamental and its triad from the beginning of "L'Art," the notion that melodic movement by triadic intervals (thirds and fifths) requires the same fundamental bass is a given at this point. In both of these drafts, Rameau provides the rationale for horizontal melodic movements having vertical consequences in the fundamental bass. But indirectly, he does more than this.

Throughout this lesson, he uses specific spatial relationships to highlight function. Up to this point, Rameau carefully emphasized the importance of thirds, first as horizontal elements in scales and then as vertical components in chords. In a similar vein, he used the scale of fifths to help the student immediately identify the three fundamentals of a key and also utilized it to set up a model where the tonic was flanked by two poles a fifth away: the dominant-tonic above and the subdominant below. In this lesson, though, other than the fifth, he focuses on two specific intervallic distances: the third and the second. Recall how Rameau used the third to separate the function of subject notes from fundamental notes by relating the mediant to the tonic fundamental and the leading tone to the dominant-tonic fundamental. In this case, he employed the third as a vertical cue to a specific fundamental below. Similarly, Rameau also used the second to relate the stepwise relationship of the leading tone to the tonic, the supertonic to the tonic, and the superdominant to the dominant-tonic. In each of these illustrations, Rameau employs a specific intervallic distance, a distance that can be reckoned from note to note melodically (a horizontal element), to also connect the relationship of a subject note to its fundamental (the vertical element).

He also uses these specific intervals laterally in the movements of the fundamental bass itself. His prohibition against stepwise motion in the fundamental bass is a good example of this. Another is the use of different fundamental basses for stepwise motion in

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the subject. In each of these ideas, the second symbolizes a form of disconnection on a certain level: in the fundamental succession, the connection of harmony ceases; in the subject, the fundamental must change.[6] On the other hand, the third promotes a connection: a melodic indication of a specific fundamental, or a temporary stasis effected by the retention of a fundamental. In Rameau's eyes, the idea of subject notes being related to fundamentals by thirds and by seconds takes on new light.

The Pedagogical Asides

As mentioned earlier, Gianotti significantly reduces the information in five different sources in "L'Art" to one chapter here. Since he is primarily concerned with making Rameau's theory accessible to a beginner, he only relates the rudiments of this theory. Unfortunately, he not only leaves out many of Rameau's details, he omits extraneous material that is of extraordinary interest to the modern reader: Rameau's pedagogical asides. Rameau includes many of these practical hints throughout both drafts of lesson 5. Through these asides we glimpse "Rameau the teacher," for his comments are particularly revealing of his methodology.

Rameau starts both drafts of lesson 5 with a nuts-and-bolts approach. He begins by introducing some very basic information:

5/1:

Any given subject can be a **dessus,** an **haute contre** or a **Basse**— it makes no difference and it is the teacher who gives it first because it should be subject to the order of rules.

There are two staves, one above the other: the upper one is for the subject and the one below[7] is for the fundamental bass

5/2:

Any given melody can be a **dessus,** a **Basse,** or an **haute contre**—it does not matter. It is the teacher who gives it until the student is not only in the state of imagining it himself but also until he perfectly possesses a thorough knowledge of all the rules.

There are two staves, each of five lines, one above the other. The melody is in the one above and the fundamental bass is

[6] Stepwise resolution of the seventh can also be seen in this light.

[7] As in lesson 2/2, there is an error concerning the word *dessus* in the manuscript. From the context here, it is clear that Rameau is referring to the lower staff. Once again, *dessus* is mistaken for *dessous*.

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where one places notes perpendicularly below those of the subject.

Though we generally only fill the examples with whole notes [**rondes**], one can suppose them quarters [**noires**] [or] eighths [**croches**]—this does not matter, since this difference only affects the tempo [**mouvement**] which one is free to suppose either slow or fast. What is more, for the subject, we make use of a clef which presents the same notes in the same spaces as those of the fundamental bass in order not to be concerned with an unnecessary difference.

(I/5/1-f. 9ᵛ)

placed in the one below. Each note of the melody should have a note in the fundamental bass perpendicularly below it.

(I/5/2-f. 48ᵛ)

At first glance, this material seems too simple for inclusion at this stage of the game, but Rameau's suggestions here have more significance than is immediately obvious. By spelling out these details, he designates a specific line for the subject and a specific line for the fundamental bass. In both drafts, he stresses that fundamental bass notes lie directly beneath their respective subject notes. Subtly, he simultaneously emphasizes horizontal and vertical placements of both parts—a view that continually surfaces throughout this lesson and "L'Art" in general. From this introductory material, too, the student also learns that this lesson can be applied to any voice range against a fundamental bass—be it soprano, alto or tenor, or even bass. Rameau's provision of the subject in this lesson leads to the next advice: procedures for working the examples in a lesson.

5/1:

In all our examples, we join the fundamental bass to the subject so that the [fundamental bass] may take the place of the teacher. Consequently, it is necessary to copy or to make a separate copy of the subject, leaving a blank space below in order to place the fundamental bass that one will then compose according to the rules which are prescribed for you without being guided in any way by the fundamental bass of the example. However, when it is

5/2:

In all these examples, one finds the fundamental bass with the melody, but it is necessary to take care to glance there only after having composed the fundamental bass oneself in order to confront them later [to see] if everything conforms. One copies or makes a copy of the melody of all the examples separately in order to compose the fundamental bass oneself according to the given rules. If one finds some differences with that of these examples, it is necessary

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composed, one should compare it with ours in order to see if they agree. And if one finds some differences there, it will be necessary without examining what they consist of, to reflect anew on the prescribed rules in order to see if one has observed them well, and if one is once again sure of everything that would be found to agree.

(I/5/1-f. 9v)

to look over one's work without examining the model, recollecting the preceding rules in order to try to correct oneself through the appropriate lights.

(I/5/2-f. 49v-50r)

These particular asides are not only useful tips for the reader, they reveal Rameau's intentions for this work—for these drafts were not merely his own notes for teaching the practical composition course, they were designed to become eventually a manual for self-instruction. With this in mind, Rameau finds it extremely important to tell his readers how to even use this manual, for he wants to make sure that his students do not "cheat" themselves of the learning experience by accepting his completed examples. His is a "learn by doing" approach.

These passages also show that Rameau's concern lies not in the rote memorization of rules, but in the knowlegeable application of these rules. He does not want the students to follow his examples slavishly; rather, he allows for flexibility in the musical solutions—as long as they fit the prescribed rules. For, in order to complete these exercises successfully, the student must not only know the rules, he must make decisions based upon hierarchical ordering of these rules.

In addition to suggesting how to use the given solutions in the manual, Rameau suggests a means of dealing with numerous variables in the consideration of a musical outcome. Here, he advises placing a temporary marker in the space where a possible solution is imagined:

5/1:

In order not to make a blunder and in order to keep the object in sight, one places a dot in place of the imagined fundamental note until one is assured of the [note] that fits in

5/2:

One only needs to place a dot in place of the note that one imagines for the fundamental bass, so that always having an eye on this dot, one occupies oneself only with the

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the fundamental bass. harmony of this note in order to see whether
(I/5/1-f.10r) the melody note belongs.[8]
(I/5/2-f. 49r)

While these passages do not shed much light on Rameau's theory, they do provide a glimpse of his teaching methods, methods that are not revealed in any of his other treatises.[9]

Other asides reveal theoretical values as well as methodology. Two passages in 7/2 are noteworthy in this regard. Recall the passage where Rameau distinguishes subject notes from fundamental bass notes:

> One must never give the names proper to the fundamental bass to the melody; one ought to consider [the melody notes] only as thirds, fifths, or octaves of this fundamental bass. Otherwise, ambiguity will arise sometimes. If one takes the melody note as if it were the fundamental without thinking about it, one consequently imagines the harmony of this melody note and one sometimes becomes suddenly disoriented through this imperceptible misunderstanding.
> (I/7/2-f. 51r)

As pedagogue, Rameau is also a troubleshooter for the beginner. Thus, he effects a separation between fundamental bass note names and subject names for the reason of avoiding confusion in the sea of melodic and fundamental bass options. However, on a deeper level, he delineates harmonic components (the fundamental bass) from melodic components (thinking in terms of intervallic relations to the fundamental bass) at the same

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[8] The passage in draft 2 is crossed out in the manuscript.

[9] Rameau was not the only teacher to advocate using dots as placeholders while composing. Johannes Lippius (1585-1612) also suggested using dots as placeholders for notes above a notated bass in his method Synopsis musicae novae of 1612. However, in Lippius's method, the student was to compose the bassline first, dot all the triadic members vertically above each bass note second, and then compose each successive voice part linearly while keeping triadic members in mind. There is an illustration of this on p. 48 of Benito Rivera's English translation Synopsis of New Music, (Colorado Springs: Colorado Music Press, 1977).

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time. Thus, his practical advice can also simultaneously reveal ideas on a much deeper level.

Throughout "L'Art," Rameau frequently asks the reader to memorize things. These memorization tips are not only helpful in their own right, they often provide us with a unique view of Rameau as teacher. In 7/2 alone, Rameau advises memorizing key concepts to avoid distraction in the composition process:

> Since it is necessary to have so much in mind, as well as all that had preceded, one must not be obliged to reflect a moment in order to remember these things; when it is a matter of being interested in the name of an object, one object distracts from the other and nearly always throws confusion into one's ideas.
>
> (I/7/2-f. 51r)

The statement that follows, however, seems contradictory:

> One ought not count on his memory too much, since one would know too much to keep running through everything that one should know before going too far.
>
> (I/7/2-f. 51r)

Actually, through these remarks, Rameau reveals what is important to know. He realizes that a beginner can not only get bogged down in copious details, he can frequently become disoriented in the face of multiple musical decisions—especially given the fact that everything is terra incognita. To avoid common hesitations, then, he advises in this particular lesson memorizing a simple association: the tonic with its two fifths. He also provides one source for quick retrieval of the desired information: the scale by fifths. As long as the student knows how to figure out the information when his memory fails, he is on the right path. In this way, Rameau shows the student how to teach himself.

Contrary to anecdotes that often portray the irascible side of Rameau, these particular asides show Rameau to be a sympathetic pedagogue who understands the

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difficulties waiting for the student at every turn. His insights often reveal practical tips and extraordinary ideas in one fell swoop. Despite his writing problems, Rameau is a talented teacher; he enables the student to acquire the necessary theoretical ideas and **apply** them. He literally takes the student by the hand, provides a guided tour of the possible difficulties, and points his finger at the best solution. More importantly, he also explains why certain solutions are better than others. In many respects, reading his manuscript is the next closest thing to having Rameau look over one's shoulder. Through "L'Art," the ghost of Rameau still exerts influence.

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CHAPTER III

Some special rules of the fundamental bass

Gianotti:
One should recall here all that we have said about syncopation, sect IV [of the Preliminary Introduction].

First rule

1 Every syncopated note, or [one] implied as such in the melody, requires two different fundamental notes.

Rameau: draft 1

I/6/1-f. 11[v]
Art. III

Every syncopation of the subject generally requires two different fundamental notes: one for the first value of the syncopation and the other for the second value.

Second rule

2 The two weak beats of a measure of three beats are not supposed to syncopate, though one can subject them to it in order to obtain for the fundamental bass its legitimate progression.

I/6/1-f. 11[r]
Art. II

A note which contains only the two weak beats of a measure of three beats is not felt to syncopate, although, in order to give the fundamental bass [its] most legitimate succession, one could submit to the rules of the syncopation when the need presents itself.

Third rule

3 One should avoid syncopating the fundamental bass, unless absolutely forced. However, [the fundamental bass] can syncopate at the beginning, without being of consequence, as long as the subject starts on a weak beat, which is always counted for nothing in a similar case.

I/6/1-f. 11[r]
Art. III

The fundamental bass should never syncopate unless one is absolutely forced. Yet there are almost always means of evading it—as when a fundamental note changes its nature in becoming a dominant or a subdominant after having been a tonic. This can only take place in a change of key—which is not a concern yet.

Rameau: draft 2

I/6/2-f. 50[r]

For the present, it suffices to know that the fundamental bass never ought to syncopate—except in the beginning when the melody does not begin on the strong beat of the measure. Here [the syncopation] is immaterial. When the melody syncopates, it is especially necessary to avoid syncopating the fundamental bass: on the contrary, [the

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fundamental bass] should occupy the whole measure with the same note as much as possible.

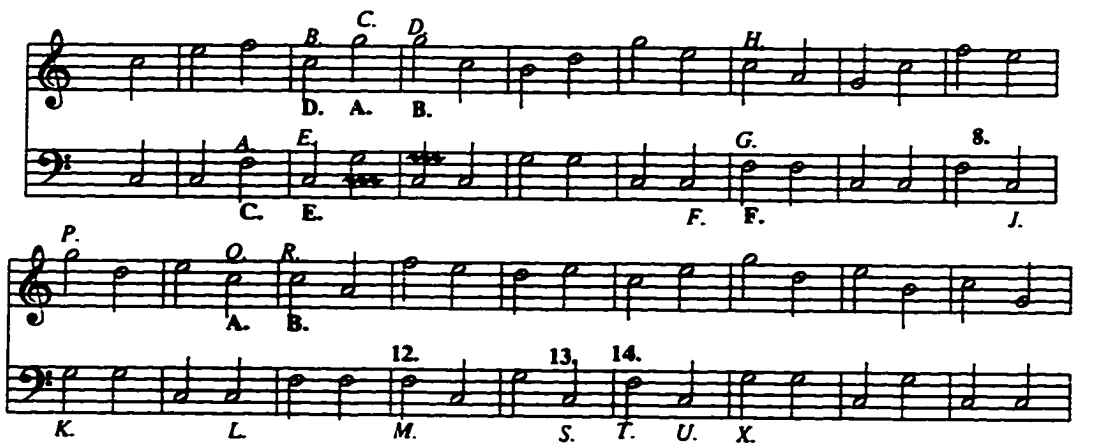
I/6/1-f. 11ᵛ
Art. III

Besides, the fundamental bass can syncopate at the beginning because the weak beat upon which one starts is then counted for nothing.

4 Moreover, [the fundamental bass] can syncopate from one measure to another in a measure of three beats as long as one could reduce the two measures where it syncopates into one measure. See *example 2, pl. 1.*[1]

I/6/1-f. 11ᵛ
Art. III

[The fundamental bass] can even syncopate in a measure of three beats as long as one could reduce the two [measures] where it syncopates into one measure as one will see in the Explication.

[1] Rameau's letter names in the "Explication" sections of I/6/1 do not match those in Gianotti's "Observations." The first two lines of Gianotti's Example 2 appear below with Gianotti's letter names in boldface and Rameau's in italics:

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Observations on this example

5 Since the first melody note occurs on a weak beat, it counts for nothing, and the fundamental bass can syncopate there without being of consequence.

I/6/1-f. 11ᵛ-Art. III Explication

Since the first note of the opening is on a weak beat, one counts it for nothing, and then the fundamental bass can syncopate there without being of consequence.

6 The notes of the subject at A. [&] B. are understood to syncopate, even though they are not connected with a semi-circle [tie]. Each duration of these syncopations should have its own fundamental bass.[2]

I/6/1-f. 12ʳ - Art. III Explication

The subject note syncopates from C. to D.; therefore each value of this syncopation should have its own fundamental bass. And in order for this to take place, one cannot retain the tonic at E. in the first or in the second value of the syncopation so that it [might] return next: this is arbitrary as the guidemarks show. In this way, one selectively executes the rule.

7 If one retained the dominant [subdominant] at C. under the subject note at D., which could serve as a fifth of this subdominant, the fundamental bass would syncopate; this is why it's necessary that it [the fundamental bass] passes to the tonic at E., which then forms an octave with the note in the subject at D.

I/6/1-f. 11ᵛ-12ʳ Art. III Explication

Though the subject note at B. forms a fifth with the subdominant already employed at A., [the subdominant] cannot remain under this fifth without syncopating. Consequently, it is necessary that it passes to the tonic E. under the same note B. which forms an octave of it for the same reason that one cannot retain the tonic J. under its fifth P.

[2] Gianotti is referring to the syncopation of the subject across bars 2 and 3 in this example. However, he does not draw attention to the parallel octaves between the subject and the fundamental bass in measure 2. The reader is reminded that the fundamental bass line is not a real voice but a structural voice. Therefore, this situation is permitted because presumably, other voicings of the chord would be used in the actual sounding bass line. What seems to be a breach of the parallel octave rule in this situation is perfectly permissible because of the skeletal nature of the fundamental bass. Neither Rameau nor Gianotti mentions this detail.

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since it would syncopate there. As a result, it then passes to the dominant-tonic K. with which the note at P. forms an octave.

8 The same observations can be made at mm. 8 & 9 and 13 & 14.

I/6/1-f. 12r-Art. III
Explication

9 At F., one would have been able to retain the tonic [in the fundamental bass] already employed in the preceding measure without giving rise to a syncopation. And, if one had used the subject note as fifth of the subdominant, in order to retain the same fundamental note throughout the whole measure, [one would have to] change the fundamental bass at each strong beat when the subject allows it. One should always observe this in arbitrary cases similar to this one. It's not the same [situation as] measure 12, where the subject forces us to retain the subdominant already employed throughout the entire preceding measure.

One could retain the tonic at F. under its octave at H., since it would not syncopate there and since it can pass next to the subdominant. However, the necessity of changing the fundamental bass at each strong beat as much as possible and retaining the same note throughout the whole measure should urge us to seize this subdominant at G. first. The subject note at H. forms a fifth [of this subdominant at G.] the same way that it forms an octave with the tonic at F.

It is not the same at M. where the subject forces [us] to retain the subdominant that the syncopation at Q. R. of this same subject had already forced [us] to use after the tonic L.: thus, when one cannot do better, it is necessary to submit to it.

10 When a particular solution is forced [by the rules], one must [simply] submit to it.

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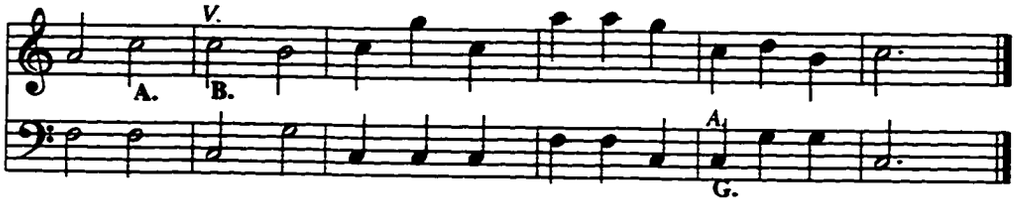
I/6/1-f. 12[r]-Art. III
Explication

11 If the tonic syncopates at G., one can reduce into one measure the two which the tonic occupies in this place.

The syncopation of the subject at V. requires as elsewhere, two different fundamental notes for its two values. If the tonic syncopates at A.; notice that the two measures that they occupy can be reduced to one [measure] of three whole notes. Therefore these three whole notes mark the three beats without syncopating.[3]

12 One can follow the notes or the custodes, in the fundamental bass, under the first letters A. B.

[3] The last line of Gianotti's Example 2 appears below with Rameau's letter names in italics:

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Editorial Commentary on Chapter III

Gianotti usually prepares the reader for the topic of the chapter through his choice of title. Unfortunately, Gianotti's title for this chapter falls short of the mark, for he could have simply labeled the chapter "Syncopation and the Fundamental Bass." Rameau gives much more descriptive titles to both drafts of the corresponding lesson in "L'Art": "Concerning the measure, its beats, syncopation, and the value of the fundamental notes in each measure" (I/6/1) and "Concerning the distinction of beats of the measure, syncopation, the value of fundamental notes in each measure, and the breve" (I/6/2). Through these descriptive titles, Rameau gives the reader a good idea of what will be presented in the body of the lesson, even though he, like Gianotti, does not limit the course of study to syncopation alone.

The way that each author titles the lesson is more than a minor detail, for in imparting the material along the lines implied by the title alone, each author reveals his own understanding of syncopation. In general, Gianotti tends to lump a number of ideas under a vague heading while Rameau espouses the details. It is Rameau's attention to detail which clarifies the problems that Gianotti sweeps under the blanket of generality. In fact, Gianotti's title for this chapter is no mere misnomer—it points to his misapprehension of how syncopation truly impacts on the fundamental bass. Though Gianotti does not intentionally distort Rameau's work, Gianotti, through his reorganization of the material and his emphasis on the melodic perspective of syncopation, does not do justice to Rameau's thinking. As a result, the reader does not experience the full flavor of Rameau's ideas and receives a watered-down version instead.

Gianotti makes his first mark as an editor by splitting the material of Rameau's single lesson on syncopation into two non-consecutive divisions: section IV of the Preliminary Introduction and Chapter III. Gianotti introduces the basics in section IV of

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the Preliminary Introduction, describing the beats in a measure and offering a definition for syncopation; he saves the application of syncopation to the fundamental bass for the third chapter. In presenting the topics this way, Gianotti actually follows Rameau's pacing of ideas in the first draft version of lesson 6, for Rameau presents the divisions of beats in a measure in Article I, defines syncopation in Article II, and relates the basics of syncopation to the fundamental bass only in Article III. So it is not Gianotti's pacing of ideas that causes difficulty; rather, it is his attempt to divide the topic into two installments, for trying to introduce the idea of syncopation without the fundamental bass in the Preliminary Introduction would be similar to teaching the concept of mitosis without the cell. Therefore Gianotti's problems start with the material in the Preliminary Introduction.

Gianotti's method of introducing an idea in its simplest form before proceeding to a more complex application (as in chapter 1) usually stands him and the reader in good stead. In trying to simplify matters in the Preliminary Introduction section, however, Gianotti actually makes matters worse by omitting important details—details which Rameau provides. For example, both authors provide a definition of syncopation. It is only in Rameau's version, however, that a particular detail comes to the fore:

Gianotti:	**Rameau: draft 1**	**Rameau: draft 2**
Preliminary Introduction-Sect. IV, ¶ 3	**I/6/1-f. 11r**	**I/6/2-f. 50r**
Every note that belongs to two different beats is syncopated or felt to syncopate. It is especially [felt to syncopate] when it belongs to two different measures without completely filling these two measures. Such would be a note that, beginning on a weak beat of a measure, would finish on the strong beat of the	Syncopation consists of a note whose value begins on a weak beat and continues through the strong beat which follows. This note which syncopates can either be repeated or connected by a tie[1] as ⌒ or ⌣ or it could even be shared like Φ by the bar line which separates the measure—it is all the same. Syncopation is also recognized in a note whose	Syncopation consists of a note whose value begins on a weak beat and continues through a strong beat: either this note is repeated or is shared by the bar line which separates the measures, or it is connected by a semicircle [tie].

[1] Rameau literally calls this a "semicircle" here. From the context, it is clear that he is referring to a tie.

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following measure, or, that, beginning on the weak part of a beat, would finish on the strong part of the following [beat], or, that, beginning on the last half of a beat, would continue through the following beat.

value begins on the last half of a beat and continues through the beat which follows it.

Rameau defines syncopation in terms of weak and strong beats whereas Gianotti defines it as "a note which belongs to two different beats." While this detail may seem insignificant at first glance, its importance colors the way each author presents the concept throughout the lesson.

Gianotti's statement is too vague. By neglecting to indicate the relative value of each note, he ignores the basic premise of syncopation: retention of a note starting in a weak metric position into a strong metric position. For instance, according to Gianotti's basic definition of syncopation as "a note which belongs to two different beats," a half note occurring on the first two beats of a three-beat measure could be considered a syncopation. Gianotti leaves out one important detail: he forgets to tell us that a syncopation does not occur from a strong beat to a weak beat. As a result, the reader does not learn how restricted are the conditions for syncopation, which are given more precisely by Rameau.

Though Gianotti tends to generalize, he does clarify his first definition of syncopation by providing some significant details in his next thought:

> Such would be a note that, beginning on a weak beat of a measure, would finish on the strong beat of the following measure, or, that, beginning on the weak part of a beat, would finish on the strong part of the following [beat], or, that, beginning on the last half of a beat, would continue through the following beat.
>
> (Gianotti, Prel. Intro, sect. IV, xxii)

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Gianotti comes closer to Rameau's idea of syncopation in this passage, for he describes a situation where the syncopation continues from a weaker value to a stronger value—whether it occurs from one measure to another or from one beat to another. Rameau conveys this idea in his definition from the outset; by presenting the syncopation as a suspension of a value in a weak metric position into the value of a strong metric position, he opens the idea for application to either the melodic or harmonic realm. What becomes clearer in the course of the lesson is that Rameau understands syncopation as a harmonic event, an occasion where a previous harmony temporarily supplants the harmony that is to follow. Thus, he understands it as harmonic displacement—not a mere continuation of what has preceded. Unfortunately, in trying to relegate syncopation to a melodic event independent of a harmonic underpinning, Gianotti does not accurately reflect Rameau's view of the situation; for syncopation seen from the melodic perspective alone produces a mere ripple in the rhythmic surface of the melody, a ripple that effects a blind application of rules in the fundamental bass. And this is precisely Gianotti's problem in his summation of the Preliminary Introduction: he reduces the syncopation encounter in the fundamental bass to five rules.

Gianotti's five rules at the end of the section are particularly confusing for the beginner. Once again, it is Rameau's additional comments which help to explain the connection of ideas. Consider Gianotti's second rule: "syncopation has two different values proportionate to the two different beats that it comprises." Though Gianotti points the beginner in the basic direction, the reader soon flounders on account of the lack of detail. Rameau, on the other hand, provides exactly what is missing, by focusing on a more specific context:

> Syncopation is distinguished in 2 values: its first value comprises the weak beat and the second value is always the strong beat. **Even the two weak beats of a three-beat measure [can be considered the first value of the syncopation] when it continues through a strong beat.**
>
> (I/6/1- f. 11r)

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By specifying the exact nature of the first and second values of the syncopation, Rameau gives information that can then be applied to any metrical situation: the student need only be aware of starting the syncopation on a weak beat and ending it on a strong beat. The latter part of Rameau's definition here also helps to explain Gianotti's third rule: "a note that contains the two weak beats of a measure of three beats and finishes on the strong beat of the following measure is understood to syncopate." However, in order to fully understand this particular problem in triple meter, it is necessary to backtrack to the first topic of the lesson: the beats in a measure.

Both Rameau and Gianotti launch the discussion of syncopation with a presentation of the division of beats in a measure:

Gianotti:

Preliminary Introduction Sect. IV, ¶ 1-2

One can reduce the different measures in use to two [types]: the measure of two beats and that of three beats. [The measure] of four beats should be considered as being composed of two measures of two beats.

The first beat of any measure is called strong, the other [beats] weak. Thus, in a measure of two beats, there is a strong beat and a weak [beat]; in the measure of four beats, two strong beats and two weak [beats]; in that of three beats, a

Rameau: draft 1

I/6/1-f. 10^{v}

[Everything] that is contained between each barline [constitutes] the measure. It can have two, three, or four beats. For the present, these beats are whole notes [**rondes**], [but] one can substitute [any] other note that is desired.

I/6/1-f. 11^{r}
Article I

One should imagine the measure of four beats to always be divided in two measures of two beats in order to apply the following rules there. The first beat of

Rameau: draft 2

I/6/2-f. 50^{r}

The measure distinguishes itself in two, three, and four beats. The first beat is called strong and the others weak, noting nonetheless that the third beat of a measure in four is a

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strong beat and two weak [beats]. But one must notice that, in this last measure, the third beat can be considered a strong beat relative to the second [beat], as long as the note that forms it does not continue through the strong beat of the following measure.

the measure is called strong and the others weak.

I/6/1-f. 11r Article III [sic] (II)[2]

The third beat of a three-beat measure is regarded as a strong [beat] relative to the second; as long as it does not continue through the strong beat [of the next measure] because this one gives exclusion to all the other [rules]. If syncopation develops from one beat to another; its second value will always fall on the beat.

[emphasis added]

strong beat. One only needs to divide this measure into two measures of two beats in order not to be mistaken.

Though both teachers stress that the first beat of a measure is "strong," they vary ever so slightly in their description of the four-beat measure. Predictably, Gianotti's description of the four-beat measure is general; he only says that there are two strong beats and two weak beats. As can be expected, Rameau clarifies this idea through additional detail—this time in the second draft version—where he indicates the exact placement of these strong and weak beats within the measure structure:

> The measure distinguishes itself in two, three, and four beats. The first beat is called strong and the others weak, **noting nonetheless that the third beat of a measure in four is a strong beat. One only needs to divide this measure into two measures of two beats in order not to be mistaken.** [emphasis added]
> (I/6/2-f. 50r)

[2] Though Rameau divides the material of the first draft lesson into three distinct Article sections, he misnumbers the second article as "Article III" and repeats the same heading for the third article.

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Rameau's idea of the four-beat measure would look something like this:

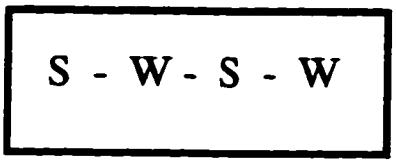

Figure 3- 1: *Model of Rameau's four-beat measure where* ***S*** *= Strong beat and* ***W*** *= Weak beat*

Both authors also agree that the first beat of a three-beat measure is strong. After designating the remaining beats as weak beats, they both offer a reconsideration of sorts: they present the third beat as a strong beat in relation to the second beat—as long as the third beat does not continue into the strong beat of the next measure. Thus, for the three-beat measure, we have two models:

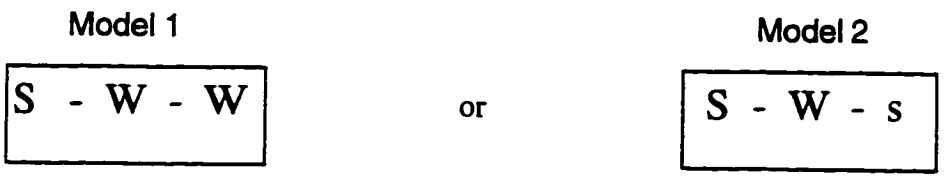

Figure 3- 2: *Models of two possibilities for the three-beat measure.*

It is Rameau's description of syncopation as a phenomenon occurring from a weak beat to a strong beat which helps to shed light on a missing piece in Gianotti's puzzle, for in the third rule at the end of section IV of the Preliminary Introduction, Gianotti says that "a note which contains the two weak beats of a measure in three, and finishes on the strong beat of the following measure, is felt to syncopate." Through additional information in boldface in the quoted parallel passage from I/6/1-f. 11[r], Rameau clarifies that beats two and three of a triple measure (model 1) can be considered as a weak beat together;

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therefore, together, they can be considered the first value of the syncopation with the second value occurring on the strong beat of the next measure, as in Fig. 3- 3.

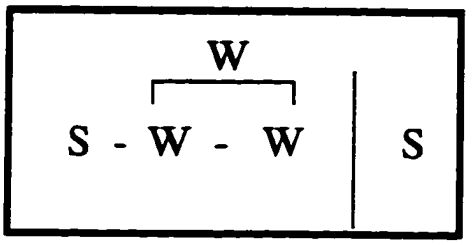

Figure 3- 3: *Model based on Rameau's additional information in I/6/1-f. 11r*

Some of Gianotti's rules in the Preliminary Introduction are problematic because they involve the fundamental bass and cannot fully be discussed until chapter 3. For instance, rules four and five refer to a situation in a three-beat measure where the melodic syncopation across beats 2 and 3 requires two different fundamental bass notes. Gianotti's first rule also requires further explanation. He states that "a note which would entirely fill one, two, or three measures must not be syncopated." Here he is trying to differentiate a tied note from a syncopated note in the melody. However, Rameau's comment in the second article of 6/1 reveals much more than this:

> This fundamental bass should occupy the whole measure as much as the subject permits. Above all, it should change at each strong beat—except that it might continue for several entire measures. (I/6/1-f. 11r-Art. III)

Through careful attention to detail, Rameau clarifies the idea. He alone takes care to specify that it is the fundamental bass that can continue for several measures in this situation—not the melody note. This leads to the next topic of discussion: the fundamental bass.

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Syncopation and the Fundamental Bass

Even though Gianotti attempted to delay treating the relationship of syncopation to the fundamental bass until chapter 3, he could not escape introducing it in some of the rules at the end of the Preliminary Introduction. As mentioned earlier, this problem stems from the fact that syncopation is as much a matter of harmony as it is of melody. In chapter 3, Gianotti tries to reduce all the harmonic complications that syncopation raises for the fundamental bass to three simple rules. Once again, through his lack of detail and his ordering problems, he does not provide an adequate explanation of the rules in this chapter.

Through additional comments, Rameau not only clarifies some of Gianotti's problems of omission, he reveals a view of syncopation on a much higher level: the idea that syncopation, by its very nature, is a disturbance of some sort of equilibrium. In his examples, Gianotti comes closer to Rameau's view of syncopation, but it is only Rameau's explanations that tie the concepts together and show that this equilibrium can be achieved not by following the rules blindly, but by understanding and discerning the best option from a variety of alternatives available for a given situation. In short, in Rameau's rendition, three rules are not enough to convey the complexities that syncopation introduces.

Gianotti's 3 Rules

Gianotti's first rule, that each syncopated subject note requires a separate fundamental bass, is not problematic. However, he neglects to tell us that syncopation can occur in a variety of ways. In both drafts, Rameau alerts the student to the various guises of syncopation: a note repeated across the bar, a note tied across the bar, or a note shared by the barline (see pp. 161-2 for text). While Gianotti briefly mentions that a repeated note could indicate a syncopation as well as tied note in the fifth rule in the Preliminary Introduction, he does not emphasize this fact. Though Gianotti does not reiterate this in the

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body of chapter 3, his second example involving letters A. and B. (¶ 6) serves as an illustration of this particular point.

In terms of significance, Gianotti's second and third rules should be reversed; it is far more important to avoid syncopating the fundamental bass (rule 3) than it is to understand the ramifications of syncopating the second and third beats in the melody of a three-beat measure. Subliminally, through his ordering of rules, Gianotti gives precedence to a melodic event over one in the fundamental bass yet again. Rameau, on the other hand, provides additional information about the fundamental bass that helps to clarify several facets of rule 3 which Gianotti does not explore. These facets, in turn, help to shed light on Gianotti's second rule as well.

Gianotti's third rule actually consists of three different rules that are related. The first statement is a general rule: avoid syncopation of the fundamental bass unless forced. The other two rules that follow are actually exceptions to the first rule—exceptions that allow some room for flexibility in situations such as the upbeat to melodic phrase and hemiola at the end of a piece.

Unfortunately, Gianotti does not emphasize enough the importance of avoiding a syncopation in the fundamental bass. He gives each division of the third rule equal importance. In this respect, he follows Rameau's first draft version more closely than he does the second draft version. Compare Gianotti's version with the following:

Gianotti: Chapter 3

Third rule

3 One should avoid syncopating the fundamental bass, unless one is absolutely forced. However, [the fundamental bass] can syncopate at the beginning, without being of consequence, as long as the subject starts on a weak beat, which is always counted for nothing in a similar case.

Rameau: draft 1

I/6/1-f. 11r
Article III

The fundamental bass should never syncopate unless one is absolutely forced. Yet there are almost always means of evading it—as when a fundamental note changes its nature in becoming a dominant or a subdominant after having been a tonic. This can only take place in a change of key—which is not a concern yet.

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It is not hard to see the resemblance in wording and hence approach between both authors' first statements. In this passage from the first draft, Rameau introduces too much too soon when he talks of a fundamental note changing its nature. Even though this matter is not yet germane to the topic, it still functions as an exception to the first rule. In this respect, both authors also resemble each other in methodology by following an absolute rule with an exception.

In 6/2, however, Rameau gives the dictum considerably more weight:

> For the present, it suffices to know that the fundamental bass never ought to syncopate—except in the beginning when the melody does not begin on the strong beat of the measure. Here [the syncopation] is immaterial. When the melody syncopates, it is especially necessary to avoid syncopating the fundamental bass: on the contrary, [the fundamental bass] should occupy the whole measure with the same note as much as possible.
>
> (I/6/2-f. 50r)

This particular statement includes a concept that Gianotti misses: retaining the fundamental bass through a measure as much as possible. Here, Rameau advocates this procedure as another fundamental bass solution beneath a melodic syncopation. This particular suggestion provides an alternative for using a different fundamental bass note under each value of the syncopation in the melody (Gianotti's first rule). Thus, the issue of syncopation is far more complex than Gianotti's three rules would have us believe.

The true nature of syncopation, seen as a type of disturbance, has ramifications not only in the melodic realm but particularly in the harmonic realm of the fundamental bass. In Rameau's world, the melody affects the fundamental bass and the fundamental bass affects the melody: in short, they are interrelated. Because of this fact, a disturbance in one directly affects the other. Since the melody often displays vertical components of the fundamental bass (chord members) in a horizontal way (melody), the actual melodic

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progression of the components, their relationship to the fundamental bass, and the rhythmic disturbance of their progression are all factors that influence an appropriate solution for a given situation. Hence, while the actual syncopation itself might seem a simple event, its effect on the corresponding part is not as clear-cut. Rameau reveals this view in both drafts by including far more details and illustrations than Gianotti concerning the interaction of the fundamental bass and the subject in given situations. In these passages, Rameau provides contextual cues to help the beginner determine when to change, repeat, or retain a fundamental bass option:

Rameau: draft 1

I/6/1-f. 11r-v
Articles II & III

This fundamental bass should occupy the whole measure as much as the subject permits. Above all, it should change at each strong beat—except that it might continue for several entire measures.

f. 11v

However, when a fundamental note has begun the value on the strong beat, it can continue as long as the subject obliges without having consideration for the preceding rules. Always try not to stray from these rules unless the subject absolutely forces [a change].

It is in this case that one must well discern whether or not the subject forms the fifth or the octave of the fundamental bass that one wishes to retain, since this same subject note can also form an octave

Rameau: draft 2

I/6/2-f. 50r-v

Do not be concerned about all these reflections on syncopation, for one will be informed of them in what follows. For the present, it suffices to know that the fundamental bass never ought to syncopate—except in the beginning when the melody does not begin on the strong beat of the measure. Here, [the syncopation] is immaterial. When the melody syncopates, it is especially necessary to avoid syncopating the fundamental bass: on the contrary, [the fundamental bass] should occupy the whole measure with the same note as much as possible.

This fundamental bass will never syncopate [as long as one] always employs on the strong beat of each measure of the fundamental bass a different [fundamental] note than the one which immediately precedes it.

In consequence of this rule, it is necessary to fill each measure with the same fundamental note as much as the melody permits; moreover, it is always better to repeat the same note four times rather than

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or a fifth of another fundamental [note] as well. It is free to be substituted for the [previous note] that one would have wanted to retain.

three when one sees the possibility of employing it in two measures of two beats in succession. On the other hand, in the three-beat measure, the repetition of three [notes] and six [notes] is best because this number fills one or two measures there.

The same note can be continued for several measures of the fundamental bass inasmuch as the melody traverses only the notes of its chord or harmony—observing as much that the melody can permit it to give up this note only at the same time as a new measure begins.

Rameau introduces several related concepts here. First of all, he says that when the melody syncopates, the fundamental bass should fill the entire measure as much as possible. Then, he adds that the fundamental bass can continue filling measures as long as the subject permits. While he mentions changing the fundamental bass at the strong beat of each measure in both drafts, he does so in slightly different contexts:

Rameau: draft 1

I/6/1-f. 11^{v}

However, when a fundamental note has begun the value on the strong beat, it can continue as long as the subject obliges without having consideration for the preceding rules. Always try not to stray from these rules unless the subject absolutely forces [a change].

Rameau: draft 2

I/6/2-f. 50^{r-v}

This fundamental bass will never syncopate [as long as one] always employs on the strong beat of each measure of the fundamental bass a different [fundamental] note than the one which immediately precedes it.

Rameau clarifies the situation by explaining that the decision to either retain a fundamental bass or change it at the strong beat of the measure is dependent upon another factor: the relationship of the melody notes to the fundamental bass. In his second draft version, Rameau conveys this idea in one thought:

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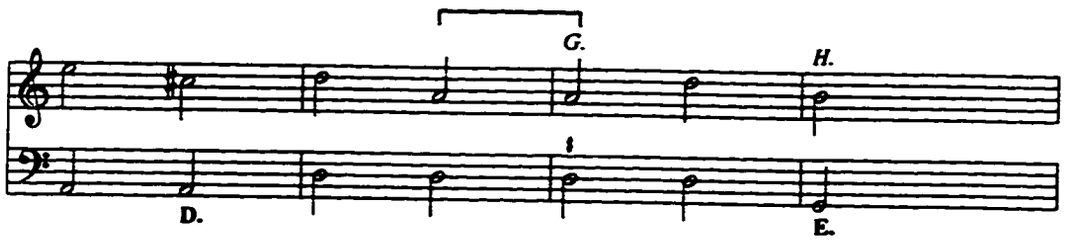
> The same note can be continued for several measures of the fundamental bass inasmuch as the melody traverses only the notes of its chord or harmony—observing as much that the melody can permit it to give up this note only at the same time as a new measure begins.
>
> (I/6/2-f. 50v)

In sum, Rameau provides several options for the fundamental bass; however, the correct application of these options requires an understanding of hierarchical relationships between the melody and the fundamental bass. As long as the root, third, or fifth of the fundamental is in the melody, the fundamental bass can be retained. When the fundamental bass changes, it should do so on the strong beat (the first beat) of each measure. If there is a melodic syncopation, the fundamental bass can either be retained from the strong beat of the measure and then change at the next measure's strong beat (as at Gianotti's second and third letters A. B.) **or** each value of the syncopation can receive its own fundamental bass (as at Gianotti's first A.B. reference).

There is another available option intimated by Rameau in the additional passages cited above. In the example drawn from Gianotti's seventh chapter, "In Which Many Methods are Indicated for Knowing the Key in the Subject," under the fourth sectional division (Fourth Method), Rameau points to the change of function of the value on the strong beat at letter *G.*:



Example 3- 1: *Measures 20-23 of Gianotti's Ex. 12 drawn from the Observations of Chapter 7, Fourth Method*

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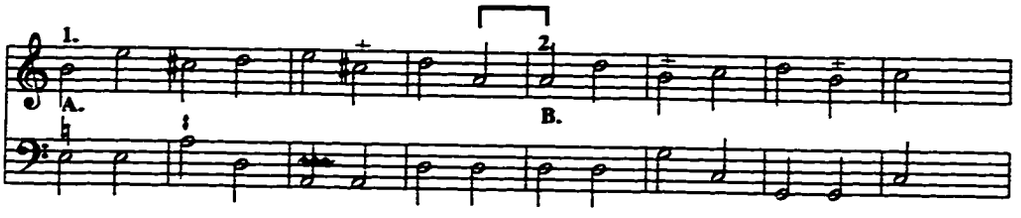
Though Rameau uses the example to explain how the melodic syncopation of the A, an event that usually requires a change of fundamental beneath the strong value at *G.*, is mediated by the chord's modal shift effecting a change of function, he permits in this situation a melodic syncopation over a fundamental bass that is retained for two full measures. In another example, Rameau even allows a similar melodic syncopation without the justification of a change of function:



Example 3- 2: *Measures 9-16 of Gianotti's Ex.16, drawn from the Observations of Chapter 10, Art. II*

In both of these contexts, Rameau allows a retention of the fundamental bass when the melodic syncopation is one of the triadic members of the prevailing fundamental.

While these last examples might seem to contradict Gianotti's strict rules, seen from Rameau's perspective they are merely opportunities to allow the context to influence the choice of the best possible solution from a variety of alternatives. Gianotti has a hard time conveying this kind of flexibility in the hierarchical decision process. Though he opts to condense the material of lesson 6 to three rules in the main body of text in the chapter, he does transmit many of Rameau's additional comments through the illustrations in his example section, omitting the additional comments themselves in the process. As a result, in Gianotti's version, some of the concepts, which are supposed to be "self-evident" in the examples, are not as clear as they could be. Rameau's additional comments and illustrations not only shed light on Gianotti's counterparts, but also lead us to the best

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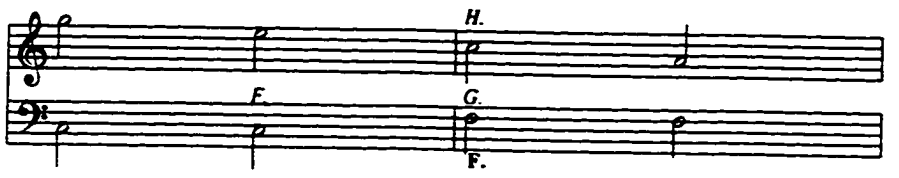
solution in a context where there are a number of options. For example, Gianotti, like his teacher, advocates changing the fundamental bass on the strong beat of the measure where possible. He raises this issue in his fifth example (¶ 9):

> At F., one would have been able to retain the tonic [in the fundamental bass] already employed in the preceding measure without giving rise to a syncopation. And, if one had used the subject note as fifth of the subdominant, in order to retain the same fundamental note throughout the whole measure, [one would have to] change the fundamental bass at each strong beat when the subject allows it.

Although Gianotti says that the tonic could have been retained at letter F., he shows the change of fundamental in the example.[3] Only Rameau, however, emphasizes why this hierarchical decision is better:

> One could retain the tonic at F. under its octave at H., since it would not syncopate there and since it can pass next to the subdominant. **However, the necessity of changing the fundamental bass at each strong beat as much as possible and retaining the same note throughout the whole measure should urge us to seize this subdominant at G. first.** The subject note at H. forms a fifth [of this subdominant at G.] the same way that it forms an octave with the tonic at F.
>
> [emphasis added]
> (I/6/1-f. 12^{r} -Art.III-"Explication")

[3] Measures 5-6 of Gianotti's example 2 appear below with Rameau's guidemarks in italics:



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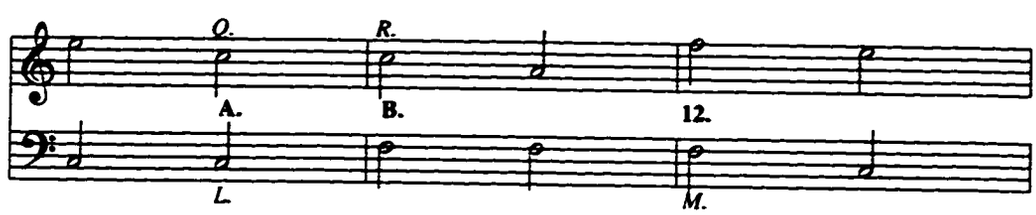
In the same paragraph, Gianotti contrasts the previous situation, where the fundamental bass had two options, to a new situation (m.12) where the fundamental bass has no option because of the melody note on the strong beat of the measure. Although he admits that the subject forces the situation here, he does not explain it as thoroughly as Rameau:

> It is not the same at M. where the subject forces [us] to retain the subdominant that the syncopation at Q. R. of this same subject had already forced [us] to use after the tonic L.: thus, when one cannot do better, it is necessary to submit to it. [4] (I/6/1-f. 12^{r} -Art.III-"Explication")

Here, Rameau explains which decisions override others in the course of several measures. Through his text, Rameau indicates the exact musical illustration that Gianotti provides in mm. 10-12. Notice that Rameau explains the impact that each decision exerts upon the succeeding event over a longer span of time. Rameau says that the fundamental tonic in measure 10 has to change to the subdominant in measure 11 because of the melodic syncopation of C across bars 10 and 11; hence, due to the presence of syncopation, the melody controls the outcome of the fundamental bass. Since the fundamental has to change on the strong beat, it has to remain in effect throughout the entire measure (especially since the subject does not require another change of fundamental). In this situation, the fundamental bass is in control. However, the roles reverse at measure 12. Here, the

[4] Measures 10-12 of Gianotti's Example 2:

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subdominant fundamental must be retained across the bar because the subject note on the strong beat (F) can have no other fundamental but the subdominant.

In Rameau's description of events, interaction between the melody and the fundamental bass is constant; there is no doubt that Rameau sees their roles as interdependent. Gianotti does not choose to emphasize this aspect. Instead, he just points out the matter as an exception to the prevailing rules, a perception that confirms Gianotti's limited understanding of the topic, a flaw revealed early on by his choice of title for this lesson.

Common tones to different fundamentals also provide more than one option in the solution of a given problem. In ¶ 7, Gianotti and Rameau point out that the subject note at D. (Rameau's *B.*) could be harmonized with a subdominant fundamental. However, if that were the case, the fundamental bass would syncopate across the bar. Both teachers use this opportunity to show how the various harmonizations of common tones can be used to avoid syncopation of the fundamental bass. In this case, Gianotti uses the same methodology as Rameau, showing the student how to make decisions that allow for the correct progression of the fundamental bass.

Rameau takes the application of the rule one step further than Gianotti. He even provides an additional example where the change of fundamental is the preferred method in the face of a double syncopation:

> The fundamental bass given at S. and U. is not the same as at A.: because [the fundamental bass] would syncopate if one retained S. under its octave at Y. and U. under its fifth at Z. Therefore, it is absolutely necessary that S. passes to T. where the octave [Y.] of the tonic at S. becomes fifth of the subdominant at T. It is necessary that U. passes to X. in the same way where the fifth [Z.] of the tonic U. becomes the octave of the dominant-tonic X.
>
> (I/6/1-f. 12r - Art.III - "Explication"]

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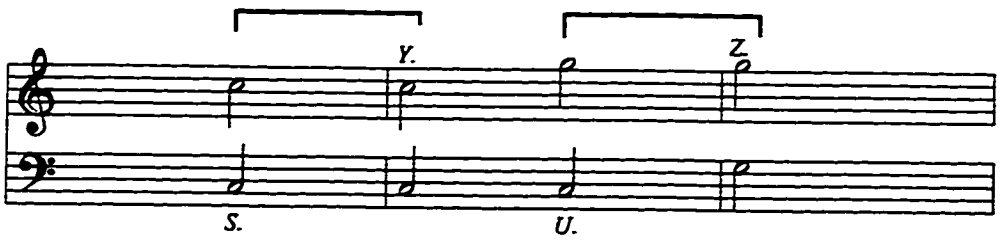
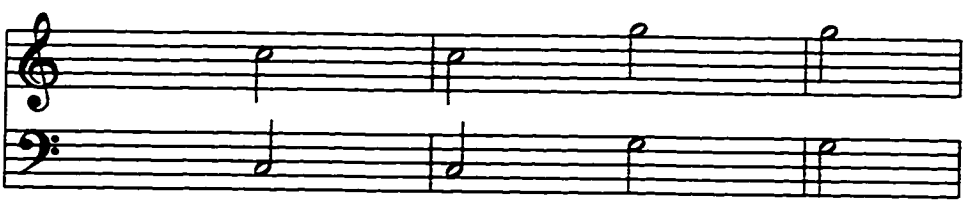
At the beginning of the text of this example, Rameau compares the events at S. and U. to that of letter A.. Since Rameau had already revealed A. to be the first value of the syncopation and B. its second value in the Explication section of the second article, by association, he therefore designates letters S. and U. as the first values of the syncopations:



Example 3- 3: *Rameau's example with guidemarks S. and U. designating the first values of the syncopation*

Now, if the student had been provided with the melody alone, he might be tempted to harmonize each melody note as an octave of the fundamental:

Example 3- 4: *Hypothetical solution where each change of melody note receives its own fundamental bass*

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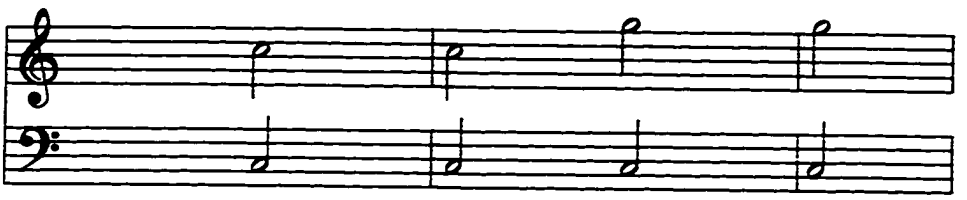
This solution, however, would produce a double syncopation between the melody and the fundamental bass two times in a row. The student might even be tempted to continue the fundamental C beneath all four melody notes:



Example 3- 5: *Hypothetical solution where the fundamental C is retained*

To avoid this, Rameau presents the solution illustrated in example 3-3 where he changes the fundamental to G on the strong beat of the last measure. However, he admits that even this solution is not the best possible option: for in this situation, though the melody notes are triadic members of the fundamental C and the fundamental continues throughout the measure, retention of this fundamental across the bar still creates a syncopation.[5] Instead, Rameau invokes the rule of changing the fundamental on the strong beat at both T. and X.:

[5] Caplin presents the idea of syncopation as an accent that is heard in contradiction to the notated meter. He calls attention to the fact that Rameau would not typically support accents which did not fall in line with those inherent in the notated meter:

> A composer normally uses a notated meter as a guide for distributing accents in a way that will produce a particular metrical style (which in eighteenth and nineteenth centuries is characterized by a regular alternation of accents and unaccents). It is thus necessary that the notated accents be "realized" by expressed accents of some kind in order to achieve this style. Therefore, within Rameau's theory, the primary function of his principle prohibiting harmonic syncopation is to insure that the desired metrical organization is made manifest to the listener without any disruptions caused by an arrangement of harmonies

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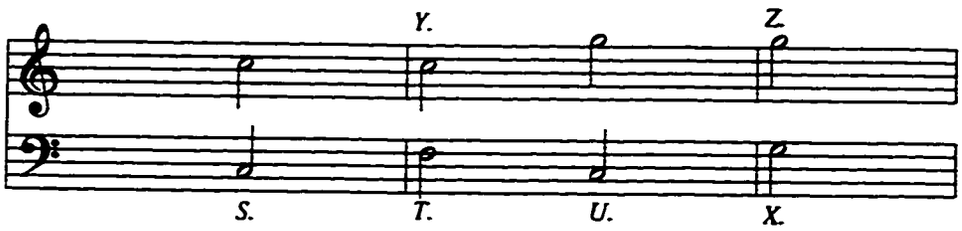

Example 3- 6: *Reconstruction of the Rameau's solution where each melody note receives a different fundamental bass*

Thus, Rameau's solution in this situation follows the general rule: he provides a different fundamental bass under each melody note.

Though Rameau's solutions fall within the general guidelines presented by Gianotti, Rameau's additional explanations reveal hierarchical decision making that could possibly be problematic for a beginner not yet possessing enough musical acumen. As a result, Rameau's comments are probably aimed more appropriately at the intermediate or advanced student. To the student's benefit, though, Rameau's view provides much more than a set series of rules, and in the long run, is much more applicable to the task of composition. For, through Rameau's guiding hand, the student begins to understand

---

that could express accents contrary to those indicated by the notated meter.

Caplin's explanation sheds light on Rameau's ultimate solution here, for in the option presented in ex. 3-5 where a single fundamental is retained beneath these melodic syncopations, the listener would hear accents that contradicted the notated meter (accents on the weak beats instead of the strong beats). Changing the fundamental on the strong beat would then reinforce the characteristic emphasis that the first beat ordinarily receives in the measure and keep the listener on the right metrical track. See Caplin's dissertation Theories of Harmonic-Metric Relationships from Rameau to Riemann, (Ph.D. dissertation, University of Chicago, 1981), 32-33.

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musical reasoning guided by contextual clues. Thus, through the examination of all possibilities, the student learns that the fundamental bass can be retained as long as it starts on the strong beat and fills the measure **and** as long as the subject does not provide a deterrent—a syncopation, or the fifth or octave of the fundamental (since these can also receive a different fundamental bass). When in doubt, the student can always follow Rameau's concluding advice in the first draft:

> The required change of the fundamental bass at each strong beat makes many an operation easier—especially when the subject syncopates or can be felt to syncopate.
>
> (I/6/1-f. 11ᵛ -Art. III)

Triple meter and the fundamental bass

Knowing the ins and outs of avoiding syncopation of the fundamental bass gives us a general background for a more limited discussion: melodic syncopation of the two weak beats in a three-beat measure (Gianotti's second rule). This is not just a melodic event; on the contrary, this specific situation occurs to facilitate a perfect fundamental bass progression. It is rather astonishing that Gianotti numbers this situation as the second rule in chapter 3, for it requires the construction of events far beyond the scope of a beginner, not to mention the fact that an understanding of rule 3 is prerequisite. While Gianotti had intended to reduce the complexities of syncopation into three simple rules, he actually made the problem worse through his ordering of these rules and the omission of key details.

Because the fundamental bass is at the root of the matter here, Gianotti's introduction of this problem as rules 4 and 5 in the Preliminary Introduction is not well placed. In a sense Gianotti rephrases his fourth and fifth rules in the Preliminary Introduction as rule number 2 in this chapter. Compare the Preliminary Introduction with rule 2 in chapter 3:

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Preliminary Introduction

4) one of the places where one can create a syncopation is the two weak beats of a triple measure, since we have already said that the third [beat] could be regarded as a strong beat relative to the second, [and]

5) in the proposed cases, the syncopation, though it may not be marked with a tie, subsists of it no less, and requires two different fundamental notes

Chapter 3:

Second Rule

The two weak beats of a measure of three beats are not supposed to syncopate, though one can subject them to it in order to obtain for the fundamental bass its legitimate progression.

Unfortunately, Gianotti does not connect the preceding information in the Preliminary Introduction to the concept here; he does not even clarify the situation in this chapter with any additional details. Neither Gianotti or Rameau give any musical illustration of this rule either—an especially intriguing fact since the issue of triple meter keeps surfacing in the corresponding text of both authors. In fact, aside from the one illustration of hemiola, neither author gives examples in triple meter. From the textual clues given, we can construct an example that will illustrate the significance of the rule. To do this, we must review what each author says.

Recall that Gianotti's fourth rule, a rule which speaks of submitting beats two and three in a three-beat measure to a syncopation, is problematic in the Preliminary Introduction because it implies connection with the fundamental bass (a topic not yet introduced in that section). This implication is confirmed by Gianotti in his fifth rule: "in the proposed cases, the syncopation, though it may not be marked with a tie, subsists of it no less, **and requires two different fundamental notes**" [emphasis added]. Gianotti says that one can submit the two weak beats of a triple measure to the syncopation "since we have already said that the third [beat] could be regarded as a strong beat relative

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to the second" (rule 4). Recall that this is the **S - W - s** model of triple meter (see fig. 3-2).

Though Rameau also refers to this particular situation in his second article of 6/1, an article which does not fully incorporate syncopation with the fundamental bass, he does provide some added information that clarifies matters:

> A note which contains only the two weak beats of a measure of three beats is not felt to syncopate, although, **in order to give the fundamental bass [its] most legitimate succession, one could submit to the rules of the syncopation when the need presents itself.**
>
> [emphasis added]
> (I/6/1- f. 11[r])

From what Gianotti and Rameau say, we know: 1) that this problem involves the measure **S - W - s** (my model 2), and 2) that the solution of this problem requires maintaining a perfect succession of the fundamental bass. First of all, in the situation **S - W - s**, a syncopation can occur from the weak beat on 2 to the strong beat on 3. The syncopation must occur in the melody, since the fundamental bass should not syncopate (Gianotti's third rule here) and since the fundamental bass must progress in its most perfect way, that is, by fifths. For example, knowing that we have a situation where the melody progresses **S - W - s** and recalling Gianotti's first rule of this chapter (that a syncopated subject note requires two different fundamental bass notes), we can construct a skeletal model where the fundamental bass changes on each beat:

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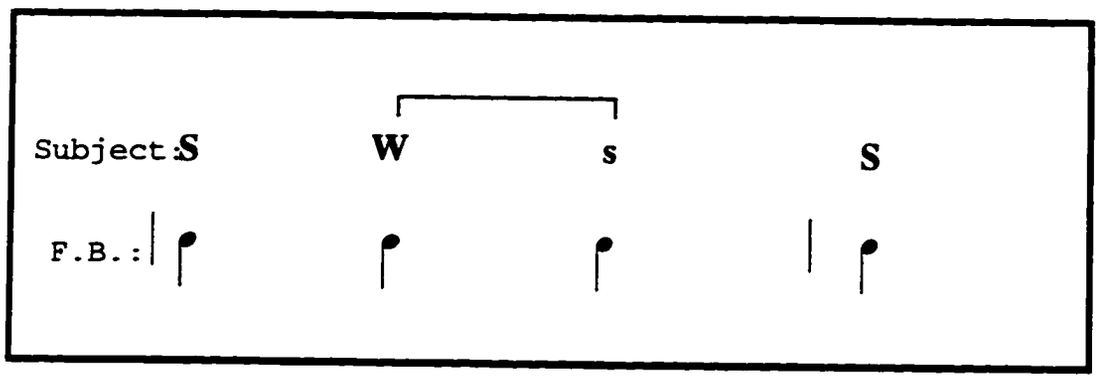

Figure 3- 3: *Representation of the correct application of the fundamental bass for the syncopation in the S - W - s model (following Gianotti's first rule)*

The fundamental bass must change on every beat because it must: 1) change on every strong beat and 2) change on each value of the syncopation. Given the following melodic situation,

each melody note would receive a different fundamental bass in order to avoid a similar syncopation of the fundamental bass:

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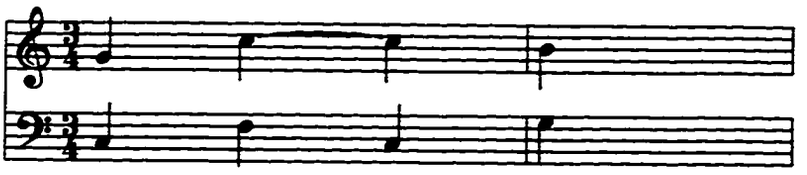
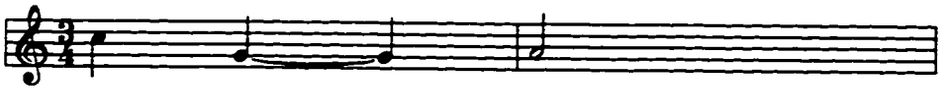

Example 3- 7: *Example of syncopation in triple meter where each melody note must be harmonized with a separate fundamental bass in accordance with Gianotti's first and third rules*

The application of Gianotti's first and third rules provides the best possible fundamental bass line beneath this kind of melodic syncopation. However, this is not what Gianotti is getting at in rule 2. He says that beats two and three are not supposed to syncopate; this event occurs to give the fundamental bass its most perfect succession.

In triple meter, the **S - W - W** model is more common. If the following occurred in the melody,



a change of fundamental on the strong beat of each measure would provide a possible solution:

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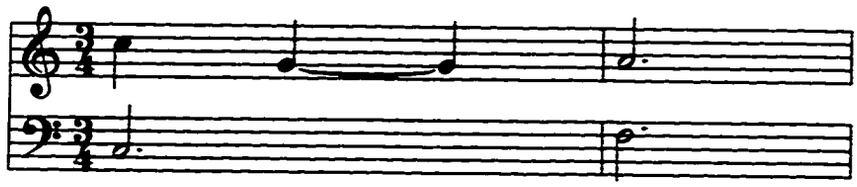
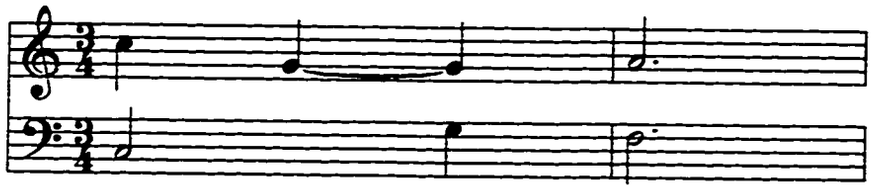

Example 3- 8: *Example illustrating the change of fundamental bass on the downbeat of each measure in the S - W - W model*

However, another possibility would involve changing the fundamental on each strong beat using the model **S - W - S**:

Example 3- 9: *Example illustrating the change of fundamental bass on the downbeat of each measure in the S - W - S model*

In this case, though, the fundamental bass progression by step from G to F across the bar would contradict the prescribed fundamental progression by fifths. For this reason, both Gianotti and Rameau advocate changing the fundamental on each beat to give the fundamental bass its most perfect progression:

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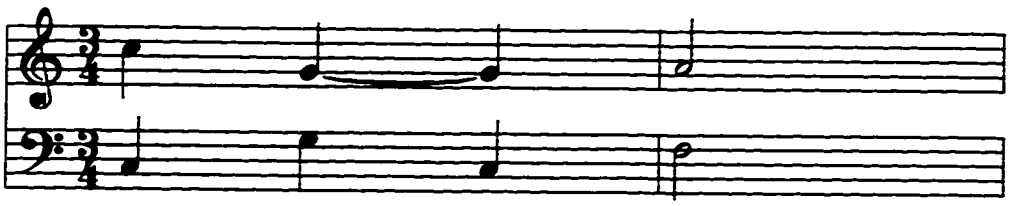
Example 3- 10: *Illustration of the proper fundamental bass progression beneath a melodic syncopation of beats 2 and 3 following Gianotti's second rule*

It is this example that illustrates Gianotti's second rule. Unfortunately, the poor reader left to his own devices must fill in the gaps to arrive at this conception. In this respect, Gianotti hinders the beginner more than he helps. These are not the only details that Gianotti leaves out in this chapter, for Rameau includes additional information that reveals a view of syncopation at higher levels.

Harmonic Rhythm at Larger Levels

In order to formulate the fundamental bass concept, Rameau had to have a good understanding of the long-range flow of strong and weak events, for the idea of strong and weak emphases even exists in the fundamental bass concept itself. Consider the model of the tonic and its two fifths. When the tonic moves to the dominant in either direction, it loses some of its power and becomes a "weak" event; conversely, when the dominant-tonic returns to the tonic, the tonic retrieves its power and becomes "strong."
Though Rameau does not actually describe the dynamism of movement both toward and away from the tonic in these terms, the idea is latent in the model. In his lesson on syncopation, though, Rameau does reveal his understanding of strong and weak events at many different levels, from the sub-beat level to the phrase level.

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Gianotti picks up on one of these ideas: the sanctioned syncopation of the fundamental bass on the upbeat of a piece. Rameau mentions this idea in both drafts of lesson 6:

Gianotti:	**Rameau: draft 1**	**Rameau: draft 2**
	I/6/1-f. 11^{v}	**I/6/2-f. 50^{r}**
3 One should avoid syncopating the fundamental bass, unless absolutely forced. However, [the fundamental bass] can syncopate at the beginning, without being of consequence, as long as the subject starts on a weak beat, which is always counted for nothing in a similar case.	Besides, the fundamental bass can syncopate at the beginning because the weak beat upon which one starts is then counted for nothing.	For the present, it suffices to know that the fundamental bass never ought to syncopate—except in the beginning when the melody does not begin on the strong beat of the measure.

In these passages, neither Gianotti nor Rameau tell the reader why the fundamental bass can syncopate in the initial upbeat of a piece. They just say that the subject note starting on a weak beat in this instance is "counted for nothing." The real issue concerns the structural weight of beats in a measure, for certain beats support a change of fundamental more than others. Rameau sheds light on this idea through an unusual passage in 6/2. Recall that the second draft version is titled "Concerning the distinction of beats in a measure, the syncopation of the value of fundamental notes in each measure and the breve." The only factor missing from the first draft version is the breve. At this particular point in the manuscript, most readers would question the relevance of including a discussion of this note value. This particular discussion occurs at the end of the lesson. Rameau says:

> The eighth-note [**breve**] is a note of less value than the [notes] which precede it and almost always less value than the [note] which follows it. As soon as a breve is preceded by a dot and followed by another note on the same degree, for example, C C D D etc., when imagining the first

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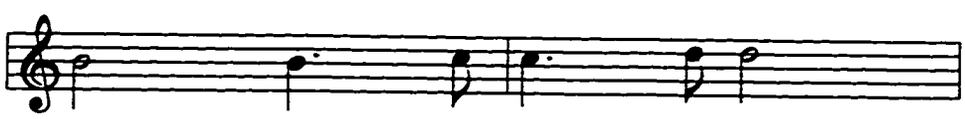
> C or the first D for a breve, this breve, shall we say, is counted for nothing. **One then assigns it with the note with a dot that preceded it as if it still continued the value of [the dotted note]. As a result, the fundamental bass only concerns the dotted note without having any consideration for this breve.**
>
> [emphasis added]
> (I/6/2-f. 50v)

In this passage, Rameau describes a situation where the first pitch (the breve) anticipates the second note on the same pitch as:

Example 3- 11: *Realization of the example Rameau mentions in the text of I/6/2*

In his concluding passage of this draft (see the portion in boldface above), he points to the relative harmonic weight of the breve by telling us that essentially, it is "counted for nothing." Rameau is not just showing strong and weak beats here—he is specifically designating where the breve falls in relation to the fundamental bass. He wants the student to understand that the breve does not warrant its own fundamental bass. On the contrary, though it anticipates the harmony of the note to follow, it is still governed because of its brief rhythmic duration by the fundamental of the preceding strong beat. Though Rameau does not provide an actual music example of this, the following fundamental bass provided under the melodic realization of ex. 3-11 represents Rameau's idea:

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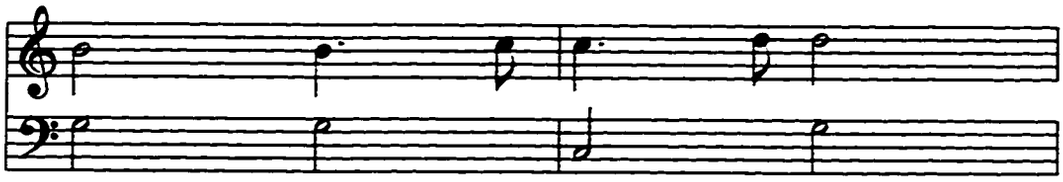
Example 3- 12: *Representation of the idea in Rameau's concluding paragraph of I/6/2*

Through this example, Rameau reveals that the upbeat has little harmonic weight. This is why the fundamental bass in an upbeat situation at the beginning of a piece can syncopate.

Rameau reveals this keen awareness of harmonic rhythm in other passages as well. In several places, Rameau advocates changing the fundamental bass on the strong beat of a measure:

Rameau: draft 1

Article III
f. 11[r]

This fundamental bass should occupy the whole measure as much as the subject permits. Above all, it should change at each strong beat—except that it might continue for several entire measures.

f. 11[v]

However, when a fundamental note has begun the value on the strong beat, it can continue as long as the subject obliges without having consideration for the preceding rules. Always try not to stray from these rules unless the subject absolutely forces [a change].

Rameau: draft 2

f. 50[r-v]

This fundamental bass will never syncopate [as long as one] always employs on the strong beat of each measure of the fundamental bass a different [fundamental] note than the one which immediately precedes it.

f. 50[v]

In consequence of this rule, it is necessary to fill each measure with the same fundamental note as much as the melody permits; moreover, it is always better to repeat the same note four times rather than three when one sees the possibility of employing it in two measures of two beats in succession. On the other hand, in the three-beat measure, the repetition of three [notes] and six [notes] is best because this number fills one or two measures there.

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The fundamental note which serves as the first value of the syncopation can be the same [note] that immediately preceded it. But it must not promote any complications.

The same note can be continued for several measures of the fundamental bass inasmuch as the melody traverses only the notes of its chord or harmony—observing as much that the melody can permit it to give up this note only at the same time as a new measure begins.

Rameau weaves many ideas here. All of these ideas involve harmonic rhythm. Rameau advocates changing the fundamental at each strong beat—especially in the face of a melodic syncopation. However, he also advises retaining the fundamental for as many measures as the melody permits. Filling the measure with the same fundamental is also a priority. Sometimes, this even includes using a repeated fundamental note. Note that in the passage in 6/2 above, Rameau wants the repetition of the fundamental to fill the measure without spilling over into the next measure. He ties the number of repetitions to the meter, advocating multiples of two in duple measures and multiples of three in triple measures. This is also the case in 6/1 when he allows a repetition of the first fundamental note of the measure for the first value of the syncopation thus filling the measure with the same repeated fundamental. In all of these passages, Rameau thinks of the fundamental bass as a strong beat event at the beginning of each measure.

There is additional evidence that he envisions harmonic rhythm beyond the measure level. Rameau allows the continuation of the fundamental bass for several measures as long as the subject permits. However, he does not approve of the reverse situation. In a single passage in 6/1, Rameau discourages maintaining a subject note from the strong beat of one measure to the strong beat of the next:

> Even a subject note that would have begun on a strong beat and which would continue through another strong beat would be felt to syncopate through the relationship [**rapport**] with the new fundamental note that this other strong beat would require.
>
> (I/6/1-f. 11^{v} - Art. III)

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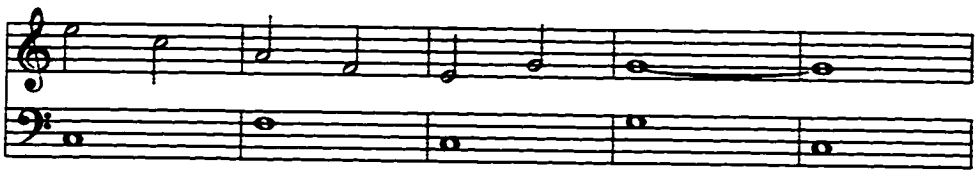
Rameau seems to be saying that if a note in the subject were maintained for two measures, the required change of fundamental on the strong beat of each measure would make the subject seem to have a syncopation at the hypermeasure level:

Example 3- 13: *Hypothetical example where the change of fundamental bass at the strong beat of the measure creates a syncopation at the hypermeasure level*

Of course, if the fundamental bass did not change at the strong beat, both the harmonic and melodic motion of the piece would be brought to a grinding halt.

Rameau's understanding of harmonic rhythm is also revealed in another example: the accepted syncopation of the fundamental bass in a hemiola. Traditionally, the term hemiola refers to the playing or singing of three beats in the time of two. This formula usually appears at the final cadence of a piece. Gianotti provides an illustration of this event in the last four bars of his musical example. Both Gianotti and Rameau speak of avoiding a fundamental bass syncopation in triple meter when two measures are reduced to one:

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Gianotti-Chapter 3

4 Moreover, [the fundamental bass] can syncopate from one measure to another in a measure of three beats as long as one could reduce the two measures where it syncopates into one measure. See *example 2, pl. 1.*

11 If the tonic syncopates at G., one can reduce into one measure the two which the tonic occupies in this place.

Rameau-6/1

[The fundamental bass] can even syncopate in a measure of three beats as long as one could reduce the two [measures] where it syncopates into one measure as one will see in the Explication.

(I/6/1-f. 11ᵛ-Art.III)

The syncopation of the subject at V. requires as elsewhere, two different fundamental notes for its two values. If the tonic syncopates at A.; notice that the two measures that they occupy can be reduced to one [measure] of three whole notes. Therefore these three whole notes mark the three beats without syncopating.

(I/6/1-f. 12ʳ-Art.III-"Explication")

In his example, Gianotti signals the syncopation of the fundamental bass at G.(Rameau's *A.)*:

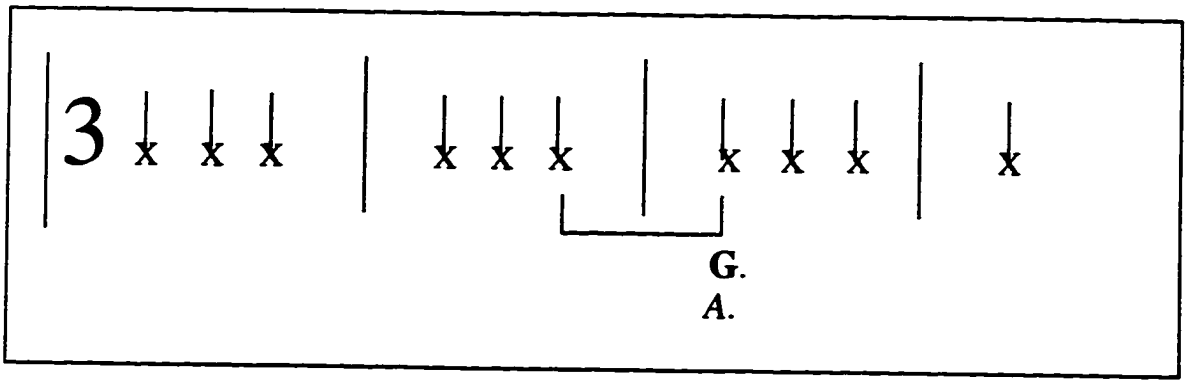

Figure 3- 4: *Gianotti's example of hemiola where the syncopation occurs across the notated bar*

However, he does not give an example of the regrouping of the two measures into one. Unfortunately, Rameau does not provide an illustration of this regrouping either. However, given Rameau's understanding of strong and weak beats and their ebb and flow in larger

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patterns of harmonic rhythm, the idea of regrouping measures to restructure the patterning of strong and weak beats would not be foreign to his general train of thought. In light of Rameau's comments, the following diagram would make sense:

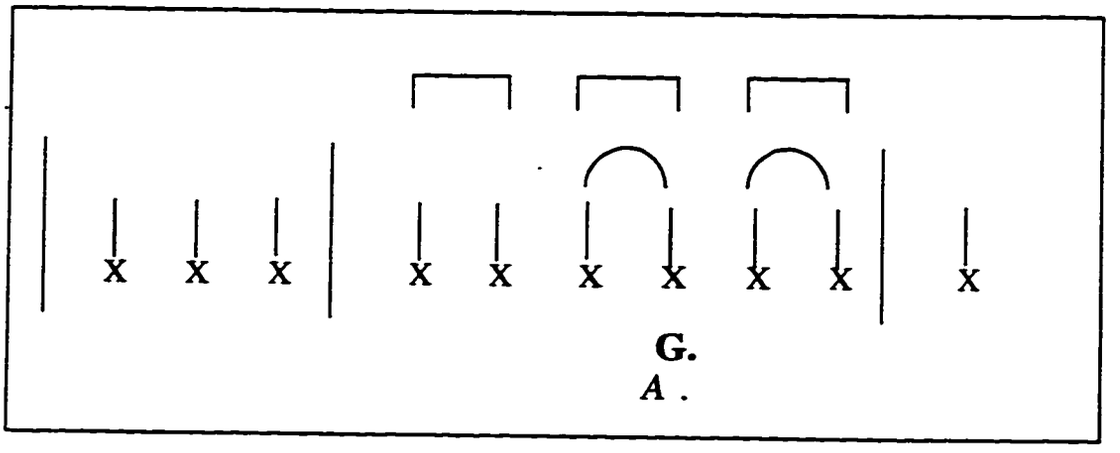

Figure 3- 5: *The representation of hemiola as the compression of two measures into one*

In this illustration of events, the syncopation disappears because of the new measure grouping. The musical beginner would have benefited from such an example. Perhaps this idea was so commonplace that the eighteenth-century music student needed no explanation—hence the absence of illustration. Whatever the case may be, it is evident that Gianotti includes this example as yet another exception to the third rule, avoidance of a fundamental bass syncopation. However, set against Rameau's additional comments in this chapter, the hemiola event is not an exception; it is another example of Rameau's ideas on different planes. Viewing the grouping of strong and weak beats in another format might have been beyond Gianotti's ken, but it certainly was not beyond Rameau's.

Superficially, Gianotti's version looks and reads better than Rameau's. From a pedagogical standpoint, however, Gianotti's reorganization of the material on syncopation suffers both in the Preliminary Introduction and in Chapter 3. His separation of the concept from the fundamental bass is the root of the problem. Recall too that he also has difficulty differentiating the primary from the secondary ideas (recall the reversal of the

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second and third rules in chapter 3). While his examples tell more of the story than the text in this chapter, it is really Rameau's additional details that fill in the gaps.

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CHAPTER IV

Concerning Cadences or pauses in the subject and in the fundamental bass*

Gianotti:

1 Everything that forms a melodic close in the subject is called a cadence or pause [**repos**].

2 Generally, these cadences in the subject are formed by two diatonic [i.e., conjunct] notes. The first of these two notes announces the cadence; and the second, which falls on a strong beat, ends it.

3 Very often, [cadences] are also formed through the [melodic] interval of a third to the mediant and to the leading tone.

4 Lastly, but more rarely, they are also formed through a syncopated note or one understood to syncopate—because the last

Rameau: draft 1

I/8/1-f.12^{r}

One calls everything that forms a pause [**repos**] or close of the melody in the subject a cadence.

I/8/1-f. 12^{r-v}

Generally, the pauses of the subject are formed from two diatonic notes, of which the first [diatonic note] should be heard to announce the pause and the last, which generally falls on the strong beat, to end it.

I/8/1-f. 12^{v}

Very often, these same pauses are formed in descending a third to the mediant or to the leading tone.

I/8/1-f. 12^{v}

More rarely, they are also formed from a syncopated note or one felt

Rameau: draft 2

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* *Only perfect and imperfect cadences will be discussed here. The second part of this treatise will discuss broken and interrupted cadences* [**cadences rompues et interrompues**] *and their sequences.*

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value of this syncopation, which falls on a strong beat, can end a harmonic thought, and moreover, demands a new fundamental note.

as such—because, in certain cases, its last value, which falls on the strong beat, can finish a [musical] thought and moreover, demands a new fundamental note.

5 One distinguishes cadences in the fundamental bass [either] as perfect [or] imperfect [types].[1] A perfect [cadence] occurs by descending a fifth; the dominant-tonic announces it, and the tonic ends it. The imperfect cadence occurs by ascending a fifth to this same tonic or to the dominant-tonic. In the first case, it is the subdominant which announces [the cadence]; and in the second case, it is the tonic which announces [the cadence].

I/8/1-f. 12r

When two notes are a fifth away from each other, the first [note] announces the cadence and the last ends it on the strong beat. These cadences end on the tonic or on the dominant-tonic—never on the subdominant. They are distinguished [either as] perfect [or] as imperfect [types].

The perfect cadence occurs by descending a fifth to the tonic; the imperfect, by ascending a fifth to this same tonic or to the dominant-tonic.

The dominant-tonic announces the perfect cadence and the subdominant [announces] the imperfect [cadence] when the tonic ends it, for if it is the dominant-tonic which ends the [imperfect cadence], the tonic then announces it.

I/13/2-f. 56r-57r

Pauses or cadences only end on the tonic or on the dominant-tonic in the fundamental bass and one only arrives there through an interval of a fifth or a fourth. From this, one sees that the first lessons have only revolved around these cadences. There are two cadences: the perfect and the irregular or imperfect.

In the perfect [cadence], the tonic is preceded by its dominant; in the imperfect, this tonic is preceded by its subdominant. The same cadences also end on the dominant-tonic, [but] with this difference: in the perfect, the dominant of this Dominant-tonic never bears a major third so that the leading tone is excluded—from which a similar cadence can be regarded only as an imitation of the perfect whereas in the imperfect [cadence], the tonic which precedes its dominant can be recognized as a subdominant. Ex.e

6 Since we are only concerned with one key in our examples, the cadences or pauses can only be fully understood at the end of these examples. At the appropriate time, we will

I/8/1-f. 12v

One should only take the fundamental successions by fifths for cadences when the subject forms a pause at the same time. The first

[1] Rameau refers to this cadence type as either the "imperfect" or "irregular" cadence throughout his treatises. In the Traité, the Nouveau système and the Code, he refers to these as "irregular" cadences.

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join these necessary insights to the first ideas. Meanwhile, let us not be surprised by fundamental progressions by fifths, mistaking them for cadences. They should be taken for such only in the places where the subject forms a perceptible pause. *See ex. 3, pl. 2*

examples still provide some pauses that become perceptible only in finishing since it is only a matter of one key. When it becomes time to pay attention to it, we will take care to apply the necessary insights to our first ideas. Moreover, it is not irrelevant [here] to make [these things] felt early until the simplest things are explained. Examples.

Observations on this example

I/8/1-f. 12ᵛ
Explication

7 Wherever the fundamental bass descends or ascends by fifth to a strong beat, one could consider all these progressions as cadences. But, since the subject forms a perceptible pause only at A., B., C., D., one should pay attention only to those.

All the diatonic successions of the subject can be possible cadences as the fundamental bass always progresses there by fifths. One can take the melodies on D. E. F. and G. for pauses at least because they are on the strong beat: but since the subject gives perceptible pauses only at A., B., C., and at the end, one should consider only those for such.

I/8/1-f. 13ʳ
Explication

8 Cadences are perfect at A., B., and D.; the dominant-tonic announces [the cadences] and the tonic ends them.

The cadences are perfect at A. at B. and at the end; the dominant-tonic announces them, and the tonic ends them.

I/8/1-f. 13ʳ
Explication

9 The cadences are imperfect at E. and at C.: the subdominant announces the first and the tonic ends it. This same tonic announces [the cadence] which is formed at C., and the

They are imperfect at E., and at G.; the subdominant announces the one that occurs at E. and the tonic

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dominant-tonic ends that cadence.	ends it. On the other hand, the tonic announces the one at G. and the dominant tonic ends it.

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Additional Sources to Chapter IV

Excerpts pertaining to Cadences from:
Lesson 12/1 & 12/2 of "L'Art de la basse fondamentale"
Ch. VII, Art.vi of the Code de Musique Pratique (1760)[1]

Draft 1:

I/12/1-f. 22v
Art. IV

Much like discourse, music has phrases. The end of each phrase is marked at each pause. The less pauses are perceived, the more [phrases] are linked and form a sense of connection; the more pauses are perceived the more [phrases] are ended.

I/12/1-f. 22v-23r
Art. IV

A.

The pauses of the subject are perceived more or less in two-measure groupings and especially in four-measure groupings. As a rule, since the second measure in music is [comparable] to the hemistich in poetry, [pauses] generally end on the strong beat.

In [two or four] measures, one must regard a weak beat [i.e. an upbeat to the phrase] as nothing more than that which follows the [preceding] pause.

Draft 2:

I/12/2-f. 54v

Melody is a kind of discourse where the meaning of each phrase ends at more or less perceptible pauses.

I/12/2-f. 54v
Art. I

A.

In musical terms, pauses are called cadences. They generally end on the first note of a measure and the fundamental bass always arrives there through an interval of a fifth.

Code: Ch.VI, Art. VI

These pauses or cadences ordinarily develop in groups of two measures, but they are even more perceptible in groups of four [measures.]

The first of the two pauses, as relatively imperceptible as it may be, produces just about the same] effect as a hemistich of a verse where the [complete] sense of it is not ordinarily finished.

The measure upon which the phrase begins and which does not start on the strong beat [**temps bon**] is never counted in the

[1] Parallel excerpts drawn from both drafts of lesson 12 of "L'Art" appear in block format in this section. I have assigned letter names to each block for ease of reference. Priority has been given to the progression of ideas in lesson 12 of "L'Art," therefore parallel passages drawn from Ch. VII Art.vi of the Code de Musique Pratique do not appear in their original printed order here. All translations of the Code are mine.

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I/12/1-f. 23r
Art. IV

B.

For now, the aid of the ear is required for perceiving the pauses of the subject and the fundamental bass.

I/12/2-f. 54v
Art. I

B.

It is here that we are allowed to employ the aid of the ear in order to perceive the pauses of the melody.

I/12/1-f. 23r
Art. IV

C.

In order to perceive these pauses well, one must at least sing the subject by oneself, or play it on an instrument; feigning to stop every two measures without altering the tempo **[mouvement]** there—the intention alone of stopping is then sufficient.

By means of this intention [of stopping], as soon as one actually feels able to stop at the second or at the fourth measure, it is a sign that there is a pause at this place. And, in order to profit from the ability that one has in perceiving the fundamental bass of it, it is necessary to follow exactly what will be prescribed.

!/12/2-f. 54v
Art. I

C.

In order to perceive pauses well, one must at least sing the melody of the lesson oneself, trying to stop every two measures on the first note of each measure: if the pause is not perceptible at the second measure, it will infallibly be at least a bit more [perceptible] at the fourth [measure] and, if by chance, one passed this number [of measures], which would be quite rare, one would perceive it sufficiently through a forced continuation of the melody which would lead further on.

I/12/1-f. 23r
Art. IV

D.

Assured of the note of the pause, one begins again by singing the whole subject in succession in strict time without interruption or any preoccupation until this note of the pause. Then, one lets one's voice fall promptly [to a note] below this note as if both were sounded at the same time:

I/12/2-f. 55r
Art. I

D.

As soon as one sings all that precedes the pause until the note which ends it in succession and without any preoccupation, one immediately perceives the fundamental bass of this pause by oneself without thinking there. In order to be up to date on this perception [of the fundamental bass],

specified number [of measures].

We find the fundamental bass of all pauses of a melody naturally ourselves as long as after having sung everything that precedes the pause in time and without stopping, one lets one's voice fall as quickly as possible and without thinking about it, at least a third below the note which ends it. Example A.

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and this without thinking about what one is going to do.

one must, as already said, sing all that precedes the pause in succession in strict time, without any preoccupation. And, in the same moment that one sings the note which ends the pause, one lets one's voice fall below this note as if the whole complied at the same time—and this without thinking about what one is going to do. Otherwise—let the sound of the voice go and certainly one will sing the fundamental bass of this pause or at least a note which will indicate it.

I/12/1-f. 23[r]
Art. IV

E.

If the voice moves to a third or a fifth below the note of the pause, that will be the fundamental bass; if on the contrary, the voice moves to a fourth, or a sixth below, this note of the pause will be the octave of the fundamental bass.

I/12/2-f. 55[r]
Art. I

E.

If the voice moves to a third or a fifth below the note of the pause, it will be the fundamental bass. If, on the contrary, it moves to a fourth[2] or a sixth below the note of the melody, the melody itself will be the fundamental.

The fundamental bass will always be the note where your voice moves to a third or a fifth below the one of the pause of the melody. Instead, this melody note itself will be the fundamental bass if your voice moves to a fourth, sixth, or octave below.

Let us profit from this last advice in all other doubtful cases, be they a third, a fourth, or fifth, and let us quickly pass through all the diatonic [notes] which lead from one of the notes of the interval to the other. After having sung everything that precedes the proof in time, one will pass through such a sharp or flat which will certainly declare the *key*.

[2] The manuscript actually reads *si au contraire elle se porte a une quinte ou a une sixte au dessous*, however, from the context, it is clear that Rameau intends the fourth below—not the fifth.

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I/12/1-f. 23r
Art. IV

F.

If by chance the voice moved to the second below the note of the pause, one would sing that which should follow it then and not that which should be heard with it. This is why it would be necessary to start over again, singing everything until there, forgetting what one had done previously, that one would yet be able to have too much present in order to let one's voice fall lower; and one will not miss arriving at the third or at the fifth below.

I/12/1-f. 23r-v
Art. IV

G.

When the voice moved to the third below, one must start over again trying to carry the voice still lower. And, if this time one then sang the fifth below with the same facility that one had sung this third, it would be necessary to stick to the fifth. But also, if one found difficulty singing this fifth, it would be necessary to abandon it and stick to the third. Let us suppose, however, that one holds onto the third when the fifth ought to be preferred to it. In that case, one would not be able to imagine it then as tonic or dominant-tonic without it requiring sharps or flats—which would not be found in the subject from the pause which precedes the one in question.

From the eighth lesson, one knows that

I/12/2-f. 55r
Art. I

F.

If by chance one only sang the second below the melody note, this one would then be the fifth of the dominant tonic: but this will not happen much—only because the ears are yet little trained. Hence, they feel the note which should follow instead of the one that one should hear at the same time. It is not necessary to hold on to the note, rather, to start the operation over in trying to carry the voice lower without the will directing it yet, that is to say: letting it go like a machine.

Often, the voice moves only to the third below when it could descend up to a fifth [below], which then would be the true fundamental bass—it is always necessary to test this. For, if this third is the true fundamental bass, the voice will never descend to the fifth of itself: in this case it would be necessary to look for it to determine it through reflection.

The fifth that the voice bears below the pause of the melody is generally the dominant tonic. The proof [of this] is in the leading tone that then occurs between the melody and this fifth below; otherwise, this one would be a tonic. But be that as it may, one cannot be mistaken especially since keys a fifth away from each other differ only in the sharp

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pauses or cadences only end on the tonic or the dominant tonic in the fundamental bass

or natural which marks the leading tone of the [key] that is a fifth above. For example, if one sings everything that precedes the pause in time and without stopping, and, if ready to arrive [at the pause] one passes diatonically through all the notes which, by ascending, lead to each of these two doubtful tonics, if it is the *key* a fifth above, the voice will pass through its leading tone without thinking about it; if not, it will simply be a dominant tonic.

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Editorial Commentary on Chapter IV

If someone asked the question "What is a cadence?," how should it be answered? Most musicians would probably answer in terms of quality, speaking in terms of specific harmonic formulae such as I - V - I sounding as the "perfect" or "final" cadence of a piece, or I - IV - I as the "plagal" or "church" cadence, or even V - vi as "deceptive" because it sounds unfinished. A musical beginner not yet familiar with this specific terminology would simply answer in terms of experience: "it sounds like a point where the music stops." Of course, more seasoned musicians and analysts can answer this question on a multitude of levels by discussing the subtle ways that cadences operate in a work to either promote or hamper the flow of music not only from note to note, but from phrase to phrase, period to period, and section to section etc. The idea of cadence is not so simple after all.

The more one truly understands the complex idea of cadence on many levels, the harder it is to teach. Rameau faces just this problem. He tries to answer the cadence question at all levels. He knows on a very simplistic level that cadences are both melodic and harmonic pauses. His definition of cadence embraces both melodic and harmonic realms by coordinating the diatonic motion of two melodic notes with directed harmonic motion by fifth to a specific fundamental goal: either the tonic or the dominant-tonic in the fundamental bass. Recall from the introduction of this study that it is Rameau's revolutionary explanation of the stepwise resolution of the dissonant seventh to a consonance over a fundamental bass progression by fifth which constitutes all tonal motion. But even within the context of consonance, to Rameau motion by fifth in the fundamental bass (which in this chapter can also be considered cadential motion) is the very heartbeat of living music. It is the very fibre of his fundamental succession and as such, governs cadential progression as well as regular note-to-note transit. With only three

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fundamentals to choose from, there seems to be nothing to differentiate ordinary chord-to-chord motion from significant points of arrival. In fact, to complicate matters, Rameau himself even describes chord-to-chord motion in terms of an "imitated cadence" which does not have the true sense of repose as its "real" counterpart. A true understanding of Rameau's view of cadences, then, involves the hierarchical function of fundamentals, a topic Gianotti omits from the basic discussion at hand.

Cadence as a Melodic Event

Up to ¶ 5, Gianotti presents the melodic components of the cadence the same way Rameau does in 8/1, that is, by presenting the definition of "cadence" as a melodic close (¶ 1) before actually identifying melodic clues such as stepwise motion between two notes (¶ 2). While Gianotti and Rameau both provide another melodic cadential cue in ¶ 3, only Rameau tells us that the pauses arise after a descent by third to the mediant or to the leading tone. Unfortunately, neither Rameau nor Gianotti gives any further explanation here. However, through the information that Rameau provides concerning the mediant and the leading tone as "known notes" in lessons 4/1 and 9/2, we can come to a better understanding of what Rameau is getting at here.

In chapter 2, Gianotti briefly ties the relationship of the mediant and the leading tone to specific fundamentals without explaining the rationale behind the facts:

> when examining the subject, assuming that the key will already be known, it is necessary to try to distinguish the mediant and the leading tone [from other subject notes there] because the fundamental bass of these two notes will be known at the same time. The mediant demands the tonic for the fundamental bass and the leading tone demands the dominant-tonic. (¶ 3)

Also recall that Rameau highlighted these specific notes as thirds of each fundamental:

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> Among [all] the notes of the subject, one principally distinguishes the third of the tonic, and the [third] of the dominant-tonic from [all the other notes].
> The third of the tonic is called the mediant and [the third] of the dominant-tonic, the leading tone. One should always regard them as known notes which generally indicate their fundamental bass. The mediant requires the tonic for a fundamental bass and the leading tone requires the dominant-tonic. Consequently, when examining the subject, assuming that the key will already be known, it is always necessary to try to distinguish the mediant and the leading tone [from the others there] because their fundamental basses will be known at the same time.
>
> (I/4/1-f. 8v)

In 9/2, Rameau hinted at their function by calling them "sensitive notes":

> The third of the tonic distinguishes itself from the others by the designation mediant and the third of the dominant tonic distinguishes itself by the designation leading tone. [The purpose of these names] not only serves to mark them better, but also [designates them] as the most sensitive, especially the last.
> **...sometimes the mediant can serve as fifth to the fundamental note where the tonic descends a third, but this can only happen in order to evade the syncopation in the fundamental bass or in order to follow a new route of dominants which is not a concern yet.**
> Let us take care to notice henceforth this mediant and this leading tone in order to give to each its fundamental bass, to wit: the tonic to the mediant and the dominant-tonic to the leading tone. As soon as one glances at a melody whose key is known, it is necessary to find with care there each of these two notes, which we will call in what follows the "known notes of the melody" or simply "known notes". Besides being the third of the dominant tonic, the leading tone is also always a semitone below the tonic or its octave.
>
> [emphasis added]
> (I/9/2-f. 52r-v)

At first glance, it seems that the passage in boldface in 9/2 above might relate to the situation at hand in ¶ 3 of chapter 4. However, this is not the case; in chapter 4, Rameau is referring to the descent of the **melody** by third to a mediant, not the descent of the tonic in the **fundamental bass** by third (a topic that surfaces in Gianotti's next chapter).

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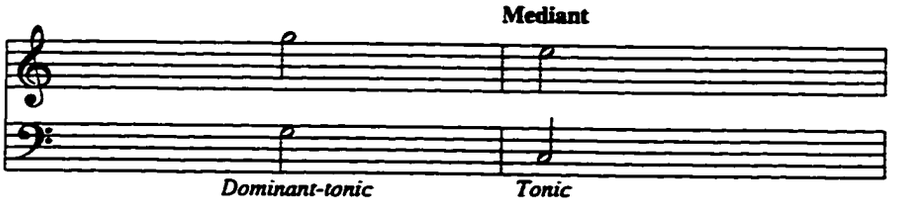
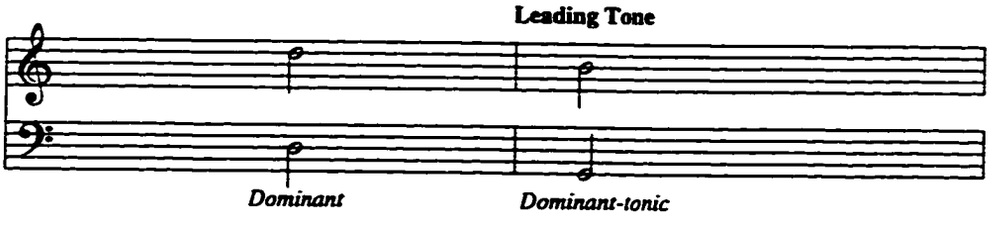
Piecing together the information about the "known notes" of the mediant and leading tone as thirds of the tonic and dominant-tonic, in addition to the fact that the first note of the cadence falls on the weak beat of a measure and the second on the strong beat, we can construct two models for both Gianotti's and Rameau's comments in the third paragraph of chapter 4:



Example 4- 1: *Model of the perfect cadence where the subject descends a third to the mediant*



Example 4- 2: *Model of the perfect cadence where the subject descends a third to the leading tone*

The melody descends a third to the mediant in ex. 4- 1 and descends a third to the leading tone in ex. 4- 2. In this scenario, both the mediant and the leading tone retain their roles as indicators of specific fundamentals: the mediant still indicates the tonic as its fundamental and the leading tone, the dominant-tonic as its fundamental. Both cadences are supported

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by descending fifth motion in the fundamental bass—hence, both are "perfect" cadences. However, since Gianotti relies only on Rameau's first draft version for chapter 4, it is not surprising that he does not include an example showing the descent of a third to the leading tone, for only 13/2 fills in the gaps for this situation by introducing the dual citizenship of a fundamental in two related keys, a topic that will be discussed in detail later.

Even though Rameau and Gianotti have pointed to the two individual components of each model previously, the mediant and leading tone as melodic indicators of a specific fundamental bass (in the previous material comprising Gianotti's second chapter) and the actual metric placement of each melodic indicator on the strong beat as cadential goal (implied in ¶ 2 of this chapter), it is unlikely that the musical beginner would make these connections alone—especially where the second model is concerned, given the fact that secondary functions have not yet been discussed. Thus, the reader does not receive the full import of the idea that as melody notes the mediant and leading tone play an important role in cueing a cadential context because of the specific fundamentals that they imply. Neither author draws attention to these melodic cues in the example section either. Though Gianotti shows the subject descending a third to the mediant in Example 3 at letter B., he only points it out as an illustration of a perfect cadence.

Further Thoughts on Cadence Recognition by Rameau

Though Gianotti and Rameau point out specific melodic cues to cadential events, they do not tell the beginner how to distinguish a cadence from its surroundings. One particular aspect of the problem is terminological: both authors use the two terms "pause" and "cadence" interchangeably here—even in the title of the chapter. Apparently, this vague usage surrounding the term "cadence" has historical precedent, for Christensen points out the variety of meanings that the term indicated in French music: a specific ornament designating a melodic close or the structural closing itself "defined by the scale degree upon

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which the bass voice ended or the interval by which the bass moved."[1] Even if we limit the discussion to the structural close itself, though, the crux of the problem involves the very nature of cadence as tonal motion, for Rameau described all music in terms of cadence as early as the Traité.

Both Gianotti and Rameau call attention to the problem in ¶ 6 and 7. In ¶ 6, Gianotti alerts the reader to the possibility of mistaking the typical fifth progressions in the fundamental bass for cadences. Rameau opens the field even further by admitting that any stepwise progression in the subject supported by motion by fifth in the fundamental bass constitutes as much (¶ 7). However, both authors point to a more specific clue in ¶ 7, for they focus attention on a particular combination of events characteristic of the cadence: the fifth progression in the fundamental bass **and** the coordination of this motion with an arrival on a strong beat of the measure. By carefully reading between the lines in this paragraph, the reader gathers that perceptible pauses are the clue to cadence identification. Therefore, finding perceptible pauses is the name of the game. Unfortunately, neither author provides the directions for this activity here.

Though Rameau does not supply directions for locating perceptible pauses in lesson 8/1, he does provide them in both drafts of lesson 12. Thus in the opening of 12/1, Rameau tells us more about phrases as units; he even alerts us to two common locations for pauses:

> Much like discourse, music has phrases. The end of each phrase is marked at each pause. The less pauses are perceived, the more [phrases] are linked and form a sense of connection; the more pauses are perceived, the more [phrases] are ended. The pauses of the subject are perceived more or less in two-measure groupings and especially in four-measure groupings. As a rule, since the second measure in music is [comparable] to the hemistich in poetry, [pauses] generally end on the strong beat.
>
> (I/12/1-f. 22ᵛ-23ʳ, Art. I)

[1] Christensen, op. cit., 113.

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In fact, his comparison of the two-measure pauses with the hemistich, a literary term, tells us more about the quality of this pause. The hemistich is half of a line of verse. Without its conclusion, the meaning of the verse is incomplete. By likening the two-measure pause to the hemistich, Rameau reveals more than a simple understanding of harmonic and melodic periodicity; he attributes an open character to this type of pause and thus implies the four-measure pause to be closed in comparison. Thus, Rameau directly indicates the cadences' varying degrees of perceptibility and indirectly hints at their varying harmonic weight.

Having mentally prepared the reader by revealing the most likely places for cadences, Rameau then moves on to the next skill: determining these actual cadential points in a melody by ear. He suggests various procedures for doing this. The first procedure is singing everything in the melody from the beginning without any interruption. Already in the Nouveau système of 1726, Rameau had said: "Open a book of music and sing everything that you find from the beginning of an Air up to the first place that you think you can pause in time."[2] Though Rameau does not include this advice in the Génération of 1737, he does give more details in both drafts of lesson 12 of "L'Art." Though the primary emphasis of lesson 12 is the means of recognizing a key in the melody, hidden within this lesson are specific instructions to help the beginner find melodic pauses.[3] Thus, in draft 1, the material appears as article four, titled "Finding the fundamental bass of all pauses naturally, from which follows the knowledge of key" and as "Concerning pauses or cadences" in article one of draft 2.

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[2] *Ouvrez un Livre de Musique, chantez en Mesure tout ce qui s'y trouve, depuis le commencement d'un Air, jusqu'au premier endroit ou vous croirez pouvoir vous reposer...* Nouveau Système, CTW, chap. X, 64.

[3] For Rameau, the word "pause" [**repos**] does not exclusively refer to a "rest." In the context of the lessons pertaining to cadences in "L'Art," Rameau associates pauses with melody notes. Hence, in lesson 12, when Rameau advises the beginner to find pauses in the melody, he tells the student to sing until he comes to rest on a particular note. Rameau then instructs the student to try to find the fundamental bass of this melody note of pause by dropping the voice to find a harmonic interval below.

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These instructions are not included in any other source.[4] They do not even appear in the Code de musique pratique of 1760, which contains the most comprehensive treatment of cadence of all of Rameau's treatises. Since none of this material appears in the Génération harmonique of 1737, "L'Art" provides a unique view of Rameau's thinking on this subject between 1726 and 1760; but its content is especially valuable because it is the only surviving pedagogical explanation of various practical details of this approach.

In in lesson 12 of "L'Art," Rameau teaches the beginner how to find pauses in the melody line before proceeding to find the fundamental bass of these pauses.[5] Pedagogically, he separates the two skills. Finding pauses is the first step:

12/1:_

f. 23[r] - Art. IV

C.

In order to perceive these pauses well, one must at least sing the subject by oneself, or play it on an instrument; feigning to stop every two measures without altering the tempo **[mouvement]** there—the intention alone of stopping is then sufficient.

By means of this intention [of stopping], as soon as one actually feels able to stop at the second or at the fourth measure, it is a sign that there is a pause at this place.

12/2:_

f. 54[v] - Art. I

C.

In order to perceive pauses well, one must at least sing the melody of the lesson oneself, trying to stop every two measures on the first note of each measure: if the pause is not perceptible at the second measure, it will infallibly be at least a bit more [perceptible] at the fourth [measure] and, if by chance, one passed this number [of measures], which would be quite rare, one would perceive it sufficiently through a forced continuation of the melody which would lead further on.

To find pauses, Rameau suggests stopping every two measures on the first beat of the measure. In the second draft version, he adds that the pause at the two-measure juncture might not be as perceptible as the one at the four-measure division—the pause might even occur further on. By saying what he does in 12/2, Rameau suggests more than just

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[4] Most of Rameau's twelfth lesson corresponds to Gianotti's seventh chapter. However, Gianotti neglects to include this information—both in this chapter and chapter 7.

[5] The passages cited from lesson 12 occur in the section "Additional Rameau Sources to Chapter IV" located on pp. 200-4. The letter names designating the blocks of text are not original to the manuscript and have been added for reference purposes.

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stopping at two-measure intervals to find natural pauses; he hints that different kinds of pauses have varying harmonic weight. Thus, he uncovers various possible cadential types in both typical (four-measure intervals) and atypical (more than four-measure intervals) situations—a welcome detail for any inexperienced beginner.

The next skill is finding the correct fundamental bass beneath the pause:

12/1:

f. 23^{r} - Art. IV

D.

Assured of the note of the pause, one begins again by singing the whole subject in succession in strict time without interruption or any preoccupation until this note of the pause. Then, one lets one's voice fall promptly [to a note] below this note as if both were sounded at the same time: and this without thinking about what one is going to do.

12/2:

f. 55^{r} - Art. I

D.

As soon as one sings all that precedes the pause until the note which ends it in succession and without any preoccupation, one immediately perceives the fundamental bass of this pause by oneself without thinking there. In order to be up to date on this perception [of the fundamental bass], one must, as already said, sing all that precedes the pause in succession in strict time, without any preoccupation. And, in the same moment that one sings the note which ends the pause, one lets one's voice fall below this note as if the whole complied at the same time—and this without thinking about what one is going to do. Otherwise—let the sound of the voice go and certainly one will sing the fundamental bass of this pause or at least a note which will indicate it.

In these passages from "L'Art," Rameau recommends retaking the whole phrase from the beginning to the new-found pause without any hesitation. At the precise moment of the pause, the student lets his voice fall to find the fundamental bass of the pause.[6] If the

[6] In both the Nouveau système and the Code, Rameau provides a helpful hint that does not occur in "L'Art": use of a word with a mute syllable such as *Tendre, Aimable, Climène* "to help the voice drop below the melodic pause. In these works, Rameau suggests placing the penultimate syllable of the word on the note that announces the cadence and the mute syllable on the actual pause. Rameau assures the reader that this approach will help the singer find the true fundamental bass of the pause. See ch. X in the Nouveau système and ch. VII, art. vi in the Code de musique pratique.

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student is having trouble because he is not sure whether his solution is correct, Rameau takes the process one step further:

12/1:

f. 23^{r} - Art. IV

E.

If the voice moves to a third or a fifth below the note of the pause, that will be the fundamental bass; if on the contrary, the voice moves to a fourth, or a sixth below, this note of the pause will be the octave of the fundamental bass.

f. 23^{r} - Art. IV

F.

If by chance the voice moved to the second below the note of the pause, one would sing that which should follow it then and not that which should be heard with it. This is why it would be necessary to start over again, singing everything until there, forgetting what one had done previously, that one would yet be able to have too much present in order to let one's voice fall lower; and one will not miss arriving at the third or at the fifth below.

f. 23^{r-v} - Art. IV

G.

When the voice moved to the third below, one must start over again trying to carry the voice still lower. And, if this time one then sang the fifth below with the same facility that one had sung this third, it would be necessary to stick to the fifth. But also, if one found difficulty singing this fifth, it would be necessary to abandon it and stick to the third. Let us suppose, however, that one holds onto the third when the fifth ought

12/2:

f. 55^{r} - Art. I

E.

If the voice moves to a third or a fifth below the note of the pause, it will be the fundamental bass. If, on the contrary, it moves to a fourth[7] or a sixth below the note of the melody, the melody itself will be the fundamental.

f. 55^{r} - Art. I

F.

If by chance one only sang the second below the melody note, this one would then be the fifth of the dominant tonic: but this will not happen much—only because the ears are yet little trained. Hence, they feel the note which should follow instead of the one that one should hear at the same time. It is not necessary to hold on to the note, rather, to start the operation over in trying to carry the voice lower without the will directing it yet, that is to say: letting it go like a machine.

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[7] The manuscript actually reads *si au contraire elle se porte a une quinte ou a une sixte au dessous*, however, from the context, it is clear that Rameau intends the fourth below—not the fifth.

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to be preferred to it. In that case, one would not be able to imagine it then as tonic or dominant-tonic without it requiring sharps or flats—which would not be found in the subject from the pause which precedes the one in question.

From the eighth lesson, one knows that pauses or cadences only end on the tonic or the dominant tonic in the fundamental bass.

Rameau's ideas here can be broken down into three basic concepts. In the material designated "E.", he tells us how certain intervals sung below the melody note of the pause can indicate the same fundamental bass. In the material designated "F.," he shows how singing a second below the melody note requires a different fundamental bass than the melody note of the actual pause, and in the material designated "G.," he points to the problem that common tones introduce between keys a fifth away.

An illustration of this material in the key of C major should make the ideas here more accessible. Since the fundamental is never separated from its implied triad, any of the three notes of a given triad can occur above the fundamental. Therefore, when one of these three notes appears in the melody, it implies a specific fundamental bass. For example, in the key of C major, if there is an E in the melody, singing a **third** below it would produce its fundamental, C. If there is a G in the melody, singing a **fifth** below it would produce the fundamental C. If however, there is a C in the melody and you sing a **fourth** (G) or a **sixth** (E) below that melody note (C), the melody note itself is the fundamental. Therefore, singing a third, a fourth, a fifth, or a sixth below the melody can reveal the tonic as a fundamental bass.

The second idea becomes clearer only from the information in the second draft. In this situation, Rameau says that the beginner might sing a second below the melody note in this process of determining the fundamental bass. If this happens, due to lack of experience on the part of the singer, this note should not be taken as a fundamental bass

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itself. On the contrary, the note a second below the note of pause should be sung as a melodic precursor to the pause.[8] It is thus related to the note by melodic step, not by harmonic skip (thirds or fifths). Rameau's opening statement in this paragraph explains this. He says that this second below is the fifth of the dominant-tonic; therefore, it would indicate the dominant-tonic as a fundamental. For example, if you sing a D below an E in the melody, the D is the fifth of the chord of the dominant-tonic, G—it is in no way related to the fundamental bass of the melody note E, which would be C. Here is an application of the idea expressed in Gianotti's second chapter where motion by step required different fundamental basses (see chap. 2, ¶ 8, rule 1). Since this second below would require a different fundamental than the actual melody note of the cadence, Rameau then advises repeating the procedure to find a note that is the real fundamental bass below the pause.

The third idea that Rameau expresses has to do with notes that are common to two fundamentals a fifth away and thus involves the idea of relative keys. Here, Rameau says that you can often sing either a third or a fifth below the melody note. This causes some problems as to which note to prefer. For instance, given a G in the melody, it can serve as a third of E or a fifth of C—each of these notes is a possible fundamental bass. From a combination of comments between 12/1 of "L'Art" and the Code, the case comes into focus.[9] If E were the fundamental bass, its chord would be either E-G-B (in the minor mode) or E-G#-B. The E major chord would require an accidental, G sharp, and thus lie outside the realm of keys a fifth apart which share common key signatures. For this reason, the C as fundamental bass would indicate a chord, C-E-G, which would be common to the keys a fifth apart (C and G here). In addition, from the last paragraph quoted from "L'Art" here, the choice of C "fits" for another reason: it fulfills the cadential

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[8] In lesson 18/1, Rameau refers to this melody note as the note which "announces" the note of pause. See ¶ 10 of Gianotti's chapter 13 (p. 420) and the relevant discussion in the editorial commentary, p. 429 ff..

[9] See the block marked G. for the parallel excerpt from the Code in the section Additional Sources to Chapter IV, pp. 203-4.

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requirement of being either the tonic or the dominant as a cadential goal. This is confirmed through the particular comment in the Code: "the fifth that the voice bears below the pause of the melody is generally the dominant tonic."

Cadence as Harmonic Event

Though Gianotti and Rameau explain events from a purely melodic perspective in the first three paragraphs of chapter four, it is in ¶ 5 that each author goes his separate way in describing the movement of the fundamental bass by fifth and its role in the different types of cadences. In ¶ 5, each teacher subtly highlights slightly different things. Organization is preeminent in Gianotti's version. Gianotti's opening statement in this paragraph gives terminology: it presents the cadence types at once and follows with a definition of each. Rameau has a less direct approach. He begins by emphasizing the specified distance between the two notes of the cadence: a fifth. His next fact points out two specific plays in the cadential game—the announcement of the cadence and the end of the cadence. It is only at this point that Rameau speaks of the role of the three different fundamentals in these specific plays.

Each author incorporates the three fundamentals in his version of the cadential game. However, each teacher continues to describe the game differently. Gianotti uses specific fundamentals in his definitions of the perfect and imperfect cadence, he calls each by name by associating each pair with the direction of the cadence; thus, the dominant-tonic descends to the tonic (perfect) and the subdominant ascends to the tonic or the tonic ascends to the dominant-tonic (imperfect). Rameau, on the other hand, thinks of the fundamentals solely as potential cadential goals: he specifies which players have the right to end the cadence. As a result, the subdominant is out of the running as a cadence terminator. Though Gianotti's definition of cadence gives the beginner a good concise understanding of the different types of cadence, his terminological bent does not quite capture Rameau's vision of the cadential game in action as a dynamic model where motion

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by fifth in the fundamental bass is as important as the arrival at a particular cadential goal, a goal which excludes the subdominant player. For Rameau, there is no cadence in the fundamental bass without these factors.

Although neither author suggests why we might want to cadence on the dominant-tonic at this early date, Rameau does provide additional details in another lesson of draft 2: lesson 13, "Concerning pauses or cadences in the fundamental bass." Unlike his first draft version 8/1 which started with melodic cues to cadence, Rameau opens 13/2 by pointing out specific fundamentals as cadential goals: the tonic or the dominant-tonic. His description of perfect and imperfect ("irregular") cadences is the point of departure from the information in 8/1—for even though the information concerning perfect and imperfect cadences is the same between the two drafts, in 13/2, he clearly emphasizes the fundamentals themselves and their function over the movement of these fundamentals by fifth in 8/1:

I/8/1:

f. 12^v

It is the fundamental succession by fifth which supports all cadences and consequently all pauses in the subject. When two notes are a fifth away from each other, the first [note] announces the cadence and the last ends it on the strong beat. These cadences end on the tonic or on the dominant-tonic—never on the subdominant. They are distinguished [either as] perfect [or] as imperfect [types].

The perfect cadence occurs by descending a fifth to the tonic; the imperfect, by ascending a fifth to this same tonic or to the dominant-tonic.

I/13/2:

f. 56^v

In the perfect [cadence], the tonic is preceded by its dominant; in the imperfect, this tonic is preceded by its subdominant. The same cadences also end on the dominant-tonic,

f. 57^r

in the imperfect [cadence], the tonic which precedes its dominant can be recognized as a subdominant

Every dominant tonic which ends an imperfect cadence can be regarded as a tonic, though its key might cease to exist immediately after.

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Where Gianotti and Rameau both confine their discussion of cadence to one key in chapter 4 and 8/1, Rameau starts to apply the concept of cadence outside the principal key in 13/2. He does this by focusing on the dominant-tonic as a cadential goal.

> In the perfect [cadence], the tonic is preceded by its dominant; in the imperfect, this tonic is preceded by its subdominant. The same cadences also end on the dominant-tonic, [but] with this difference: in the perfect, the dominant of this Dominant-tonic never bears a major third so that the leading tone is excluded—from which a similar cadence can be regarded only as an imitation of the perfect, whereas in the imperfect [cadence] the tonic which precedes its dominant can be recognized as a subdominant.
>
> Every dominant tonic which ends an imperfect cadence can be regarded as a tonic, though its key might cease to exist immediately after.
>
> (I/13/2-f. 56^{v} - 57^{r})

Even though it seems that Rameau is distinguishing a perfect from an imperfect cadence here, he is really showing how two cadences with the same fundamental as cadential goal can really be two different cadences in terms of function. Specifically, he distinguishes between the perfect cadence and the imperfect cadence on the dominant-tonic. There can be no doubt that the discussion above goes far beyond the ken of the beginner reading a chapter slotted in the first third of the section on consonances, for it introduces the idea of a fundamental's functional shift when viewed in a slightly different context. Understanding this shift in function takes a bit of time, effort, and patience.

In the example above, Rameau says that the dominant of the dominant-tonic cannot have a major third (a leading tone). He says that this situation is then regarded as an "imitation" of the perfect cadence. This "imitation" becomes clearer to the reader only as the lesson continues:

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> In the imitation of the perfect cadence to the dominant tonic of a major key, one is often free to give a major third to the dominant which precedes it, and in this case, this dominant-tonic is effectively a tonic. ex.e
>
> When the note which can be sensitive in the key where the imitation of the perfect cadence ends does not appear in the melody, it is up to the discretion of the composer to imagine it as a minor third or as a major third of the dominant which precedes the ending note of the cadence. If he imagines it a major third, from this moment it is a leading tone, the cadence is therefore perfect, and the fundamental note which ends it is a tonic. [In this situation], one is not obliged to continue in the [previous] key.
>
> (I/13/2-f. 57^{r})

At first glance, this additional information seems to contradict the previous passage where the dominant of the dominant-tonic did not bear a major third. Upon closer study, however, it really clarifies the function of a perfect cadence wherever it appears.

The situation can be explained as follows. When the dominant that precedes the dominant-tonic bears a major third, that dominant itself becomes a dominant-tonic of a fundamental cadential goal. The original fundamental goal of the cadence, the dominant-tonic in the previous key, now becomes a tonic because it was "tonicized" (to use a modern term) by its dominant-tonic, more specifically through the use of its leading tone (the major third in the chord). This additional information sheds light on the previous passage where the dominant of the dominant-tonic did **not** bear a leading tone (a major third). When the dominant of the dominant-tonic does not bear a major third, the cadence is an "imitation" of the perfect because the fundamental goal is not a tonic.[10]

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[10] Rameau explains this idea in detail in the Traité:

> As soon as the leading tone appears in a dissonant chord, it definitely establishes a conclusion of the strain; it should consequently be followed by the perfect chord of the tonic note or by one of its derivatives. On the other hand, if the leading tone does not appear in a dissonant chord, the conclusion is not established at all, and this dissonant chord should be followed by another dissonant chord, and so on in succession until the leading tone is heard. This then establishes the conclusion or at least an imitation of this conclusion...

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The importance of the leading tone as a "sensitive note" becomes the crucial factor here: for without the presence of a major third in the first cadential note, the cadential goal does not become tonicized and still maintains its original function in the initial key.[11] Through this change in function, Rameau can shift into a key that is related to the initial key by fifth—a topic that is briefly touched upon in the last paragraph of 13/2:

> Keys a fifth away from each other have two common fundamental notes—the fundamental succession, then, can often be the same in each [key]. [In this situation,] it will only be a matter of judging whether the fundamental note which ends the pause is a tonic or a dominant-tonic. ex.
>
> If the key can appear arbitrary in this last case, it is more a matter of taste—[a matter] which we will discuss in the following lesson.
>
> (I/13/2- f. 57^r)

The heart of the matter is the determination of the function of the cadential goal. Thus, if the key of the dominant-tonic "turned-tonic" continues, a modulation to the dominant has been effected and the cadential goal has changed function from a dominant-tonic to a tonic. If the key of the dominant-tonic does not continue, or if the dominant-tonic is preceded by a dominant without the leading tone, the dominant-tonic is merely emphasized in the original tonic key and retains its function as dominant-tonic.

Rameau calls attention to the role of function in imperfect cadences as well. From both 8/1 and 13/2, we know that an imperfect cadence can either progress from the tonic to the dominant-tonic or from the subdominant to the tonic where the fundamentals ascend by fifth. However, through an additional comment in 13/2, Rameau tells us that it is not just

---

Traité, Bk. III, ch. 14, Gossett, 237.

[11] Gianotti does not discuss the leading tone as a determinant of key until chapter 7 in section I. Even in this chapter, however, he presents the leading tone as an indicator of key primarily from a linear or melodic perspective. Gianotti only discusses the quality of the third of the dominant chord as a determinant of function in the examples of Art. IV in this chapter—he does not present this idea in the main body of the text.

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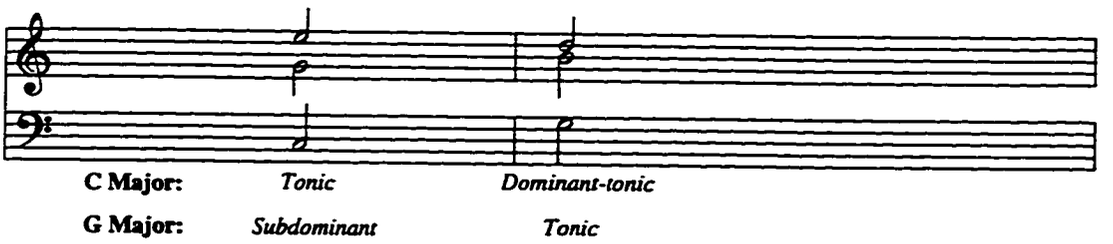
the ascending fifth progression which makes this an "imperfect" cadence. Once more, he points his finger toward the function of the cadential goal note. He says that the function of the dominant-tonic goal can be perceived a tonic and the preceding tonic a subdominant: "in the imperfect [cadence], the tonic which precedes its dominant can be recognized as a subdominant" (f. 57'). By saying what he does, Rameau indicates a change of function in this circumstance: for if the key shifts to the cadential goal (the dominant-tonic), its preceding tonic could be considered a subdominant in the new key retrospectively. The tonic in the first value of the cadence would actually function as a subdominant—what we would call a "pivot chord" in common parlance (see Ex. 4- 3).



Example 4- 3: *The dual function of fundamentals in keys a fifth away*

Thus, in 13/2, Rameau takes matters far beyond the presentation of facts in 8/1 essentially by extending the cadential concept to keys a fifth away from the principal. While this discussion seems far removed from the simple explanation of cadence in 8/1 and Gianotti's chapter 4, it must be remembered that in the second draft, lesson 13 immediately follows the lesson devoted to finding the key of the subject (lesson 12 in both drafts). Though the inclusion of this information after a general discussion of key (as in the second draft) appears to be the best ordering of concepts, Rameau had sown the seeds for these ideas all the way back in 4/1 and 7/2 where he introduced the idea of common fundamentals between keys a fifth apart. This concept, in turn, hails from the third scale (of fifths) in the

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first lesson. Thus, through the explanation of the perfect cadence and the imitation of the perfect cadence on the dominant-tonic, Rameau kills two birds with one stone. He sheds light on the function of the fundamental bass in cadences and provides the cadential explanation behind the melody's descent by third to a leading tone as a mere cadential "clue" (Gianotti's ¶ 3).

The Ordering of Cadential Topics in "L'Art" and their Bearing on Pedagogy

Rameau's presentation of cadential topics changed from draft 1 to draft 2 in "L'Art." In the first draft, Rameau introduces cadence as lesson 8. As mentioned earlier, the reader runs into some difficulty in this particular lesson because Rameau does not differentiate between the use of "cadence" as a model for harmonic progression and "cadence" as a close of a phrase. Due to the omission of a seventh lesson in the first draft, the lesson on cadence follows that of lesson 6 on syncopation. Gianotti follows the same ordering of topics. In both drafts of "L'Art," Rameau includes a section on finding the fundamental bass of all pauses in lesson 12 (the lesson which shed light on singing to find perceptible pauses). Now, in the second draft, this material serves as an introduction to the topic of the next lesson (13/2) "Concerning pauses or cadences in the fundamental bass." Since finding perceptible pauses is prerequisite to finding a "cadence" as a close of a phrase, Rameau's second draft ordering would seem to make better sense. Of course, finding a perceptible pause would be of no use for Rameau's idea of cadence as a typical harmonic progression from chord to chord. Through a comparison of both drafts, however, another difference surfaces: the perspective from which Rameau presents cadential events.

Both Gianotti and Rameau (8/1) look at cadences from the perspective of melody in this chapter. Their very first sentence reflects this view: "Everything that forms a pause or close of the melody in the subject is called a cadence." Contrast this opening statement with Rameau's topic sentence of 13/2: "Pauses or cadences only end on the tonic or on the

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dominant-tonic in the fundamental bass and one only arrives there through an interval of a fifth or a fourth." This different perspective even pervades the opening sentences of the same lesson in "L'Art":

12/1:

f. 22^{v} - Art. IV

Much like discourse, music has phrases. The end of each phrase is marked at each pause. The less pauses are perceived, the more [phrases] are linked and form a sense of connection; the more pauses are perceived the more [phrases] are ended.

f. 22^{v} - 23^{r}

The pauses of the subject are perceived more or less in two-measure groupings and especially in four-measure groupings.

12/2:

f.54^{v} - Art. I

In musical terms, pauses are called cadences. They generally end on the first note of a measure and the fundamental bass always arrives there through an interval of a fifth.

The perspective in the first draft version is much more subject-oriented. By contrast, the second draft version tells the story from the fundamental bass's viewpoint. As a result, the second draft's information tends to favor cadential function over cadential punctuation in the musical surface.

Even though Rameau tends to emphasize the fundamental bass in the second draft on the whole, it is precisely because of the revised ordering of material in this draft that the topics flow in a more logical order. Since Rameau tells the reader how to find cadences by singing in lesson 12, he will have already presented the information from a melodic perspective (see the passages marked "C." in the section Additional Sources to Chapter IV, p. 201). Having done this in lesson 12, Rameau is free to discuss the function of cadential goals in lesson 13. The second draft ordering also provides a beautiful example of Rameau's reliance on a dualistic approach toward music, an approach that blends the

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practical with the theoretical, for Rameau invokes the ear (Nature) to find pauses in lesson 12 and applies logic (Reason) to explain fundamental function in lesson 13.

"L'Art" is not Rameau's final say on musical matters. A look at his organization and pedagogy of cadential topics in the Code, his last practical treatise, sheds light on his adaptation of previous work. With the exception of the introduction of dissonance into cadential matters (i.e. the interrupted cadence, treated in a separate article), Rameau limits his cadential presentation to article VI of chapter 7 in the Code. Of all of Rameau's treatises, this version is probably the most accessible for the beginner because it provides a good comprehensive survey of forty years worth of thinking about cadences. Other than the musical illustrations that accompany the chapter, the information is not new. In fact, the context is not really new either, for Rameau conveys most of this information in the same context that he did in lesson 12 of "L'Art," that is, in the context of key.

Rameau's opening statement of this section in the Code is very similar to the opening of article IV in 12/1: "The most certain means of knowing the *key* and the length of the phrase is to be assured of all the pauses of a melody."[12] He also ends this section with an explanation of the quality of the cadential pause and its use in the determination of key. However, in this version, he does combine melodic and harmonic perspectives by revealing common locations for cadences and fundamental cadential goals. He even gives hints for finding the fundamental bass of the cadential pause and uses this material to help the reader to determine the key of a passage. In this respect, he creates in this work a composite of the information conveyed in 8/1 and both drafts of lesson 12 of "L'Art." For the most part, his material flows coherently. However, in some ways, the material in "L'Art" is of far more interest to the beginner.

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[12] *Le plus sur moyen de connoitre le Ton & la longeur de la phrase, est de s'assurer de tous les repos d'un chant.* Code, Ch. VII, art.vi. For the parallel passage in "L'Art," see the paragraph preceding the one marked "A" of 12/1 in the section Additional Sources to Chapter IV, p. 200.

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"L'Art" provides the very material that the beginner needs and wants to know—how to find cadences just by singing a melody. Another topic of considerably more theoretical weight is omitted from the treatment in the Code, namely, an explanation of the different cadence types with a particular emphasis on the function of cadential goals—the very material found in 13/2 of "L'Art" alone. Unfortunately for the reader of the Code, Rameau only makes a passing reference to the function of the dominant-tonic in an imperfect cadence by calling it an "implied tonic." The reader is left floundering without any explanation of this fleeting remark.

Though this particular commentary has gone somewhat beyond Gianotti's intended scope for Chapter IV in the Guide, we must remember that Gianotti based his material for this chapter on only one draft of Rameau's work; as a result, he misses out on many explanatory details that the other draft provides. One thing is certain: as editor, Gianotti deliberately chooses to omit the passages on singing and other relevant details hidden in the articles of lesson 12—even in chapter 7, the chapter whose content corresponds most closely to the content of lesson 12. Gianotti does no disservice to the beginner in this chapter of the Guide. His postponement of detail helps the reader easily digest what is at hand. In this respect, he succeeds in conveying the more simple idea of cadence to a beginner in a very concise manner. Though Gianotti may not have Rameau's comprehensive vision of cadence at a variety of levels, his basic view of cadential events actually keeps the reader afloat amidst the shifting currents of cadential function.

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CHAPTER V

Various fundamental progressions of the tonic

Gianotti:

1 The dominant-tonic and the subdominant can only progress by fifths. It is not the same with the tonic; its routes will multiply whereas the two other fundamental notes will always follow the same [path].

Rameau: draft 1

I/9/1-f. 13[r]

Every fundamental succession other than the one by fifths generally concerns only the tonic.

I/9/1-f. 13[r]

These [tonic] routes multiply while those of the two other fundamental notes stay the same, so that one should say early on that the tonic has several different routes whose choice depends on the turn of the subject. Every other fundamental note has its own determined succession to which the subject should lend itself until, from one fundamental note to the other, supposing that there are several [fundamental notes], one arrives anew at the tonic.

Rameau: draft 2

2 These new progressions of the tonic will lend more variety to the subject. Without [variety], the subject would be reduced to being a nearly uniform and monotonous melody. It is necessary, therefore, to consider the tonic, henceforth, as the force behind the variety and beauty of melody, of harmony, and of modulation: which we will

I/9/1-f. 13[r]

These new fundamental successions give a more varied change to the subject and imperceptibly we will make the most of the greatest variety it affords. From now on, let us regard the tonic as the principal force behind the variety of melody, of harmony, and of modulation.

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try to prove imperceptibly by our examples

ARTICLE I
Concerning the progression of the tonic by ascending second

1 The tonic can ascend by second to a dominant. We will call this dominant the supertonic [**sus-tonique**] according to the nomenclature introduced in the second section [of the Preliminary Introduction, p. xvii].

I/9/1-f. 13r
Art. I

For the present, the tonic can ascend by second to a dominant which we shall call the supertonic henceforth.

2 There is only one tonic and one subdominant in each key. But there are two kinds of dominants: the dominant-tonic, which always precedes the tonic, and the other type, which we will call simply a dominant, which always precedes another dominant

I/9/1-f. 13r
Art. I

There is only one tonic and one subdominant but there are two types of dominants, which however differ only in that one, to wit, the dominant-tonic, always precedes the tonic; from which we give it the designation tonic; and the other, which we call simply dominant, always precedes another dominant.

I/8/2-f. 51v

The new dominant in question is not a dominant-tonic, it is simply a dominant of another dominant. In each key, there is only one dominant-tonic which is the fifth of the tonic; all the other dominants are no more than dominants of dominants.

3 The progression of these dominants should be the same everywhere: they should all descend by fifth and should follow each other until the tonic preceded by its dominant-tonic

I/9/1-f. 13r-v
Art. I

Moreover, the succession of these dominants is the same. They should all descend by fifth. What is more, they should follow each other to the tonic always immediately preceded by its dominant-tonic.

Thus, after the first

I/8/2-f. 51v

One knows that every dominant is the fifth of the note that it dominates; therefore, one cannot make a mistake by following the order of the third scale specified in the preceding lesson. As soon as a dominant appears in the fundamental bass, it should progress from dominant to

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dominant, one first passes [to] the tonic. It is always necessary to progress from dominant to dominant until one arrives anew at the tonic. Since the succession of dominants is frequently the same as the subdominant, but reversed, it would not be excessive to keep them in mind, so that one could recall quickly which note dominates another.

dominant until the tonic. Thus, supposing the key of C, it is necessary that A, for example, where this C will have descended by third, passes next to D, then D to G, and G to C. On the contrary, if it ascends by second to D, this D will pass to G and G to C.

4 At first glance, this progression by ascending second seems to interrupt the connection of harmony which we insisted upon in chapter II, since, in actuality, there appears to be no connection of harmony between *C-E-G* and *D-F-A*. And, for the time being, [this lack of connection] does not matter here. But when we understand dissonance, we will see the apparent lack of connnection disappear. We will see even more—that the new fundamental chord is merely formed through the inversion of the subdominant In the meantime, let us take advantage of this new progression of the tonic to vary our melodies and harmony and let us try to bring each to its greatest perfection.

5 The tonic will have to ascend by second only in the case where: it could not observe the progression by fifths, or when one would see it forced by the subject to

I/9/1-f. 13^{v} -14^{r}
Art. I

Only one [thing] remains to be discovered: when it is that the tonic ought to ascend by

I/8/2- f. 52^{r}

There is only one case where the second of the tonic occurs in the melody. Being tempted to give it the

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syncopate the fundamental bass, or once again, when the subdominant would be obliged to ascend by second to the dominant-tonic. *See ex. 4, pl. 2*

Observations on this example

6 The leading tone at B. requires the dominant-tonic for a fundamental bass. If one were to employ this same dominant under the subject note A., a syncopation would be inevitable there.

7 If one employed the subdominant at C., it would be forced to pass to the dominant-tonic, which requires the subject note D., and the harmonic connection will be interrupted there.

8 The same observations can be made at letters E. and F.

second. This will be precisely when it cannot [ascend] by fifth without encountering a syncopation in the fundamental bass or when one is forced to make the dominant-tonic follow the subdominant.

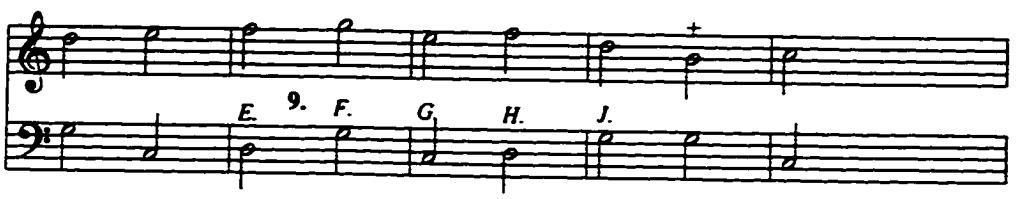
I/9/1-f. 14[r]-Art.I
Explication

If one employs the dominant tonic at A., the [dominant-tonic] would be forced to syncopate at B.

I/9/1-f. 14[r]-Art.I
Explication

If one takes the subdominant at C., [the subdominant] would be forced to pass to the dominant tonic under D.—it will be the same H. and J.[1]

dominant-tonic as a fundamental bass, one must, on the contrary, make this tonic ascend by second in order to avoid syncopation in the fundamental bass.

[1] After guidemark D., Rameau's guidemarks no longer correspond to those given by Gianotti in this example. Rameau's letters E., F., G., H., and J. occur in measures 9-11 of Gianotti's Ex. 4. These coordinates appear below in italics:

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9 If one follows the custodes at m. 9, the fundamental bass will be forced to syncopate.

I/9/1-f. 14r-Art.I
Explication

If one observes the first rules under E. F. where the subdominant both follows and precedes the tonic according to the custodes; this tonic would be forced to syncopate at G.

10 In this example, one sees the necessity of having the tonic progress by an ascending second in order to either avoid syncopation in the fundamental bass or to maintain the connection of harmony

I/9/1-f. 14v - Art. I
Explication

One sees in all these cases the necessity of making the tonic ascend to the supertonic either to avoid the anticipated syncopation at G., or to avoid the syncopation of the dominant-tonic at B., or to avoid making the [dominant-tonic] directly succeed the subdominant at D. and at H.—thus the first rules always serve as guides to the last.

I/8/2-f. 52r

One will realize the necessity of making the tonic ascend a second or descend a third when one sees by following the fundamental route by fifths that it would be impossible to arrive at the tonic next according to the given rules—either for those concerning the progression by fifths or those concerning syncopation.

I/9/1-f. 14r-Art.I
Explication

Though the two notes [in the subject] H. and J. are contained in the supertonic chord, which corresponds to [the fundamental used at] H., one still cannot retain [the fundamental D] under J. without destroying the prescribed fundamental succession. Consequently, it is necessary that it be immediately followed by the

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dominant-tonic under J., moreover this observation is the same as the other at C. and D.

ARTICLE II

Concerning the progression of the tonic by descending third

I/9/1-f. 14v
Art. II

1 The tonic can also descend a third to a simple dominant. We will call this dominant the superdominant [**sus-dominante**] according to the nomenclature in the second section [the chart in section II of the Preliminary Introduction, p. xvij]

The tonic can also descend by third always to a dominant which we shall call the superdominant henceforth.

I/9/1-f. 14v
Art. II

2 The most evident case of using this new dominant is when the tonic would be forced to syncopate, even in beginnin[g:] of course the subject, for the time being, will lend itself to this progression

The rules concerning this superdominant are the same as [those] for the supertonic, to which we will add only that the most evident case of employing it is when the tonic is forced to syncopate, even in beginning, assuming that the subject then lends itself to it.

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3 Like the supertonic, this new dominant will be subjected to descend by fifth in order to progress from dominant to dominant until [reaching] the tonic preceded by its dominant-tonic. See ex. 5, pl. 2

I/9/1-f. 14v
Art. II

We still have one more dominant [to discuss]. [After it is introduced], it will be necessary, as previously, to progress from dominant to dominant up to the tonic. The tonic C will descend a third to A, which is the dominant of D, and the rest [occurs] as in the preceding article.

I/8/2-f. 51v

One knows that every dominant is the fifth of the note that it dominates; therefore, one cannot make a mistake in following the order of its third scale specified in the preceding lesson. As soon as a dominant appears in the fundamental bass, it should progress from dominant to dominant until the tonic. Thus, supposing the key of C, it is necessary that A, for example, where this C will have descended by third, passes next to D, then D to G, and G to C. On the contrary, if it ascends by second to D, this D will pass to G and G to C.

Observations on this example

4 In the first [of the two given] beginnings, one can make the tonic descend by third, since the subject is not opposed to this progression. Instead, it is forced to syncopate in the second [beginning] by the absolute opposition of the subject to the new progression indicated in this article.

I/9/1-f. 14v - Art. II
Explication

In the first [of the two given] beginnings, the subject allows the tonic to descend by third. In the second [beginning], however, [the subject] does not permit [this]. As a result, the tonic is forced to syncopate there.

If one profits from the liberty to syncopate the tonic in the first beginning,

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one sees the impossibility of employing the subdominant under A., since it would be forced to pass to the dominant-tonic under B. next.[2]

According to the preceding article, it is true that one need only take the supertonic in place of the subdominant under A.—in all likelihood, some ambiguity arises as a result and this is [the topic] which will be resolved with considerable care in the next article.

5 The subject requires the tonic to descend by third at A., since neither the subdominant nor the supertonic could be employed there without syncopating at B. If one employs the tonic at C., it will syncopate there; therefore this is a clear-cut case for making it descend a third to the superdominant.

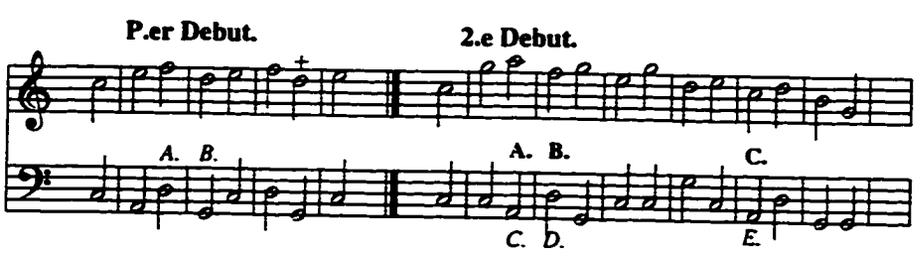
I/9/1-f. 14v - Art. II
Explication

If one employed the subdominant, even the supertonic under C., either of these would be forced to syncopate at D. Therefore the tonic should absolutely descend by third there.

I/9/1 f. 14v - Art. II
Explication

The tonic cannot stay at E. without syncopating; thus, here is a case of

[2] Gianotti does not include this point. Rameau's guidemarks for the first line of Gianotti's ex. 5 appear as follows:



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6 The choice is arbitrary between the superdominant and the supertonic marked at the guidemark D.

making the [tonic] descend by third when the subject allows it. [For] F. and G., see the preceding article. The ambiguity between the superdominant at H. and the supertonic [is] marked by a custos.[3]

ARTICLE III

In ambiguous cases, the progression of a descending third should be preferred to that by ascending second; which gives rise to the necessity of marking the various possible fundamental basses with the custodes.

1 The ambiguity in question affects all the notes of a key, except the leading tone. For, in addition to what we have already said in chapter II on the subject of the community of notes between chords of the three basic fundamental sounds, this community obtains once more between the fifth of the dominant-tonic and the octave of the supertonic, and between the fifth of the supertonic and the octave of

I/9/1-f. 15ᵛ - Art. III

In this way, all the notes of a key except the leading tone are common to the chords of two different fundamentals because that which follows or precedes a common note in the subject almost always determines the choice of the fundamental note which fits there in consequence of the prescribed fundamental succession.[4]

I/9/1-f. 15ᵛ - Art. III

In all these chords, one sees the dot of a

[3] Rameau's letter H. = Gianotti's letter D. in ex. 5.

[4] Rameau uses this paragraph as the conclusion to his example. Since it provides further explanation of Gianotti's isolated statement in this paragraph, it appears both here (to facilitate comparison of content and alongside Gianotti's ¶4) and in its original sequence as well.

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the superdominant.	semicircle[5] standing for the fifth of a fundamental note and for the octave of the other: so that one ought to first perceive the alternative between the dominant-tonic and the supertonic only in the note D. That is to say, when the note D occupies the subject, one must watch out and examine whether it is the dominant-tonic, where D forms the fifth, that one should use or the supertonic, where this same D forms the octave. The same is true for these two fundamental notes as for the tonic with its dominant-tonic and with its subdominant, which have the octave and fifth in common. This [applies] to every two fundamental notes a fifth away from each other [such] as the superdominant and the supertonic.
2 On the other hand, the subdominant has two common notes with the supertonic and with the superdominant. Moreover, the octave of the superdominant forms a third with that of the subdominant and the fifth of the supertonic.	On the other hand, the superdominant [sic] [subdominant] which is the third of the supertonic and of which the superdominant forms a third, still has two notes common with one and two [notes] with the other. Yet among these common notes, there is one more common to all three: to wit, the octave of the superdominant, which is the third of the subdominant and fifth of the supertonic.

[5] Rameau literally says "the dot of a semicircle" (*la pointe du demicercle*) here. However, due to the description of various notations for several options in another passage, it is far more likely that there is both a dot and a semicircle designating both options simultaneously here. In a comment in an example related to Gianotti's ¶ 10 (i.e., the various options created through repetition of the subdominant in the fundamental bass), Rameau gives three options (notes, custodes, and dots) in place of Gianotti's two (custodes and notes). Thus in the explication section of I/9/1-f. 16^{v}, Rameau says: "The most perfect succession is marked with notes, the other with custodes, and the least perfect with a dot which is going to return to the Custodes." (*La plus parfaite succession est marquee avec les notes, l'autre avec des Guidons, et la moins parfaite avec un point qui va revenir aux Guidons.*) And, in the main body of Rameau's third article I/9/1-f. 15^{r}, there is another passage that reveals the use of three options: "One will mark the most perfect fundamental bass with notes, the other with custodes and the other, if there is a third possible [option], with dots." (*On marquera la plus parfaite Basse fondamentale avec des notes l'autre avec des guidons, et l'autre s'il s'en trouve une troisieme possible avec des points.*)

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3 The same community of notes reigns again between the octave of the tonic and the third of the superdominant, and between the third of this same tonic and the fifth of this superdominant.

The same community [exists] between the octave of the tonic, the third of the superdominant and the fifth of the subdominant.

4 By this analysis, one sees the necessity of setting about making all these notes common with different fundamental notes, through the examples which one can make oneself by arranging all these notes with their perfect chords in succession.

In order to set about making the subject note common to three different fundamental notes, it suffices to recall the octave of the superdominant on one side and the [octave] of the tonic on the other. The tonic has two more notes in common with the superdominant, since it is a third away from it.
In this way, all the notes of a key except the leading tone are common to the chords of two different fundamentals because that which follows or precedes a common note in the subject almost always determines the choice of the fundamental note which fits there in consequence of the prescribed fundamental succession.

5 It is from this community of sounds, that this ambiguity in question arises. That which follows or precedes a common note, almost always determines the choice of the fundamental note which fits there, according to the prescribed progression. But one must never be concerned about ambiguity in the fundamental bass since many progressions are regular there. It is at this occasion that it is necessary to prefer the most perfect to those which are less so. [For instance,] the progression by fifth is more perfect than the one by third,

I/9/1-f. 15' - Art. III

One must never be concerned about ambiguity in the fundamental bass since its succession is regular here and there. Therefore, there is many a possible fundamental bass: if not, there must not be any ambiguity. Moreover, one

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and this one is more perfect than the one by second. This knowledge should guide us in the choice that we must make. Nevertheless, since perfection also consists in variety, in a beautiful melody, in the spirit of this melody, in expression, and in design, one is sometimes obliged to transgress a less significant rule to submit to these. *See example [6], pl. 2* [6]

can be mistaken in all this only when one does not recognize it oneself.

I/9/1-f. 15[r] - Art. III

The most perfect should always be preferred; thus when one knows that the fifth is more perfect than the third, and that this [is] more perfect than the second, one will not be able to miss observing this rule in ambiguous cases.

I/9/1-f. 15[r] - Art. III

However, since perfection also consists in [such things as] the variety in a beautiful melody, the spirit of this melody, expression, and design, one is sometimes obliged to transgress a less significant rule in order to promote these.

I/8/2-f. 52[r]

When the melody equally permits making the tonic ascend a second or descend a third; this last progression [the descending third] should be preferred—as long as the continuation of the melody provides the means of passing from one dominant to the other until the tonic according to the given rule. If not, it would first be necessary to make the tonic ascend by second.

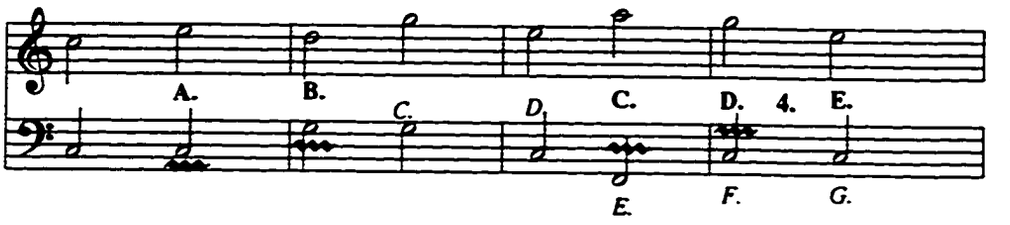
Observations on this example

6 Although we have already stated elsewhere that the mediant naturally

I/9/1-f. 16[r] - Art. III
Explication

It is true that the mediants at A. and D.[7] naturally require the tonic as

[6] This is erroneously given as Ex. 5. The Guide's Errata corrects this to Ex. 6.

[7] After Guidemarks A. and B., Rameau's guidemarks C. through G. do not coordinate with Gianotti's. They appear in italics in the first four measures of Ex. 6 below:

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required the tonic as a fundamental bass, this should be understood only in the case where where this tonic is not already employed immediately beforehand; because then it is free to employ the mediant as fifth of the superdominant since it is common to these two fundamental notes.

a fundamental bass, but this should only be understood in the case where this tonic is not already employed immediately beforehand, for once one has used [this tonic], one is free to apply the mediant, under which this tonic can be repeated, to any other fundamental note that the determined succession can authorize.

7 Since the dominant-tonic is repeated in measure 2, one can first employ the supertonic, marked by a custos under the subject note at B.[D being], common to these two fundamental notes.

I/9/1-f. 16'-Art. III Explication

B. forms a fifth with the dominant tonic which follows the tonic and which is repeated at C. in order to pass next to this same tonic under the mediant D. Now, when this dominant tonic is repeated, nothing prevents preparing the supertonic first for it under B. according to the custos, since the subject note B. is common to the chords of these two fundamental notes and since the succession is in the prescribed order.

8 The same observation can be made at the penultimate measure of this example.

9 Since the tonic is repeated in the fourth measure, one can substitute the supertonic for the subdominant, which is under the subject note at C., in order to arrive at the tonic under the note at E. through a progression of dominants: because the subject note at C. is common to the chords of these two fundamental notes in question the same way that the subject note at

I/9/1- f. 16' -Art. III Explication

When the tonic at F. is repeated at G., one looks to see whether one could not substitute the supertonic for the subdominant at E. in order to arrive at the tonic G. through a succession of dominants—because the subject note E. is common to the chords of the two fundamental notes in

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D. is common to the tonic and the dominant-tonic chords.

question the same as the subject note F. is common to the chords of the tonic and of its dominant tonic. Thus one sees the possibility of a second fundamental bass in the custodes under E. F.

I/9/1- f. 16' -Art. III
Explication

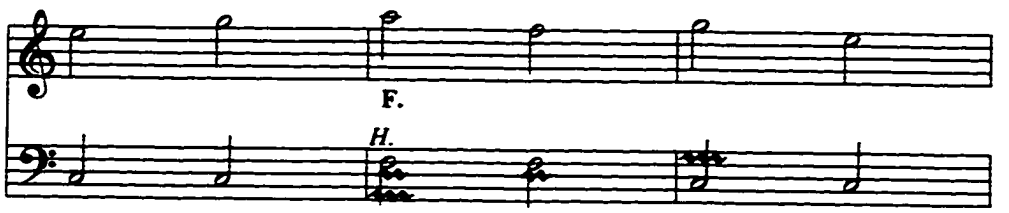
10 The different fundamental notes, marked with custodes under the subject F., can be imagined only through the repetition of the subdominant preceded and followed by its tonic.

The octave of the subdominant H. is common to the chords of three different fundamental notes, which can be employed [in slightly different ways] so that there are three different fundamental basses up to a certain point [the route A-D-G] and two in the rest [the route D-D-G]. The idea of these different fundamental basses should be suggested by the repetition of the subdominant H. and by the tonic which follows it.[8]

I/9/1- f. 16' -Art. III
Explication

11 The notes are better than the custodes at G. and H., because in following the custodes here, the tonic under H. would be obliged to ascend by second, and, as has already been stated, this progression is not as perfect as the one by third.

The most perfect succession is marked with notes, the other with custodes, and the least perfect with a dot, which coordinates with the Custodes.

[8] Rameau's letter H. = to Gianotti's F.:

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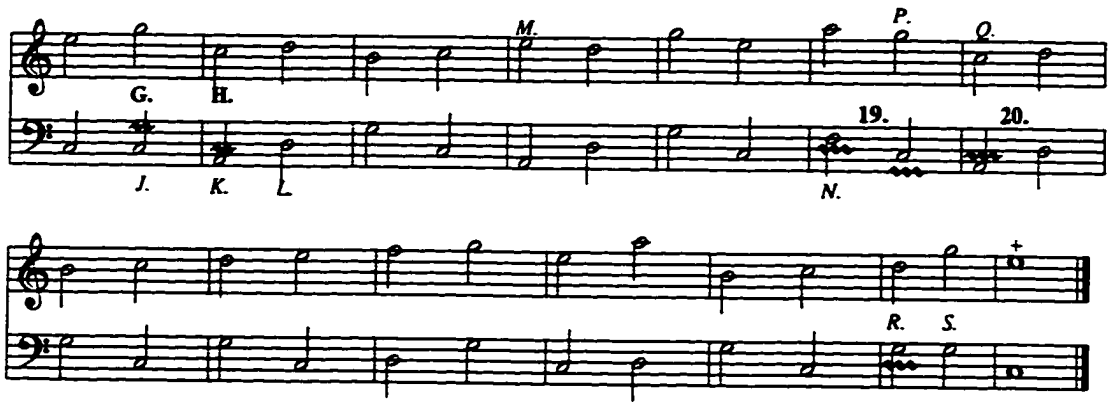
Instead of retaining the tonic at J.[9], one can substitute its dominant for it because it is advisable for [the tonic] to return at K. after this dominant. Since [the tonic] is still obliged to ascend by second next at L., the notes are better [than the custodes] because [the tonic C at J.] descends by third at K. and the third should get the better of the second. The mediant M. does not receive the tonic since it would then syncopate.

12 One can equally follow the fundamental bass notes or the custodes in measures 19 and 20: both work equally well there. However, in following the custodes, one takes the dominant route, which is always the best route to take.

I/9/1-f. 16' -Art. III
Explication

After the most perfect succession found from N. to P., one would be forced to syncopate the tonic at Q. if one did not know that it could descend by third there with conditions. As a matter of fact, it is necessary to make sure [of these conditions] when examining whether or not the

[9] Measures 14-27 of Gianotti's ex. 6 with Rameau's guidemarks in italics:

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continuation of the subject opposes [the descent of a third] there: because the subdominant , moreover , with which Q. forms a fifth, is not possible considering that the subject does not allow it to be followed by the tonic [next].

However, the mere possibility of employing the tonic at Q. without a syncopation should make [us] determine whether or not one could arrive in this place through another route by making the tonic ascend a second to N., for example, from which one progresses next through dominants marked with custodes up to the last tonic Q.

The cause of these different fundamental basses resides in the subject note Q., common to the chords of the tonic, the subdominant, and the superdominant, which suffices to bring about this undertaking. The dominant-tonic, which is repeated from R. to S., can be replaced at R. by the dominant marked by a custos considering that the subject note R. is common to their chords and the prescribed succession does not suffer from it.

13 In the custodes of this example, one sees the possibility of a second fundamental bass, concerning which one will base decisions on various possible factors, for example, to vary the harmony, or for the taste of the basso continuo line, or finally, for the arrangement of the other parts.

I/9/1- f. 16^{r} -Art. III

One will discover imperceptibly the possibility of different fundamental basses either by dint of practice or by the aid of explications that we will give and by the custodes or dots which will serve to mark them.

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Editorial Commentary on Chapter V

Gianotti's talent for organization usually stands the reader of the Guide in good stead. In fact, as we have seen in the first chapters, it is Gianotti's presentation of material which makes Rameau's copious explanations particularly accessible for the beginner. The tripartite division of the content in chapter V, however, is not Gianotti's own invention—it hails from Rameau's first-draft version of the topic "Concerning the fundamental succession of the tonic by ascending second and descending third" in lesson 9. In lesson 9/1, Rameau breaks down the topic of tonic progressions into sectional divisions. He thus devotes the first article to the route by ascending second and the second article to the route by descending third. In the third and final section, Rameau discusses the merits of the route by descending third over that by ascending second.

"*Caveat lector*!"— let the reader beware for the organization of the material in Gianotti's chapter and the source in "L'Art" upon which it is based is deceptively simple. Problems only become apparent upon scrutiny of the content of each article. One glaring inconsistency is the paltry three paragraphs devoted to the route by descending third, the route that is deemed preferable to that by ascending second. The reader also expects to find out why the descending third progression should be preferred to the ascending second and receives a long-winded example of common tones between chords a third and fifth away instead. The surprise, in the end, is that this discussion integrates all the loose ends in this lesson.

The unsuspecting reader of the Guide is in for another surprise: the ninth lesson in the first draft is not the only version of this content—Rameau provides another view of matters in lesson eight of draft two. In 8/2, Rameau not only condenses much of the content of 9/1, he dispenses with the tripartite article division of the first draft as well. This second draft version is not just a seamless summary of the contents of 9/1; for Rameau, in dispensing with the article divisions, presents both the succession by ascending second and

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descending third together instead of individually. This approach highlights the shared function of these routes, not their individual attributes.

Although many of the facts are the same between 9/1 and 8/2, through the unique presentation of this topic in each draft, Rameau looks at this lesson from two different perspectives. In the second draft, he groups both routes together, choosing to emphasize their common function while, in the first draft, he differentiates the routes showing why one is better than the other in specific situations. Unfortunately, both methods fail to answer two important questions directly—why these new options supplant the previous rules for fundamental succession by fifth alone and why the descending third succession is preferred over that of the ascending second. In fact, other than giving "a more varied change to the subject," Rameau does not even acknowledge why the student should use these routes in the first place. Gianotti comes much closer to assessing the true contribution of these new routes to composition in his concluding remark: "it is necessary to know how to make the most of the opportunity at hand either to vary the harmony, or for the taste of the basso continuo line, or finally for the arrangement of the other parts" (Art. III, ¶ 13.)

Sifting Gianotti's cloned passages from Rameau's original in 9/1, however, uncovers additional material. It is Rameau's additional illustrations, pedagogical asides, and subtle explanations that serve to connect related ideas. Sometimes an added phrase makes all the difference in explaining an example merely mentioned by Gianotti. Through this additional material and the different approach in the second draft version, the answers to the two questions gradually emerge. The puzzle only falls into place from the contemplation of the whole, a composite of the different perspectives of each version.

Common Tones

Perhaps the greatest surprise of Gianotti's chapter is the discussion of common tones in the third article because, as mentioned earlier, it seems out of place with regard to

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the alleged topic expressed in the title of the subheading—the preference for descending third over the ascending second. Gianotti is not alone in his approach here, for Rameau provides the same discussion in the third article of 9/1. Rameau's presentation of material in this section, however, surpasses Gianotti's in a number of ways. Only Rameau connects the concept of common tones to the original fundamental succession by fifths through his pedagogy. His additional asides also shed light on compositional process—a topic that Gianotti does not include in his version.

Rameau does not start this article with an explanation of common tones. Instead, he provides several paragraphs that help prepare the reader to see the relationship between the previous material and the example which is to follow:

> The most perfect should always be preferred; thus when one knows that the fifth is more perfect than the third, and that this [is] more perfect than the second, one will not be able to miss observing this rule in ambiguous cases.
>
> However, since perfection also consists in [such things as] the variety in a beautiful melody, the spirit of this melody, expression, and design, one is sometimes obliged to transgress a less significant rule in order to promote these. For the present this is why it will not hurt to mark the various possible fundamental basses under the same melody of the subject while waiting to know which [choice] one ought to adhere to.
>
> One will mark the most perfect fundamental bass with notes, the other with custodes, and the other, if there is a third possible [option], with dots.
>
> For the present, one must not overcomplicate the mind too much in order to find these different possible fundamental basses. Provided that one composes in conformity to one of our examples, one should be satisfied. As one acquires knowledge and [one's] talents are developed, the gray areas will become more apparent little by little and one must mark them in the proportion that one distinguishes them.
>
> **The cause of these different possible fundamental basses resides in the notes common to their chords. The fundamental notes a fifth away from each other only have one note common**

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to their chords and the ones a third away have two.

At first, it is necessary to notice which note of the chords is common to fundamentals a fifth away and which are the two notes common to the fundamentals a third away. Then one notices the intervals that these notes form at the same time with the highest and the lowest of the these two fundamental notes.

[emphasis added]
(I/9/1-f. 15^{r} -Art. III)

From these paragraphs, several important ideas come to the surface. Rameau starts by prioritizing what seems to be interval relationships. He says that the fifth is more perfect than the third, and the third is more perfect than the second. This idea is yet another manifestation of Rameau's prioritizing the most perfect intervals according to their natural order in the harmonic series, the foundation of his fundamental theory. It should come as no surprise then, that Rameau prefers the progression by fifth over that by third as far as tonic routes go; Rameau includes the second, an interval only previously categorized as stepwise motion in the progression of a melody, as a last resort here. In this way, Rameau continues to use these specific intervals consistently throughout his theory and applies their hierarchy to a horizontal progression of events here: the succession of the fundamental bass.[1]

In the second and third paragraphs, Rameau indicates that a good melody requires variety and that this variety requires some finessing in the fundamental bass. Therefore some "previous" rules in the fundamental bass will be broken. Metaphorically speaking, Rameau opens the door here for the use of the new routes. Since these new routes provide a number of available options, Rameau also anticipates the notation of these various options

[1] Recall that in the first draft, Rameau presented the tonic and its two fifths (the subdominant and the dominant-tonic) as the fundamental succession in lesson 4 before emphasizing the ability of these fundamentals to bear triads composed of thirds in lesson 5. Characteristically, his presentation is reversed in the second draft. In draft 2, Rameau associates the fundamental with its triad composed of third and fifth (lesson 3) before presenting the tonic and its two fifths in lesson 7. See the section Additional Sources to Chapter I, pp. 93-5 for the comparison of presentations of the fundamental succession in lessons 4/1 and 7/2.

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in different ways that indicate all the available possibilities simultaneously: through notes, custodes, and dots.

Rameau's most direct explanation for these alternative tonic routes appears in the paragraph in boldface above. Without Rameau's explanation of common tones between chords a third and fifth away, the idea of different tonic routes could not be rationalized. For the substitution of another fundamental bass note for one of the three primary fundamentals depends upon a common denominator: a note in the subject common to the primary fundamental and its substitute, the supertonic or the superdominant. Rameau's last paragraph in the above citation amplifies this notion. He advises the student to evaluate common tones, telling them to sort which are common between fundamentals a fifth away and which are common to fundamentals a third away. This leads into the example which both Rameau and Gianotti include as the bulk of the third article.

In the opening of Article III, Gianotti calls attention to the fact that common tones among chords are potential sources for ambiguity. After excluding the leading tone from this morass, he recalls the "community of notes" between chords of the three basic fundamentals (the tonic, dominant-tonic, and subdominant). In the first three paragraphs, he also seizes the opportunity to show common tones between other chords: the D between the dominant-tonic and the supertonic, the A between the superdominant and the subdominant, and the C and E shared between chords of the tonic and superdominant.

Both Rameau and Gianotti present the idea of tones that are common to chords a fifth away and a third away. However, while both authors start by naming D as a common note between the supertonic and the dominant-tonic, after this point, their methodological paths diverge. Compare Gianotti's first paragraphs in Article III with the corresponding passage in Rameau' s same article:

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Gianotti:

1 The ambiguity in question affects all the notes of a key, except the leading tone. For, in addition to what we have already said in chapter II on the subject of the community of notes between chords of the three basic fundamental sounds, this community obtains once more between the fifth of the dominant-tonic and the octave of the supertonic, and between the fifth of the supertonic and the octave of the superdominant.

Rameau:

At first, it is necessary to notice which note of the chords is common to fundamentals a fifth away and which are the two notes common to the fundamentals a third away. Then one notices the intervals that these notes form at the same time with the highest and the lowest of the these two fundamental notes.

Here is something to facilitate these remarks. In all these chords, one sees the dot of a semicircle standing for the fifth of a fundamental note and for the octave of the other: so that one ought to first perceive the alternative between the dominant-tonic and the supertonic only in the note D. That is to say, when the note D occupies the subject, one must watch out and examine whether it is the dominant-tonic, where D forms the fifth, that one should use or the supertonic, where this same D forms the octave. **The same is true for these two fundamental notes as for the tonic with its dominant-tonic and with its subdominant, which have the octave and fifth in common. This [applies] to every two fundamental notes a fifth away from each other [such] as the superdominant and the supertonic..**

[emphasis added]
(I/9/1-f. 15^{r-v}, Art. III)

In paragraph 1, Gianotti presents two examples of common notes. He presents D as the fifth of the dominant-tonic and octave of the supertonic, and A as the fifth of the supertonic and octave of the superdominant. Thus, like Rameau, he shows examples of the fifth of one note simultaneously being the octave of a note a fifth away.

Rameau's example differs in subtle ways. Rameau precedes his example with a paragraph that prepares the reader to expect certain relationships between chords a third and fifth away. This sets the tone for his example. Unlike Gianotti, Rameau uses the pitch D to illustrate one example only. His focus is not on common tones between chords per se,

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but on the possibility that common tones in the subject open up for different harmonic choices in the fundamental bass. He reveals this agenda through several clues: the use of symbols such as the dot and a semicircle to designate possible options and the specific statement concerning the appearance of this note in the subject. Unlike Gianotti, he warns the reader to be on guard—because this subject note can have two possible fundamental basses. Recall that Gianotti does not specify D as a subject note, but as a note common to the dominant-tonic and the supertonic only. Even though Gianotti connects this idea with the community of notes between the three basic fundamental sounds introduced previously, he does not really apply this concept to all notes a fifth away as Rameau does in the passage highlighted in boldface above.

Both authors bring the subdominant into the picture next. In his second paragraph, Gianotti relates the subdominant chord to the supertonic chord through two common notes, F and A, and to the superdominant through two other common notes, A and C. Thus he shows that chords a third away from each other share two common notes each. By calling attention to the octave of the superdominant as third of the subdominant and as the fifth of the supertonic, he also points out that three chords a third away from each other share one note in common (A in this case.)

Gianotti:

2 On the other hand, the subdominant has two common notes with the supertonic and with the superdominant. Moreover, the octave of the superdominant forms a third with that of the subdominant and the fifth of the supertonic.

3 The same community of notes reigns again between the octave of the tonic and the third of the superdominant, and between the third of this same tonic and the fifth of this superdominant.

Rameau:

On the other hand, the superdominant [sic] [subdominant] which is the third of the supertonic and of which the superdominant forms a third, still has two notes common with one and two [notes] with the other. Yet among these common notes, there is one more common to all three: to wit, the octave of the superdominant, which is the third of the subdominant and fifth of the supertonic. The same community [exists] between the octave of the tonic, the third of the superdominant and the fifth of the subdominant.

In order to set about making the subject note common to three different fundamental

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> notes, it suffices to recall the octave of the superdominant on one side and the [octave] of the tonic on the other. The tonic has two more notes in common with the superdominant, since it is a third away from it.
>
> (I/9/1-f.15^v-Art.III)

Rameau also introduces the subdominant at this point, but his model presents it specifically as the third between the fifth D and A. Since the fifth and the third are important triadic intervals for Rameau, it comes as no surprise that he uses these specific intervals as the frame for his illustration here. He even maintains the hierarchy mentioned at the beginning of the article by presenting the outer fifth first [D-A] before presenting the third [F]. In this way, even Rameau's methodological approach reflects his idea that the fifth is more perfect than the third. Rameau expresses the idea here more succinctly—that notes of chords a third away have two different sets of common tones and that 3 chords a third away share a common tone between them. Thus, Rameau's example could be illustrated as the following:

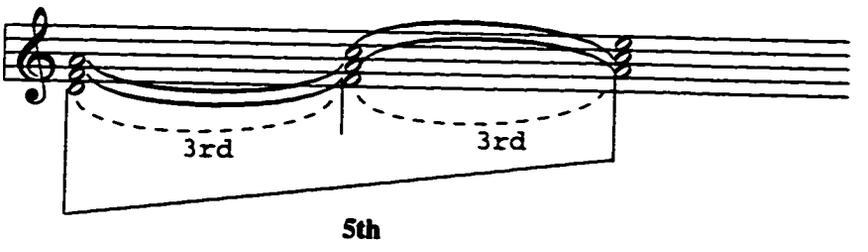

Figure 5- 1: *Model which reflects Rameau's presentation of chords a fifth and third away*

Both Gianotti and Rameau point out common tones between the tonic, the superdominant, and the subdominant, but each author conveys a different message.

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In ¶ 3, Gianotti chooses to emphasize the relationship by thirds:

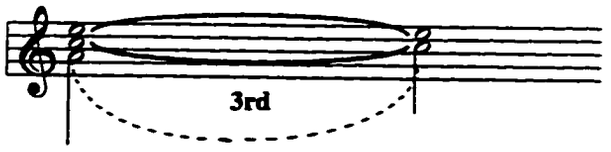

Figure 5- 2: *Model which reflects Gianotti's tertiary emphasis*

Rameau, on the other hand shows one note common to three chords: C as the octave of the tonic, the third of the superdominant, and the fifth of the subdominant. This last example highlights the difference between Gianotti and Rameau here. Rameau's focus is a single note, for his aim is to have the beginner see this note as representing three possible fundamental bass options. Gianotti merely uses the three notes to provide yet another illustration of common tones between notes a third and fifth away.

At the end of this article, both Gianotti and Rameau give numerous examples. This example section serves as a fitting conclusion to the chapter because both authors show which routes to use in specific situations. However, the correct application of these routes is dependent upon another factor which surfaces primarily through the added perspective of the second draft version of this lesson, 8/2. In order to completely understand the use of these new tonic routes, an evaluation of their function is in order.

The Function of the New Fundamental Routes

As mentioned earlier, Rameau presents these new fundamental progressions of the tonic a different way in each draft. In the first draft, he separates each route and delineates

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its function before explaining the superiority of one over the other. Rameau's simultaneous presentation of both routes in the second draft provides another look at the situation. In 8/2, Rameau concentrates on a common denominator between these seeming disparate routes: function. Rameau's stance in the second-draft thus casts new light on the information in 9/1. In fact, it can be seen that the classification of routes by common function existed all along in 9/1, albeit as an underlying factor. It is only through a comparison of Rameau's two versions, though, that certain inconsistencies in the first draft rise to the surface.

In the preliminary material which serves as an introduction to the first article of 9/1, Rameau already subtly sets the stage for the idea of a common function between these new routes. Rameau not only allies these new routes with the usual progression of the fundamental bass by fifths, he relegates them solely to the domain of the tonic:

> Every fundamental succession other than the one by fifths generally concerns only the tonic. These new fundamental successions give a more varied change to the subject and imperceptibly we will make the most of the greatest variety it affords. From now on, let us regard the tonic as the principal force behind the variety of melody, of harmony, and of modulation. These [tonic] routes multiply while those of the two other fundamental notes stay the same, so that one should say early on that the tonic has several different routes whose choice depends on the turn of the subject. Every other fundamental note has its own determined succession to which the subject should lend itself until, from one fundamental note to the other, supposing that there are several [fundamental notes], one arrives anew at the tonic.
>
> (I/9/1-f. 13r)

Even though Rameau indirectly relates these routes by earmarking them for the tonic alone, his overall organization of the material in this lesson gives another impression. As stated earlier, Rameau divides this lesson into three specific articles: Article I: "Concerning the ascending second," Article II: "Concerning the descending third," and Article III: "Concerning the preference for the third over the second from which arises the

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ambiguity between these two successions and the necessity of marking the various possible fundamental basses." The sectional organization of the first draft itself implies that each route is used in a specific way and that one route is better than the other.

From a pedagogical standpoint, it seems a good idea to introduce each new route separately. However, this division is deceptive, because these routes are not as separate as the organization would have us believe. The content of the second article, one paragraph in length, is significantly shorter than the first. Rameau can be concise here precisely because he has already laid out the particulars for both progressions in the preceding article on the ascending second. The apparent dearth of material in the second article is all the more surprising given the preference for the descending third over the ascending second, the supposed topic of the third article division. Thus, the length of each of the first two article divisions alone suggests an emphasis that contradicts not only the idea expressed in the title of the third division, but the basic premise of these routes being different, a premise that inherently lies beneath the external organization of the lesson.

A much more direct reference in draft 1, however, reveals the common bond between these two different routes. In his opening sentences of the second article, Rameau links the descending third progression to the ascending second by stating that they share the same rules:

> The tonic can also descend by third always to a dominant which we shall call the superdominant henceforth. The rules concerning this superdominant are the same as [those] for the supertonic
>
> (I/9/1-f. 14^{v} -Art. II)

Contrast this statement with Rameau's later version in draft 2:

> One will realize the necessity of making the tonic ascend a second or descend a third when one sees by following the fundamental route by fifths that it would be impossible to arrive at the tonic next according to the given

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> rules—either for those concerning the progression by fifths or those concerning syncopation.
>
> (I/8/2-f. 52^{r})

In this later version, Rameau mentions both routes in the same breath. Here, he not only states that they share the same rules, he says that they share the same function: they both serve to maintain the progressions by fifth and avoid syncopation of the fundamental bass. This common function also surfaces through Rameau's terminology. Thus, he calls both routes "dominants" and differentiates these "dominants" from the "dominant-tonic":

I/9/1-f. 13^{r}-Art. I

For the present, the tonic can ascend by second to a dominant which we shall call the supertonic henceforth. There is only one tonic and one subdominant but there are two types of dominants, which however differ only in that one, to wit, the dominant-tonic, always precedes the tonic; from which we give it the designation tonic; and the other, which we call simply dominant, always precedes another dominant.

Moreover, the succession of these dominants is the same. They should all descend by fifth. What is more, they should follow each other to the tonic always immediately preceded by its dominant-tonic.

I/8/2-f. 51^{r}

In addition to the succession of fifths, the fundamental bass can also ascend by second or descend by third—but only after the tonic. Both the notes where the tonic ascends by second or descends by third are, in that instant, dominants.

The new dominant in question is not a dominant-tonic, it is simply a dominant of another dominant. In each key, there is only one dominant-tonic which is the fifth of the tonic; all the other dominants are no more than dominants of dominants.

By saying what he does here, Rameau points out that these new routes fulfill the same prescribed fundamental succession as the dominant-tonic, progression by fifth. Thus, their distinction from the dominant-tonic is not a matter of function, but a matter of degree—for only the dominant-tonic, as the fundamental a fifth away from the tonic in the principal key, has the privilege of preceding the tonic. In this way, Rameau subtly suggests that these new routes can be used as substitutes for the dominant-tonic without detracting from its hierarchical position as a fundamental.

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This last detail points to another contradiction in this first draft version (and Gianotti's rendition as well): the presentation of these new routes as tonic routes per se—for they actually perform the same roles as the subdominant and dominant-tonic. In the second-draft version, Rameau does not prefer one route over another; he presents both routes together equally.

While Rameau does not explicitly link the new dominants as fundamental substitutes, he does liken them to the subdominant and dominant-tonic in their predetermined succession. In the second draft only, he specifically relegates the usage of these dominants to the subdominant's domain:

> The necessity of making the tonic ascend by second or descend by third will be nearly wherever one will be tempted to employ the subdominant.
>
> (I/8/2-f. 52^{r})

What Rameau does not explain is that the subdominant is a special case that must be preceded and followed by the tonic harmony only. This factor comes into play in a specific musical example in the explication of the first article (see Gianotti's ¶ 9 in Art.I). While Gianotti provides this example strictly as a means of using the ascending second to avoid a syncopation in the fundamental bass, Rameau seizes the opportunity to tell us more. He says that if one were to observe the first rules, meaning progression by fundamentals only, the subdominant would ordinarily be preceded and followed by the tonic according to the prescribed succession. However, if one follows this prescribed succession, a syncopation will occur. Therefore, the new dominant route can be substituted where one would usually use the subdominant to avoid a syncopation of the fundamental bass. Through this added detail, Rameau not only tells us about the new rule, he explains how it supersedes the old rule.

In the first draft, Rameau likens the usage of these dominants to the routes of both the dominant-tonic and the subdominant because their routes are already predetermined:

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> Neither the dominant tonic nor the subdominant can be employed if they are not followed by the tonic. One can employ a dominant only when it progresses from one to another up to the tonic.
>
> (I/9/1-f. 16^{r}-Art. III)

and:

> These [tonic] routes multiply while those of the two other fundamental notes stay the same, so that one should say early on that the tonic has several different routes whose choice depends on the turn of the subject. Every other fundamental note has its own determined succession to which the subject should lend itself until, from one fundamental note to the other, supposing that there are several [fundamental notes], one arrives anew at the tonic.
>
> (I/9/1-f. 13^{r})

In this passage, Rameau not only points out that the fundamental motion of the subdominant and the dominant-tonic is restricted to progress by fifth to the tonic only, he also suggests two different loci for control. When the fundamental bass is the subdominant or the dominant-tonic, the subject must bow to the prescribed fundamental progression, the progression to the tonic by fifth. When the tonic is exerting influence, the choice of the fundamental bass depends upon "the turn of the subject," hence the subject is in control.

Another example of a predetermined route surfaces in the melodic realm. In Article III, both Gianotti and Rameau make a cryptic comment about the leading tone:

Gianotti:

> 1 The ambiguity in question affects all the notes of a key, except the leading tone. For, in addition to what we have already said in chapter 2 on the subject of the community of notes between chords of the three basic fundamental sounds, this community obtains once more between the fifth of the dominant-tonic and the octave of the supertonic, and between the fifth of the supertonic and the octave of the superdominant.

Rameau:

> In this way, all the notes of a key except the leading tone are common to the chords of two different fundamentals because that which follows or precedes a common note in the subject almost always determines the choice of the fundamental note which fits there in consequence of the prescribed fundamental succession.
>
> (I/9/1-f. 15^{v}-Art. III)

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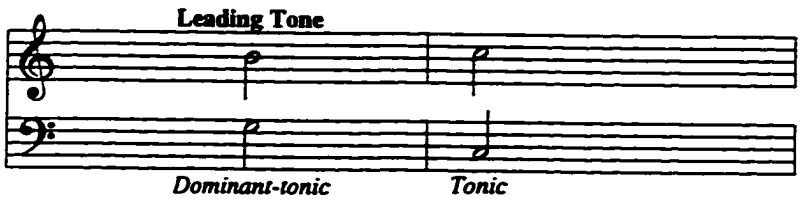
Neither author explains the significance of the comment. The leading tone is a special case because, like the subdominant and the dominant-tonic as chords, its route is predetermined. The leading tone must proceed to the tonic: hence, there are no other options allotted for it melodically or harmonically.

Example 5- 1: *The predetermined route of the leading tone and its fundamental bass*

While Gianotti fails to connect the prescribed function of the new dominant routes with the locus of control in the subject, he does, however, make a significant contribution in the first article. He too speaks of the function of these new dominants in relation to the subdominant and the dominant-tonic, but he looks at this issue from another perspective—a perspective that Rameau neglects to mention.

Recall that Gianotti disallowed the progression of the subdominant to the dominant-tonic (see Gianotti's chapter 2, ¶ 6) because it destroyed the harmonic connection. In chapter 2, Gianotti alone called attention to the fact that there was no harmonic connection between these fundamentals a step apart because their chords (F-A-C, G-B-D) did not share any common tones. He also explained that common tones were shared between chords of fundamentals that progressed by fifths.

Once again, in this chapter, only Gianotti raises the issue of step-wise progression in the fundamental bass. Here, in ¶ 4 of Article I, he connects the stepwise motion of the

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new ascending second progression (C-D) with the prohibited motion of the fundamentals IV-V (F-G) in chapter 2—a pertinent question that a beginner would probably raise. Gianotti even explains that there is no connection between the chords in this new progression, C-E-G and D-F-A. Unfortunately, he falls into Rameau's predicament of introducing too much too soon trying to explain this phenomenon. He says that this apparent lack of connection will disappear because this chord will be seen to be a subdominant harmony through the addition of dissonance—a subject that will be covered in the second section of this manual. Even though Gianotti fails to give a suitable explanation of this problem in this chapter, his contribution is still worthwhile. As a teacher, Gianotti not only draws attention to an anticipated difficulty, he makes a connection between two similar points for the reader and tries to clarify the issue. In addition, Gianotti also includes an example (see ¶ 7 in the Observations section) that shows the preference for using the new route by ascending second over the subdominant. It is clear from Gianotti's example that the new dominant can be used as a subdominant substitute and that it should be used in this instance to maintain the harmonic connection. While Rameau provides the explanation of this idea in terms of function, his example in 9/1 is definitely not as clear as Gianotti's.

The Examples

Both Rameau and Gianotti integrate many ideas in the copious examples accompanying this chapter. Without background on the predetermined function of these new routes, their purpose, and the way that a note common to many different chords provides several options for the route that a fundamental progression can take, these examples cannot fully be understood—for determination of the best route often depends upon a combination of these factors. Thus, guiding the beginning composer is a complex pedagogical feat in the face of the multiple options created through these new routes. Fortunately, these examples provide specific illustrations of typical problems in given

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contexts. Both Rameau and Gianotti use these to demonstrate many of the ideas introduced throughout the chapter.

These examples provide even more. They provide the hidden explanation of the preference for using the descending third progression over the ascending second progression. Since both routes can be used to avoid syncopation of the fundamental bass or to maintain harmonic connection, other clues must show why one route is better than another in given situations. Through various contexts, the reader begins to ascertain that the descending third is often preferable because: 1) it has more in common with the tonic (two common tones, to be exact) than the ascending second and 2) it facilitates the use of one more dominant in a chain of dominants than the ascending second progression. Only Gianotti offhandedly mentions another important idea that surfaces through these examples: the preference for using the chain of dominants over progression by simple fundamentals (see ¶ 12).

Most of the examples in the first two articles point out anticipated difficulties. Both Rameau and Gianotti's examples show how the new routes circumvent syncopations in the fundamental bass or allow for the connection of harmony. For instance, in Art. I, ¶ 6, both Gianotti and Rameau show that the subject notes at letters A. and B. (in ex. 4) would usually require a dominant-tonic as a fundamental bass. However, this situation would force a syncopation of the dominant-tonic across the bar. To remedy this situation, the ascending second progression can be used to vary the harmony and keep the fundamental progression from syncopating. Gianotti makes the additional point that the leading tone at letter B. requires the dominant-tonic, suggesting that the only option is to alter the route of the previous note in this context. Since the melody note, a D, is the octave of the simple dominant, the ascending second progression can be used.

In a comment unique to 9/1, Rameau tells why the supertonic cannot be retained itself:

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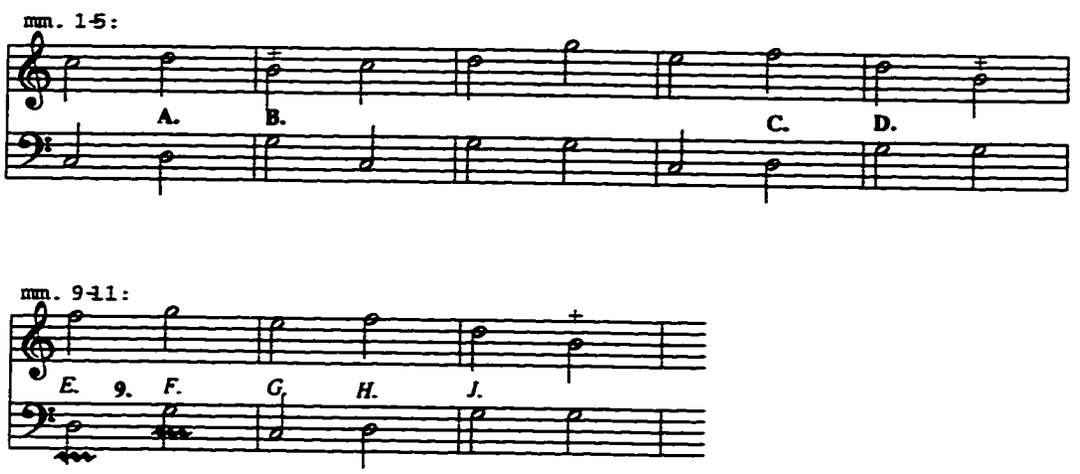
> Though the two notes [in the subject] H. and J. are contained in the supertonic chord, which corresponds to [the fundamental used at] H., one still cannot retain [the fundamental D] under J. without destroying the prescribed fundamental succession. Consequently, it is necessary that it be immediately followed by the dominant-tonic under J., moreover this observation is the same as the other at C. and D.
>
> (I/9/1-f. 14[r] -Art. I-Explication)

Example 5- 2: *Measures 1-5 and 9-11 of Gianotti's Example 4*

This is an important comment that not only clarifies an idea expressed in the first article, but also allows Rameau to express some pedagogical insights not found in Gianotti's version. Both Rameau and Gianotti say that the progression of new dominants should be the same everywhere: "they should all descend by fifth and follow each other until the tonic preceded by its dominant-tonic" (Gianotti, ¶ 3, Art. I). However, since these new dominants take the place of the tonic, it would be conceivable to retain the new supertonic, or the superdominant for that matter, as the primary fundamentals were used previously. Through this example, Rameau negates this possibility. This example also confirms additional explanations by Rameau in the main body of the first article:

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> Thus, after the first dominant, one first passes [to] the tonic. It is always necessary to progress from dominant to dominant until one arrives anew at the tonic. Since the succession of dominants is frequently the same as the subdominant, but reversed, it would not be excessive to keep them in mind, so that one could recall quickly which note dominates another.
>
> If one has followed exactly what we recommended from the first lesson, one ought to be ready for what we now propose at present, because each note of the third scale is followed by its dominant. Or, by taking [the scale] in reverse order, the first note under the name octave is dominant of the one which precedes[2] it. [This is] always the same from one to the other: C is the dominant of F, F of B, B of E etc. If C is the dominant of F, consequently F is the subdominant of C according to what had already been suggested in the fifth lesson. Thus, the first note of the scale of fifths taken in its forward order , is the subdominant of its next [note], this one is again [subdominant] of the next [note], always the same [way]. C is subdominant of G, G of D, D of A etc. We must not neglect the least details, [for] one thing distracts from the other. And if one postpones acquiring that on which the other depends, confusion soon mixes in [one's] ideas. In a word, impatience, the desire to go too fast, is the greatest obstacle to our desires. One passes lightly over the principles that one believes to possess sufficiently, then one is stopped all of a sudden because [the principles] do not come completely enough to mind. For, in order to think about it, one loses the very trace of the thing which one should principally be concerned with.
>
> In order to return to the new dominant in question, one can see that this dominant where the tonic C will ascend by second will be D, that this D is the dominant of G, and that G is the dominant-tonic of C . Such is its progression to the tonic according to what has already been stated.
>
> (I/9/1-f. 13^{v}-Art. I)

In this passage, Rameau not only spells out the exact route that the ascending second should take (the last paragraph quoted above), he links this material with the third scale by fifths (by fourths, in reverse) of lesson 1. Through this additional material, Rameau also subtly emphasizes the importance of fifths in general—a view that he consistently expresses throughout this lesson and the lessons up to this point. More importantly,

---

[2] Rameau actually writes: *par rebours, la premiere note sous le nom d'octave y est dominante de celle qui la suit.* Once again, in the context of going backwards, it is clear that Rameau means "the note which precedes it" rather than "the note which follows it."

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Rameau's helpful hints, as long-winded as they may be, are sound compositional advice. Memorization of the scale by fifths in both directions can be instantly applied to the route of dominants here. Most of all, this direct application avoids distraction in the compositional process—an important point for any composer, especially a beginner.

In the second article, Rameau also comments on the succession of dominants, this time connecting it with the descending third progression. Here, he calls attention to the fact that the progression by descending third requires an additional dominant to progress correctly to the tonic:

> The rules concerning this superdominant are the same as [those] for the supertonic. . .We still have one more dominant [to discuss]. [After it is introduced], it will be necessary, as previously, to progress from dominant to dominant up to the tonic. The tonic C will descend a third to A, which is the dominant of D, and the rest [occurs] as in the preceding article.
>
> (I/9/1-f.14ᵛ-Art. II-Explication)

Although Rameau does not completely spell out the full progression of fundamentals here, C-A-D-G-C, he does alert the reader to the use of this new route within a multi-dominant context.

Common tones in the subject between different fundamentals explain the decisions to use one route over another in a number of examples. In both examples of Article II, Gianotti and Rameau point out that the tonic can descend by third in the first beginning and not in the second because it is the subject that decides the ultimate harmonization (see ¶ 4). In this case, since the E in the subject is a member of both the tonic and superdominant chords, the new progression can be substituted for the permissible syncopation of the tonic harmony in the first beginning. The G in the subject in the second beginning, however, is not a member of the superdominant chord; therefore, the tonic must be retained.

In the next example, ¶ 5, Gianotti and Rameau rule out using the ascending second progression or the subdominant under letter A. (in Gianotti's ex.) because each option would create a syncopation in the fundamental bass; therefore they favor using the

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descending third progression as an alternative. Neither author spells out the details for the beginner. The subject note, A, is a member of the subdominant chord, F-A-C, and the supertonic chord, D-F-A. So far, each option passes the criteria for common tones. The next step is to consider the following subject note, marked B. in Gianotti's example. Because this note is an F, it would require retaining the fundamental subdominant (F) over the bar or retaining the superdominant (D) over the bar. Another possible solution, progressing from D to F by third, does not fall within the prescribed routes and consequently is not a viable option. Therefore, only one solution exists: using the descending third progression. This is possible because: 1) the A in the subject under letter A. is a member of the superdominant chord and 2) the following note in the subject, D, under letter B., is a member of the supertonic chord. Unfortunately, neither author calls attention to the fact that the supertonic dominant is required to follow the superdominant here. While both authors mention that the superdominant must also descend by fifth in ¶ 3, neither makes a point of this in the illustration.

These new routes often supplant the older established rules. Recall the example mentioned earlier where Rameau clarified that the progression by ascending second could be used instead of the subdominant fundamental to avoid a syncopation in the fundamental bass (see the corresponding passage to Gianotti's ¶ 9 in the first article). In ¶ 6 of article III, both authors mention a similar situation. They point out that because of what we now know concerning common tones between chords a third away, the former rule requiring a tonic harmonization of the mediant in the subject is not always valid. Both Rameau and Gianotti suggest using the descending third progression in this situation to vary the harmony instead of retaining the tonic. This advice also breaks with Rameau's previous suggestion to maintain a fundamental throughout a measure where possible. What the authors do not explicitly indicate, but only imply through the examples is that the progression by descending third is the preferred route in a similar situation precisely

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because it has two notes common with the tonic chord—a point that becomes evident in Rameau's explanation of Gianotti's ¶ 11.

This idea of using the new descending third route as a means to vary the harmony colors all of the examples in this third article section. Previously, both Gianotti and Rameau were concerned to use the new routes only to avoid problems—namely, syncopation and the prohibited progression IV-V. Of all the examples in this chapter, those of the third article demonstrate the most complex ways of using the routes. They also indirectly provide Rameau's pedagogical methods for working the examples and show the rationale behind the hierarchy of routes delineated in the article divisions. Thus, the preference for the descending third over the ascending second actually is revealed in the third article after all.

Two themes develop: the alliance of each route with a particular fundamental (the ascending second with the dominant-tonic and the descending third with the tonic), and the use of as many dominants as possible in the solution. Gianotti points out using the ascending second progression whenever a dominant-tonic is sustained throughout a measure in the examples of ¶ 7 and 8. Rameau's corresponding example, though (see ¶ 7), reveals the process of determining which dominant route to take. He walks us through the decision process showing us how one decision affects another in the fundamental bass. He also shows us how to look at solving a problem by traveling backwards (from right to left); for if the supertonic can be substituted for the first dominant-tonic under letter B., what is to prevent us from seeing if we can precede it with the superdominant at this point? By going backwards from letter B., the descending third, A, can be inserted for the tonic harmony under letter A. Thus, Rameau utilizes the example to show the reader how to use one route (the ascending second) to see if another (the descending third) is possible. This point depends upon knowing that the dominant that follows the superdominant is the same note as the supertonic, D. In this instance, it is the common tone shared between notes in the fundamental bass, a common dominant that is, that facilitates using the descending

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third over the ascending second here. Although Gianotti does not explain the rationale behind his example in ¶ 11, he shows the same thing as Rameau here: that it is preferable to use the progression by descending third because it adds another dominant to the chain. In the corresponding example to ¶ 11, Rameau emphasizes use of the descending third because of its closer relationship to the tonic through its two common tones.

The rationale behind this example becomes clearer through Gianotti's recommendation to take the dominant route indicated by the custodes over the alternation of fundamentals indicated by the notes in his last example in ¶ 12. However, only Rameau explains why this route is better through his parallel example which uses the same notes as Gianotti's ¶ 12:

> After the most perfect succession found from N. to P., one would be forced to syncopate the tonic at Q. if one did not know that it could descend by third there with conditions. As a matter of fact, it is necessary to make sure [of these conditions] when examining whether or not the continuation of the subject opposes [the descent of a third] there: because the subdominant, moreover, with which Q. forms a fifth, is not possible, considering that the subject does not allow it to be followed by the tonic [next].
>
> However, the mere possibility of employing the tonic at Q. without a syncopation should make [us] determine whether or not one could arrive in this place through another route by making the tonic ascend a second to N., for example, from which one progresses next through dominants marked with custodes up to the last tonic Q.
>
> The cause of these different fundamental basses resides in the subject note Q., common to the chords of the tonic, the subdominant, and the superdominant, which suffices to bring about this undertaking. The dominant-tonic, which is repeated from R. to S., can be replaced at R. by the dominant marked by a custos considering that the subject note R. is common to their chords and the prescribed succession does not suffer from it.

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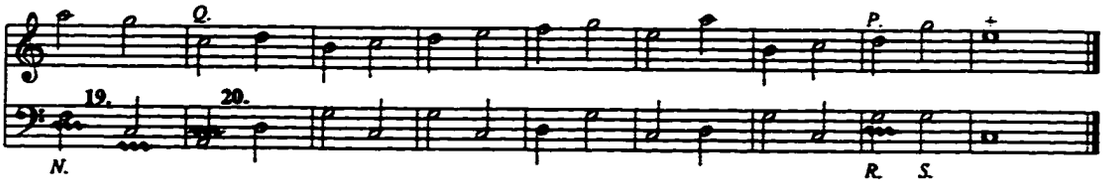

Example 5- 3: *The last line of Gianotti's ex. 6 with Rameau's guidemarks in italics*

Once again, Rameau does not just provide the example, he walks us through the explanation step by step. Rameau's explanation centers on the fundamental note under letter Q. The C in the subject at Q. is common to three different chords: C-E-G, F-A-C, and A-C-E. Rameau explores each option. If the subdominant were the fundamental, he explains, it would have to be followed by the tonic in the fundamental bass according to the prescribed rule. Since this does not happen because of the D in the fundamental bass, this is not a good option. The next option is the tonic. However, if the tonic is employed, it will syncopate because the previous note is also a C in the fundamental bass. This is where Rameau becomes creative. He suggests thinking about arriving at this tonic from a different route. Therefore, he advises imagining the tonic as a fundamental there and urges the student to explore various means of arriving at this tonic using the new routes. His solution, the ascending second utilized as far back as measure 18, is Gianotti's Guidemark route. Notice that the other remaining option, the A, is the note that Gianotti provides in the example.

What is missing from Gianotti's version is the pedagogical aside that Rameau used as early as Article I to explain working this kind of example. Even though Rameau uses this illustration for the ascending second progression, it is especially applicable to our

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previous example for using dots as temporary markers in a situation where there are many possible options:

> One can use dots instead of notes until one arrives at the tonic anew, in order to place some notes there later when one is certain of the progression.
>
> After having placed a dot on the dominant tonic or on the subdominant according to what the subject seems to require following the tonic, one sees whether one can return to this tonic, without any fundamental note syncopating—even the tonic itself, after having arrived there, and if this is not possible, this is exactly the case for substituting the supertonic for this dominant-tonic or this subdominant that one had first dotted.
>
> When this supertonic is placed, one checks as elsewhere, to see whether or not the subject requires continuing it: whether if in continuing it, one does not miss the opportunity to seize the dominant which should follow it, to arrive [dominant by dominant] from one to the other, or whether in leaving it too soon, one does not give rise to a syncopation because one must always return to this proof before seizing whatever fundamental note that the subject will have [already] chosen.
>
> The least distraction can give rise to an error without the mind first attending to the direction it had come from. That is why it is necessary to recall at each instant all the rules which ought to converge to get back on track .
>
> (I/9/1-f. 14^{r} -Art. I)

By suggesting the use of dots, Rameau does two things: he finds a way to notate the various possible options available and in doing this, he shows that the solution is the result of considering all these possibilities in light of other contextual constraints. Thus, he allows for flexibility in application of the rules, not a predetermined answer set in stone.

From the perspective of clarity, it is easy to see why Gianotti cuts these pedagogical illustrations from this version: for these passages are often lengthy and appear in contexts that are separate from their actual application. Some of the material, the review of the scale by fifths, for example, seems redundant seen through the editor's eyes. Taken in concert with the rest of Rameau's oeuvre, though, these pedagogical excursions consistently show

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an integration of basic concepts on a variety of different levels. For instance, in this chapter, Rameau's concern for the fifth manifests itself in various ways: in the application of the scale of fifths to the dominant routes, in the preference of the progression by fifth over the other dominant routes, as the first interval outlined in the common tone model. Rameau's view of a concept extends from the grandest scale to the smallest detail. This is his strength.

These very asides are especially valuable for the beginner because Rameau guides the reader through the various options that the new routes offer in this chapter. In fact, he not only lays out all the available options, he actually walks the beginner through the process of determining the options. There can be no doubt that these options might seem intimidating at first.

From a study of all three sources, the gaps can be filled, for each version provides a piece of the puzzle. Since the determination of a fundamental progression involves many factors, each version is extremely valuable for shedding light on specific aspects of the interaction between subject and the fundamental bass. More specifically, these perspectives show the beginner how to make the best decision in the face of multiple options. It is through such decisions that the composer gradually learns to determine the course of a piece.

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CHAPTER VI

Relative Keys

Gianotti:

1 Each major key has a minor key which is relative to it. The distance between the two relative keys is a minor third, such as the keys of C Major and A minor.

2 One first recognizes their rapport[1] by the same number of sharps and flats which are shared by both keys,* and second by the great number of notes common to their chords. For since their tonics are a distance of a minor third from one another, it should follow that all the fundamental notes of their keys are a similar distance away. Now, since one should know that fundamental notes a third away have two common notes in their chords (see chap. V, art. III), one will easily understand that all the diatonic notes from one of

Rameau: draft 1

I/11/1-f. 18r-v

Each key includes five others with it that are more or less related to it. The two keys, the one major, the other minor (tenth lesson), whose tonics are a minor third away from each other and into which enter the same number of sharps and flats, have such a tremendous rapport with each other that they not only assign all the other related keys to one of the two but also determine [their] quality **[genre]**.

Their rapport is recognized not only through the same number of sharps and flats common to them, but moreover in the great number of notes common to their chords. Since their tonics are a minor third away from each other, it follows that all the fundamental notes of their keys are a similar distance away. Now, knowing that fundamental notes a third away from each other have two notes common to their chords (art. III of lesson IX), one will soon understand that all the conjunct notes of one of the two equally belongs to the other—except the accidental sharps of minor according to

Rameau: draft 2

I/11/2-f. 54r

Each key has five others which relate to it more or less according to the explication which will be given. The two keys, the one major, the other minor (tenth lesson), whose tonics are a minor third away from each other and which each have the same number of sharps or flats, have a tremendous rapport with each other. One is recognized easily, for the other, the tonic of the major is always a minor third away from the tonic of the minor.

I/11/2-f. 54r

These two relative keys exhibit all the keys relative to one and to the other in their fundamental sounds. [This is] another proof of their great rapport, [a rapport] which one must be well aware of before going further. ex

The key of C major and A minor are the two relative keys which serve as models for all the others which one can learn on one's own in the enumeration of transposed keys in the preceding lesson.

[1] I have chosen to retain Rameau's word "rapport" throughout this chapter, for unlike its more neutral counterpart "relationship," it subtly conveys the idea of kinship or relatedness between keys--an idea which comes to the fore in Rameau's prose.

* *See Introduction/Sect. III.*

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these two keys belongs equally to the other, except for the two accidental sharps of the minor.[2] See the section already cited and the example which corresponds to it.[3]

what had already been said at the end of lesson X.

3 Of these two accidental sharps, one need only be concerned about the leading tone: because the other accidental sharp never appears without being followed by [the leading tone]. This leading tone of the minor mode is always formed by a sharp added to the fifth of the major. So if one sees this fifth without its sharp in the melody, it will certainly be the major key. With that one exception, the fundamental bass is arbitrarily in one of these two keys. *See exs. 7 & 8, pl. 3*

I/11/1-f. 18v

Of these two accidental sharps, one need only be concerned about the leading tone, because the other [accidental sharp] never appears without bringing the leading tone after it. Thus, once one knows that this leading tone of the minor key is always formed by a sharp added to the fifth of the major [key], when one sees this fifth without a sharp in the subject, it will certainly be the major key, as at the note near the {X}[4] where the fundamental is arbitrarily in one of these two keys. 1st and 2nd exs.

I/11/2-f. 54r

The rapport of these two keys is so great as long as one neither employs the leading tone of the minor nor the fifth of the major in the melody, which are both the same note, except that it is raised from one side [minor] and not from the other [major]. The fundamental bass is arbitrarily in one of these keys as long as the melody neither begins nor ends on the tonic of the minor, for in this case, there would no longer be any doubt.

4 The other keys relative to one of these two [keys] are found in their dominants and subdominants which can become tonics on their own. Their quality [**genre**] should be the same as that of the

I/11/1-f. 18v

In order to describe the rapport even better, let us arrange the chords of the three fundamental notes of the minor key in succession. At the same time, we will

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[2] Gianotti is referring to the raised sixth and seventh degrees in the ascending form of the melodic minor.

[3] Meaning section III of the Introduction (pp. 74-7) and the corresponding example appearing on the last page of the Preliminary Introduction (the scales of C and A minor on p. 78).

[4] In the manuscript, this mark is not clear. It probably corresponds to the carets inserted in Gianotti's exs. 7 and 8 where the fifth of the major key does not appear at all in the subject. In ex. 7, for example, the melody note E can be either a tonic harmony in A minor or C major (following the custos and the handwritten caret "la"). However, in ex. 8, in A minor, the situation is less ambiguous because the E in the melody must either be harmonized as a tonic (A in the fundamental bass) or a dominant-tonic (the E indicated by the custos at the handwritten caret "mi") in A minor because the previous tonic can only stay the same or ascend a fifth due to the combined constraints of the subject and the rules governing the fundamental succession.

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first key to which they belong.

find those of the three fundamental notes of the major key.[5]

In each tonic chord, one finds four notes common to the chords of the two fundamental notes of its relative key. The minor tonic has two [notes] common to the subdominant of the major: to wit, A and C, and two others common to the tonic of the major, to wit, C and E. [The major tonic] also has two others common to the dominant of the minor, to wit, E and G. Lastly, everything that belongs to one of these keys belongs equally to the other—except the two accidental sharps of the minor. It is through these [accidental sharps] alone [that] one is assured of this last key [i.e., the minor] in the subject.

5 From this comes an important rule: all the keys which are a fifth away from each other are of the same quality and all that are a third away from each other are a different quality.

I/11/1-f. 19r

The other keys relative to one of these two first [keys] develop from their dominants and subdominants which can become tonics in their own right and whose quality should be that of the first key to which they belong. From this [comes] the following rule which one must commit to memory: all keys a fifth away from each other are the same quality

I/11/2-f. 54r

Keys a fifth away are of the same quality and those a third away are of a different quality. Thus, these are always the two first relative keys which order [the others.] Each of them determines the quality of the key of its dominant and subdominant when these become tonics.

[5] Rameau includes a chart of these relations with the text. This chart is cited in the editorial commentary for this chapter.

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and keys a third away from each other are of a different quality.

6 Moreover, relative keys should never have more than one sharp more or one flat less than the principal key, ignoring the accidental sharps in the minor, because it is always necessary to consult the major key for everything concerning its relative minor key.

I/11/1-f. 19'

Moreover, relative keys should never have more than one sharp or one flat more than the principal, ignoring the accidental sharps in the minor. For, in this case, it is always necessary to consult the major key for everything concerning its relative minor. 3rd and 4th exs.

I/11/2-f. 54'

Besides, keys that are related to the first given should never differ more than one sharp or one flat. One must become extremely familiar with all that had been said up to the present before proceeding to other things.

Observations on this example

7 One can make the tonic descend a third under letter A., and make it pass to its dominant under letter B., in order to avoid the triple repetition of the tonic there, which is nonetheless possible.

8 The cause of the ambiguity which reigns in the fundamental bass of these two examples comes from the fifth of the major key which does not appear in the melody, with or without a sharp.

I/11/1-f. 19'
Explication

One should not apply oneself to composing the fundamental bass of these examples. One should only use them as illustrations, noting in the two first [examples] that although the melody of the subject is the same in both, the fundamental bass nevertheless progresses from one side in the key of C major and from the other in the [key] of A minor. The cause of this ambiguity comes from the [fact] that the fifth of the major [key] does not appear either with or without a sharp in the subject.

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Editorial Commentary on Chapter 6

Gianotti's topic for this chapter is relative keys. However, the discussion of this topic requires prior knowledge of one particular concept, namely, the difference between major and minor scales. Gianotti has provided the requisite information in the second and third sections of his preliminary introduction: "Concerning the key or mode and the different names that one gives the various diatonic intervals" and "Concerning natural and transposed keys and the order and nature of sharps, flats, and naturals." In these two sections, Gianotti presents the basics: the definition of key or mode, the classification of the quality of the key by its initial third, and the function of sharps, flats, and naturals both in the key signature and as accidentals. More importantly, he introduces the keys of C major and A minor as the models for all the other keys which are called "transposed." These two keys become the focus of the topic of chapter 6—relative keys.

Gianotti follows Rameau in the sectional division of this material, for in "L'Art," Rameau separates the basics from the discussion of key relationships in two different lessons that each exist in two parallel drafts. Unlike Gianotti, Rameau presents these lessons consecutively as lesson 10: "Concerning natural and transposed keys where one explains the order and nature of sharps, flats, and naturals" in draft 1 and "Concerning various keys—either natural or transposed" in draft 2 and as lesson 11: "Concerning the rapport of keys."

As far as the facts go, Gianotti's version does not stray far from that of his teacher. In fact, his version is far more accessible for the beginner because of its concise relation of these facts. Where Rameau introduces a general rule with several illustrations, Gianotti often relays the general rule only. In this way, Gianotti cuts down on material that might seem extraneous to the beginner and immerses him in the main ideas right away. This is perhaps the greatest advantage of Gianotti's sixth chapter.

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Unfortunately, the omission of these illustrations is a two-edged sword, for through the elimination of these "extraneous" examples, Gianotti discards some important threads that Rameau weaves into the rich fabric of the subject of related keys. For instance, in the second section of the preliminary introduction, Gianotti, like Rameau, defines the quality of the scale through its initial third. However, he does not include Rameau's additional illustrations that follow this point:

Rameau: draft 1

The major third is composed of two diatonic tones. See the first scale. It surpasses the minor by a semitone, which, consequently, is composed only of a tone and a semitone. There are several keys whose thirds are naturally major or minor in the first and in the second scales. The thirds of C, G, and of F, for example, are naturally major and the ones of A, D, E, and of B are naturally minor. In order to change the quality of these thirds, one must bend them [through] a sharp or a flat. The sharp increases the note by a semitone and the flat diminishes it as much. As for the natural, it returns the note to its first state. It takes the place of a flat among sharps, and of a sharp among flats. Consequently, if one associates a flat with the note E, which forms a major third of C, this third will then be minor. And if one associates a sharp with the note C, which forms a minor third of A, this third will then be major. The others are treated similarly.

(I/10/1-f. 17ᵛ)

Rameau: draft 2

Keys are first distinguished in two genres: major and minor. This difference only concerns the third of the tonic: if this third is major, the key is called major, if it is minor, the key is called minor.

The difference of the major third to the minor is a semitone of which the minor is smaller than the major. The key of C, the only key known to us at present, is a major key since the third of this C is major. But, if one diminished this third by a semitone, the third would then be E flat instead of E, [and] the key would be minor.

There are keys which are naturally major or minor in the diatonic order without needing to add either a sharp or a flat to their thirds. For example, the keys of C, G, and F are naturally major in the diatonic order and those of D, A, E, and B are naturally minor as one notices in the first and second scales of the first lesson.

When a flat is added to the third of the three first major keys, they will be minor. On the contrary, when a sharp is added to the thirds of the four first minor keys, they will be major or else when a sharp is added to the tonics of the three first major keys, they will be minor, and when a flat is added to the tonics of the four last minor keys, they will be major. One then realizes that these keys will take their nomenclature from that of the tonic which from one side will no longer be C or G, or F, but C sharp, G sharp, F sharp and which from the other [side] will no longer be D, A, or E, but D flat, A flat etc.

(I/10/2-f. 52ᵛ-53ᵛ)

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Unlike Gianotti, Rameau integrates a number of concepts here through several details. First, Rameau directs attention to the fact that certain thirds are either "naturally" major or "naturally" minor. He refers the reader to the first two scales in lesson 1, the first by steps (the diatonic scale) and the second by thirds. Although Rameau does not actually define this idea, he paints a picture through his examples, naming all the major thirds and minor thirds that fall naturally in the white-note scale. In presenting sharps, flats, and naturals, Rameau immediately puts them to use in a specific situation: altering the "natural" thirds by semitone. Through this application, the reader often gains a better understanding of the way these sharps and flats are used—an understanding that surpasses a factual presentation.

Rameau also seizes the opportunity to teach the student the construction of major and minor thirds in a variety of situations. His examples not only alter the note a third above the tonic, but the tonic itself. Thus he teaches flexibility, showing the reader how to alter a third in both directions. Most importantly, Rameau's apparent excursion into the alteration of thirds connects ideas on various levels—that major and minor thirds exist naturally in specific locations on the white-key scale and that these natural types are models for those that can be simulated or transposed on any given pitch. These related ideas serve as a bridge for connecting the relationship of transposed scales to the two models C major and A minor, a concept that Gianotti also mentions in ¶ 1 of section III.

Gianotti's presentation of key signatures in the preliminary introduction also omits another key factor in Rameau's version of the same material. While Gianotti does mention the idea of following the third scale by fifths for finding the correct ordering of sharps starting on F, and flats starting on B (paragraphs 3 and 4 of Section III), he eliminates a detail which Rameau includes in both drafts of lesson 10—using the same technique for the tonics of the scales.

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Rameau: draft 1

For example, let us begin the third scale [i.e., by fifths] on G for the tonics of major keys and [simultaneously follow the third scale starting] on F [to obtain the sharps for these keys] [travelling] as far for sharps as [one does] for tonics.

Let us begin this scale in the same way [going] backwards from F for the tonics of major keys and from B for the flats, [travelling] as far for flats as [one does] for tonics where one supposes that all the tonics after F are flatted. With regard to the minor keys, they always follow the order of majors, which are a minor third away. [Their relationship] is like that of the tonic of the key of C major and the tonic of the key of A minor. The enumeration which follows will elucidate all this.

(I/10/1-f. 17ᵛ)

Rameau: draft 2

For the present, taking the third scale by fifths, one will start on F and continue until B. One will have the order of notes which can receive a sharp one after the other. And, following this same scale backwards from B, one will have the same thing with regard to flats.

These two orders agree with those of the dominants and subdominants specified in the seventh lesson. To follow the first order for major keys alone from F for sharps and from G for tonics is to imagine as tonic, each note of this order [taking] as many sharps as necessary from F as [there are] tonics that will have occurred from G in the keys identified by these tonics.The same thing holds for flats [by travelling] backwards from B, and for tonics [by travelling] backwards from F.

(I/10/2-f. 53ᵛ)

Initially, Rameau's advice seems intimidating and confusing because he adds yet another factor to figure in addition to sharps or flats—tonics. However, he really teaches the student how to figure out key signatures for both sharp keys and flat keys here. By telling the student to simultaneously follow the scale of fifths for both tonics as well as sharps or flats, he not only associates the tonic with its key signature, but through this connection he also walks the student through **keys** in the circle of fifths, not key signatures in the circle of fifths. In comparison, Gianotti's advice just gives the order of flats and sharps.

While both authors give the same chart or table of keys associated with their respective signatures (shown on Gianotti's p. xx of Section III), only Rameau's additional advice actually teaches students how to find these keys without the aid of a chart. Thus, Rameau is the better pedagogue for teaching the student how to find the information and internalize the concepts in so doing simultaneously.

Rameau continues the line of thought after presenting the chart. He adds:

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Rameau: draft 1

One would be able to push this enumeration much further but this is useless. If, for example, one added [the key] of C sharp to the major keys, it would have 7 sharps, but this key is the same as D flat with 6 flats.

(I/10/1-f. 17v)

Rameau: draft 2

There are some keys with sharps and others with flats that are but the same key because their tonics can only be played on the same note: for example, A sharp minor and B flat minor. Now, when one wishes to compose in these keys, one ordinarily prefers the one which has the least number of one of these two types [sharps or flats] except when they occur in passing in the middle of a piece of music where it will then be necessary to submit to the sharps or flats which the clef will have already provided, but let us pass lightly over this article—it is not yet of any use.

(I/10/2-f. 53v)

Even though Rameau does not specifically name these keys "enharmonic," he makes the reader aware that keys with multiple sharps can often have an equivalent spelled with flats and vice versa. In draft 2, he applies this idea to composition. He suggests using the key signature with the least amount of sharps or flats (good practical advice) unless the change of key occurs in the middle of a piece, in which case the new key must adhere to the initial key signature of the piece.

While it might be argued that Gianotti omits this discussion because it is beyond the ken of many a beginner, Rameau thinks otherwise. For Rameau, it is yet another opportunity to make a connection between elements: between keys that sound the same and are spelled differently and their application in an actual piece of music. Through the additional comments in the second draft version, Rameau also ties the appearance of a new key in the course of a piece to the principal key by advising the maintenance of a parallel signature, the choice of a flat enharmonic equivalent in a flat key, for example. In this way, Rameau provides details that link relationships between keys on various levels—not just keys related by minor third which share the same signature, but keys that are related by being members of a set of sharp keys or flat keys.

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Unfortunately, Gianotti's abbreviated version neglects to fill in necessary details that help the reader see the connection of ideas on various levels. In this respect, it seems more a compendium of facts than a compositional guide. The additional passages concerning the alteration of thirds, the connection of tonics with their respective key signatures in the circle of fifths, and enharmonic equivalents in "L'Art" point out this difference between the authors and their works on a small scale, for where Gianotti answers the "what" questions, Rameau answers the "how" and "why." However, there is much more to this difference in detail than meets the eye, for elsewhere in the chapter it even influences the expression of ideas on a still greater scale.

In chapter 6, Gianotti's pedagogical approach differs vastly from Rameau's. This difference is not immediately apparent because Gianotti conveys Rameau's facts without distortion. It is the way that Gianotti conveys these facts that reveals his limited view of the scope of relationships between keys. The first clue to this weakness in Gianotti's sixth chapter appears in paragraphs 4 and 5 where he states three basic tenets without sufficient explanation: 1) "The other keys relative to one of these two [keys] are found in their dominants and subdominants which can become tonics on their own." (¶ 4) 2) "Their quality should be the same as that of the first key to which they belong" (¶ 4) and 3) "From this comes an important rule: all the keys which are a fifth away from each other are of the same quality and all that are a third away from each other are a different quality." (¶ 5). Actually, according to Rameau's explanation of relative keys in lesson 11, all of these tenets are true. The problem is that Gianotti provides just the headlines and not the accompanying news story. As a result, the reader only receives half the story and never fully understands the connection between events.

While this problem in Gianotti's version does not become apparent until paragraphs 4 and 5, its inception starts as early as the opening paragraph of the chapter. Compare Gianotti's opening paragraph with Rameau's two versions:

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Gianotti:	Rameau: draft 1	Rameau: draft 2
1 Each major key has a minor key which is relative to it. The distance between the two relative keys is a minor third, such as the keys of C Major and A minor.	Each key includes five others with it that are more or less related to it. The two keys, the one major, the other minor (tenth lesson), whose tonics are a minor third away from each other and into which enter the same number of sharps and flats, have such a tremendous rapport with each other that they not only assign all the other related keys to one of the two but also determine [their] quality **[genre]**. (I/11/1-f. 18[r-v])	Each key has five others which relate to it more or less according to the explication which will be given. The two keys, the one major, the other minor (tenth lesson), whose tonics are a minor third away from each other and which each have the same number of sharps or flats, have a tremendous rapport with each other. One is recognized easily, for the other, the tonic of the major is always a minor third away from the tonic of the minor. (I/11/2-f. 54[r])

There seems to be quite a disparity between Gianotti's view of the situation and Rameau's. In Gianotti's version, there is only one other key relative to the major—the relative minor a third below. Rameau, however, says that there are five keys that are related to the major; he then specifies degrees of relatedness by telling us that the major and relative minor a third below are just one of these five relationships. Rameau is also quick to point out that these keys a minor third apart have a special relationship in that they order all the other related keys and determine their quality as well. So far, Rameau presents a hierarchical model where a given relationship, the relative keys a minor third away, exert influence on the other relative keys—a point that Gianotti only hints at in ¶ 4.

Rameau's presentation of five related keys becomes clearer through the inclusion of a chart in 11/1. This chart and additional explanation in 11/1 not only clarifies how the major and relative minor share common fundamentals and common tones between chords (see Gianotti's ¶ 2) but how the other five related keys come into the picture. Rameau starts by focusing on the fundamentals of both the major and the relative minor:

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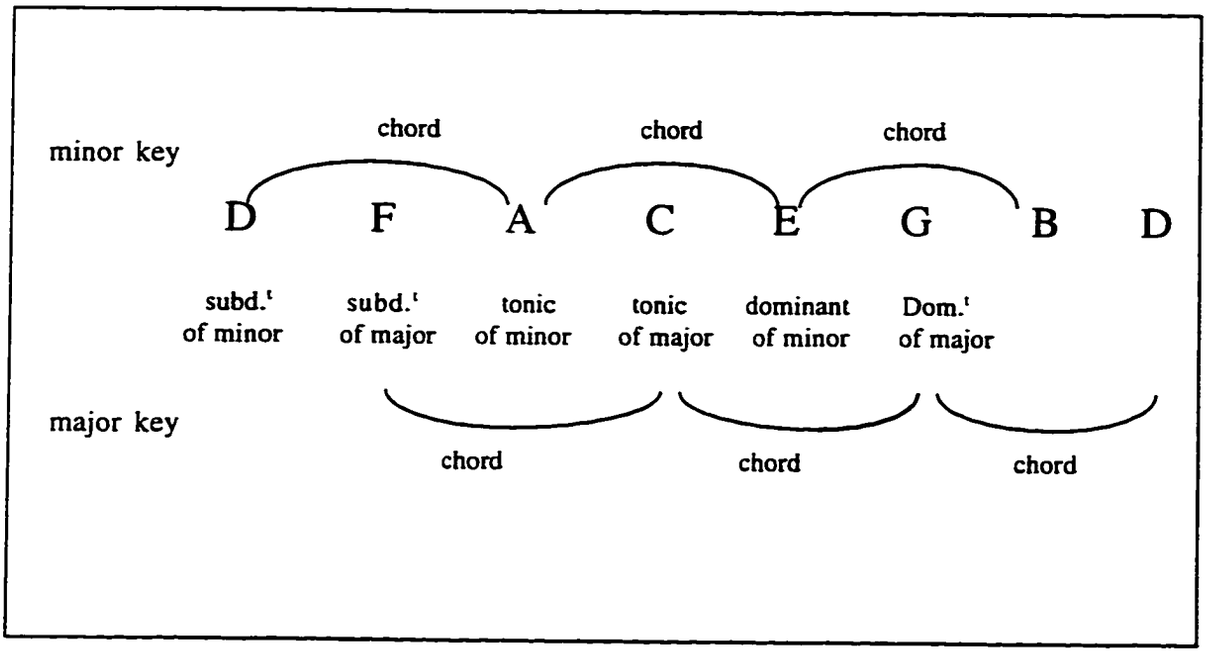
> In order to describe the rapport even better, let us arrange the chords of the three fundamental notes of the minor key in succession. At the same time, we will find those of the three fundamental notes of the major key.
>
> (I/11/1-f. 18v)

He then gives this chart and the following explanation:



> In each tonic chord, one finds four notes common to the chords of the two fundamental notes of its relative key. The minor tonic has two [notes] common to the subdominant of the major: to wit, A and C, and two others common to the tonic of the major, to wit, C and E. [The major tonic] also has two others common to the dominant of the minor, to wit, E and G. Lastly, everything that belongs to one of these keys belongs equally to the other—except the two accidental sharps of the minor.
>
> (I/11/1-f. 18v)

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In this chart, the five relative keys mentioned in the first sentence of the lesson become apparent. Through the labels beneath each note, Rameau shows that these five keys are the three primary fundamentals of the major and relative minor (not including the key used as a reference point) presented in interlocking triads. But Rameau's layout in the chart reveals more than this—it reveals the connection of all these related keys on various levels.

Notice that Rameau orders these fundamentals the same way he ordered them in lessons 4/1 and 7/2: with the tonic in the center flanked by its fundamentals a fifth away on each side (subdominant—tonic—dominant-tonic). Simultaneously, he presents the relationship of the primary fundamentals within the context of triads showing how the tonic triad of A minor is preceded by the triad of its subdominant, D minor, and followed by the triad of its dominant-tonic, E minor. At the same time, the C major chord is preceded by its subdominant chord, F major and followed by its dominant-tonic chord, G major. This particular presentation graphically integrates concepts on various levels: the mapping of not only the fundamentals a fifth away, but the triads that they support as well (a concept that Rameau mentioned as early as 1/1), and the two notes shared by fundamentals a third away—the topic of this particular lesson.

Through his commentary following the chart, Rameau also links other relationships between the major and its relative minor. He relates the two notes common to the minor tonic and the major subdominant, links the major subdominant to the major tonic, and then connects the major tonic to the minor dominant-tonic. While this seems a convoluted route, there is method to Rameau's madness.

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By introducing the example in this particular order, he presents the third relationship first by using A as the median between F and C.[1] Since the A minor triad is a third away from each of these fundamentals in the relative major, it shares two different notes in common with each of their triads according to the rules mentioned in lesson 9/1 concerning fundamentals a third away. In this first part of the example, Rameau emphasizes that fundamentals a third away, no matter what the quality of the third, share two different sets of common notes. He then shows this relationship again, this time with C major as the median between two minors a fifth apart, A and E. This whole example serves to integrate the relationship between fundamentals a fifth away between tonics a minor third apart.

There are other passages in both drafts of lesson 11 that provide another view of the five related keys through another model: presentation of the major and relative minor keys a sixth away, instead of the third.

Rameau: draft 1

If one forms a sixth from the two tonics related by third, as C and A are here, all the conjunct notes contained in the span of this sixth will be tonics of all the keys related to one of the two [keys] in question :

C D E F G A
sixth

Rameau: draft 2

Relative keys can also be recognized by placing their two tonics a sixth away from each other. The space filled by the conjunct notes of this enclosed sixth will provide all the tonics of five keys equally relative to one [key] and to the other.

For example, in this diatonic order C D E F G A, where the two relative keys C and A are a sixth away from each

[1] Rameau also presents the leading tone as the "diatonic middle" between the minor and relative major in both drafts of lesson 11:

Rameau: draft 1

One of these two relative keys is recognized through the other: not only does the tonic of the major always form a minor third from the minor, the leading tone of the major also forms the second of the minor at the same time, consequently occurring between their two tonics.

(I/11/1-f. 19^{r})

Rameau: draft 2

And, the leading tone of the major forms the second of the minor at the same time; it always occupies the diatonic middle of the two tonics.

(I/11/2-f. 54^{r})

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Whether the key of C major or A minor is the principal, all the others contained in the span of this sixth are equally relative to [the key chosen as the principal] with this sole difference: the key of the dominant of the principal will always have priority over the others. Moreover, relative keys should never have more than one sharp or one flat more than the principal, ignoring the accidental sharps in the minor.

(I/11/1-f. 19r-v)

other, one finds the five tonics of the five keys relative to the chosen [key].

But in this last order [the ordering in a sixth], the most perfect rapports do not come into sight in the same way as in the first [the ordering by third]. This one first gives us the two keys related through a minor third as the most perfect rapport, where the key of the dominant-tonic of the existing key is most compatible—all the other [keys] are much less relative. [This] knowledge will be of great assistance in time and place.

(I/11/2-f. 54r-v)

From these passages, Rameau provides additional information: he shows how the inversion of the usual intervallic distance between the major and the relative minor clearly reveals the five relative keys in a row but does not reveal the rapport or special relationship between the major and relative minor a third away as effectively. Out of all the five related keys, Rameau assigns the dominant-tonic of the principal key the next highest priority after the relative keys a third away. In both drafts, he calls this particular relationship to the attention of the reader. While Rameau does not explicitly state why this relationship is preferable to the others, several reasons surface through comments made in additional passages. These comments also shed light on Gianotti's generalizations in paragraphs 4, 5, and 6.

Throughout both drafts of lesson 11, Rameau emphasizes the fifth scale degree in various ways. Rameau, like Gianotti in ¶ 3, points out that the raised fifth scale degree in major is the same as the leading tone of the relative minor. For this reason, the appearance of the fifth in the melody is cited as a determinant of key:

Rameau: draft 1

Of these two accidental sharps, one need only be concerned about the leading tone, because the other [accidental sharp] never appears without bringing the leading tone after it. Thus, once one knows that this

Rameau: draft 2

The rapport of these two keys is so great as long as one neither employs the leading tone of the minor nor the fifth of the major in the melody, which are both the same note, except that it is raised from one side [minor]

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leading tone of the minor key is always formed by a sharp added to the fifth of the major [key], when one sees this fifth without a sharp in the subject, it will certainly be the major key, as at the note near the {X} where the fundamental is arbitrarily in one of these two keys. 1st and 2nd exs.

(I/11/1-f. 18v)

and not from the other [major]. The fundamental bass is ambiguous in one of these keys as long as the melody neither begins nor ends on the tonic of the minor, for in this case, there would no longer be any doubt.

(I/11/2-f. 54v)

Both Rameau and Gianotti point to this idea in ¶ 8 of the example section where they say that the melody could be harmonized either in C major or in A minor because the fifth does not appear as an indication of either key.

Another use of the fifth involves its relation as a fundamental to the principal key. From the very first lessons, Rameau has singled out the progression by fifth as the most perfect. In fact, it is the movement from dominant-tonic to tonic that actually accentuates or defines the tonic. Recall that each fundamental is also inseparable from its triad. As far as relative keys are concerned, the triad formed on the dominant-tonic reveals another clue because the leading tone is the third of its triad. For this reason, like the fifth scale degree in the melody, it too indicates the existing key. For example, the triad on the dominant-tonic in A minor, E-G#-B, contains the leading tone of its key (G#) as well as the triad on the dominant-tonic, G-B-D, contains the leading tone (B) of C major. The other fundamental, the subdominant, does not contain the leading tone in its triad and therefore does not give a clear indication of key. For example, F-A-C, the subdominant of C major, can function as the triad on the superdominant in A minor as well as D-F-A, the subdominant of A minor, can function as the supertonic in C major. This is what Rameau seems to be implying in the following passage taken from 11/1:

> In addition to the close rapport of these two keys, the dominant of the principal key is also as close to it; the superdominant is much less so, and the keys taken on the

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> dominant and on the superdominant of its first relative [key] will always break down [the first key]. The whole gives six relative keys including the principal there, that is to say, the one through which the piece begins and ends.
>
> (I/11/1-f. 19ᵛ)

The distance by fifth is also a determining factor of a key's quality. In ¶ 5, Gianotti quotes Rameau's general rule that keys a fifth away are the same quality and that those a third away are a different quality. As might be expected, Rameau includes some added information:

Rameau: draft 1

The other keys relative to one of these two first [keys] develop from their dominants and subdominants which can become tonics in their own right and whose quality should be that of the first key to which they belong. From this [comes] the following rule which one must commit to memory: all keys a fifth away from each other are the same quality and keys a third away from each other are of a different quality.

(I/11/1-f. 19ᵛ)

Rameau: draft 2

The key of C major and A minor are the two relative keys which serve as models for all the others which one can learn on one's own in the enumeration of transposed keys in the preceding lesson. Keys a fifth away are of the same quality and those a third away are of a different quality. Thus, these are always the two first relative keys which order [the others.] Each of them determines the quality of the key of its dominant and subdominant when these become tonics.

(I/11/2-f. 54ᵛ)

In both versions of the additional material, Rameau points out that the fundamentals can become tonics themselves, meaning that they can become new keys in the course of a piece. Since each fundamental is related to the principal key by fifth, each must maintain the same quality of the principal key in order to maintain reciprocity between the common tones of both keys. This also facilitates the return from the new key to the first key. If the dominant-tonic's key changed mode, for instance, the result would be G minor with a key signature of two flats; the minor subdominant, F minor, would have a key signature of four flats, both are rather far removed from C major.

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If the principal key modulates to that of the dominant-tonic, it would share all notes in common except the leading tone in the new key (F#); if it modulated to the subdominant, it would share all notes except the lowered fourth in the new key (Bb). Gianotti's footnote in section III of the preliminary introduction, a footnote intended to provide a shortcut for knowing key signatures, points out these very exceptions between keys at a fifth:

> The most ordinary method of transposing, is calling *si* the note upon which one places the last sharp of the clef and *fa* the note upon which one places the last flat, and then supposing next a clef relative to this change.
> (Preliminary Introduction, sect. III, footnote, xix)

Similarly, Rameau does not specifically explain the general rule found in Gianotti's ¶ 6: that relative keys cannot have more than one sharp or flat beyond the principal key. However, the same reason for maintaining the same quality for keys a fifth apart applies here: if there were more than one sharp or flat difference, they would no longer share the same key signature and maintain the same common tones. Hence, their relationship as relative keys would no longer be valid.

Gianotti's presentation of relative keys is restricted to just one relationship: the major and relative minor a third away. In his version, the reader understands the similarity between these keys and even recognizes the ambiguity that this relationship fosters in certain compositional situations where neither the fifth of the major nor leading tone of the minor appears. From combining what was said in the two sections of the preliminary introduction, the reader even gets a sense that these two keys are models for all the other transposed keys and that they order the quality of other related keys a fifth away. What is missing from Gianotti's version, however, is the general application of the term "relative key" as a key that shares common tones with another.

Through his model of five related keys, Rameau not only shows the general application of this idea but highlights the special symbiotic role that the relative keys a third

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apart share. Rameau also applies many ideas from previous chapters to this new web of connections. His model of five related keys not only reinforces the concept of common tones shared between fundamentals a third and fifth apart, but also maintains the importance of these fundamentals both in the original key and its offshoot—the relative a minor third away. For Rameau, the possibility of extending connections between any two keys becomes conceivable precisely because he does not limit his discussion to two keys only. He sees the term "relative" in a very broad sense. In fact, he sees the term "relative" as an opportunity for intersection of a sort, Rameau's inclusion of enharmonic spellings being just such an example.

There is another subtle point that emerges through comparison of both authors' presentations of this topic. Rameau looks at the idea "relative" in terms of keys where Gianotti sees it in terms of notes shared between keys a third apart. Once again, Gianotti's perspective hails from his restricted scope. Since he only focuses on the major/relative minor relationship, the most prominent feature to surface from this relationship is common tones between these keys. This is why Gianotti does not give any explanation of the fact that subdominants and dominant-tonics of these two keys can become tonics on their own in ¶ 4. Since Rameau's palette is much wider, he can explore the full range of connections between fundamentals a fifth and third apart. This is his greatest advantage over Gianotti's presentation of facts. He closes by saying:

> In the last two examples, one sees the same relationships between the key of C major as for A minor; and in each key, the fundamental bass follows the progression which had first been prescribed in relation to the key of C major in the same way as in the passage from one key to another.

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This last remark proves how necessary it is to have the dominant and the subdominant of each tonic always in mind, as well as its mediant and the leading tone, for that which pertains to the subject; so that the names of notes do not get tangled up with an idea when it is a matter of another key. In a word, one might be able to say in any key: the tonic should pass to the dominant or to the subdominant; if not, it should descend by third or ascend by second to a simple Dominant which later progresses from one dominant to the other until the tonic of the actual key or of a new key can take place at the end of the progression.

(I/11/1-f. 19^{v}, Explication)

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CHAPTER VII

In which many methods are indicated for knowing the key in the subject

Gianotti:

1 In the preceding chapters, we have sufficiently shown the possible fundamental [bass] routes in a single key: by fifth, descending third, and ascending second. We have also shown the ambiguity which prevails among these different routes. From now on, we are going to interweave the relative keys with the principal key; and, in this interweaving, we will discover some new fundamental routes. Although known by the majority of artists, these routes are either poorly employed or poorly defined. But before [doing] this, let us try to return to the objective of this chapter by indicating the different methods of knowing the key in the subject.

Rameau: draft 1

Rameau: draft 2

I/12/1-f. 22^{v}-23^{r}
Art. I

2 Much like discourse, music has its phrases and periods which are distinguished by the frequent pauses which occur, and from which one naturally finds the fundamental bass. But, since [the fundamental bass] is sometimes a tonic and at other times a dominant-tonic (according to the account of chapter IV), the visible signs in the melody prevent one from making a mistake [as to the

Much like discourse, music has phrases. The end of each phrase is marked at each pause. The less pauses are perceived, the more [phrases] are linked and form a sense of connection; the more pauses are perceived, the more [phrases] are ended. The pauses of the subject are perceived more or less in two-measure groupings and especially in four-measure groupings. As a rule, since

I/12/2-f. 54^{v}

Melody is a kind of discourse where the meaning of each phrase ends at more or less perceptible pauses.

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key] in these cases. In the absence of these signs, the connections between successive keys dissipate doubt [as to the key].

the second measure in music is [comparable] to the hemistich in poetry, [pauses] generally end on the strong beat.[1]

I/12/1-f. 20r

This fundamental bass therefore indicates the key; but since [the fundamental bass] can be a tonic sometimes and a dominant tonic at others, according to the exposition of the eighth lesson, the recognition of visible signs in the subject prevents one from making a mistake about this. And, for lack of these signs, the closest relationships [**rapports**] between successive keys then tip the balance.

FIRST METHOD

Knowing the key through the leading tone

I/12/1-f. 20r
Art. I

I/12/2-f. 55r-v
Art. II

1 The leading tone, which always forms a major third from the dominant-tonic, is the most certain method of identifying a

The leading tone, which is always the semitone below the tonic or its octave, and moreover, which forms the major third

The leading tone, which is always a semitone below the tonic, is one of the most certain methods of knowing the key. When one

[1] The pause at the second measure is likened to the hemistich in poetry which is half of a line of verse. Through this analogy, Rameau indicates the lack of closure inherent in the pause of the second measure, a pause which is not as conclusive as that at the fourth measure. By using a linguistic reference, Rameau also implies that the integrity of the harmonic phrase is not yet intelligible at the two-measure juncture and therefore depends upon the next pause at the four-measure juncture to make an impact on the listener. Rameau's statement about phrases becoming perceptible upon their conclusion supports this sense of closure at the four measure grouping as well.

Another important concept that surfaces in this reading of 12/1 is connection [**liaison**]: a concept previously encountered in the harmonic discussion of common tones between chords early in Gianotti's chapter 2 and again in Gianotti's chapter 5. Here, Rameau uses the past participle *lié* [verb=*lier*] to refer to linear events at phrase levels (as opposed to the vertical events in chords). Later in this chapter, the concept of connection is implied in the more traditional sense of maintaining relationships with related keys as in Gianotti's "3rd Method." Through these references we see the importance of the concept of connection between chords, keys and phrases.

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key.[2] This is especially the case when one takes care of placing the correct number of sharps or flats required for the transposed keys next to the clef which gives the following rule the greatest clarity.

of the dominant tonic is the most certain method of knowing the key.

When one takes care of placing the correct number of sharps or flats required for the transposed keys next to the clef, according to the enumeration of the tenth lesson, the following rule has general [application] for all the keys.

takes care of placing the correct number of sharps or flats required for the transposed keys next to the clef, the following rule has general [application] for all the keys.

I/12/1-f. 20r-v
Art. I

I/12/2-f. 55v
Art. II

2 As soon as a new sharp or flat appears, the key changes; if it has not already changed. If the note is sharped, it is the leading tone; if it is flatted, that which should have a flat after it according to the order of flats,* is then the leading tone. If there are many sharps or flats in succession between two pauses, it is on the last, in the order of sharps, that one should apply this rule.

As soon as a new sharp or flat is associated with a note of the subject, it is a sign that the key is changing, if it has not already changed. If the note is sharped, it is the leading tone; if it is flatted, the note which ought to have a flat after it according to the order of enumeration already cited, is then the leading tone. For example: if there is a flat on B and the E does not have [a flat], this E, which should have one after B, is consequently the leading tone. The other flatted notes are treated similarly.[3]

If there are many sharps or

As soon as a sharped or flatted note occurs in the melody, it is a certain sign that the key is changing, or [that it] has already changed. If the note is sharped, it is the leading tone of the new key. If the note is flatted, the note which would have a flat after it according to the enumeration of the first lesson is the leading tone. If a sharped or naturalized note occurs among flatted ones, from that moment on, it is a leading tone. [And at this point,] one need only be concerned with flats to determine whether the key is major or minor. What is

---

[2] While Gianotti states that the leading tone is the most certain method of identifying a key, he fails to mention something obvious: its relationship to the tonic as the semitone below. This fact is more important than its relationship as third of the fundamental dominant-tonic here, for it is this particular relationship to the tonic that signals the appearance of a new key in the melody—the very topic of this section. In both drafts of lesson 12, Rameau mentions this very relationship first. He emphasizes this point because it is one of the only relationships that can be counted on as a determinant of key. This idea becomes evident in the passage of 12/1 quoted alongside Gianotti's ¶ 3 in the First Method section: "Since the leading tone is always the same distance from the Tonic whether the key be major or minor, one can never make a mistake with regard to the key that it indicates if one recalls [its] relationship with the principal key."

* *See the introduction/ Sect. III.*

[3] Rameau includes a helpful illustration of the rule for flats in 12/1 that explains the concept summarized by Gianotti here.

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flats in a row between two pauses, the rule always applies to the last one according to the same enumeration already cited.

more, the sharp overrides the natural.[4] Through the knowledge that one has of key relationships, one should know the quality of the accidental keys that occur in the course of a piece of music. These accidental keys are still relative to the first given key. The natural which arrives among sharps takes the place of a flat—those who use it otherwise are not correct.

If there are many sharps or flats in succession between two pauses, it is always necessary to apply the established rule to the last sharp in the order of enumeration of the tenth lesson.

3 Two new sharps ascending by step are always accidentals of a minor key; and the second is always the leading tone. If one finds a natural before the lower of the two sharps, this sign was previously a flat. The new signs of a change of key always present themselves from one key to another. One should take the preceding signs into account when one does not see any new ones which supplant them. *See ex. 9 pl. 3*

I/12/1-f. 20[v]
Art. I

Two new sharps ascending by step are always accidentals of a minor key; the higher of the two is always the leading tone. Sometimes, a natural occurs in the place of the lower of two sharps because there was apparently a flat on the same note.

Since the leading tone is always the same distance from the Tonic whether the key is major or minor, one can never make a mistake with regard to the key that it indicates if one recalls [its] rapport with the principal key.

The new signs of a change of key always present themselves from one key to another. One should

[4] In 12/2, Rameau calls attention to the fact that a sharp or natural can be the leading tone in a context where there are flats and that a sharp takes precedence over a natural as a leading tone in this context. This passage in the second draft also implies that flats in the key signature are of secondary importance when a leading tone appears—after this point, they are used to determine the mode of the new key.

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take the preceding signs into account when one does not see any new ones which supplant them.

Observations on this example

I/12/1-f. 20ᵛ-Art. I Explication

4 One cannot make a mistake in taking the notes at A. for leading tones. The flat at B. could belong to the key of *D*, announced by the *C* sharp which precedes it; but since this same *C* appears without a sharp at C., the *B* flat should then guide [us]; and, in this case, *E* is the leading tone. Since the flat at D. is neither followed nor preceded by any sharp or flat, [it] announces *A* as the leading tone.

The sharps at A. C. G. J. K. P. and S. mark the leading tones of which one cannot be mistaken.[5]

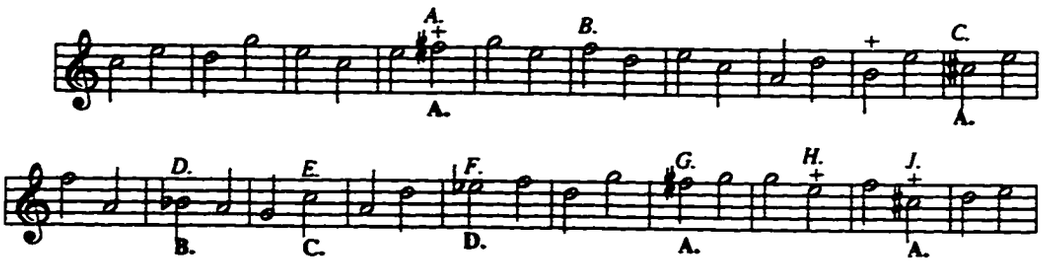
I/12/1-f. 20ᵛ-Art. I Explication

The natural at B. after the sharp at A. returns the note as it was before this sharp. The flat at D. belongs to the key of D minor announced by its leading tone C. but since the sharp [at C.] disappears at E., the same flat D. on B should then guide [us]; and in this case E is the leading tone.[6]

I/12/1-f.20ᵛ-21ʳ Art. I Explication

A is the leading tone since the flat appears next on E at

[5] Letters A. C. G. J. K. P. and S. in Rameau's 12/1 are equivalent to Gianotti's guidemarks marked A.

[6] For ease of comparison, a portion of Gianotti's example 9 appears below with his guidemarks in boldface and Rameau's in italics above the notes:

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F.[7] without any sharp or natural anywhere else.

5 The key of *G*, which comes next, is considered minor on account of the *E* flat which precedes it, although it should have been major according to its relation with the principal [key]. But in addition to this reason, the key of *D* minor which immediately follows that of *G*, requires this one to be the same quality according to the rule given in chapter VI.[8]

I/12/1-f.20^{v}-21^{r} Art. I Explication

If the sharp at G. is the leading tone of G, the key of this G is to be repeated minor on account of the E flat which precedes it at E. and which is not suppressed by any new sign until the sharp G. Although this key of G should naturally be major according to its rapport with the principal [key], one is forced to surrender to the law of the contrary as the subject prescribes. The flat at F. disappears at H. and is followed at once by a sharp at J. recognized for the leading tone of D, whose key should be minor in relation to the principal [key].
It is in order to submit to the law which requires that keys a fifth away be the same quality that the key of G had been rendered minor immediately before D, which should be minor and which is the fifth of G.

I/12/1-f. 21^{r}-Art. I Explication

The B should be flat in the key of D minor indicated once again by its leading tone L. And if there is still no flat before L., it is because it is then the lower

6 If the note at E. does not have a flat, it is because it is then the lower of the two accidental sharps of the

[7] This guidemark is erroneously given as E. in this passage.

[8] This rule is found on p. 23 of chapter VI: "Concerning this, this important rule: all keys a fifth away from each other are of the same quality and all those a third away are of a different quality."

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key of *D* minor.[9]

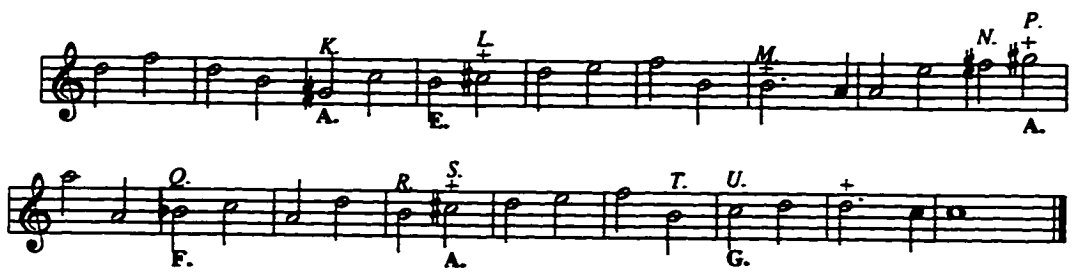
of the two accidental sharps of this minor key.

The reason why this B does not have a natural before L. is that it is natural by nature in the principal key as well as in A minor which precedes the one of D here. But as soon as this key of D minor introduces itself and the B does not ascend to the leading tone as an accidental sharp, it should be flat. As a result, since there is no [flat] at M. after L., it is a sign that the key is changing.[10]

7 The same observation [can be made] at the next *F* sharp to appear.

Regarding the key announced by the B natural at M., one will only be able to judge it well at the end of this lesson.[11] The two

[9] The relevant portion of Gianotti's example 9 appears below with Rameau's guidemarks in italics above the notes:



[10] Rameau's explanation of the B natural surpasses Gianotti's. For Gianotti it is enough to tell the reader that this note is one of the two accidental sharps of the minor key. Rameau, however, anticipates a possible question that the beginner might raise. He explains why the B does not receive a natural indication and in so doing relates this pitch as a common tone to both the principal key of the example, C major, and the key which precedes D minor, A minor. In this way, he subtly points out key relationships on the local level as well as the larger level governed by the principal key.

As to the statement concerning M. after L.: Rameau is suggesting that without being paired with its second accidental (the C sharp at letter L.) the B natural alone would indicate a new key since the key of D minor established by these two accidental sharps would require a B flat to follow.

[11] Through this additional comment, Rameau is anticipating an idea that occurs under Gianotti's "Second Method" section: the idea that the leading tone in the major is the same exact pitch as scale step 2 in the relative minor. Therefore, since it is a note common to both keys, there is some ambiguity until another sign confirms the key. In this situation, the B natural is not a leading tone, rather scale step 2 in A minor—a key confirmed by the two accidental sharps at letters N. and P.

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accidental sharps of the key of A minor are very visible at N. P. and one cannot doubt that P. is the leading tone.

8 The flat at F. indicates *E* as a leading tone. This same note, appearing next without a flat, followed by the leading tone of *D*, is readily recognized as the first accidental sharp of this minor key.[12]

The B flat at Q. indicates as at D., the note E as a leading tone. The [fact that] the B is natural at R. makes it somewhat recognizable as the first of two accidental [sharps] where S. is the leading tone.

9 The disappearance of the sharp at G. sufficiently proves that the preceding note is the leading tone.

Since the [B] is still natural at T. without [being followed by] a sharp at U., and [since] there are no other [sharps] anywhere else, this proves not only that one is no longer in the key of D minor, where [this B natural] had just served as first accidental sharp, but that [this B natural] is the leading tone itself [at T.]: because the lack of the flat that it should have in the key of D minor, then supposes it a natural.

SECOND METHOD

Concerning the suspicion that one should have for the leading tone of major keys and the appropriate intervals for revealing the key in the subject

I/12/1-f. 21r-v
Art. II

1 Since the leading tone of a major key always forms a second with the relative minor,* this sort of ambiguity can introduce some doubts about the true key. This is especially the case when one does not

When one perceives a new sharp recognized for the leading tone of a major key, one cannot be careful enough, for the leading tone of a major key also forms the second of the minor key relative to it and it [also] occurs between their two

I/12/2-f. 55v
Art. II

If the recognized leading tone is one of a major key, it could also very well be the second of the minor key relative to this major because, for the present, one should know that this leading tone of the major forms at the same time

[12] The Errata state: *fait assez reconnoitre la note si pour le premier* which translates to "makes the note B somewhat recognizable for the first" accidental sharp of this minor key.

* *See the introduction, Sect. III.*

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perceive a new sharp which could decide it [the key].[13]

2 If there is actually no other [sharp] and the fifth of the major key indicated by this single sharp appears in the subject, one will have judged well in taking [that single sharped note] as the leading tone. But, if this fifth does not appear, the doubt remains, and it is then necessary to have recourse to the pause of the phrase. In the absence of the pause, one must have recourse to the closest relationship between the successive keys, but this most particularly concerns the following means.

tonics, tenth lesson.

I/12/1-f. 21r-v
Art. II

When one sees this sharp, one must determine whether or not another is found in the contents of the same phrase. If another is found, the last of the two will certainly be the leading tone, according to the enumeration of the tenth lesson.

If there are no other sharps which might dispute its right and the fifth of the major key that it indicates appears in the subject, it is truly a leading tone—see the eleventh lesson. But if this fifth does not appear there, one can still be mistaken—and it is then necessary to have recourse to the pause of the phrase. Otherwise, one must have recourse to the closest relationship between successive neighboring keys, but this issue concerns the following articles.

the second of the minor [key] relative to it—but there are many methods of not making a mistake there.

I/12/2-f. 55v-56r
Art. II

1st. First, it is necessary to determine whether or not a new sharp occurs in the melody between the two pauses where the leading tone will have been recognized. And, if this new sharp is indeed the leading tone of the minor key relative to the major designated by the first [sharp], no doubt this one [the first sharp] was effectively only the second [degree] of this minor key. It will be necessary to confine oneself to this key alone.

2nd. If the fifth of a major key recognized through the first leading tone appears in the melody without a sharp, and this [happens] between two pauses where this leading tone will have been perceived, there is {no} more doubt concerning this major key because it is precisely this fifth which becomes a leading tone of the relative minor in question when sharped. Ex.

3rd. If the fifth of the recognized major key, either natural or sharped, does not appear in the melody between two pauses, it is necessary in that case to

[13] The ambiguity in question stems from the fact that the leading tone in a major key, scale degree 7, is the same exact note as scale degree 2 in the relative minor. In order to confirm the minor mode then, one would need to see its leading tone (which is the relative major's raised fifth) in the melody. Thus, one would need to see a new sharp to resolve the issue.

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have recourse to the pause of the melody which follows the leading tone through which this major key had been recognized. Without becoming distracted, [it is necessary] to sing all that had preceded up to this pause in succession and without interruption, letting the voice fall, as earlier said, in order to find the fundamental bass of it there. Moreover, if the pause of the melody ends on the tonic of the relative minor key, there can be no more doubt that one is in this key. Example.

4th. If one mistrusts one's talents in a similar case, then it is then on the rapport of successive keys that one must base one's decisions by noticing which one of the two keys that hang in the balance has more of a rapport to the [key] which has preceded and especially to the [key] which should follow, in order to prefer it in this case to the other key.

{If we place the key which should follow the doubtful key next to it}, it is nearly impossible that two keys [would] follow each other without the leading tone appearing in the melody or without at least the pause being well decided, but all the means have not yet been exhausted.

When of the two doubtful keys, one finds one which relates almost equally to the one which precedes it and to the one which follows it, it is without a doubt the true one.

The most perfect relationships should develop here at the fifth or at the fourth and especially

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between the major and the minor keys whose tonics are a minor third away from each other. Ex.
After these observations [are] made, one comes back to the test of the ear in order to compare sense with reason there—and soon sense persuades.

5th. Sometimes, some melodic sequences develop in several phrases in succession which should urge [us] to prefer the least related keys [i.e. those by second]. This will be the subject of the seventh lesson.

6th. and finally—when the recognized leading tone is that of the minor key, it is certain that one is in that key.

3 Regarding the appropriate intervals for making the key known in the melody, they consist of two types: 1) the falling of the third on a strong beat 2) the intervals of a fourth or fifth.

I/12/1-f. 21ᵛ
Art. III

4 The notes upon which the subject falls a third on the strong beat and where one feels a slight pause are either mediants or leading tones. They could also not be [leading tones or mediants], but then one recognizes this easily. It is either because the pause that this falling third should form will be imperceptible, or especially through the very absence of sharps or flats

Each note where the melody of the subject descends a third to a strong beat and where one feels a slight pause is generally a mediant or a leading tone for lack of another sign which gives it certainty. Moreover, one will risk nothing because the fundamental bass is always the third below one of the two and because the continuation of the subject will not fail to eradicate the

I/12/2-f. 56ᵛ
Art. III

When two notes that descend a third are separated by the measure [barline], the last, that is to say, the one which begins the measure, is generally the mediant or the leading tone. The contrary can never happen without it being visible and perceptible —especially since through the corresponding sharps or flats in the same phrase or by those that a similar mediant or leading tone

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required by the key since [these sharps or flats] would indicate some similar mediants or leading tones.[14]

doubt—especially at the nearest perceptible pause.

When the note where one descends by third to a strong beat in this manner is neither a mediant nor a leading tone, one recognizes it easily. It is either because the pause is imperceptible there or especially because one will not find the sharps or flats in the subject required by the keys that would indicate similar mediants or leading tones.

would require in the key, one would see and feel the impossibility of a required key of that sort.

What is more, this difficulty ordinarily happens only in the continuation of a melody where several notes descend in succession this way through imitation and where the ones which should be recognized there as mediants and leading tones are distinguished easily. For, in addition, one of the two, that is to say, the mediant or the leading tone, always ends the phrase there.

All these collected methods should soon bring those who will know how to make use [of all of this] up to date and this use only demands a little attention without too much hurrying.

I/12/1-f. 21ᵛ-22ʳ
Art.III

5 On the other hand, two notes a fourth or fifth away in the subject are most often fundamentals of the existing key. Sometimes there are only one of the two, and sometimes as well, neither one or the other. But by making the same remark that we have made above for

On the other hand, two notes a fourth or fifth away in the subject are most often fundamentals of the existing key; sometimes there are only one of the two, and other times neither one nor the other is there as well. But it is easy not to be mistaken there because the

[14] In this paragraph, Gianotti summarizes Rameau's material in Article III of both drafts of lesson 12. However, by omitting a passage which Rameau includes in 12/1, he misses the opportunity to connect these melodic indications with their fundamental underpinnings. Only 12/1 relates the leading tones and mediants here to the underlying fundamental bass. As in lessons 4/1 and 9/2, Rameau is consistent in presenting the tertiary relationship of the mediant and leading tone to their respective fundamental basses. More importantly, through this comment, he emphasizes their importance as indicators of either the tonic or dominant-tonic fundamentals. It is the fundamentals which indicate the key. Confirmation of this key comes in the form of melodic accidentals which occur in the following phrase. If the accidentals do not confirm the supposed leading tone or mediant, another key is in effect.

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the mediant and for the leading tone, it is easy not to be mistaken. The most certain method of not being mistaken about two doubtful keys is to notice the sharp or flat required by the key that one believes preferable between two notes of the subject. For, after having sung the whole subject until the pause which follows these two notes, one sings it a second time while trying to fill in the conjunct degrees contained [between the two notes] in addition to the two same notes without altering the tempo [**mouvement**]. If one sings the sharp or the flat in question naturally there without the least hesitation, one will have guessed correctly; if not, it will be necessary to retain the other key. *See ex. 10 pl. 3*

exclusion of sharps or flats required by the key in which one would take them as fundamental notes would first render the error evident.

The fundamentals in question are the tonic, the dominant tonic, and the subdominant. The most certain method of not being mistaken about two doubtful keys is to notice the sharp or flat required by the key that one believes preferable between two notes of the subject. Then, after having sung the whole subject until the pause which follows these two notes, one sings it a second time, trying to traverse the conjunct degrees contained between these two same notes without altering the tempo. And, if one sings the sharp or flat in question there naturally, without the least reflection, one will have guessed correctly. If not, it will be necessary to adhere to the other key.

For lack of these two notes, one looks for one which forms a semitone with the sharp or flat in question. Then, singing the subject in the same way as before, one tries to repeat this note and sing between the two the [note] which should have this sharp or flat with the result that if the semitone is formed there naturally, one will have guessed well. One can sing by oneself [or] for lack of a voice, one can execute the whole thing on

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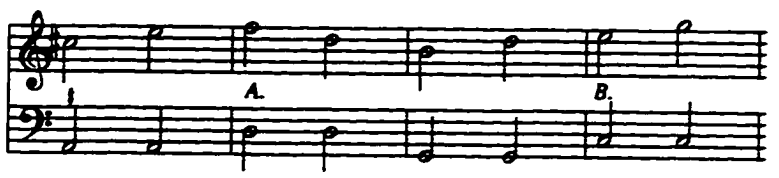
an instrument.[15] Ex.

[15] Recall that in section III of the Preliminary Introduction (footnote, xix) Gianotti pointed out two specific tones for transposing keys easily: fa (the last flat of the key) and si (the last sharp of the key). It is these very notes that Rameau wishes the student to imagine when they do not appear in the subject. His singing directions therefore cause the beginner to first look for an actual note in the subject which would then form a semitone with one of these key indicators. By seeing which indicator fits the actual context, the beginner then determines the key.

Rameau also includes a passage in 12/1 which sheds light on how notes taken as leading tones in the melody can indicate whether the fundamental is a tonic or a dominant-tonic. In the first example of the explication of Article IV, Rameau advises looking for leading tones that would indicate one fundamental over the other:

> The leading tones up to A. distinguish the tonics from the dominant tonics. The guidemarks A. and B. should be recognized for tonics by the C sharp which precedes A. and by the note B which precedes B. Since this note B, which should have a flat in the key of A. [D minor], does not have [a flat] in its wake, it is [the same] as if a sharp or natural were associated with it. In this way, the custodes under this C sharp and under this note B should be recognized as dominant tonics.
>
> The guidemark C. is a dominant tonic since the F which precedes it and follows it should have a sharp in order that this guidemark be recognized as a tonic .
>
> [I/12/1-f. 24r-Art. IV-Explication]

The illustrations of this example can be drawn from portions of Gianotti's ex 12 (mm. 5-8 and mm. 10-13 respectively). I have assigned Rameau's guidemarks A., and B., and C. to comparable points in ex. 12. In the first paragraph, Rameau says that the leading tones establish the notes at A. and B. as tonics; the leading tones themselves therefore have dominant-tonics as their fundamental bass:

In the second paragraph. Rameau points out that since the G in the melody is not preceded or followed by an F sharp, it is a dominant-tonic in the key of C major because it would need to be preceded by its leading

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Observations on this example	**I/12/1-f. 22^r -Art. III Explication**
6 The notes marked A., where the melody descends a third to the strong beat, are mediants; and the notes marked B. are leading tones.	The notes at A. where the subject descends a third to the strong beat are mediants whereas the notes at B. are leading tones.
7 If one took the first note at B. for a mediant, one would be quite mistaken because, despite the fact that the fundamental bass would be the same, one does not see at C. the sharp required for the key that this poorly-imagined mediant would indicate. Besides, one would be forced to return in the key where it is the leading tone.	**I/12/1-f. 22^r -Art. III Explication** If one took the leading tone at B. as a mediant, one would be mistaken because despite the fact that the fundamental bass would be the same, by not seeing the sharp required for the key that this poorly-imagined mediant would indicate at C. [i.e. G major], one would be forced to return in the key where it is the leading tone.
8 Anyone who would take the notes at D. for mediants or leading tones would be undeceived by the absence of sharps or flats required in such a similar case. If the first note at D. were a mediant, there would	**I/12/1-f. 22^r -Art. III Explication** Those who would take the notes D. for leading tones or mediants would be well mistaken on account of the absence of sharps or flats

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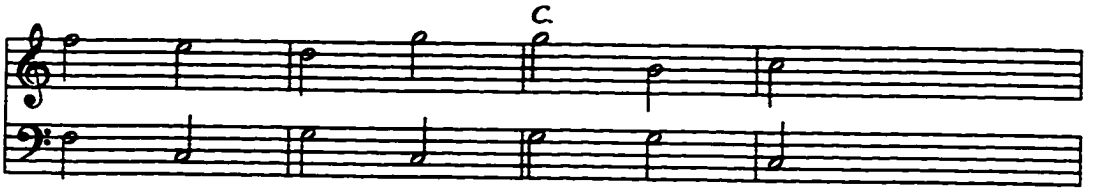
tone (F sharp) if it were a tonic (in G major):

Through these additional examples he shows how the presence of a sharp not only indicates the tonic in a melodic line alone but also determines which of the two fundamentals, the tonic or the dominant-tonic, is governing a given context.

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have to be a flat on *E* which precedes it, and there would have to be a sharp on *G* which appears after the second note at D., if this one were likewise a mediant. If the note at the third D. were [to be] a mediant or a leading tone, there would have to be a flat on the *B* which follows it. One should make the same observations at the other notes marked D.

required in this case. If the first D. were a mediant, there would have to be a flat on E which immediately precedes it. If the second D. were a mediant, there would have to be a sharp over G, which would appear [both] before and after without this sign. Neither of these two D.'s could be leading tones since there are no sharps associated [with them] and since no flat appears either before or after [them] which might make them suspected for such.

I/12/1-f. 22^{r-v} -Art. III
Explication

If the third D. were a mediant or a leading tone, there would have to be a flat on the B which follows it and one certainly will not begin singing the conjunct degrees [filling in the] third through which the subject descends to D.—the other D.'s [follow] in this way.[16]

9 If it so happens that there are several mediants whose pauses are imperceptible, the notes at D., which one would believe could be [considered as mediants] do nothing to make them any more perceptible [as mediants].

[16] Both Gianotti and Rameau say that if the A at the third letter D. were a mediant (in the key of F), the B which follows would have to be B flat. Rameau includes an additional comment which confirms this idea through singing. He says that one would certainly not sing C-B-A, but rather C-Bb-A in this situation because we normally sing a whole step plus a half step descending from the fifth of the scale to the mediant (C-Bb-A) **not** a half step followed by a whole (C-B-A). This idea is related to Rameau's singing advice (see 12/1 in ¶ 5 in this section).

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Of the three notes which form two intervals of a fourth in measures 4 and 5, the first is the dominant-tonic, and the second is the tonic.

10 Of the two notes a fourth away, mm. 10 & 11, the last is the dominant-tonic.

Of the two notes a fourth away, G. is dominant tonic; and the two [notes] G.G. are equally fundamentals, with the last being a tonic.[17]

11 The two notes again a fourth away, measures 20 and 21, are fundamentals: the first is the dominant-tonic, and the second a tonic.

I/12/1-f. 22ᵛ -Art. III
Explication

12 Neither of the two notes at E. or F. is a fundamental note, since they form a false fifth [tritone], and not a true fifth. Besides, as a fundamental note, the note at E. would require a flat at F., and this one a sharp at the note at E.

Neither of the two notes at H. and J. is a fundamental since they form a false fifth and not a [true] fifth. [Either] H. would require a flat at J. [or] J. a sharp at H. according to the fifth lesson.

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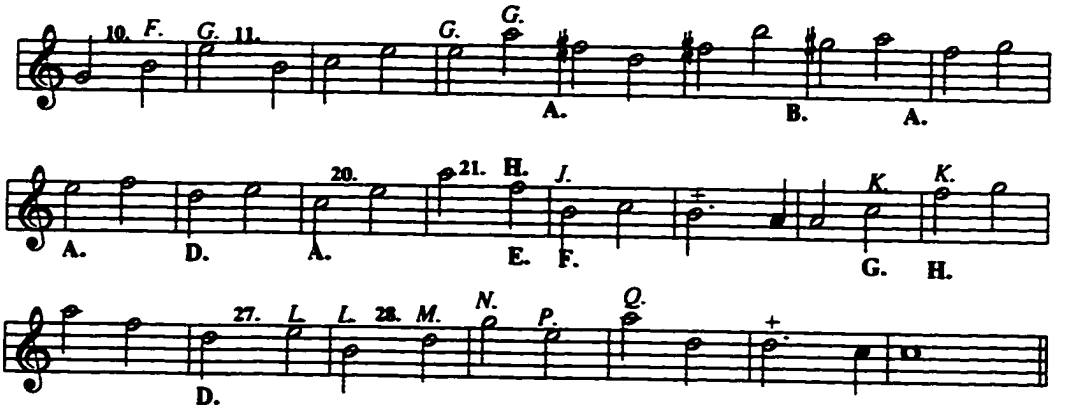
[17] For paragraphs 10-15, consult the following portion of example 10 for coordination of Rameau's guidemarks with those of Gianotti:

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13 The two notes at G. and H. are fundamentals: the one a dominant-tonic, the other a tonic.

14 With respect to the *B* flat that the key indicated by [the fundamentals] requires, it suffices to sing the subject from the note before G. up to the strong beat of the measure which follows letter H. [First, sing the notes as given.] Then, immediately start again and fill in all the intervals. One will sing the *B* flat which forms the semitone of which we have already spoken.

I/12/1-f. 22' -Art. III
Explication

The two notes K. and K. are fundamentals: the one a dominant tonic, the other a tonic. One would not imagine them otherwise without supposing some sharps or flats which might not appear with regard to the B flat that is required in their key. It suffices to sing the subject from K.K. up to the strong beat which follows them, trying to add the [next] note above this strong beat in order to return to [the strong beat] immediately and one will certainly sing a B flat which then forms the semitone of which we have spoken.

15 Of the two notes of the descending fourth, measures 27 and 28, neither is a fundamental note; one is a mediant, the other a leading tone. Of the two notes which follow those two which form the interval of an ascending fourth, the last is a dominant-tonic.

I/12/1-f. 22' -Art. III
Explication

The two notes L. and L. are thirds: the one a mediant, the other a leading tone. One cannot imagine one of the two [notes] as a fundamental without recognizing an error—through the absence of sharps that would then be required.[18] Of the two notes M. N., N. is the dominant-tonic. The two notes P. Q. are not fundamentals otherwise one of the two would require a sharp which does not appear. {It is upon similar remarks that one can always make certain of one's convictions.}

[18] In the parallel passage in 12/1 here, Rameau explains why neither of the notes in measures 27 and 28 are fundamentals.

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16 In this example, our observations have not yet taken the intervals of a third, fourth, and fifth into account. The fear of tiring the reader holds us back; besides, it is good for the reader himself to follow the route which we have already indicated.

THIRD METHOD

Knowing successive keys through their relationships

I/12/1-f. 24v-25r
Art. V

1 The subject can be turned in such a way that none of the evident signs already cited appear. In such a case, it is necessary to have recourse to the closest relationships [**rapports**] between successive keys.[19]

However, the melody of the subject can be turned in such a way that none of these signs occur and even the fundamental bass would appear arbitrary there. But as for this ambiguity, it is possible to solve it by singing the subject [notes] consecutively and without interruption until the fifth or sixth pause; and by then immediately retaking the first phrase. In this way, the impression received from all the rest [of the notes] will make the key of this first phrase felt and consequently will make [one] sing the true fundamental bass of its pause. But all the methods are not exhausted yet: we still have the reciprocal rapports of successive keys. It is a always necessary to consider these, especially in the absence of evident signs in the subject.

[19] Before he suggests resorting to the relationships between keys, Rameau mentions singing the subject from the beginning to the fifth or sixth pause. This is one of many references in "L'Art" where Rameau advises singing a passage to find its true nature, a belief that values the natural perception of musical language inherent in one's ear.

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2 These relationships consist of two keys which immediately follow each other. [Such keys] should be a fifth one from the other unless they are a third, like the major and relative minor. What is most necessary is that the keys which follow each other in the course of a piece be related to each other and to the principal key.

I/12/1-f. 25r
Art. V

These reciprocal relationships consist of two keys which immediately follow each other. [Such keys] should be a fifth away from each other; if they are not a third away as are the major and relative minor.

Keys which follow each other in the course of the subject should all be related to the principal key, but in addition, they should also be [related] to each other following the order that one has just prescribed.

3 However, when all keys are related to the principal [key], they can therefore follow each other by second. But then the tonic of the first key always descends by minor third or by fifth—by minor third in order to pass to the key a second above, and by fifth in order to pass to the key a second below. This results in the fact that the third or fifth can be regarded as a passing tonic which, although relative to these two keys which succeed each other by second, maintains the relationships required.[20]

I/12/1-f. 25r
Art. V

However, when all these keys are related to the principal [key], they can follow each other by second. But, notice then that the tonic always descends by a minor third or by fifth before passing to the one which forms a second either above it or below it. As a result, since this third or fifth can be regarded as a passing tonic, thirteenth lesson,[21] it maintains the reciprocal relationships required in this case.

---

[20] Here, Gianotti does the better job of spelling out the details concerning these progressions. Recall that Gianotti and Rameau have already introduced the descending third progression as one of the possible tonic routes (see Gianotti's fifth chapter/ Art. II). In chapter 5, Gianotti used it to pass to another simple dominant; here he specifies this dominant as the second above the tonic.

[21] Only Rameau includes a reference to 13/1 here. Rameau devotes this entire lesson to discussing the passing tonic in detail. Though Gianotti does not refer to the upcoming discussion, he too follows Rameau's first-draft ordering of material, for his parallel discussion of the passing tonic occurs in chapter 8, the very next lesson.

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4 Two tonics can never follow each other by second; the only exception would be the case where one would suppose the thought absolutely concluded on the first one, with the result that the second began anew—as if there were two different pieces of music. But this observation does not yet have the competence of our first rules.[22]

I/12/1-f. 25r
Art. V

If it is possible to make two tonics a second away follow each other immediately, it is only in a case where one supposes the thought completely finished on the first tonic—with the result that the second begins anew, as if there were two pieces of different music. But beginners do not have the competence [to judge this] yet.

I/12/1-f. 25r-v
Art.V

5 Once well understood, all of these principles shed great light on what to do in doubtful cases. From such assistance, it is impossible that one would not succeed in rising above one's doubt, because if at one time one succeeded at knowing a key by the indicated aids, one will easily succeed at knowing the doubtful [case] through the reciprocal relationships between successive keys, for lack of other signs. *See ex. [11], pl. [4].* [23]

Once this principle is well understood, one profits from it with regard to the first doubtful key: [when] one passes up to the fifth or sixth pause [and] examines the signs in the subject, it is impossible that at least one [sign] would not be found that would make the key which follows the doubtful one known. Drop the [doubtful key] and pass on to the third key—it will determine the doubt of the second [key], and this [key] will determine the doubt of the first.

Therefore, if one fears making a mistake with all these methods, one need only rely on the last pause, whose fundamental bass is always the tonic of the principal [key]. Example

[22] The only way Rameau allows conjunct motion between keys is through the prescribed routes using the passing tonics of a descending third or descending fifth as means to this end. Otherwise, conjunct motion between keys indicates a form of closure (for Rameau, the lack of connection or **liaison**)—hence the feeling of starting anew on the second of these keys.

[23] Erroneously given as Ex. 2. Corrected in the Errata.

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where one will compose the fundamental bass.[24]

I/12-1-f. 24'
Art. V

6 Since the key of *C* major and the key of *A* minor are models of all the other keys, we will use either of these keys indiscriminately in our examples. When one wants to make use of other keys, it is easy to model them on these—placing the necessary sharps or flats next to the clef.

Since the key of C major and the key of A minor are the models of all the others, we will make use of only one of these two keys in all the lessons. When one wants to make use of other keys, it is easy to model them on these—placing the necessary sharps or flats next to the clef.

Observations on this example

I/12/1-f. 25'-Art.V
Explication

7 The figures placed above the notes throughout the course of this example serve to mark the pauses, which are in groups of two measures; but the pause which develops at figure 4 is always more perceptible than that which occurred previously.[25]

Everywhere [one sees] the figures 1.2.3.4. follow each other, the pause at 2. is most often imperceptible: to the ear, this pause is comparable to the hemistich in poetry. Therefore, the pause at 4. is much more perceptible. When there are only the figures 1. and 2., there is no hemistich; rather, these keys follow each other by second. As a result, the lack of rapport between them

[24] Here, Rameau offers a very practical approach to determining the doubtful keys in succession—a hint that Gianotti does not offer. Rameau advocates starting from what is known (the fact that the last pause will be on the tonic of the principal key) and reasoning backwards using all the clues available (signs in the subject and relationships between keys) to solve the puzzle. Like a chain of dominoes, each phrase is dependent upon the preceding. This pedagogical advice not only sheds light on Rameau's understanding of long-term key planning but also indicates his approach to solving musical problems: an approach much like Cartesian geometry where one reasons (backwards) from a given proof or factor that is already known.

[25] Both Gianotti and Rameau use this example but use it to demonstrate different things. Here, Rameau emphasizes the fact that it is the absence of relationship which, in effect, changes the harmonic rhythm of the two-bar units. This is an interesting glimpse of the connection between phrases and harmonic rhythm. While Gianotti makes this point later on at the end of the example section (¶ 13 in this section), he seizes the opportunity in the following paragraphs to stress the determination of keys in the opening phrases.

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requires shorter phrases.

8 Since the two notes at the beginning are common to both the major and the minor key, there would be some doubt about the true key if the perceptible pause which makes itself felt at the fourth measure did not decide in favor of the minor. Moreover, the last note of this same measure, a note that one should regard as the repose of the pause, indicates the key of *A* minor well enough.

I/12/1-f. 25' -Art. V Explication

If the key is doubtful in the beginning, it is no longer [doubtful] at the second perceptible pause D. Moreover, the note B. is like the repose of the pause at A., therefore it is the key of A minor.

I/12/1-f. 25' -Art. V Explication

9 Through a thorough examination of this first phrase, one will find two notes a fourth away under figure 3. These cannot be fundamental notes in the key of *C*: rather, the last of the two notes is the dominant-tonic of the key of *A*.[26]

If one examines the first phrase thoroughly once more, one will find two notes a fourth away there under the figure 3. These cannot be fundamentals in the key of C: rather, the last of the two is dominant tonic of the key of A. In addition, one descends by third to the strong beat there which comes after.[27]

I/12/1-f. 25' -Art. V Explication

10 The key of *G* at letter A., is a passing one; the sharp which announces it is one of the two accidental sharps of the principal key,

The key of G that appears at C. is passing; the sharp that makes it recognizable is there only as one of the two accidentals of the key of A minor, the other [accidental

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[26] Both Gianotti and Rameau use various means to prove their point: the perceptible pause at the fourth measure on A and the notes at a fourth under the measure marked 3. whose fundamental bass is in the key of A—not C. This last clue is an application of the rule that Gianotti mentions in his "Second method" division: "two notes a fourth or fifth away in the subject are most often fundamentals of the existing key."

[27] Rameau adds that the subject descends a third to the strong beat of the next measure. In this situation, it is clear that the subject note is the mediant of the new key, A minor—a confirmation of the key indicated by the notes a fourth away in the preceding measure. This provides an illustration of the two points made under Gianotti's "Second Method" division—see paragraphs 4 and 5.

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the other accidental sharp appears next. Consequently, the pause there is not as perceptible as the one which develops at letter B.

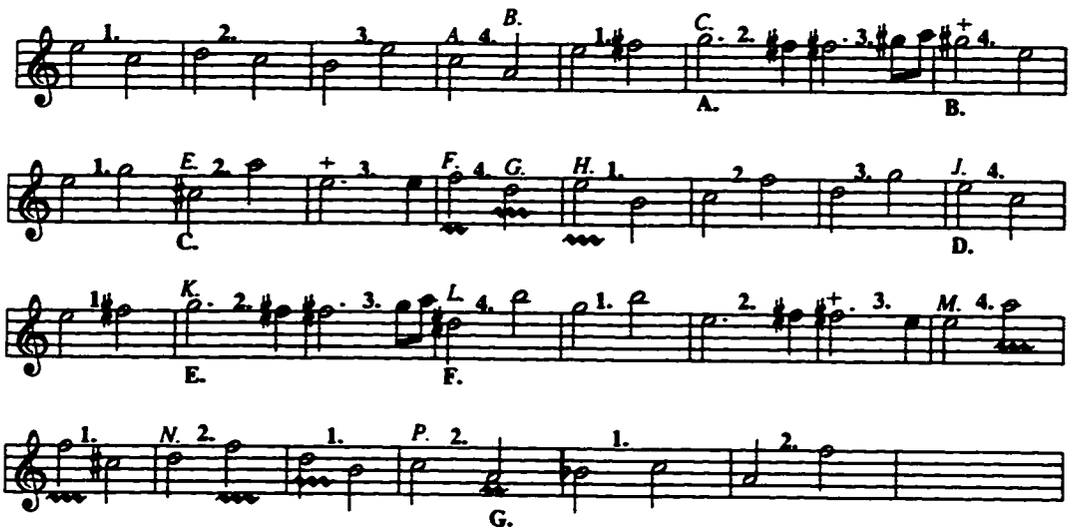
sharp] appears next. Therefore, the pause is not very perceptible at C. and very far from being as [perceptible] as [those] at A. and at D.[28]

11 The key of *D*, a fifth from the principal key, is visible at letter C. It is the same situation as that of *C* which finishes at letter D. This one [key of C] is a second away from that of *D* which precedes it. But, by examining the custodes which take the place of the fundamental bass, one sees the first key [i.e. the key of D at letter C] descend by fifth to *G*, and this one descend a fifth to *C*, through which the rapport required between keys that are relative to each other and the principal [key] is well maintained.

I/12/1-f. 25v -Art. V
Explication

The key of D, fifth of A, is visible and perceptible at E. It finishes at F. like the key of C which finishes at J. Since [the key of C] is a second away from D which precedes it, the fundamental bass D under F. then descends a fifth to G [at] G., which descends a fifth once more to C at H.—through which the rapport required between keys that are relative to each other and the principal [key] is maintained.

---

[28] A portion of Gianotti's ex. 11 appears below with Rameau's guidemarks:

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I/12/1-f. 25v -Art. V
Explication

12 The key of *G*, fifth of *C*, appears at letter E. Next, that of *E* appears at letter F. The latter is the relative minor of *G* major and is therefore a minor third away from the first.[29]

The key of G, fifth of C, appears at K. Next, that of E at L., which finishes at M. and which is the major key relative to G minor.

I/12/1-f. 25v -Art. V
Explication

13 The key of *D*, preceded by that of *E*, appears next and is followed by that of *C*. All three are a second away from each other, but through examination of the custodes, one will find them related among themselves and the principal key.[30] It is still necessary to observe that these phrases are very short, as it should be when keys succeed each other by second.[31]

The key of D at N., preceded by that of E, is followed by that of C [at] P. All three are a second away from each other but are relative to the principal.

14 The key of *F*, fifth from *C*, appears at letter G., from which the example continues through keys visible enough to be to self-explanatory.

---

[29] While Gianotti's example uses the same letter names for the progression of keys here, the progression of modes are the reverse of Rameau's.

[30] Here, Gianotti gives the better explanation of events. The key of E descends a fifth to A, which descends a fifth to D, which descends a fifth to G, which is dominant of C major. This example gives a good illustration of the use of the perfect succession of the fundamental bass (by falling fifth) integrated with the rule for maintaining connection between keys a second away. Note that Gianotti uses the phrase "**related** among themselves and the principal key." This word "related" does not correspond to any relation they may have to each other, rather, it corresponds to the act of maintaining the harmonic connection through fifths.

[31] An illustration of Rameau's earlier point in 12/1—see ¶ 7 in this section.

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FOURTH METHOD

Determining the precise moment where the key changes and concerning the fundamental progression in a similar case

I/12/1-f. 26[r] -Art. VI

1 The key changes only after a pause or cadence on the tonic or on its dominant. It is after this pause that one should arrange the fundamental progression in order to arrive on the tonic of a new key through prescribed routes.

Every new key begins immediately after the fundamental note where the pause ends a cadence. This fundamental note takes the place of a semicolon in the harmonic phrase and it is only after it that one first arranges the fundamental succession in a way that it might be able to lead to the tonic of the new key by the prescribed routes.[32]

2 If the same key continues after the pause, there is nothing new to know.

If the same key continues after the pause, there is nothing more to know.

3 If the key changes, the fundamental note of the pause, whatever it be, should be an implied tonic and one chooses among the various possible routes, the one that fits in order to lead to the tonic of the new key.

The high line [**dessus**][is] that which is already specified—but if it is worth changing, the fundamental note of the pause should be regarded as a tonic from that moment on and one chooses among these various possible known routes, the one that fits in order to lead to the tonic of the new key—always through the given routes.

I/12/1-f. 26[r] - Art. VI

4 One should prefer the most perfect fundamental progressions here as elsewhere. The progression by fifth is the most perfect.

The most perfect fundamental successions should be preferred here as elsewhere; for example, making the tonic descend by

[32] Rameau's linguistic analogy here sheds light on his view of events on a larger level than Gianotti. Gianotti only sees this juncture as an ending, an arrival of the new tonic from the previous fundamental route that has led up to this point. Rameau, however, compares this juncture to the grammatical construction created by a semicolon. Just as the semicolon provides a temporary halt to the flow of the first half of a sentence, yet promises completion in the next clause, the pause of the harmonic phrase is simultaneously a beginning and an end. This view reveals an understanding of connection of harmonic units at the phrase level.

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If this progression is impractical, one can make the tonic which concluded the pause descend a third, or make the dominant which will have ended it ascend a second. Next, one passes to another key.

fifth, from which one passes to another key in order to progress next from dominant by dominant next until the new tonic—nothing is more perfect. Otherwise this first tonic descends by third or ascends by second.

5 This same dominant can be followed by its tonic once more before passing to another key if the subject allows it. *See ex. 12 pl. 4*

It does not matter whether it is the dominant-tonic that ends the pause after which one passes to another key, for [the dominant-tonic] can be followed by its tonic before entering into this other key when the subject allows it.

Whether it be to keep the same key or to change it, as one sees in the fundamental succession, there is nothing new if it is only a matter of choosing the fundamental note that should follow the tonic. When one passes to another key, it requires much more care so that one might progress from this tonic by the given routes to those of the new key.

But as soon as the new key is well discerned, there is no way to make a mistake in the fundamental succession which leads to it without it being visible.

I/12/1-f. 26v - Art. VI

Thus the difficulty only consists in starting the operation over until one finds the best route, and for this purpose, it is necessary to recall all that concerns the fundamental succession. Ex

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Observations on this example

6 The first interval of a fourth in the subject could indicate the key of *C* major, but in addition the second [fourth] should make it lean toward *A* minor; the sharp which follows decides in favor of this last key.

7 The dominant-tonic ends the pause which develops at letter A. This dominant-tonic is followed by its tonic in the following measure, which, in turn, becomes a dominant-tonic of *D* on account of the sharp.[33]

I/12/1-f. 26' -Art. VI Explication

If the first interval of a fourth in the subject makes it lean toward the key of C major, at the same time the second [fourth] makes it lean toward A minor; but the sharp which follows at A. decides in favor of the last [key].

The pause A. at the strong beat of the fourth measure ends on the dominant tonic which is followed by the tonic at B.[34]

This tonic B. becomes dominant tonic of the key of D minor in consequence of the sharp B.

8 The note *B*, without a flat at letter B., announces the key of *C* well enough. In order to arrive there, the tonic *D* descends a fifth to *G*, which passes to the tonic *C* according to the rule already given for keys which succeed each other by second. Notice that in the present case, *G* cannot be a tonic after the tonic of *D* minor—rather, a dominant-tonic. This observation also applies to a similar succession—that before letter G. in the preceding example, and for every other similar case which might occur later on until a dissonance comes to dispel

I/12/1-f. 26' -Art. VI Explication

This key of D minor requires a flat on B. Now, since this B appears at C. without a flat, it is necessary that it be a leading tone as long as a new sharp does not dispute this right. But there are no [new sharps] until the pause D.: therefore the first result is correct and the key of C remains after the pause on D.

This D descends by fifth to G at C., and this G passes in the same way to the tonic C according to the rule already given for keys which follow each other by descending

[33] Neither Rameau nor Gianotti explicitly state that a dominant-tonic must be major in quality while a tonic can be either major or minor; the idea, however, is implied in their approach. Since dissonances are excluded in section I, the seventh of the dominant-tonic is not yet a factor in the function of this chord; the quality of the lower triad, however, becomes the prime method of distinguishing a dominant-tonic from a tonic in these examples.

[34] Rameau's letter B. is Gianotti's C sharp in the fifth measure.

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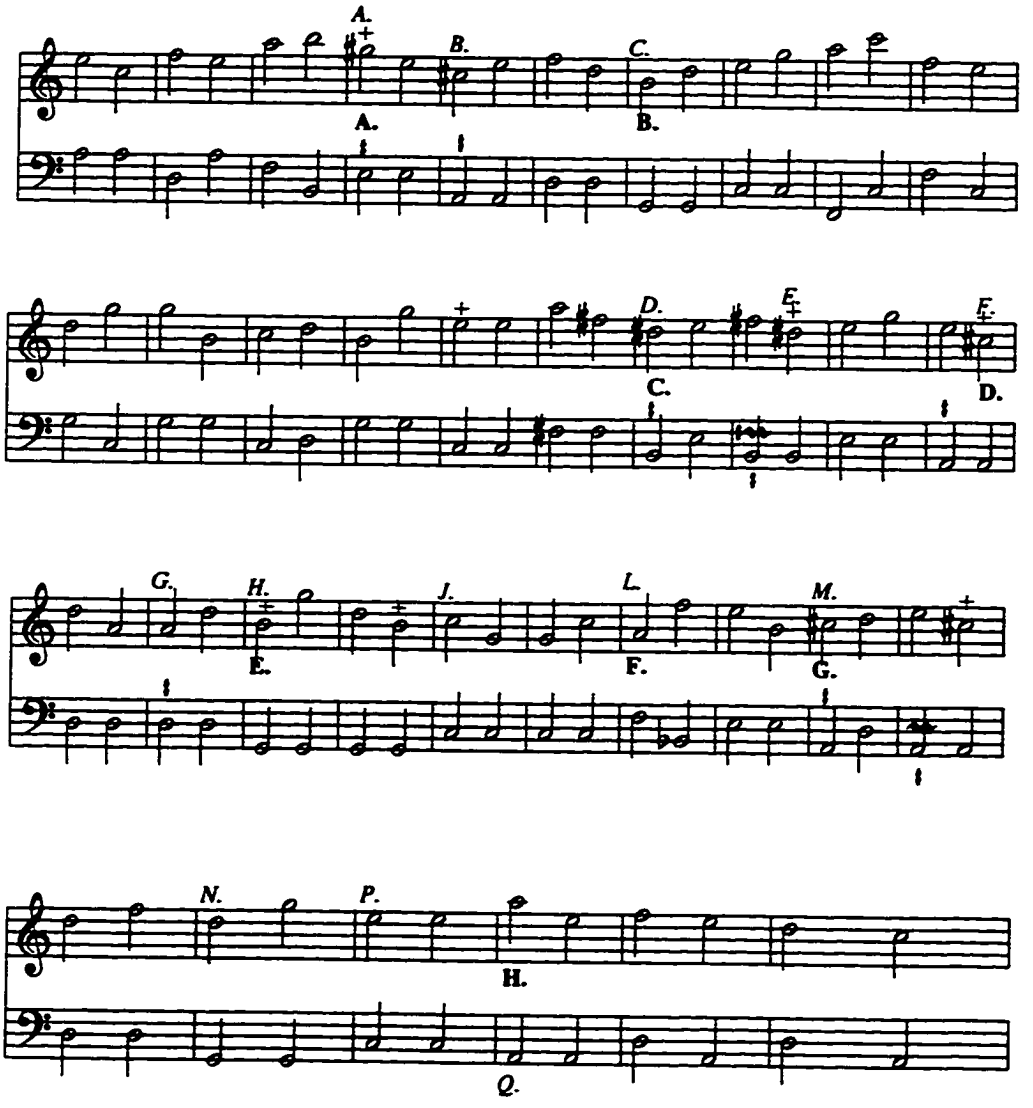
doubt through the addition of a figure.[35] second.[36]

[35] Gianotti points out that the key of G cannot be considered a tonic here, but a dominant-tonic of C major. While Rameau does not say this, he states that this progression follows the rules for keys which follow each other by second. Thus, the motion is from the key of D minor to the key of C major via G major, which maintains the necessary connection by fifth from D, and by fifth once more as dominant-tonic to C. The keys of D minor and G major cannot be related as tonics because of the rule in chapter VI which states that all keys a fifth away from each other are the same quality.

[36] The following is a portion of Gianotti's ex. 12 which includes Rameau's guidemarks:

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9 After having finished the key of *C* on the tonic, one takes a progression of dominants to arrive at that which the leading tone indicates at letter C.

Of the two sharps that one sees next, E. is the leading tone. And, in order to arrive at the key indicated by this sharp, one sees a succession of dominants from the tonic D. until the one which follows E. The key of D minor, recognized by the sharp F., follows that of E; the fundamental bass progresses there by dominants from one tonic to the other—considering that the phrase of the key of E is long enough to be able to give the tonic D a different succession from the one which had first been announced in this case. Moreover, the succession of dominants which appears here should always be felt before any other because it is the most perfect.

10 The same observation and the same fundamental progression [obtains] in order to arrive at the key indicated by the leading tone at D.

11 Before ending the key of *D* on the tonic, one retains it under the syncopation of the subject in order to become the dominant-tonic of *G* there, which is indicated by the perceptible pause at letter E. in the melody.

I/12/1-f. 26' - Art. VI
Explication

The strong beat H. where the subject descends a third announces a pause; thus it is the key of G because it is a fifth from that of D which precedes it. Consequently, it is not advisable to change the fundamental note D at the syncopation G. of the subject, because D changes nature there. From the tonic, it becomes dominant tonic and this suffices in order to avoid the syncopation of the fundamental bass according to that which appears in the seventh lesson.

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I/12/1-f. 26v-27r
Art. VI
Explication

12 After the key of *G* comes that of *C*, and next that of *F*. The fundamental progression is the same everywhere: each tonic becomes a dominant-tonic and the relationships are observed there regularly.

The key of C appears at J. and that of F at L. The fundamental bass follows the same order from one key to the other from G.: the tonic becomes a dominant tonic everywhere and the relationships are observed there regularly.

13 We are encouraged to take the key of *F* at letter F. instead of continuing in *C* for two reasons. The first [reason] is that there is a pause at F. A similar pause is formed only on a mediant or on a leading tone—and the subject note is neither a mediant nor a leading tone in the key of *C*. The second reason is that the key of *D* minor, announced by the sharp at G., is the relative minor of the key of *F* major instead of being a key a second away from *C*. This last reason is more than sufficient when, in the case of a doubtful key, one considers, as one should, the key which follows it and the relations whereby it is led.

I/12/1-f.27r -Art. VI
Explication

The strong beat L., where one descends by third, should make [one] prefer the key of F major to that of C. Even though no sign up to this point indicates a change from the key of C, three reasons should rule in favor of F:
1st [The first reason is] because there is a pause at L. A similar pause is only formed on a mediant or leading tone—and the note L. is neither one or the other there in the key of C.
2nd If one sings the subject up to N. and one suddenly retakes it from H. up to L., one will sing a B flat between the two notes which descend by third at L.[37]
3rd Finally, the key of D minor, recognized through the sharp M., is the relative of F major—rather than being the key a second away from C. This last reason is

[37] Note the reference to the "ear" as a confirmation of key in Rameau's second point.

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more than sufficient when at the occasion of a doubtful key, one has consideration, as one should, for [the key] which follows.

14 Concerning the key of *D* announced by the leading tone at G., one passes to the key of *C* through the prescribed routes, from whence the tonic descends by third to the tonic of the principal key at H., whose key continues until the end.[38]

I/12/1-f. 27[r] -Art. VI
Explication

The key of D, finishing at N., passes to the one of C, recognized through the pause where the subject descends by third to the strong beat P. The fundamental bass then descends by fifth in order to pass from one tonic to the other. The tonic P. passes to the new tonic Q. by descending a third. [This] key continues until the end.

[38] Gianotti neglects to mention that G major comes between the keys of D minor and C major; this is an example of the rule found in ¶ 3 in the "Third Method"—the tonic descends a fifth to pass to the key a second above. Note that both D minor and C major are considered tonics whereas G is a dominant-tonic.

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Editorial Commentary on Chapter VII

Gianotti's seventh chapter is based on two drafts of lesson 12 in "L'Art." Like Rameau, Gianotti breaks down the topic of the chapter, the methods of knowing the key in the subject, into sectional divisions: Rameau calls these divisions "Articles," Gianotti calls them "Methods." The number of these sectional divisions varies in each source. The chart below compares the sectional divisions among the three sources according to shared content:

Gianotti:	**Rameau: 12/1**	**Rameau: 12/2**
First Method	Article I	Article II
Knowing the key through the leading tone	Concerning the leading tone and accidentals that consequently produce sharps, flats, and naturals	Concerning the leading tone and accidentals that produce sharps, flats, and naturals
Second Method	Article II	Article II
Concerning the suspicion that one should have for the leading tone of major keys and the appropriate intervals for revealing the key in the subject	Concerning the doubt that one should learn to develop for the leading tone of major keys	Concerning the leading tone and accidentals that produce sharps, flats, and naturals
	Article III	
	Concerning the appropriate intervals for revealing the key in the subject	
Third Method	Article V	
Knowing successive keys through their relationships	Method of knowing successive keys through their reciprocal relationships	
Fourth Method	Article VI	
Determining the precise moment where the key changes and concerning the fundamental progression in a similar case	Concerning the precise moment where the key changes and concerning the fundamental succession in a similar case	

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Article IV	Article I
Finding the fundamental bass of all pauses naturally, from which follows the knowledge of key	Concerning pauses or cadences

As in previous chapters, Gianotti relies heavily on the first draft for his presentation of material in three particular ways: the content itself, the flow or progression of ideas, and the actual phraseology used to convey these ideas. On the whole, a comparison of sectional headings between the drafts gives a good idea of what is shared between the sources and what appears differently. For instance, the second draft version does not include any information corresponding to Gianotti's fourth division, determining the precise moment where the key changes and concerning the fundamental progression in a similar case. Gianotti, on the other hand, omits the passages that show the reader how to find the fundamental bass of all pauses by singing—passages that Rameau provides in both drafts of lesson 12 as Article IV in 12/1 and Article I in 12/2.

While this chart compares the sectional layout of topics between the three versions, it does not reveal anything about the progression of ideas within each article or division. In the second draft, Rameau gives a clearer picture of the rationale behind the content subsumed under Gianotti's first three headings—content that Gianotti adapts from 12/1. Through the progression of ideas in the second draft, Rameau specifically leads the reader to determine the key through a distinct process. In this process, he uses the clues that are mentioned in the first draft, but shows the reader how to evaluate each clue step by step here instead of introducing concepts in a circuitous way, as in the first draft.

For instance, in the first draft version of Article I, which Gianotti uses as his "First Method" section, four basic rules occur:[1] 1) a new sharp or flat is a clue to a key change (¶ 2), 2) the sharp is considered the leading tone of the new key (¶ 2), 3) the new

[1] For ease of reference, since Gianotti's version is the prime source for this study, all references cite parallel readings in Rameau according to the Guide's sectional organization.

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flat is not the leading tone itself, but points to the note that should have a flat after it in the order of flats, which is then the leading tone of the new key (¶ 2), and 4) two new sharps ascending by step are always the accidentals of the minor key.

These rules seem very simple, taken one at a time. However, the clear progression of rules in the text is not maintained in the example section that follows this first division. There is no problem in ¶ 4 where the notes at A. which are (sharps) simply show the leading tones of the new key. The confusion results when several factors, the presence of both sharps and flats, occur in a given situation. In the preceding text, neither Rameau or Gianotti explain the need to search for other clues that both precede and follow the one sharp or flat that appears.

A principal idea that surfaces through the examples alone is the cancellation of a previous sharp or flat and its control over the situation. The B flat at letter B. in ¶ 4 is one such example: both Rameau and Gianotti tell the student that the C sharp that precedes it rules in favor of D minor, but since the C is natural after the B flat, the flat that follows B in the order of flats, E, is the new leading tone. The same kind of reasoning follows in the examples of paragraphs 8 and 9: in ¶ 8, the cancellation of the B flat (at letter F.) followed by a C sharp (at letter A.) indicates the two accidental sharps of the minor, and in ¶ 9 the cancellation of the previous C sharp taken in conjunction with the cancellation of the previous B flat (at letter F.) makes B the leading tone and C the new key.

Another idea surfaces in the example section without sufficient explanation in the previous text: the relationship of keys that occur one after the other—a topic which is saved for discussion until Gianotti's "Third Method" section and Rameau's "Article V" in 12/1. Yet, in the example in ¶ 5 of the "First Method" division, both Rameau and Gianotti point out that local events, meaning the relationship of keys that occur one after the other, take precedence over their relationship by mode to the principal key, or large scale tonal events.

Rameau's second-draft version, on the other hand, gives a clearer picture of the application of these rules in a given situation. In the second draft, Rameau also presents

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these rules as a means to a specific end—determining the ambiguity of key caused by the fact that the leading tone's appearance as scale step 7 in the major does not manifest itself any differently as scale step 2 in the relative minor. Since the actual note can be the same in either key, Rameau focuses on the context in which this note occurs as an indication of its function (see the five rules in ¶ 2 of the "Second Method" section). Here, Rameau focuses on the sharp taken as an indicator of key. He then guides the student to look for other signs in the surrounding context: if another sharp in the vicinity is the leading tone of the relative minor, the key is the relative minor and the first sharp was only scale step 2 in the minor key (the first rule). Once again he examines the context of the first sharp taken as an indicator in his second rule. The first sharp can indicate either a major or a minor key. Rameau suggests thinking of it as the leading tone of the major and then suggests looking to see if scale step 5 of this major actually appears in the melody. If it does, it is a confirmation of the major key because this same scale step raised by half step would indicate the leading tone of the relative minor. If scale step 5 of the major does not appear at all (rule 3), other options must be undertaken to find the key. Hence, Rameau provides the charming method of singing the fundamental bass of a pause to find its key (rule 3), and looking to the relationship between successive keys (rule 4)—topics covered in Article IV of 12/1 and in Gianotti's "Third Method" section (Article V in 12/1). While this second-draft version does not include the illustrations of many of the complexities of key selection, it does provide a clear methodological approach to determining a key.

Point-to-Point Pedagogy

A particular suggestion for determining keys through the relationship of successive keys in the fourth rule of 12/2 (see ¶ 2 in the "Second Method" section) reflects a pedagogical technique that Rameau uses throughout this lesson and in other lessons of "L'Art" as well. In the fourth rule, Rameau advises looking for a key that would be common to both the key that precedes as well as the key which follows. To use a

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mathematical analogy, this common key facilitates progression from one key to another much like the way a common denominator facilitates multiplication or division of fractions: it provides a common element between factors that seem unrelated on the surface.

Pedagogically, to solve the problem of key here, Rameau teaches the student to direct attention to one particular event in a point of time. He then shows how this particular event relates to what has preceded as well as what will follow. In this way, Rameau applies the idea of liaison or connection, a concept previously limited to retaining common notes between successive chords, to the concept of relative keys.

Recall that this pedagogy is not new, for maintaining a sense of connection between chords requires the ability to perceive point to point relationships between certain specific musical events. In order to retain common notes between chords, for instance, the composer must assess and compare the constituents of one chord against the constituents of a preceding or following chord in order to determine which notes must be retained. Rameau applies this same approach to keys, teaching the student to look at the unknown key as a point between two known factors—the preceding and following keys.

This technique requires considering a single point as the center between two other events—a technique that Rameau introduces early on in his presentation of the tonic and its two dominants. In lessons 4/1 and 7/2, for example, Rameau provided a "snapshot" of the tonic flanked by its two dominants—the subdominant below and the dominant-tonic above (see the discussion in the editorial commentary of chapter 2). By showing the tonic preceded by its subdominant and followed by its dominant-tonic, Rameau focuses on particular point, the tonic, and presents it as the center of two poles.

Here in this lesson, in the realm of key, Rameau applies this way of looking at a problem to both local and long-range events. In the fourth rule of 12/2 (¶ 2 of the Second Method), Rameau shows how to determine an unknown key between two known keys at a local level. In his fifth article of 12/1 (¶ 5 of the Third Method), however, he applies this idea of using what is known to find what is unknown in a slightly different situation: he

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uses a non-adjacent key to solve the first unknown key. If the first key cannot be determined through the usual means, Rameau suggests passing to the third key that occurs after this point. Using keys like a chain of dominoes, Rameau says that the third key will determine the second; the second, in turn, will determine the first. This is yet another example of the application of reason to the solution of a problem. Determination of the correct solution in these cases relies more on the powers of reason than sense.

Sense versus Reason

Throughout lesson 12 in both drafts, Rameau uses both reason and perception (through singing) to determine different kinds of musical solutions. Certain situations, such as finding an unknown key through relationships to known keys, rely more on the type of reasoning used in geometric proofs—building a case or constructing possible solutions from a known factor as a given. Other situations rely more on sensory perception of musical contexts ascertained through experience, such as hearing common stylistic musical formulas applied over and over again in various pieces in the course of a lifetime. In lesson 12, Rameau accesses the listener's natural perception of musical formulae through singing. He advocates singing as a pedagogical technique in two specific cases: 1) to find the fundamental note of a pause (see ¶ 1, Third Method and the passages on singing from Article IV of 12/1 and Article I of 12/2 in Additional Sources to Chapter IV, pp. 200-4) and 2) to imagine the sharps or flats that occur between two fundamentals a fourth or fifth away in the melody (see ¶ 5, Second Method).

Although both techniques share the procedure of singing from one point to another and repeating the process to confirm the result, each of these approaches connects singing the scale with the fundamental bass in distinct ways. To find the fundamental bass of a pause, Rameau has the student sing the preceding phrase up to the point of the pause and then advises dropping the voice below the actual note of the pause. The interval formed from dropping the voice a third or fifth below the pause is the fundamental bass; the

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interval formed from dropping a fourth or sixth below the pause proves the note of the pause to be the fundamental bass itself. When the two fundamentals appear in the melody, however, Rameau directs the student to sing the preceding phrase including these two fundamentals up to the pause following the last fundamental. He also recommends retaking this procedure and filling in the steps between the fundamentals to imagine the sharps or flats that would naturally appear in the context to indicate the true key. These sharps or flats then act as clues to support the preference of one of the fundamentals over the other. Thus, in each case, the student learns to find the key by finding the ruling fundamental in a given musical context.

Pedagogical Perspectives

As mentioned in the editorial commentary of chapter 2, Rameau integrates both vertical and horizontal elements from the three scales introduced in the first lesson. In this lesson, he applies both horizontal and vertical approaches in pedagogy. The fundamental bass can either be imagined as a horizontal phenomenon or as a vertical phenomenon depending on the context—as a horizontal line when considering its route alone, and as a vertical structure when it is the root beneath the chord it supports. When Rameau teaches the student to sing the fundamental bass of a pause, he does so by having the student utilize a horizontal technique—singing the melodic phrase up to the point of pause. Only after this point does he instruct the student to retake the phrase and sing the interval below the pause, a vertical component found in either the scale by thirds or by fifths (or their inversions, sixths or fourths).

By singing from one specific point to another point, the composer picks up contextual clues along the way by traveling in one specific direction—from left to right. In fact, since the singer can only travel one direction at a time, Rameau advises retaking the approach from the starting point to the ending point in order to confirm the solution. This

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progression in one direction is akin to the way we hear music, for a piece evolves or unfolds in a single direction from start to finish.

Unlike this approach, which depends on singing a line in one direction, the course of determining an unknown key requires looking at musical events in a different way. The rational approach looks at a musical event as a specific point in a continuum; it then evaluates this point in terms of what has preceded and what follows. In this lesson, this particular approach not only influences the choice of successive keys, it underlies the very first procedure given in the examples of the First Method section—determining a key in the face of multiple accidentals in the musical surface. The confusion in the examples stems from the lack of explanation, not procedure. When Gianotti and Rameau advise the student to isolate a sharp as a leading tone and then look for accidentals that both precede and follow this leading tone, they are using the very rational approach that Rameau applies to key recognition on many different levels. Just as singing is tied to the aural perspective that progresses from one point to another in time in one direction, the rational approach is tied to the visual perspective afforded by a score which facilitates locating a musical event as a point that can be evaluated from two different directions in the continuum.

Linguistic References and their Significance

Rameau makes a powerful opening statement in 12/1: "Melody is a harmonic discourse whose phrases are distinguished with the help of frequent pauses which occur there."[2] Throughout both drafts of lesson 12, Rameau periodically likens music to discourse. His references not only tie pauses with forms of punctuation such as the semicolon (see ¶ 1 in the "Fourth Method"), but with syntactical elements such as the hemistich (see ¶ 2 before the "First Method" and ¶ 7 in the "Third Method").

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[2] *Le chant est un discours harmonique. dont les phrases se distinguent a la faveur des frequent repos qui s'y rencontrent.* (I/12/1-f.19v-20r)

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By using these linguistic analogies, Rameau reveals an understanding of cadential events at various levels. For instance, in his first article of 12/1, Rameau states:

> Much like discourse, music has phrases. The end of each phrase is marked at each pause. The less pauses are perceived, the more [phrases] are linked and form a sense of connection; the more pauses are perceived, the more [phrases] are ended.
>
> (I/12/1-f. 22^{v}-23^{r} -Art. I)

In this statement, Rameau associates the perception of pauses with the connection of phrases. These pauses can either serve to mark the phrases or link them. Rameau uses a form of the verb *lier* ["to connect"] in this passage—a term that he used previously to describe the connection of tones common to successive chords. Even in this passage, through a linguistic reference, Rameau applies one idea, the idea of connection or liaison, on both vertical and horizontal planes. However, this statement is far more complex than it first appears, for harmony and melody are intimately wedded in Rameau's view of cadential events.

In the continuation of the passage quoted above, Rameau uses the hemistich to describe the pause at the two-measure juncture of a phrase (see ¶ 2 preceding the "First Method" division). Since the hemistich is half of a line of verse, the meaning of its content is incomplete by nature, and inherently open-ended. By using this analogy, Rameau suggests that the pause at the two-measure grouping is incomplete when compared to its four-measure counterpart. From this comment, the student sees that pauses of phrases occur at duple groupings of measures and that these two kinds of pauses have two different kinds of harmonic weight; they are either inconclusive, as the hemistich implies, or conclusive.

In Article V of 12/1 (¶ 7 of the "Third Method"), Rameau tells us more about the pause at the second measure of a phrase: he says that it is less perceptible than the pause at the fourth measure of the phrase. Apart from its use for determining phrases through

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singing or listening, though, this fact does not reveal much more about pauses than the first statement indicated. However, in this same passage, Rameau also refers to the hemistich in a more specific context. He says:

> When there are only the figures 1. and 2., there is no hemistich; rather, these keys follow each other by second. As a result, the lack of rapport between them requires shorter phrases.
>
> (I/12/1-f. 25^{v} -Art. V)

Here, Rameau advises against using the hemistich in this situation for a very good reason: it would maintain an open connection, a connection that ordinarily occurs between two similar events. Since the successive keys that occur in two-measure groupings are not related, their syntax should be closed, not open. This kind of pacing usually occurs in sequences where there is repetition of a pattern in neighboring keys a second apart. The result is two-bar harmonic rhythm where four-bar harmonic rhythm is the norm and the effect on the musical surface is a quickening of the flow of harmonic activity. Rameau's application of the linguistic term to a specific musical context shows that he was very much aware of the impact of closure on many different levels.

The last example involves comparison of the fundamental note at the pause of a cadence with the function of a semicolon in a sentence. Through this particular comparison in the sixth article of 12/1 (see ¶ 1 of the "Fourth Method"), Rameau points to the fundamental of the pause as an ending of what has preceded, as well as the beginning of the new segment of the phrase. Like the hemistich, the semicolon simultaneously maintains a brief respite while facilitating a connection between two similar parts which are each incomplete on their own. Here, though, Rameau speaks of closure in the harmonic phrase in terms of key. This idea involves an application of cadences in one key as components that either foster or discourage closure at the level of another key.

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Though Gianotti captures the basic tenets of Rameau's theory and actually expresses them in an organized format, he is not the teacher that Rameau is. Rameau not only connects ideas on many different levels, he actually uses similar pedagogical techniques in the face of different musical problems. While Gianotti leaves no trace of personal methodology in his approach, he is very careful to connect ideas from chapter to chapter (such as, in the Fourth Method section, the application of the tonic routes from chapter 5 to the discussion of where the key changes). Through Gianotti's attention to detail and Rameau's explanation of related ideas, the student receives the best of both worlds.

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CHAPTER VIII

Concerning the possibility of passing from one tonic to another through all the consonant intervals, and concerning foreign or passing tonics in the existing key

Gianotti:

1 Since a tonic can pass to another tonic through all consonant intervals, it follows that the dominant-tonic, the subdominant, and the superdominant can be implied tonics because all these intervals are consonant.

2 However, the subdominant of a minor key is excepted from this rule. It can never be an implied tonic after its tonic. But if the key of this subdominant asserts itself at the same time that it follows its tonic, at that moment one gives it [the tonic] a major third. The subject is sure to give it in this case, as in the fifth measure of the last example [Ex. 12, m.5], where the tonic, upon ending its minor key, received a major third in order to enter into the key of its subdominant. In this way a tonic becomes common with both its own key and that which

Rameau: draft 1[1]

I/13/1-f. 27r

Since a tonic can pass to another [tonic] through all the consonant intervals, it follows that the dominant tonic, the subdominant to which the tonic passes, as well as the dominant to which [the tonic] descends by third can [all] be implied tonics because the progressions are all consonant.

I/13/1-f. 27r

If the key of the subdominant asserts itself at the same time that it follows its tonic, at that moment one should suppose a major third to this tonic. The subject is sure to give it in this case when the third [is] so present, as at B.of the last example, where the tonic, upon ending its minor key, received a major third B. in order to enter into the key of its subdominant. By this means, a tonic becomes common to its key and to the one which follows it—a question that we will discuss shortly.[2]

[1]There are only two columns in this chapter. The reader is reminded that the lack of a third column reflects the absence of a corresponding source in draft 2 of "L'Art."

[2] In "L'Art," this passage follows the passage parallel to Gianotti's ¶ 3.

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follows—an issue which we will discuss in the next chapter.

3 If the subject did not provide this major third, as can happen, and one were obliged by necessity to render the minor subdominant a tonic, one would be forced then to split the tonic which preceded [the subdominant] into two [rhythmic] values, supposing the major third to the second value. It is understood that neither third would appear in the subject; for in that case one would be forced to conform to what it would require, without the proposed substitution having taken place.

I/13/1-f. 27ᵛ

However, if it appeared necessary to render the minor subdominant a tonic in order to pass into its key or another, one would first only have to split the tonic which precedes this subdominant into two values. One would suppose a major third to the second value. It is understood that neither third will occur in the subject; for [in that case] one would be forced to conform to [the melody], without the proposed supposition having taken place.

4 The most obvious case of using a foreign or passing tonic is when one has exhausted all the means indicated up to the present in order to pass from one key to another. In this case, one can introduce up to three [passing tonics] by descending thirds, but it is absolutely necessary that the last one used be common to its key and to the key into which it enters. Thus, it becomes either a dominant or subdominant there.[3]

I/13/1-f. 27ᵛ-28ʳ

If one can go no further after having exhausted all the means of passing from one key to another through the given routes, this is exactly the case where one must introduce a foreign and passing tonic after the tonic of the key that one has left. One can even introduce up to three [passing tonics] there when they descend by third, but it is absolutely necessary that the last [passing tonic] used be common to its key and to the one in which it enters. That is to say, it is the subdominant of it or it serves as dominant: to either pass first to the new tonic

[3] Both Gianotti and Rameau mention the fact that the last passing tonic should be either a subdominant or a dominant of the new key but neither talks about the role that the subdominant plays in pointing out the new key. Rameau does mention that this last passing tonic (either a subdominant or dominant) can either pass directly to the new tonic or eventually pass to a new tonic through a chain of dominants. In this case, the identification of key through this procedure still seems a bit nebulous because the last passing tonic is not a dominant-tonic, which would identify the key more directly.

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or to arrive there through a succession of dominants.

Even though the same key continues, one can use one of the two tonics foreign to this key after its own tonic. The latter can be woven in there. But if three [passing tonics] occur by descending thirds, the last would necessarily be a dominant tonic.[4]

5 A note can receive different foreign tonics in the fundamental bass when the subject provides a note which lasts for many beats or many measures.[5]

I/13/1-f. 27r-v

6 In addition, a tonic can also ascend by third to reach another tonic. For other situations, consider all of the possibilities in moderation without having to resort to extremes. *See example 13, pl. 5.*

In addition, the tonic can still ascend a third to another tonic. The subdominant of a minor key is excepted from this rule. It can never be an implied tonic after its tonic.[6]

I/13/1-f. 27v-28r

One must not misuse all these possibilities. On the contrary, one should make use of them only when the need arises. Little by little, taste develops. It is in [experience with] the basso

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[4] Rameau distinguishes the use of foreign tonics in two separate situations here: to stay in the same key or to change key. When there are three foreign tonics descending by third in a row, the last must be a dominant-tonic to change key. Unfortunately there is no corresponding example in the illustration at the end of the chapter. However, the first illustration in ¶ 7 shows a situation where passing tonics do not change the tonal center.

[5] Only Gianotti makes this point in the text of the lesson. Both Gianotti and Rameau provide an illustration of this idea in the first example of this chapter—see ¶ 7.

[6] In "L'Art," Rameau places this statement in his first paragraph, the material that appears alongside Gianotti's first paragraph in this chapter. See the editorial commentary of this lesson for details on the significance of this original ordering.

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continuo that one will become more aware of situations that merit a seemingly questionable fundamental bass to one recognized as the most legitimate.

Observations on this example

I/13/1-f. 28[r]
Explication

7 If one retained the principal tonic under the first four measures, the melody of the subject would seem insipid, but through the variety of tonics at A. and B., it will be more pleasant. The last of these becomes the subdominant of the principal tonic.[7]

Though the same key continues until C., instead of retaining the same principal tonic under the first four measures, one changes it at each measure; descending a third to A., then from A. to B., where B. becomes subdominant of the principal tonic which follows it.

The melody of the subject will appear insipid by retaining the principal tonic under the first four measures, but through the variety of the tonics A. and B., it will be more pleasant—how true it is that harmony contributes to the beauty of melody.

I/13/1-f. 28[r]
Explication

8 After having ended the pause on the dominant-tonic at C., one passes to its tonic, and from there to the key of *C* through a progression of dominants.

The dominant tonic which ends the pause under the leading tone C. is followed by its tonic at D.[8] From this one passes through a succession of dominants to the key of C, the key which is declared by the natural of the subject at G, which descends a third to the mediant on the strong beat.

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[7] Both Gianotti and Rameau use this example to show that passing tonics can provide variety when a subject is somewhat stagnant. Only Gianotti introduces this idea in the body of the chapter.

[8] Rameau's letter D. is the note after Gianotti's C.

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I/13-f. 28r

9 The notes at letters D., E., F., and G . are all passing tonics. The key of *D* at letter F. is foreign here, that is to say, it is not the same quality as the original key because the sharp in the subject is only the first of two accidentals in the key of *A* minor. But then this key maintains the relationships which are all a fifth away from each other.[9]

The fundamental notes E.F.G.H. are all tonics of passing keys. The key of G. is foreign there because the F sharp in the subject is only the first of two accidentals of the key of A minor. But then this key maintains the reciprocal relationships which are all a fifth away from each other.

I/13/1-f. 28r-v Explication

10 The dominant tonic ends the pause again after G., and is followed by its own tonic at H., from which one progresses through a succession of dominants to the tonic at I. in consideration of which one disregards the signs of the subject which could indicate another fundamental bass.

The dominant tonic J. ends the pause again under the leading tone and is followed by its tonic L. though the key changes.

The sharp M. would be bent for the key of G major, if one did not see a D sharp succeeding it before the pause. [This D sharp] then indicates the key of E minor which is relative to G major. But shouldn't the key of A minor, from which one exits, make [us] suspect that E [would follow] as a consequence of their relationship [by fifth]? And shouldn't this [explanation] at least suffice to see whether the continuation of the subject conforms to it [?] A

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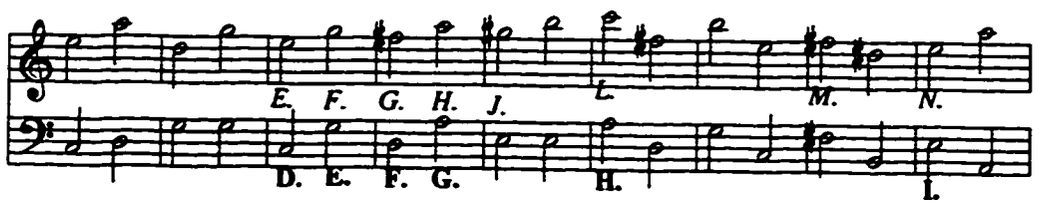
[9] The second line of Gianotti's ex. 13 with Rameau's guidemarks:

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progression of dominants [occurs] from the tonic L.to the tonic N., [for] which one disregards the signs [in the subject] which could point to another fundamental bass.

11 With the absence of sharps which had previously been in the key of *E*, the sharp at letter K. is sufficient to indicate the key of *D*, which arrives via a chain of dominants.

The lack of sharps after the tonic N. over the same notes which had them previously in the subject, added to the sharp which comes after, sufficiently proves the key of D to which one arrives once more through a progression of dominants.

I/13/1-f. 28^{v} Explication

12 The melody passes to the key of *C* from the key of *D* minor. The *B* natural at M. indicates that key well enough, and moreover, there are no sharps. These two keys are a second away from each other and do not have any relationships. But the foreign tonic at L., where there is an ascent by third, connects them: because the key of *F* is the relative major of *D* minor and becomes the subdominant of *C* at the same time.[10]

Concerning the key of D minor at O., one sees the subject pass to C major because the B at R. does not have a flat and moreover, one sees no sharp. So this B is the leading tone.

I/13/1-f. 28^{v} Explication

In following the subject from O. to R., one sees no means of giving the fundamental bass its determined succession. This is particularly where the foreign and passing tonic is a great resource: not only does one observe the determined progression through this means but the reciprocal relationships

[10] Gianotti calls attention to the fact that the fundamental succession by second (from D to C) has no liaison or connection. He also hints at their disparate relationship by mode. Rameau, on the other hand, does a better job of showing how the passing tonic (F major) not only connects the key relationships in the fundamental progression but also provides a connection of quality between the disparate modes of minor and major (maintaining "reciprocal relationships" between D minor and C major).

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between successive keys as well.[11] If the keys of C and D are a second away from each other, the key of F that P. gives connects them. [F] is the relative major to D minor and becomes subdominant of the tonic Q. of C major. What is more, the tonic O. is not obliged to continue through the strong beat of the measure which follows it through this means.[12]

I/13/1-f. 28v-29r
Explication

13 The dominant-tonic at N. is an implied tonic, since it is not followed by its own [tonic]. Thus one passes from the key of *C* to the key of *E* through [passing] keys related by fifth.

The dominant tonic S. is an implied tonic and the case of profiting from this knowledge is urgent here because the subject gives no sign of a change of key and therefore the dominant tonic S. cannot be followed by its tonic. In imagining it a tonic, however, one directs it imperceptibly through the reciprocal relationships up to the key known through the sharp

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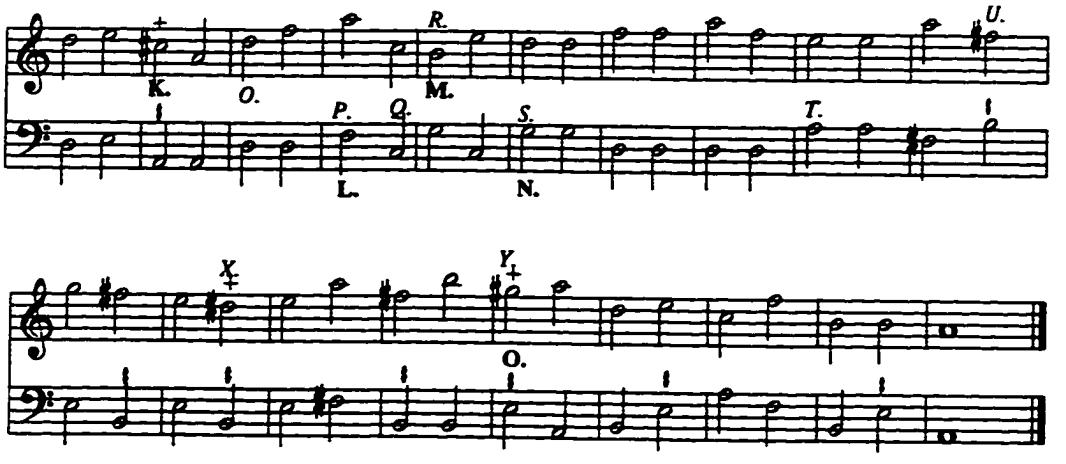
[11] The third and fourth lines of Gianotti's ex. 13 with Rameau's guidemarks:

[12] Rameau adds that as a bonus this passing tonic prevents the student from retaining the fundamental D under the A in the melody at letter L. (Rameau's *P.*)—thus avoiding a possible syncopation of the fundamental bass from the previous measure.

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X. One should judge the sharp at U. like the one at M. previously. Moreover, the impossibility of making the tonic follow its dominant tonic S. should make [us] suspect the key of A minor, [a key which is] relative to C major, which cannot continue—for the subject generally allows ambiguity only between two keys with similar relationships. It is therefore the key of A minor that decides in favor of that of E, threatened by the sharp U. and confirmed by the sharp X.

In this way, one passes from the key of C at Q. to successive keys which are all a fifth away from each other until the key of E because after the dominant tonic S., each fundamental note is an implied tonic: where one sees the tonic T. descend a third to a dominant which leads to the tonic E.

14 Although this key of *E* is minor, it finishes at O. with a major third in order to submit to the tonic of the new key which follows it—this is the topic of the next chapter.

I/13/1-f. 29[r] Explication

Although it is minor, this key of E ends at Y. with a major third in order to submit to the tonic of the new key which follows it—this is the subject of the following lesson.

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Editorial Commentary on Chapter VIII

"*How true it is that harmony contributes to the beauty of melody.*" Who but Rameau would pen these words? While this statement could very well serve as the topic sentence of a chapter or even the opening line of a treatise, it hails from an example in a relatively small lesson in "L'Art,"lesson 13/1, which concerns various kinds of tonics—implied tonics and passing or foreign tonics. This is the lesson which is the sole source for Gianotti's eighth chapter.

That this characteristic expression of Rameau's musical beliefs lies buried in the midst of examples should come as no surprise to the reader at this point. Its placement mirrors the appearance of other scattered nuggets of information which reveal the true import of the topic stated as the chapter heading, for neither Gianotti nor Rameau explicitly state the rationale for using passing tonics in the main body of the chapter; they only advise their use when all other means have been exhausted (see ¶ 4). Neither author explains the relevance of the procedure for tonicizing the minor subdominant either; they state that this will be covered in the next chapter. Unfortunately, this lesson provokes many questions that are not answered satisfactorily. The student is forced to read between the lines to find out specifics such as how a passing tonic differs from a dominant or why a passing tonic can also be called a foreign tonic. Even though some answers can be deduced from the musical examples at the end of the chapter, it is Rameau's asides that help to shed light on many of the particulars.

Although Gianotti does not often depart from Rameau's thirteenth lesson in content, he sometimes alters the presentation of ideas. His version improves upon Rameau's in two instances. In ¶ 12, it is Gianotti's condensation of Rameau's detail that reveals the musical illustration much more directly. And in ¶ 3, it is Gianotti's ordering of ideas that makes better pedagogical sense: he alerts the reader to the exact melodic context for rendering a minor subdominant a tonic before providing the details on the actual procedure whereas

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Rameau introduces the procedure first before describing the appropriate melodic context for its use. Through this particular ordering of ideas, Rameau gives precedence to the underlying operation rather than the logical unfolding of details.

Though Gianotti's rendition in these two particular cases betters Rameau's presentation in "L'Art," in general, his abbreviation of Rameau's additional material is more of a minus than a plus, for it is through these very details that Rameau connects ideas on many levels. For instance, Gianotti and Rameau both reveal an underlying use for passing tonics (i.e. tonics which progress to other tonics via consonant intervals) in the text of the first example (see ¶ 7) when they point out that the melody would be "insipid" if the principal tonic were retained throughout the first four measures of the example. What they are really saying is that passing tonics can be used for variety. Rameau, however, goes one step further than Gianotti. Additionally, he tells us that the same key remains in effect through letter C. (8 measures) and that the last passing tonic (at B.) becomes a subdominant of the principal tonic which follows it. By calling attention to the fact that the harmonic events up to letter C. remain under the aegis of the principal key, Rameau points out the use of passing tonics as a technique to extend a key to a cadential point.

A hidden organization to Rameau's scattered presentation of this material emerges, for Rameau views passing tonics in terms of how they foster larger key relationships. Connection **[Liaison]**, a concept that Gianotti introduces only in chapter 9, is at the heart of this view. By focusing on key, Rameau is able to show the application of passing tonics in a given musical context and their interaction with other elements such as dominants to either maintain the prevailing key or establish a new key. Through this same focus, Rameau also reveals a hierarchical understanding of musical events at several different levels—from events occurring at the large level of the principal key to more local events occurring at the phrase level, measure level, and note level. Along the way, Rameau also provides insights that show how an element's somewhat flexible terminology is dependent upon its function in a specific musical context.

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Function & Terminology

There are three different types of tonics mentioned in this lesson: the implied tonic, the passing tonic, and the foreign tonic. Unfortunately, neither author provides a clear definition of each tonic type. The reader only comes to an understanding of each kind of tonic through a careful study of context in the accompanying examples. It is the context that sheds light on the true nature of each of these tonics, for it is through contextual clues alone that Rameau reveals the slightly different function of each kind of tonic.

Terminological confusion ensues soon after the opening paragraph. In the first paragraph, both authors cite specific fundamentals as implied tonics: the dominant-tonic, the subdominant, and the superdominant a third below the tonic. However, included in this "definition" of an implied tonic is a notion of the tonic as a fundamental that "passes" to another tonic through consonant intervals only. In the next paragraph, Rameau and Gianotti say that a minor subdominant can never be an implied tonic after its tonic. What they do not explain is that in major, the tonic chord can conceivably support a dual function, acting simultaneously as tonic in the previous key and dominant-tonic of the new key, the subdominant. In short, in major, the tonic can function as a pivot chord. In minor, however, the quality of the tonic chord does not naturally support a dual function as a dominant-tonic of the subdominant, therefore it must be split artificially into two separate values, the second of which functions as a dominant-tonic. If the minor tonic did not become a dominant-tonic through the alteration of its third in the second value, the minor subdominant that follows would remain a subdominant in function reflecting the motion back to its minor tonic. It is therefore the quality of the chord—not its intervallic distance from the tonic in this particular case—which determines both its function and nomenclature in a given context. From this seeming diversion in the second and third paragraphs then, we learn that the implied tonic, unlike a dominant, enjoys the same rights as a traditional

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tonic: it progresses to another tonic a consonant interval away and it has the potential for being a temporary key center itself.

Both Gianotti and Rameau also use the terminology "passing tonic" and "foreign tonic" interchangeably in paragraphs 4 through 6. However, in the example section, the terminology is not used as loosely. The distinctions between these particular classifications can only be made in the context of key. For this reason, these tonic types will be discussed in the next section which follows. Further, neither author categorically explains the difference between the passing tonics introduced in this chapter and the simple dominants introduced as early as chapter 5. Through subtle clues in the examples, though, an examination of function of these elements in musical contexts clarifies some of the terminological problems in this chapter.

One clue in ¶ 13 helps to shed light on the difference between a dominant-tonic and an implied tonic. Here both Gianotti and Rameau state that the dominant-tonic at N. (*S.* in "L'Art") is an implied tonic because it is not followed by its tonic. Thus, the dominant-tonic in this instance becomes somewhat an end itself, rather than a means to an end in accordance with its changed status as tonic. Additionally, Rameau explains that as a tonic, it can progress to other tonics in its travel to the key of E at letter *X*.. Though Gianotti conveys the basic idea succinctly, his statement does not have the impact of Rameau's because Rameau has taken great pains to point out the function of specific fundamentals throughout the lesson.

Rameau's different view of matters starts in the very first paragraph of the chapter. Here Rameau presents the passing tonic in a context of activity whereas Gianotti just names the degrees. Rameau actively describes the tonic passing to the subdominant and to the dominant which lies a third below, whereas Gianotti passively refers to them by name only—the subdominant and the superdominant. Similarly, Gianotti says "[they] can be implied tonics because all these intervals are consonant," whereas Rameau says that "[they] can be implied tonics because the progressions are all consonant." Rameau paints the

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picture of active participants here: not just static points of rest. He also calls attention to the fact that the action is in the fundamental succession. Thus, in ¶ 4, Rameau describes using up to three passing tonics (descending thirds in this case) in a row in order to reach the next point of arrival achieved by fifth. What Rameau subtly reveals in the examples is a notion of passing tonics as motion towards goals and implied tonics as temporary goals themselves. The tricky notion is that the implied tonic can be both a temporary point of arrival (as at N./S.) and a means of passing to the next definitive point of arrival at the same time—hence the terminological problem.

Through these subtle means of description, Rameau reveals his awareness of the function of these passing tonics. The introduction of the passing tonic that ascends by third is yet another example of his insight into these matters. In "L'Art,"Rameau includes the presentation of this element along with the other passing tonics in his first paragraph of the lesson:

> Since a tonic can pass to another [tonic] through all the consonant intervals, it follows that the dominant tonic, the subdominant to which the tonic passes, as well as the dominant to which [the tonic] descends by third can [all] be implied tonics because the progressions are all consonant.
> (I/13/1-f. 27r-v)

Gianotti, however, does not mention this idea until the sixth paragraph, and then gives no explanation of any kind. In Gianotti's ordering, this idea seems an afterthought or a misplaced fact of seeming insignificance. Rameau's placement of this idea coordinates intervallic distances in the fundamental succession in both directions from a central location—the tonic. He presents the passing tonics by fifth first—above the tonic (the dominant-tonic) and below the tonic (the subdominant)—and then introduces the passing tonic a third below the tonic (the superdominant) and the third above the tonic (the mediant). As in lessons 4/1 and 7/2, Rameau is consistent in presenting the triadic components of the third and fifth in both directions radiating from the tonic center. In this

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way, he also subtly highlights the primary tonic while presenting the passing tonics in a subsidiary fashion.

Other distinctions between implied tonics and simple dominants are not quite as clear. However, some conclusions can be drawn by reading between the lines and consulting the musical examples. In ¶ 8, Gianotti and Rameau point out that the key after the dominant-tonic at letter C. (A minor) progresses to C major through a succession of dominants. These dominants do not deviate from the descending fifth pattern. The succession of dominants mentioned from letter H. to I. in ¶ 10 follow suit. Indeed, in the first article of chapter 5, Gianotti states that "the progression of these dominants should be the same everywhere: they should all descend by fifth."[1] The notes at letters D. E. F., and G. are called passing tonics—and these progress by ascending fifths.

There is one more type of dominant—the kind that does not descend by fifth. Recall the tonic routes in chapter 5. Tonics can descend by third to a dominant or ascend by second to a dominant. Thus, there are two more possibilities for terminological confusion. However, only the descending third is a consonant route and thus a possibility as a passing tonic; the ascending second is disqualified as a passing tonic by its very nature as a non-consonant distance.

Key

Through the musical examples, Rameau reveals a keen understanding of music at various structural levels. In subtle ways, he shows that all fundamental notes are not created equal. In the very first example cited above, the first four bars of example 13 (see ¶ 7), Rameau shows how these passing tonics maintain the principal key of A minor. Thus, these passing tonics alone provide a temporary surface motion in a relatively static harmonic area. In Schenkerian terms, these passing tonics provide foreground activity within a background prolongation of tonic harmony. But they also often serve to change

[1] Chapter 5, Article I, p. 14. (see p. 228 in translation)

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the key. Rameau's version of the example in ¶ 13 presents a progression of keys from G major to E minor through a combination of implied tonics and dominants. Gianotti sidesteps the issue by saying that the passage between these two keys is achieved "through [passing] keys related by fifth." The keys progress in this order: C major-G major-D minor-A minor-F# minor-B major-E minor.

Rameau starts with the key of G major at letter N. (S. for Rameau). As already mentioned, he designates this key an implied tonic because its function as dominant-tonic is thwarted by the appearance of D minor after it, instead of its tonic, C major. He also says that the key of A minor, the relative to C major, is suspect here. While the key of A minor seems a red herring, it is a significant part of the puzzle. If the key of G major were indeed followed by C major, A minor could follow as a relative minor of C major. The D minor key following G major causes some trouble in this regard. On the local level of key progression, the D minor key is also problematic because it is not the same quality as the previous one (G major) a fifth away. However, Rameau points out that the next key, the key of A minor, "decides in favor of" E minor. Casting all melodic cues aside, the keys of A and E, a fifth away, follow the rule of the fifth relation by virtue of being the same quality.

In this example, Rameau mentions some keys directly and refers to others only indirectly. He also refers to all the fundamentals as implied tonics except the dominant where the tonic descends a third. In the diagram below, the keys mentioned directly by Rameau appear in boxes.

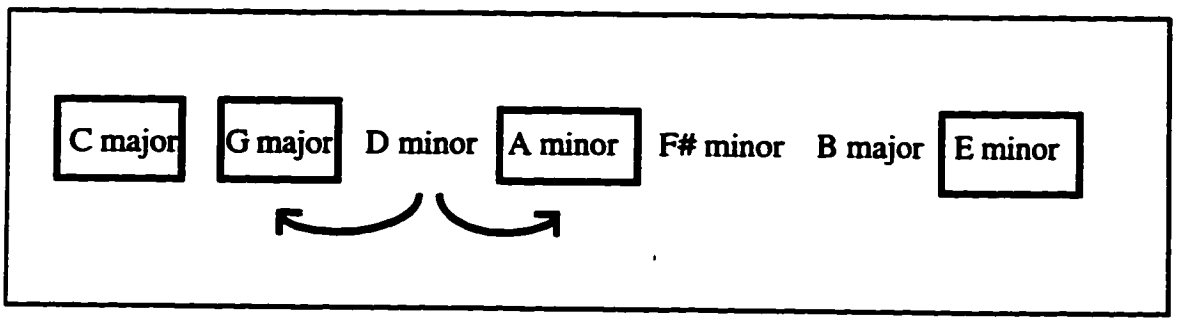

Figure 8- 1: *Diagram of key center references in Rameau's example*

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The diagram highlights the keys a fifth away that follow the rule (i.e., that are the same quality). Through this progression of keys, Rameau not only shows how to use a succession of implied tonics to change key, he simultaneously points to the importance of continuity between keys that follow each other successively and between keys that are further apart, such as A minor and E minor. Although Rameau does not call attention to the fundamental D here, it maintains a sense of connection between keys of different modes purely through its fifth relationship, that is, its lying a fifth away from G on one side and A on the other.

Rameau also relies on the reasoning used in determining key relationships (lesson 12) to clarify the function of a particular type of passing tonic in a specific musical context. Before he does this, though, he sets the stage for this kind of presentation later on by first reviewing (from lesson 12) subject clues to the determination of key. In paragraph 8, he not only points out the chain of dominants from the key of A minor (at letter C.) to the key of C major (Gianotti's D.), but also draws the reader's attention to clues of key change in the subject—the cancellation of the G sharp, and the descent of a third to the mediant of C major on the strong beat of the measure (Gianotti's D.). In paragraph 11, he also calls attention to two clues in the subject: the F sharp and the D sharp (the measure before Gianotti's I.). The F sharp signals two possible keys: G major or E minor. Rameau reasons that even if the student missed the significance of D sharp as an indicator of the key of E minor, the rapport of E minor with the previous key, A minor, should settle the uncertainty.

Rameau is teaching more than reasoning here. By focusing on the clues to key that the subject provides with great detail, Rameau subtly shows which key centers have more significance than others. In this way, he differentiates passing events, whether they consist of tonics or dominants, from points of arrival. To determine these temporary cadential points, Rameau turns to the subject for help. Since the fabric of the fundamental

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succession consists of the same materials (fifths and thirds), its content does not reveal a change of key as clearly as accidentals in the melodic surface.

Both Rameau and Gianotti coordinate the idea of related keys with the use of a foreign tonic in the harmonic succession in paragraphs 9 and 12. In ¶ 9, both authors differentiate the passing tonic at letter F. (G. in "L'Art") from the others as "foreign" because it is a major chord, not minor like the principal key, A minor. Recall that according to the rule in chapter 6, all keys a fifth away should be the same quality. Therefore, the passing tonic's quality should be minor in relation to the principal key. However, this "foreign" tonic's quality relates to the two previous passing tonics, C major and G major, which are all related by fifth. In this situation, the "foreign" tonic maintains a sense of connection in some respects but not in others: it maintains connection on a local but not on a larger level.

There is another example of a foreign tonic in ¶ 12. Even though Rameau and Gianotti show how this passing tonic that ascends by third (L.) connects the keys of D minor and C, both are unsuccessful in showing why the tonic is called a "foreign" tonic in this context. In this example, the passing tonic at L. relates equally to the key that precedes and the key that follows: the key of F is simultaneously the relative major of D minor and the subdominant of C major. However, neither author reminds the reader that F major is not related to the principal key, A minor. Thus, through the examination of key relationships in comparison to the principal key and keys at the local level, the reader starts to understand the slight variations in terminology for these passing tonics.

All of these means, implied tonics, passing tonics, foreign tonics, dominants serve to maintain a sense of connection between keys at many levels. It is clear that the connection between keys is the underlying objective here. Even though the procedure for tonicizing a minor subdominant can be seen as an artificial construct, it too fosters connection by allowing a minor tonic to take on a new function in regard to its subdominant.

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CHAPTER IX

Concerning Harmonic Connection

Gianotti:	**Rameau: draft 1**[1] **I/14/1-f. 29r**
1 Unquestionably, the most important concern which should occupy the composer is connection. As we already know, it consists of notes common to chords of different fundamental notes. But in addition, it also consists of a tonic or [note] implied[2] as such, common to its key and to [the key] which follows.	Connection is one of the principal concerns which should occupy the composer. It consists of notes common to chords of different fundamental notes, common in that one of the two [notes] always belongs to the chord of the other, and of fundamental notes common to those keys a fifth away. [However], it also consists of a tonic or [note] perceived as such, common to its key and to the [key] which follows it.
	I/14/1-f. 29r
2 In addition to what we have already said in chap. V art. 3 on the subject of the community of sounds in fundamental chords, we can restate the matter here. Since chords are composed of thirds and fifths, it follows that one of the two fundamental notes which follow each other at the third	One already knows that notes are common to chords and that fundamentals are common to two keys a fifth away from each other; one can also immediately imagine that since chords are composed of thirds and fifths, it is quite necessary that one of the two fundamental notes which

[1] Once again, the reader is reminded that the two-column format reflects the absence of a corresponding source in draft 2 of "L'Art."

[2] Gianotti uses *censée tonique* where Rameau consistently uses *sensée tonique*. Though the adjective *sensé* is no longer currently in use, in the 17th century it expressed a sense of good judgement. For Rameau, good judgement in musical matters is strongly grounded in an enlightened intuition based on experience or practice. For this reason, I feel that Rameau's use of the word draws more from the verb *sentir*, which can be translated either as *to perceive/feel* or *to imply*. The word *censée*, on the other hand, has a much more limited translation: "implied." Like the word *supposer*, which has multiple shades of meaning (*imply*, *suppose*, *superimpose*), Rameau's choice of word allows the reader a much richer interpretation that suggests both meanings simultaneously. Therefore, I have consistently translated each author's word differently in this chapter: Gianotti's as "implied" and Rameau's as "perceived."

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or at the fifth should be contained in the chord of the other.[3]	follow each other at the third and at the fifth be contained in the chord of the other.
3 The two fundamental notes which follow each other at the second will be outwardly excepted from this rule, until we understand dissonance.	The only fundamental notes not bound to this principle are the two fundamental notes a second away from each other. But before deciding in favor of this last article, let us wait until we understand dissonance.
4 One yet needs to know how a tonic or note implied as such becomes common to its key and to [key] which follows.	There is only one [thing] that one needs to know concerning all of this: how a tonic or [note] perceived as such becomes common to its key and to the [key] which follows it.
	I/14/1-f. 29'
5 In order to fully appreciate this connection, one must know that the moment of a pause of a phrase, which consequently marks the end of a thought, can be simultaneously the beginning of the following phrase. In this way, the tonic, or [note] implied as such, can take the quality that fits in the key which follows at the moment that it ends its pause. Consequently, it receives the harmony suitable to its new character.	In order to fully appreciate this last connection, one must imagine that the moment of a pause of a phrase, which consequently marks the end [of it] can be simultaneously the beginning of the phrase which follows it. In this way, the tonic, or [note] perceived as such, can take the quality that fits in the key which follows at the moment that it ends its pause. Consequently, [it] receives the harmony it ought as the quality it takes in this last key.
6 And that is how in the last two examples we have seen some tonics of a minor key end on a major third. They became at once	It is for this reason that in the two preceding examples we have already seen tonics of a minor key finish their key through a major third.

[3] Here, Gianotti and Rameau are not referring to the three fundamental notes of a single key (i.e. the tonic, dominant-tonic and subdominant). Rather, they are using the term "fundamental" as "chord root." Reviewing the discussion in Chapter 5/Art III. makes this clearer: chords a third and fifth away sharing common tones are used as examples of the "community of sounds." Everything except the leading tone can share in this community within a key context.

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dominant-tonics of the key which followed them.

They became at once Dominant tonics of the key which followed them.

I/14/1-f. 29ᵛ

7 A pause can end on a leading tone belonging to a passing key; but not on a leading tone belonging to the previous key. Even after having thoroughly examined the phrase which precedes this leading tone, one would still be able to be mistaken if any evident sign does not reassure us; but the necessary relationship between successive keys should suffice to dispel the doubt.

Henceforth, it is necessary to be well aware of the following: a pause can end on a leading tone belonging to a passing key but not [on the leading tone] of the previous [key]. But if one only [relies upon] examining the subject in the whole phrase which precedes this leading tone, one may be mistaken, and supposing that no clear sign allowed one to judge it, the rapport required between successive keys would then suffice.

8 The minor key exists until the moment of the pause. The third of this pause, marked major, announces the beginning of another key of which this tonic serves as dominant tonic. This case can happen without the major third appearing in the melody, but it is up to us to imply it.

The minor key exists until the moment of the pause where the major third of the tonic, which should have been minor, designates this as a beginning of another key as well, where this [major] tonic serves as dominant tonic.

This [particular] case can occur without the major third [actually] appearing in the subject. Therefore, it is up to us to imply [the major third] when we see the tonic of a minor key pass to its subdominant which becomes a tonic or [can] even be only perceived as such in the moment that one employs it according to the remark of the preceding lesson.

I/14/1-f. 29ᵛ-30ʳ

9 If the tonic of a major key becomes the subdominant of a minor key, and one might not be able to repeat this tonic, it is necessary to divide the tonic into two values in order to give a major third to its first

Regarding the tonic which can become a subdominant: if it is the tonic of a major key which becomes subdominant of a minor key, it is necessary to give it a

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value and a minor third to the second. This is related what we have already prescribed for keys which succeed each other by fifth in chapter VI.

minor third—but not immediately. And if the tonic in question cannot be repeated, it would then be necessary to divide it into two values in order to give a major third to its first value and a minor third to the second value.

[The situation] with a minor key differs from that of the major key. The latter [the major] which is the only natural [key] will end as it had begun. The other [the minor], on the contrary, can yield to the major in ending—such is its subordination. If one recalls the rule which says that all keys a fifth away should be the same quality (XIth Lesson), one will immediately sense why the tonic of a major key should take a minor third when it becomes subdominant of a minor key: because these two keys are a fifth away from each other, and in order to render them consistent, at the very least, it is quite necessary that the major yield to the minor key, whose quality cannot be changed, before passing into it, by receiving a minor third.

10 What is yet to be discovered is that the tonic of a minor key can never become a subdominant of a major key. In this way, *A* minor can never be an implied subdominant of *E* major.[4]

I/14/1-f. 30^{r}

Never can a tonic of a minor key become a subdominant of a major key.

11 From everything that has just been said, we can

This principle well digested should make [us] notice that

[4] Gianotti refers to the mode of the keys here by their initial thirds. Thus he literally says: "In this way, *A*, minor third, can never be an implied subdominant of *E*, major third."

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conclude that each tonic which passes to its dominant can be regarded as a subdominant. Each tonic which passes to its subdominant can be regarded as a dominant-tonic, but with more circumspection because then it is necessary that the key of this subdominant be announced in the subject by a somewhat perceptible pause when it might be only a passing pause.

every tonic which passes to its dominant can be regarded as the subdominant. When the [tonic] passes to its subdominant, it can be regarded as the dominant tonic; but with more circumspection—because then it is necessary that the key of this subdominant be announced by a somewhat perceptible pause in the subject, were it only a passing pause similar to the hemistich of a verse.

All this is imagined without impairing the key which exists before and after the dominant where the subdominant [is] rendered a tonic, except that if the key of one of these two last fundamental notes continues after having imagined them tonics, the idea was just and founded.

I/14/1-f. 30r

12 All these reflections shed great light on everything that we have so far [permitted] only by license up to the present, for lack of knowing the principle.[5] *See example 14, pl. 5*

These reflections sow great seeds for everything that we have so far [permitted] only by license up to the present for lack of knowing the principle well.

[5] Gianotti's substitution of the word "light" for Rameau's "seeds" gives a slightly different feel for what is said. In Gianotti, one gets the impression that this chapter is clarifying material that has preceded. While Rameau threw unexplainable phenomena under the umbrella of "license" in previous treatises such as the Traité, his use of the term in this paragraph implies that this lesson is only the beginning to the true understanding of everything deemed "license" previously.

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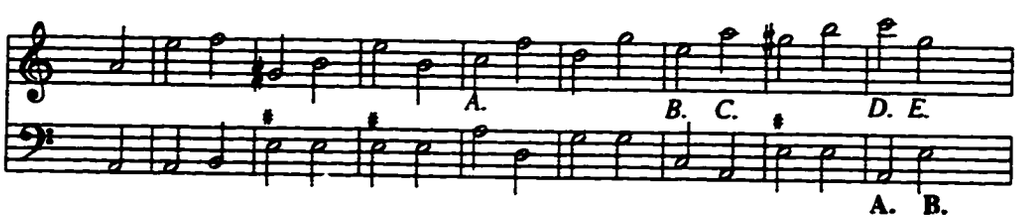
Observations on this example	**I/14/1-f. 30v** **Explication**
	The tonic A. is common to its key and to the one which follows,[6] becoming a dominant there in order to pass from one to the other at the tonic B. This tonic B. passes to the tonic C. of the key which follows it according to the preceding lesson: they then have two notes common in their chords.[7]
13 The tonic at A. becomes a subdominant of the tonic at letter B.	The tonic D. becomes the subdominant of the tonic E.
14 The tonic at C. ends its key with a major third and consequently becomes the dominant tonic of the [tonic] which follows it at	The tonics F. and G. of a minor key each end their key on a major third, becoming dominant tonics of the key that follows them. The tonic

[6] Rameau's guidemarks do not match Gianotti's. The example below shows the first line of Gianotti's example 14 with Rameau's guidemarks in italics and Gianotti's in boldface.



[7] Rameau is reviewing a concept from the previous chapter. He is reminding the reader that the tonic at C. is a passing tonic: it descends by third and has two notes common to the previous chord at B.

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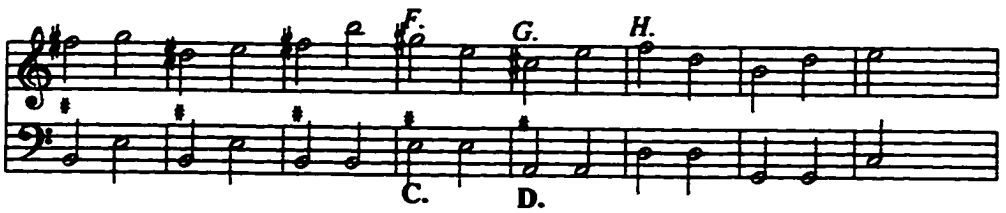
D.. The [tonic at D.] takes the same quality by relationship with the key which follows [it].[8] These two notes are therefore tonics through the relationship with their key, and dominant tonics through the relationship with the key which follows them.

H. [is] the same as the tonic A.[9]

15 One imagines the note at E. a tonic because of the somewhat perceptible pause which develops in the subject at this place.[10] And then the note which precedes becomes dominant-tonic of its subdominant. The imagined tonic descends immediately after by third in order to reenter in the key which had been left by

The tonic J. [is] treated as dominant tonic of its subdominant L. by means of a somewhat perceptible pause in the subject below L. Although the key of J. continues until M. in this way, the subdominant L. now imagined as a tonic, assumes its rights [as tonic] and descends by third to a dominant, which returns in

[8] This statement is a little confusing. Gianotti literally says that the chord at D. takes the same quality as the previous dominant-tonic did (i.e. major) because it is a dominant of D minor, the key which follows. This procedure follows the rule in chapter 6 that recommends maintaining the same quality between keys a fifth away.

[9] Gianotti's second line of example 14 with Rameau's guidemarks appearing in italics above.

[10] Recall that in ¶ 2 of chapter IV, Gianotti mentions that cadences are generally formed through two conjunct notes in the subject. Rameau includes this cadential formula in his discussion "On how to compose a Fundamental Bass below a Treble," chapter 40 of Bk. III of the Traité—see the chart in Gossett's translation, p. 332.

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means of this supposition.

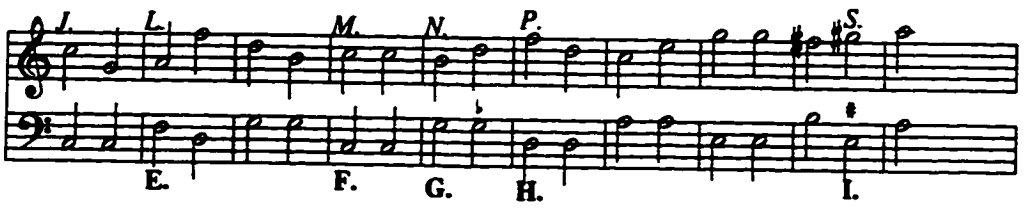
16 In its second value, the tonic at F. becomes the subdominant of the tonic at G.. The key in both cases is major. But since the tonic at H. is minor, the tonic which precedes it at G. becomes its subdominant. Consequently it receives a minor third for its second value in order to comply with the prescribed rule for keys which follow each other at the fifth.

17 As soon as a tonic ascends a fifth, the second enjoys the same right and can follow suit as long as the subject allows. This is especially the case when the key is undecided as after H., until it be perfectly understood as at I.,where the last tonic [i.e. the B before I.], to which the preceding [tonic E] served as a subdominant becomes dominant in its turn.

the key of J.[11]

The tonic M. becomes subdominant of the tonic N.—the key in both cases is major. But since the [key] of the tonic P. is minor, the tonic N. which becomes subdominant of it should receive a minor third in its second value.

Since every note that is perceived as a tonic enjoys the rights of a tonic, it follows that as soon as a tonic ascends a fifth to another, [this tonic] can follow suit in the same way from one to the other as much as the subject allows. This is especially the case when the key is undecided up until it is perfectly recognized, as at the leading tone S., with the result that the last tonic [B] to which the preceding [tonic E] had served as subdominant, becomes a dominant in its turn. As to the rest, regard the first rules.

[11] The third line of Gianotti's example 14 with Rameau's guidemarks appearing in italics above.

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Editorial Commentary on Chapter IX

Harmonic connection is not only the topic of this chapter, it is the very technique Rameau uses in his fourteenth lesson to teach the concept. Since Gianotti also follows Rameau's first draft version of chapter 14 in its sequential presentation of ideas as well as content, both authors' versions offer the same approach. In fact, in the opening paragraph of the chapter, both Gianotti and Rameau prime the pump so to speak for the topic of this lesson (connection between keys) by reviewing the idea of connection at the chord level. This is good pedagogy. Oftentimes, Rameau tells us more than Gianotti—this is evident even in the opening paragraph where Rameau alone emphasizes the fifth relationships between fundamentals that give rise to common tones between chords. This piece of information bridges the gap between chords and keys: for it is in the shared fundamental notes between keys that fundamentals can function in different ways as pivots. In this way, Rameau gives a better picture of the nexus of connections through his view of the way all factors interact.

In the previous chapter concerning passing and foreign tonics, both Gianotti and Rameau devoted considerable space to a procedure that provided a loophole for the caveat forbidding the minor subdominant to be an implied tonic after its tonic. This procedure involved splitting the tonic that preceded the subdominant into two values: the first minor and the second major (see ¶'s 2 and 3 of chapter 8). Unfortunately, in chapter 8, the reader was directed to consult the next chapter for further details. Even though this procedure was not directly applicable to the rest of the content of chapter 8 at the time, from the perspective of chapter 9, this procedure is the link for the concept of connection between the chapters. For, in chapter 9, Rameau uses this procedure as a springboard to discuss how a tonic can be viewed as a means of connection between keys when it is seen both as the tonic of the

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previous key and as a dominant (be it a dominant-tonic or a subdominant) of the following key. It is this dual function of the tonic which is the underlying idea of chapter 9.

On the whole, Rameau's use of the concept of connection as a pedagogical presentation tool is not as successful as it could be. While Rameau sets the tone for the main idea of the lesson (see the parallel passage of ¶ 4), his subsequent delivery of details puts the proverbial cart before the horse. Rameau presents the main idea of the lesson, that a tonic can subsequently be viewed as a dominant-tonic when it moves to its subdominant and that it can subsequently be viewed as a subdominant when it moves to its dominant-tonic, in one of the concluding paragraphs of the chapter. By showing how tonics are divided into two values in various contexts before expressing the underlying idea of function first, Rameau not only provides ample opportunity for confusion on the part of the student, but distracts the reader from the way these procedures facilitate the main idea that he expresses so succinctly in ¶ 11. Thus, the student cannot see the forest for the trees. Reversing the order of presentation would have helped considerably, for the asides and examples help to clarify many applications of the main idea.

Since Rameau presents the procedural details in this chapter before the main idea in ¶ 11, the significance of his additional comments in the paragraphs leading up to this point only become apparent upon subsequent readings of the chapter. Through his asides and through the examples that follow the main idea expressed in ¶ 11, the reader gradually becomes aware of Rameau's keen perception of the function of chords and the role of shifting function in a tonic common to two keys.

In paragraph 5 , Rameau and Gianotti highlight a specific juncture which can be considered the end of one phrase and the beginning of the next phrase at the same time. Both authors call this point a "pause." Rameau and Gianotti say that the chord at this juncture can take the quality needed for the new key. Thus, at this particular point in the lesson, the pause could conceiveably reflect two procedures: the change of the chord's quality from minor to major or from major to minor. In paragraph 6, however, both

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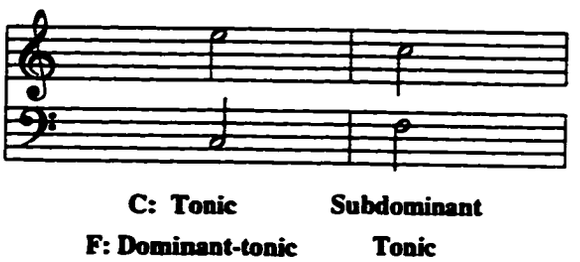
authors only refer to one particular procedure, the minor tonic taking on a major quality. From this paragraph, the reader learns that the major third enables the chord to take on the function of a dominant-tonic of the new key (the procedure first introduced in chapter 8 without explanation). Thus, the tonic assumes a new function through a change in the quality of its third. In effect, it transmutes the old key into the new key much as the flick of a switch changes dark to light.

When a Tonic becomes a Dominant-Tonic

Rameau reveals one particular idea indirectly through the examples and asides of chapters 8 and 9: a major tonic, by nature of being major in quality, has the opportunity to become a dominant-tonic in function. Since discussion of the function of the dominant-tonic is restricted to the realm of consonances only in the first section of this treatise, the dominant-tonic chord here does not include the characteristic dissonant seventh as a characteristic element of its function. In section I of this treatise, therefore, the major quality of the chord becomes the primary clue to its function as dominant-tonic. When the tonic progresses to its subdominant, therefore, it becomes a dominant-tonic of the new tonic. In modern harmonic terms, we could call this first chord a "pivot chord" as shown in Ex. 9-1:



Example 9- 1: *Tonic becoming a Dominant-tonic*

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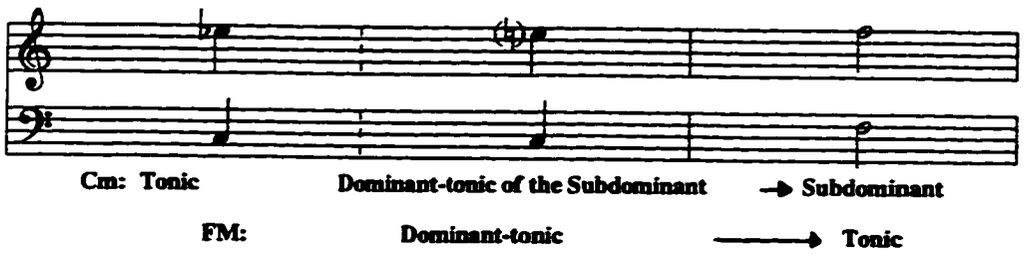
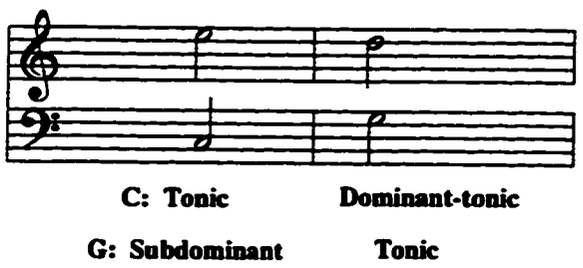
In Example 9-1 above, both chords are major. When each chord is a different quality, however, the procedure of dividing the first tonic into two values, a procedure first introduced in chapter 8, mediates between the two chords. This is the rationale behind Rameau's rule in ¶ 8 where the tonic of a minor key becomes a dominant-tonic of the new key through a major third in its second value, thus:



Example 9- 2: *Minor Tonic becoming a Dominant-tonic*

When a Tonic becomes a Subdominant

In paragraphs 9 and 10, both Gianotti and Rameau discuss the other dominant route: the subdominant. When the tonic passes to its dominant-tonic, the tonic, in effect, becomes subdominant of the new tonic:



Example 9- 3: *Major tonic becoming a subdominant*

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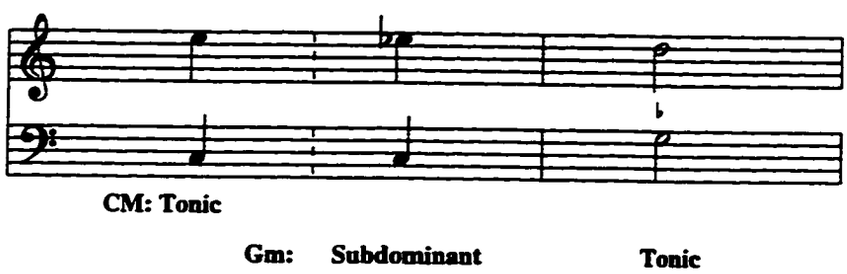
Unlike the situation where the tonic becomes major to assume the quality and function of a dominant-tonic, the tonic-turned-subdominant must obey one rule: it must be the same quality as the key into which it passes. Therefore, if both the tonic and dominant-tonic are major, there is no problem. If the tonic is major and the dominant-tonic is minor, however, the tonic of the major key must become minor in its second value in order to function as the minor subdominant of the following chord because of the rule that requires keys a fifth apart to be the same quality, thus:



Example 9- 4: *Major tonic becoming a minor Subdominant*

Views of Function

It is clear from additional asides throughout the chapter that Rameau is very cognizant of the function of chords in specific contexts—an awareness that Gianotti does not reveal in his version of events. Though Gianotti accurately reflects Rameau's view of the tonic-turned-dominant-tonic as an instantaneous shift of key, he also transmits a more puzzling detail in paragraph 7 without sufficient explanation. Both Rameau and Gianotti state that if the pause ends on a leading tone, it must be the leading tone of the new key, not the previous key. Neither author really explains this rule. Instead, they say that examination of the phrase preceding the pause of this leading tone provides no additional assistance: in fact, they both state that following this procedure can result in mistakes. Through an aside that occurs later on in ¶ 11, Rameau sheds light on the advice in ¶ 7.

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In a passage from 14/1 (see ¶ 11), a passage devoted to both kinds of key shifts (major to minor and minor to major), Rameau says:

> All this is imagined without impairing the key which exists before and after the dominant where the subdominant [is] rendered a tonic, except that if the key of one of these two last fundamental notes continues after having imagined them tonics, the idea was just and founded.
>
> (I/14/1-f. 30r)

Previously, in lesson 13, Rameau walked the student through a close inspection of the subject for clues to key (i.e. accidentals). However, through the aside above in 14/1, Rameau essentially nullifies the previous approach in this new context, telling us that the old key no longer matters. He does, however, say that if the key of the last two fundamentals continues, the idea is confirmed. While Rameau does not spell out the details, he leaves a trail that leads to an explanation. In paragraphs 6 and 8, Rameau (and Gianotti) point to the fact that the shift to the new key is quick—so quick that it happens in one chord. Therefore, in this new situation, the student can look to the new key for confirmation of the shift, but the previous key relates only to itself. This insight also applies to the passage concerning pauses on leading tones cited in ¶ 7. Since the key shift occurs in a single chord, a pause on the leading tone of the old key would only establish the old key, not the new one. Therefore, a pause that changes function can only rest on the leading tone of the new key. Note that this vertical perspective of changing function here supplants the horizontal approach used to determine key in the previous chapter.

Like his teacher, Gianotti points out the change of function from tonic to dominant-tonic when presenting in ¶ 8 the quicksilver change of key through the substitution of a major third for the minor. Following Rameau, Gianotti also says that "this case can happen without the major third appearing in the melody, but it is up to us to imply it." However, through the strides of additional commentary, Rameau soon leaves his faithful student

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Gianotti in the dust, for only Rameau understands the application of this procedure in the face of a specific functional context:

> This [particular] case can occur without the major third [actually] appearing in the subject. Therefore, it is up to us to imply [the major third] when we see the tonic of a minor key pass to its subdominant which becomes a tonic or [can] even be only perceived as such in the moment that one employs it according to the remark of the preceding lesson.
>
> (I/14/1-f. 29ᵛ)

Rameau is very specific. He advises the reader to imply a major third in a particular context: when the minor tonic passes to its subdominant. What Rameau only intimates here is that the major form of the tonic is the subdominant's dominant-tonic. By mentioning the tonic and its subdominant in this aside, though, Rameau focuses once again on the relationship between a tonic and one of its dominants a fifth away. He also highlights their sense of relatedness by showing how each fundamental not only resides in the key a fifth away, but functions differently in each key.

In this chapter, Rameau is generally able to show how the simple motion of a tonic passing to one of its dominants (the subdominant here) can also effect a shift to the key of this subdominant or dominant-tonic through a simple change of quality. In this situation, the fundamentals trade roles in each key: the old tonic becomes a dominant and the old dominant becomes a new tonic. Through the additional details in this paragraph, Rameau reveals most of all that it is not the procedure that is the actual topic of the lesson, but the shift in function from tonic to dominant—the idea expressed in ¶ 11.

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The Examples

In the examples, Rameau continues to blend the old with the new. He consistently takes advantage of the opportunity to show the student how these new techniques can be used with those already learned from the previous chapter (such as passing tonics). Thus, in the passage that precedes Gianotti's ¶ 13, Rameau integrates several ideas. He shows how the A minor chord at letter *A.* is not only a tonic in its own right, but becomes a simple dominant in function in order to progress by descending fifths to the new pause, the C major chord at letter *B.* He also reviews the passing tonic progression by descending third from the previous chapter (*B.* to *C.*). By relating the tonic at *H.* to the tonic at *A.* (¶ 14), Rameau calls attention to the fact that they are minor tonics preceded by dominant-tonics. These minor tonics also eventually lead to major tonics by simultaneously becoming dominants: the A minor tonic at *A.* leads to C major at *B.* and the D minor tonic at *H.* leads to C major two measures after it. Thus, Rameau provides another example of changing function not mentioned in the body of the chapter.

Though Gianotti follows Rameau's content in ¶ 15, Rameau's view of the situation reveals additional insight. Gianotti says that the tonic at E. descends by third "in order to reenter in the key which had been left by means of this supposition." Rameau, on the other hand, says that the key of *J.* (C major), the key which functioned as dominant-tonic of the tonic at Gianotti's E. (*L.*) "continues until *M.*". It is clear that Gianotti sees the progression of events only from point-to-point while Rameau recognizes this "point-to-point" excursion as a temporary suspension of events in C major. In this way, Rameau not only perceives how fundamentals have dual functions on local levels, he also sees how these events extend key to much larger planes.

Rameau reveals this same kind of integration of ideas in the final paragraph. Here, he not only shows how each tonic becomes subdominant of the next by promoting a sense of tonal flux or transition (as passing tonics that ascended by fifth did in the previous

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chapter), but he melds this with a different operation—the change of fundamentals' function to effect a change of key at the end of the progression. In this case, the tonic E (E minor) serves as subdominant of B minor, which theoretically becomes dominant-tonic of E (through a change of quality on its second value—not shown in the example), which in turn becomes dominant-tonic of A minor.

Thus, in this chapter, Rameau not only uses the idea of connection as a pedagogical tool to introduce the changing function of a tonic-turned-dominant, he fosters the connection of ideas from chapter to chapter, continually linking older ideas with newer ideas. In word and deed, Rameau gives credence to his opening sentence of the chapter: "Connection is one of the principal concerns which should occupy the composer." Rameau not only practices what he teaches, he teaches the way he practices.

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CHAPTER X

Concerning sequences of the melody and of the fundamental bass in consequence

Gianotti:

1 One distinguishes two types of melodic sequences: some unfold in retaining the same key, and others change the key at each sequential pattern.

2 We will assign these two types of sequences to two articles. In the first [article], we will treat melodic sequences in the same key; in the second, melodic sequences in different keys.

ARTICLE I

Concerning sequences of the melody in the same key

1 One recognizes melodic sequences in the same key when [one] sees the melody progress from one measure to the other, always ascending or descending through similar intervals in groups of two or four measures. No sign should appear to make us suspect a change of key.

2 When one sees a similar melody a second above or a second below the one which precedes [it], the

Rameau: Draft 1

I/15/1-f. 30^{v}

There are different kinds of sequences: some retain the same key and others change the key at each sequential pattern.

I/15/1-f. 30^{v}

Melody is imitated readily from measure to measure at the taste of the composer in groups of two [or] four measures. Similar sequences make the operation of the fundamental bass much easier.

I/15/1-f. 31^{r}
Art. I

Melodic sequences in the same key are recognized when the subject progresses from one measure to the other, always ascending or descending through similar intervals in groups of two or four measures. No new signs should appear to mark a change of key.

When one sees a melody similar to the one which preceded it, always at the second above or second

Rameau: Draft 2

I/17/2-f. 60^{r}

A melodic sequence follows from one measure to the other, sometimes in groups of two measures, other times in groups of four measures. This sequence consists of a melody which is the same but has one or more degrees of distance.

I/17/2-f. 60^{r-v}

Descending melodic sequences which are not interrupted by some perceptible pauses demand a

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fundamental bass generally progresses by ascending fifth if the sequence unfolds by ascending and by descending fifth if the sequence unfolds by descending.

3 In ascending sequences, sometimes a leading tone, a syncopation or some other evident sign, obliges the fundamental bass to descend by third, in order to ascend a fifth or a fourth afterwards. [This is] always the same in each sequence.[1]

4 Sequences generally end on a strong beat. If the contrary happens, it is then necessary to follow our original rules, without persisting in making the fundamental bass ascend or descend continually by fifth. It is good even to adhere to these original rules where some melodic sequences appear from one measure to another. Not that one might not make [the fundamental bass] sometimes descend by third in order to ascend by fifth when the sequence progresses by ascending. But in this case, as in any

below as for example, as C, F, D, G, E, A ascending or A, D, G, C, F, B descending, the fundamental bass generally progresses by fifths. It ascends by fifths when the sequence unfolds while ascending and descends the same way [by fifths] when the sequence unfolds while descending.

Sometimes when a sequence unfolds by ascending in two-measure groups or four-measure groups, the fundamental bass should descend by third [first] in order to ascend next by fifth. [This is] always the same in each sequence. Therefore, a leading tone, a syncopation in the subject, or some other evident sign serves as a warning there.

Melodic sequences generally end on strong beats. When the opposite happens, it is necessary to follow our original rules there without persisting to making the fundamental bass ascend or descend continually by fifths.

When several sequences [occur] from one measure to another where the fundamental bass could have been observed according to the first rules, one could adhere to this—not that one might not sometimes seize the opportunity to make it

fundamental succession that descends by fifth until the tonic or one implied as such. And [other] melodic sequences which are not interrupted by perceptible pauses demand a fundamental succession that ascends by fifth.

[1] Both Gianotti and Rameau provide illustrations of this idea in the example section which follows the first article (see ¶ 16, 17, 19, and 21). Contrary to the way this idea appears in the text, the examples show that the alteration of the fundamental bass by descending third does not occur at the leading tone itself, but in the fundamental succession that leads to this leading tone. There are two missing steps. The leading tone itself requires the dominant-tonic as a fundamental bass. It is the adherence to this harmonic requirement that forces the composer to alter the preceding fundamental succession (often through descending third) to lead to this point, because a dominant-tonic must be preceded by a dominant. Pedagogically, this technique is related to the point-to-point procedure that Rameau uses to determine a succession of keys. See the section *Point-to-Point Pedagogy* in the editorial commentary in chapter 7 where I discuss how Rameau directs the student to focus on one key at a specific point in order to determine the keys that both precede and follow it.

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other, when one arrives at the last of these sequences, it is necessary to make allowance for the key in which it [the sequence] finishes in order to submit the fundamental bass to it. Since each note of the fundamental bass can be an implied tonic when it progresses by ascending fifth, one gives to one of these notes the route which suitably leads it to the tonic of this key.[2]

descend by third [first] in order to have it ascend by fifth [next] when the sequence progresses in an ascending fashion. However, in this case, as in all others, let us be well aware that when one arrives at the last of these sequences, it is necessary to pay particular attention to the key in which it finishes in order to submit the fundamental bass to it. Since each note of the fundamental bass can be an implied tonic when it progresses by fifth, one gives to the [note] that one wishes the route which suitably leads it to the tonic of this key according to the prescribed order.

I/15/1-f. 31r-v
Art. I

When sequences consist of more than one measure, all the intervals cannot be equal there. But generally the first and the last note of each sequence always form a second [to the sequence which precedes or follows it]. Moreover, whatever difference occurs there, it is always very small

I/17/2-f.60v

Sometimes these sequences vary by the difference of an interval or two, but the uniformity which occurs otherwise either in other spots in the melody, or in the number and value of the notes [duration?], in the number of measures, in the pause, and especially in the same

[2] There is another idea that is tacitly implied in this discussion. In the case where sequences appear between measures instead of ending on a strong beat, ascending fifth progressions are recommended because in ascending fifth progressions, each fundamental bass is an implied tonic of the fundamental that has preceded it. Recall that tonics (even implied tonics) have more options (chapter 5) than simple dominants. Simple dominants must progress by fifths until the dominant-tonic which precedes a tonic goal. Thus, the composer has more flexibility in an ascending fifth route to arrive at the tonic of a new key at the end of an sequence than he would in a dominant route.

As in Chapter 8, ascending fifth progressions are often used in transitional contexts as links between points of arrival—not to actually define the points of arrival as dominants do. In this sense, the ascending fifth progression has more of a passing function than its counterpart the descending fifth, which serves to establish key more definitively (especially when the dominant bears a major third—the characteristic hallmark of its function as a dominant-tonic).

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and consists at most in a single interval.[3]

The trouble that can arise in the subject will never happen in the fundamental bass. And, the suspicion of a melodic sequence is enough to immediately know whether this suspicion is founded through the fundamental bass. For, if this fundamental bass can progress in the same way in each sequence, one should not be concerned about the difference of an interval that chance or sometimes taste will have introduced from one sequence to the other.

fundamental bass of which each sequence is susceptible relative to its key—[all of these things] should prevent one from losing sight of them. Ex.

5 The trouble caused by the disparity of intervals in sequences can arise in the subject, but it will never happen in the fundamental bass. For, if [the fundamental bass's] progression can be regular in each sequence, one should be little concerned about an interval that taste will have introduced from one sequence to the other [in the subject].

6 The fundamental bass should everywhere serve as a proof. The regularity of its sequences can cease only when one is forced to change the route of a tonic in order to submit to the key in which the last sequence is going to finish.

The sequence is always regular in the fundamental bass. Consequently, it should serve everywhere as a proof. And, its regularity can cease only when one is forced to change the route of a tonic in order to submit to the key in which the last sequence is going to finish.

[3] Through this additional comment in 15/1, Rameau reveals that melodic sequences are often differentiated from each other by second. By including this remark, he also implies the closed nature of each sequence—since the interval of a second is never conducive to connection or liaison. This idea becomes the focus of Rameau's presentation of sequence in the second draft version, 17/2. See the commentary for further discussion.

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7 Sequences which end on a strong beat always introduce a more or less perceptible pause there.

All sequences which end on a strong beat always introduce a type of pause [that is] more or less perceptible. In each sequence, a single fundamental note a second above or below the first [fundamental of the sequence] should bear as many notes as the first [fundamental] did.

8 For the present, one should know that in the case where the fundamental bass descends a fifth, it [the fundamental bass] passes from one dominant to another, and that when it ascends by fifth it passes from one tonic to another. In the first case, the tonic which one leaves can take the quality of a dominant in its second value; and in the second [case], [it can take the quality of] a subdominant.[4]

One knows that when the fundamental bass descends by fifth, it passes from one dominant to another from the tonic that one is leaving up to the [tonic] of the declared key. Therefore, the tonic that one leaves can take the quality of a dominant in its second value, according to the preceding lesson.

But when the fundamental bass ascends a fifth, all its notes are tonics. Each of [these tonics] should be perceived subdominant of the one which follows it in its second value.

I/17/2-f. 60v

The fundamental succession that descends by fifth is that of dominants which should progress until the tonic of the known key. But one can also sometimes form some passing tonics from these—as long as the melody allows according to that which had been said in the 14th lesson. Ex.

The fundamental succession that ascends by fifth gives as many tonics as notes that can [be] regarded as subdominants of the tonics that follow them, without ever losing sight, nonetheless, of the key which indicates the key that the melody indicates at the end of the sequence in order to no longer consider [any] of them the tonic except this one.[5]

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[4] Neither author clearly tells the reader whether the "second value" of the tonic here is an actual note (as in chapters 8 and 9 where a note was split into two values to facilitate a change of function) or more of a conceptual construct inspired by the procedure in the eighth and ninth chapters to represent a change of function. Since none of the examples in this chapter show two separate notes in actual usage, it is safe to assume a conceptual change of function from the context of this passage.

[5] In this convoluted passage, Rameau seems to be referring to the fact that in an ascending fifth passage, tonics have a dual function—they can be considered implied tonics on their own and subdominants of the notes that follow them. However, Rameau also differentiates these lower-level tonics or passing tonics from the goal tonic occuring at the end of an sequence. In this case, the function of the goal tonic looms larger than the function of tonics-turned-subdominants in an ascending fifth progression. Therefore, the student should never lose sight of the tonic at the end of the sequence, letting it take precedence in guiding the route of the fundamental succession. This is yet another example where Rameau points to the use of the ascending fifth progression as a transitional device, a function that is contrasted with the arrival of a new key at the end of a sequence.

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I/15/1-f. 31ᵛ
Art. I

9 When the fundamental bass descends a third in order to ascend next by fifth, these two notes can be implied tonics— though [the tonic] reached by descending third can be treated as a dominant. That is to say, one can imply it as such in its second value.

When this fundamental bass descends a third in order to ascend next by fifth, all these notes can still be implied tonics—not that those where one descends by third could not be treated as Dominants—at least one can imply them as such in their second value. Except for the tonic of a known key, all the others are passing and foreign.

I/15/1-f. 31ᵛ
Art. I

10 Since keys are almost always unclear in ascending sequences, this uncertainty is enough to [cause us to] adopt the fundamental progression by ascending fifth there.

Take note that ascending sequences almost always give ambiguous melodies: [ambiguous] either for the pauses or for the keys that one traverses there. It is precisely this uncertainty which they maintain that should make us suspect the fundamental succession by ascending fifths there.[6]

I/15/1-f.32ʳ
Art. I

11 If after one or more sequences at the ascending second there occurred one a third away from it, one is then forced to make the tonic descend by third in order to ascend by fifth next. *See ex. 15, pl.6*

When an ascending melodic sequence unfolds at a third instead of a second, one is then forced to make the tonic descend by third in order to ascend by fifth next.

Observations on this example

I/15/1-f.32ʳ Art. I
Explication

12 The numbers placed above the notes of the melody mark the first note of

The numbers 1.2.3. etc. mark the first note of each sequence.

[6] In "L'Art," this passage appears as a continuation of the second paragraph cited in ¶ 8, hence it appears before the one in ¶ 9.

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each sequence.

13 As it is always necessary to secure the key in the beginning of a piece of music, the fundamental bass is consistent with our original rules from the beginning up to A. And even though a different [fundamental bass] would be possible [at the beginning], [such a bass] would fit less well there than elsewhere.

The sequences up to A. necessarily require a fundamental bass conforming to our original rules. And even though a different [fundamental bass] would be possible, [such a fundamental bass] would still fit less in the beginning than elsewhere. For, it is always necessary to secure the key in the beginning instead of [having] continual progressions by fifths (especially ascending [fifths]) at least threatening a change of key.[7]

14 The sequences that ascend by second from A., require a fundamental bass that ascends by fifth. But as the third of these sequences is a third away from that which precedes it, one is forced to make the fundamental bass descend a third in order to have it ascend by fifth next.

The sequences that ascend from A. require a fundamental bass that ascends by fifth. Yet one is forced to make it descend by third at the third [sequence] because the sequence then occurs at the third instead of the second there.

15 The interval [of the fourth] in the third sequence [at] B. is definitely not similar to that of the first, nor of the second; but it is enough that the notes of this measure belong to the same chord, so that the fundamental bass is similar to one of the sequences which have preceded this one.

Though the interval B. of the third sequence is not similar to that of the first or the second, the fundamental bass is nevertheless the same there because the notes of measure B. belong to the same chord as are those in the measures to which it is compared.

The pauses and the keys appear undecided from A. until the interval of a fourth at B. from which the fundamental succession by ascending fifths should at

[7] Once again, through an additional aside, Rameau suggests that using an ascending fifth progression would undermine the stability of a key. Thus, he infers the transitional nature of this particular progression.

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least be suspected.[8]

I/15/1-f. 32r-v Art.I
Explication

16 One would be able to follow the first rules to C. according to the custos, without the perceptible pause which makes itself felt in this place and which is going to be imitated at each sequence. [This pause] requires a perfect cadence where the subdominant [at C.] is an implied tonic. After this, the fundamental bass is constrained to descend a third in order to ascend next by fourth in consequence of the leading tone at D.—all of which is observed once more in the following sequence.

If the fundamental bass progresses first by fifth in the first sequence C., the leading tone, requiring the dominant tonic as a fundamental bass, forces [the fundamental bass] to descend a third after D. in order to be able to arrive [at F.] according to the rules.[9] One would have been able to follow the original rules by making the tonic descend a third at D. as the custos indicates, but the pause which develops in the subject, [a pause] which is going to be imitated in each sequence, demands a cadence of the fundamental succession and, in this case,

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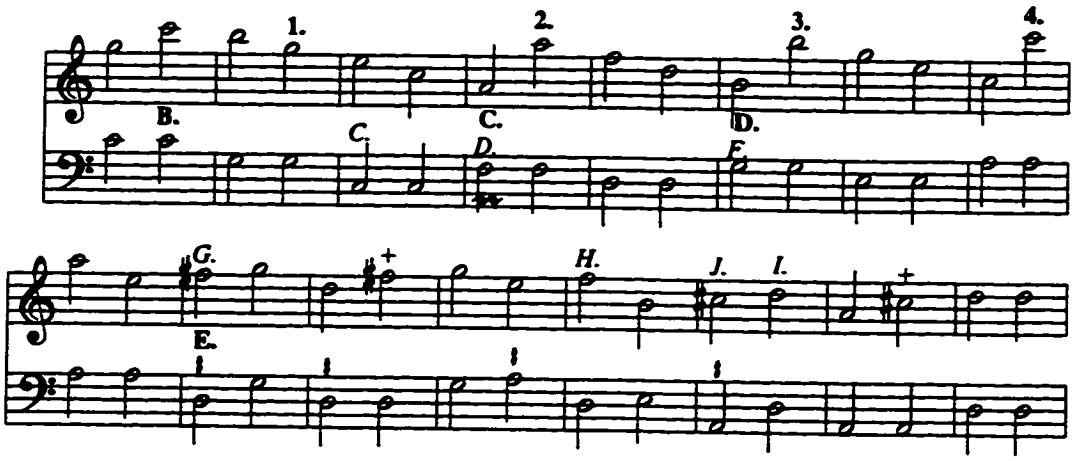
[8] Another instance where Rameau points out the association of ascending fifths with keys that are "undecided."

[9] Measures 14-29 of Gianotti's Ex. 15 showing Gianotti's guidemarks B. - E. with Rameau's guidemarks C. - J. in italics:

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the subdominant under D. is an implied tonic.

This is how the fundamental bass [is] constrained to descend by third after D. in order to ascend next by fourth[10] in each sequence in consequence of the leading tone at F.

17 The fundamental bass is not able to follow the same route at the fourth sequence, where the second interval is not similar to those of the preceding sequences; but even if [the fundamental bass] could [do so], the leading tone at E. is sufficient to require that the fundamental bass retain the only note that can precede this leading tone.

The fourth sequence changes in the second interval in [such] a way that the fundamental bass can no longer descend by third. But even if [the fundamental bass] could [descend by third], is not the leading tone at G. sufficient enough [to prevent this][?], for its known fundamental bass obliges [us] to retain before it, the only fundamental note that could precede it regularly.

The natural H. and the leading tone J. declare the key at I. clearly enough. Consequently, [they declare] the fundamental succession from the previous key, since in this case, the natural H. which is the mediant, demands the tonic as a fundamental bass.

18 The subdominant is an implied tonic at F. not only because the pause is felt there, but in order to comply

The sequences 1.2. at L. are at the fifth and therefore find their fundamental basses in the

[10] The manuscript erroneously gives "fifth" here instead of "fourth": *Voila donc la Basse fond.te contrainte a descendre de tierce apres D. pour monter ensuite de quinte dans chaque imitation en consequence de la note sensible F.*

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with the sequence which preceded.

original rules.[11] But the perceptible pause of the last of these two sequences at M. require the subdominant as the tonic, as much to comply with the first sequence as because there is a somewhat perceptible pause.

19 The sequences after F. are at the descending second. The fundamental progression by fifth is authorized here. And, in order to arrive there after the subdominant implied a tonic at F., one sees the necessity of making [the fundamental bass] descend a third in consequence of the leading tone which comes immediately after.

The descending sequences 1.2.3.4.5. will permit a fundamental succession by descending fifth without difficulty, but in order for this to happen after the subdominant implied a tonic under M., one sees the necessity of making it descend by third in consequence of the leading tone N. which demands the dominant tonic as a fundamental bass.

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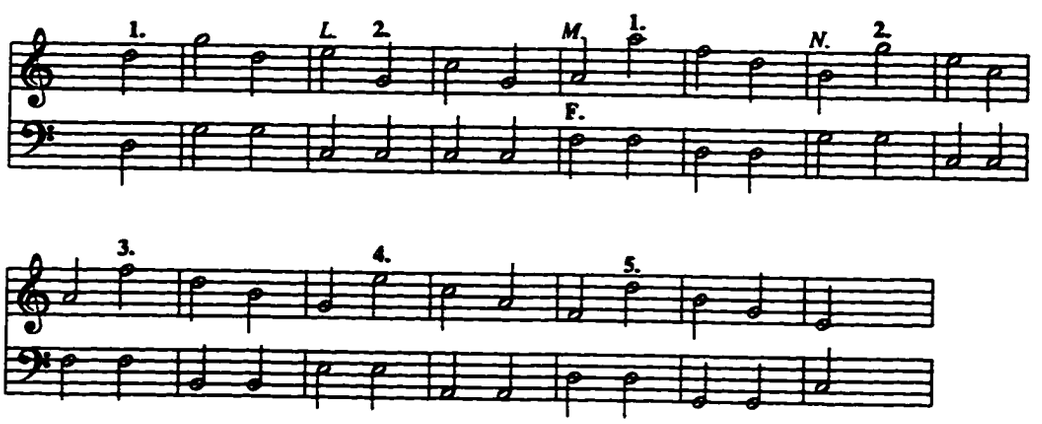
[11] Mm. 29-43 of Gianotti's ex 15 showing Rameau's guidemarks L. - N.:

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20 One is obliged to change the fundamental bass at each strong beat at the syncopations of the sequences between G. and H.; however one cannot observe this progression immediately after G., for the reason that if one descended a third in this place, one would not be able to come back by fourths. [Thus,] through this [progression], one would fail to shape the fundamental bass to the sequences of the subject.

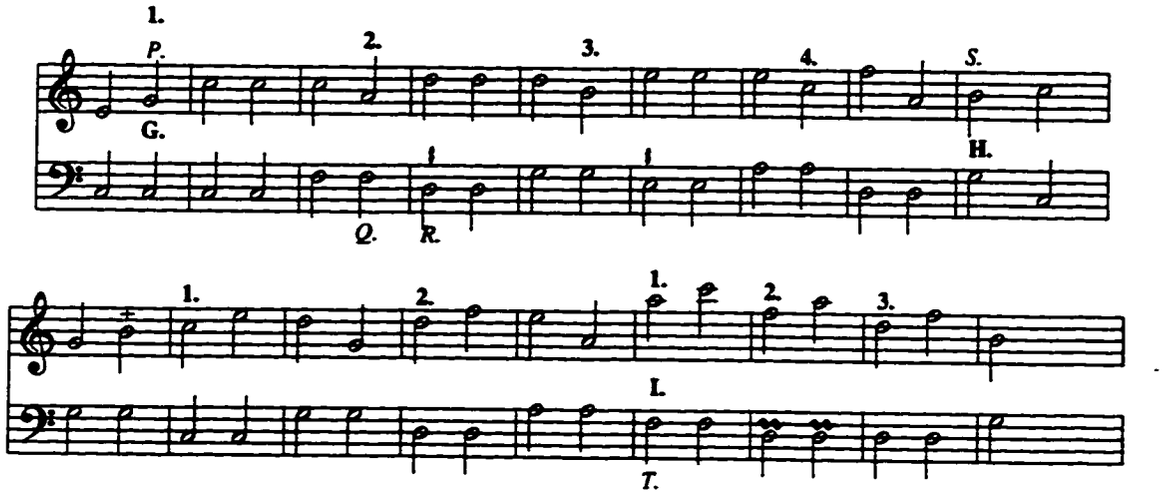
I/15/1-f. 32ᵛ Art. I
Explication

The syncopations of the sequences between P. and S. oblige [us] to change the fundamental bass at each strong beat.[12] This cannot be carried out [from] Q. to R. without descending a third at Q.—one should not miss [the opportunity] to imitate this in order to conform with the sequences of the subject.

I/15/1-f. 33ʳ Art. I
Explication

21 The leading tone at H. at once decides what should become a tonic under the number 4. [This tonic] can arrive at the dominant-tonic that this leading tone requires only through a progression of dominants related to those which have preceded. One should not be troubled about the irregularity of this last

The fourth of these sequences begins as the others, but does not continue in the same way. What is more, the leading tone S. suddenly makes [us] see that which should become the tonic under 4.—since it can only arrive at the dominant tonic that S. requires through a progression of dominants starting from [the

[12] Mm. 43-60 of Ex. 15 showing Gianotti's guidemarks G. - I. and Rameau's guidemarks P. - T.:

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sequence.

tonic under 4.].

The two sequences which follow S.ascend; consequently the fundamental bass ascends by fifth there.

22 The sequences at I. descend by third; the fundamental bass descends to these passing tonics everywhere by third in order to arrive at a key which asserts itself next.

The last sequences are at the third. One makes use of the passing tonics that descend a third from T. in order to arrive at the known key; since the subject itself does not permit use of them otherwise.

23 One is free to follow either the route of the custodes or that of the notes [in the measure] immediately after letter I.

ARTICLE II

Concerning sequences of the melody in different keys

I/15/1-f. 33r
Article II

1 The difficulties smooth themselves out in the sequences of the melody in different keys. The first of these types of sequences serves as a guide to those that follow. [One uses] the same route everywhere and the same fundamental notes at each beat of the same measures in relation to the tonic of each key.

When the key changes from one sequence to the other, the fundamental bass of [the sequences] is that much easier to find. [One uses] the same route in each sequence and the same fundamental notes at each beat of the same measure in relation to the tonic of each key.

2 There are cases where one can observe no connection from one sequence to the other because the melody of these sequences is so complete in itself that the fundamental bass is forced to begin and end each sequence on the tonic. Note well that this is

There are sequences whose melody is so complete in itself that one can observe no connection from one sequence to the other because the fundamental bass then begins and ends each sequence on the tonic. Ex.

I/17/2-f. 60r

Since the tonic generally ends all phrases or all pauses, it can be regarded as a point after which something quite new starts once more. And, in this case, one is not forced by any observance between it

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the only case in which two tonics can succeed one another at the second. *See ex. 16, pl.7.*

and the fundamental note which follows it because the rule of succession regards only that which ought to be linked [as] a necessary chain of words that compose a thought. Now, in such sequences, the thought can be perceived finished at each phrase, at each pause, and therefore one need not be troubled by whatever fundamental note is to follow the tonic that ends this pause, provided that this note be with regard to the new key what the first note of the previous phrase was to its key.

Observations on this example

I/15/1-f. 33^{r} Art. II
Explication

3 The sequences at A. and B. are at the descending second; the first in the key of *D*, the second in the key of *C*. The fundamental bass notes of the second sequence are similar to those of the first a key lower. Each of these sequences begins on the dominant of the dominant-tonic in the fundamental bass.

The first sequence A. begins on the dominant of the dominant tonic in the key of D. The second, B., begins in the same way in the key of C.

4 In order to observe more of a connection between the fundamental note of the first sequence [at] C. and that which precedes it, one is free to begin it on a foreign tonic, although one could also make it start on the dominant of the dominant-tonic according to the custos.

In order to connect the first sequence C. to the fundamental note which precedes it, one can make it begin on a foreign tonic, though one is also free to make it begin on the dominant of the dominant tonic as marked by a custos.

5 One can employ the same thing at D., but nevertheless one will do better here to prefer the custos to the note, rather than to persist in following

That which had been put into practice at C. should be practiced in the same way at D.in the second sequence: though in order to observe more connection from each

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the sequence in the fundamental bass exactly.

side, it is permissible to employ the foreign tonic at C. alone, without following the sequence of it at D., where one will then prefer the custos to the note.

6 The two sequences [at] E. and F. begin and end on the tonic of their key. Now since they are a second away from one another, there can be no connection between these two tonics which follow each other immediately. This is the only case where one can transgress the rule given with regard to the connection of harmony between successive keys.

I/15/1-f. 33^{r-v} Art. II Explication

The first sequence E. begins and finishes on the tonic. It should be the same from the second F. with the result that since the keys of these two sequences are a second away from one another, no connection can be found between their two tonics which follow each other immediately.

7 One is free to make the first of the four last sequences begin through the tonic, as shown by the custos, but not to [then] make the fundamental bass of the first two [sequences] the same, because, since they are in the same key, one must follow what the subject demands.

I/15/1-f. 33^{v} Art. II Explication

Among the four last sequences of the example, the first two are in the same key; thus one must not persist in making their fundamental bass the same. One then follows what the subject requires or one is free to make the first begin on the tonic marked by a custos.

8 When sequences occur in different keys, it is often the second sequence that should regulate the fundamental bass of the others.

So often, [one should look] to the second sequence over the first to regulate the fundamental bass of the other [sequences] when they occur in different keys.

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Editorial Commentary on Chapter X

Gianotti relies on Rameau's first draft lesson on sequences (15/1) so closely that he transmits many problematic aspects of Rameau's presentation of material. A quick comparison of the two lessons reveals several obvious similarities: the same title for the lesson, "Concerning sequences of the melody and of the fundamental bass in consequence" and the same organization of subtopics as article divisions. Even the ordering of these articles remains consistent. It should come as no surprise that Gianotti's content follows Rameau's version just as closely.

It is only after finishing Gianotti's chapter that the reader gets the sense that things could have been presented differently. The trouble starts right in the title, for from the phraseology of the title alone, the reader would primarily expect to learn about sequences in the melody. Fundamental bass progressions appear to be a secondary topic. In actuality, though, the reverse is true; for the real topic of this lesson happens to be tailoring the fundamental bass to sequences in the melody. Rameau's other version of this material in the second draft, lesson 17/2, reveals this idea in the very first paragraphs of the lesson:

> A melodic sequence follows from one measure to the other, sometimes in groups of two measures, other times in groups of four measures. This sequence consists of a melody which is the same but has one or more degrees of distance.
>
> The fundamental bass of an imitated melody is almost always the same in each sequence—especially when there are some pauses, because these pauses are a sure sign that that which has just developed in one key is going to develop in another. Thus, the fundamental bass found in the first key will be the same in each sequence.
>
> (I/17/2-f. 60r)

In the second draft, Rameau includes the fundamental bass as an integral part of melodic sequences, not just a consequence of melodic developments. Even though the title incorrectly expresses this connection in all the sources, there is no doubt that Rameau is

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aware of this idea in the first draft as well. For, even in the first draft, Rameau at least mentions the fundamental bass in the introductory paragraphs that precede the first article:

> Melody is imitated readily from measure to measure at the taste of the composer in groups of two [or] four measures. Similar sequences make the operation of the fundamental bass much easier.
>
> There are different kinds of sequences: some retain the same key and others change the key at each sequential pattern.[1]
>
> (I/15/1-f. 30r)

This is one particular that Gianotti omits. Thus, the reader of "L'Art" receives a slightly different picture than the reader of the Composer's Guide. In "L'Art," the reader understands that there is a connection between melodic sequences and the fundamental bass. In fact, a specific relationship emerges: since the melody of each sequence is similar, the fundamental bass beneath each sequence is generally the same in each sequence whether the sequence is in the same key or different keys. This is the underlying idea of Rameau's lesson in both draft versions.

The organization of ideas in Rameau's first-draft version and Gianotti's concomitant rendition is another source of confusion because it distorts this very premise. On the surface, the topical organization seems clear: Article I covers sequences in the same key and Article II covers sequences in different keys. From a pedagogical perspective, though, the ordering of ideas in the articles suffers because both the sequences and the fundamental bass turn out to be more regular in different keys (Article II) than in the same key (Article I). For example, the reader only learns that irregularity of the fundamental bass is a hallmark of sequences in the same key upon reading the seventh and eighth paragraphs of the second article, where the fundamental bass does not have to follow the

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[1] This is the original ordering of the opening paragraphs of 15/1 in "L'Art." In the three-column format of chapter X, however, the original sequence of these paragraphs was reversed to give precedence to Gianotti's ordering of ideas.

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first two previous sequences because in the same key, "one must follow what the subject demands" (see ¶ 7). Thus, in following Rameau's first draft presentation in organization, Gianotti introduces all the complexities before revealing the simplest form of the idea—an approach that is sure to disorient even the experienced composer. Though reversing the content of the articles would have helped considerably, it does not solve many other conflicting issues which arise in the course of the lesson.

Even the basic idea that appears in the second article division is fraught with problems, for the notion of regularity in the fundamental bass is far from simple. Through the examples which follow both article divisions, the reader eventually sees that the fundamental bass is not so regular in sequences after all. For example, in the first article, it is only in the example section that the reader sees how leading tones, syncopations, and other signs in the melody (¶ 3) require specific solutions in the fundamental bass—solutions that take precedence over the idea of regularity in each sequence.

In addition, Rameau and Gianotti often offer contradictory statements, sometimes one right after another, that tend to obfuscate rather than clarify the idea. For instance, in ¶ 5 of the first article, Rameau and Gianotti point to the fact that irregularities in the subject's sequences introduced at the "taste" of the composer do not affect the regularity of the progression in the fundamental bass. However, in the following paragraph, the student soon finds that irregularities in the melodic sequences do affect progressions in the fundamental bass when "one is forced to change the route of a tonic in order to submit to the key in which the last sequence is going to finish."

Rameau's second draft version avoids this pitfall by offering a slightly different perspective. Even the wording of the title departs from the first version ever so slightly: "Concerning sequences of the melody where the key can change and concerning the fundamental succession in consequence." While the title of this version suffers from the same misdirected focus as the first draft in disassociating melodic sequences from their

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respective fundamental basses, the lesson's organization does not fall into the same trap of presenting the complications before the simple idea. In this draft, Rameau does not split the material into two articles. He treats the idea of sequence generally, choosing to focus instead on how sequences act as musical units. This particular perspective eventually helps to clarify why the fundamental bass can be irregular in certain situations.

However, the reader would throw the proverbial baby out with the bath water if the concept of "regularity" in the fundamental bass were ruled out on the basis of inconsistencies in the relation of the subject matter. Through various illustrations distributed in both articles, Rameau shows that regularity of the fundamental succession is indeed the rule rather than the exception. In fact, the exceptions can be boiled down to three particular scenarios. Rameau allows deviations to establish key, to maintain harmonic connection between larger musical units at the sequence or phrase level, and, most importantly to require the same underlying harmonic function in each successive sequence.

Key

As a composer and teacher, Rameau reveals a keen understanding of the impact of key in a given musical context. From the very first lesson on scales, we have seen how Rameau viewed the tonic not only as a starting and ending point of a scale, but as the reference point from which all events flow. Given the attention to the tonic as the prime source of all musical activity, it should come as no surprise that Rameau allows irregularity in sequences to establish the principal tonic, or the key of the principal tonic at the beginning of a piece. In ¶ 13 of Article I, for example, Rameau allows irregularity in the first sequence at the beginning of a composition to establish the initial key as the principal key or tonal center of the piece.

Rameau also applies this same idea to more local levels of key. He says that in sequences in different keys, one should base the fundamental bass on the second sequence, not the first (¶ 8, Article II). From this musical illustration, we can surmise that the

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second sequence is often more stable than the first statement because the first statement must often provide a transition from the preceding key. The example in ¶ 20 of the first article provides another extension of this idea to cadential function in sequences. The melodic sequence consists of three repeated notes preceded by an upbeat a fourth below. The fundamental bass descends a third and then ascends a fourth. In the first statement, however, the fundamental bass does not descend a third as in the others because it would not set up the cadential progression (V-I) in the fundamental bass; instead, it retains the C in the fundamental bass which then becomes dominant-tonic of what follows. It is this cadential progression which is regular in each sequence. In this situation, Rameau shows how the first sequence often is irregular because certain elements are in a state of flux.

Sometimes melodic indicators of key alter a fundamental succession's route in an sequence. In ¶ 17 of Article I, for example, the leading tone at letter E. requires a dominant-tonic as a fundamental bass. Rameau explains that the fundamental bass preceding this leading tone cannot descend a third as in the previous sequences because the dominant-tonic required under the leading tone must be preceded by a dominant in the fundamental bass. A leading tone is another source of deviation in ¶ 19. Since the leading tone B requires a dominant-tonic as a fundamental bass, the fundamental bass F under letter F. is required to descend a third to become the dominant of the dominant-tonic appearing under the leading tone. The progression also prevents the proscribed progression by second (F to G) in the fundamental bass.

It is Rameau's concern for connection on many different levels which makes him sensitive to the junctures at the beginning and ending of sequence groups. In ¶ 4 of Article I, for example, both Rameau and Gianotti stress the importance of making the fundamental succession fit in order to lead to the new key where the last sequence finishes. To do this, the composer is authorized to alter the route of the fundamental succession in previous sequences through the selection of implied tonics; thus, preference is given to the

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connection of key from one musical event to another over maintenance of a set pattern in the fundamental bass.

Connection between Sequence Units

Connection is a high priority for Rameau. The idea of connection is certainly not new, but in this chapter Rameau applies the concept to a new musical unit—sequences. Rameau particularly draws attention to the sequence as a musical unit in his second draft version of this material, lesson 17. His approach in this draft is unique in viewing sequences as independent entities. This is an important facet of thought, for the objects of comparison (be they chords, measures, measure groupings, or sequences) must first be isolated as identifiable structures before any sense of connection between them can be examined.

In 17/2, Rameau does not concern himself or the reader with all the complexities introduced in the first Article of 15/1; rather, he shows how each sequence is a closed unit. He does this by subtly demarcating each sequence. His very definition of a sequence in the second draft reveals this view concisely: "This sequence consists of a melody which is the same but has one or more degrees of distance" (I/17/2-f. 60ᵛ)—a much more focused idea than the description of sequence found in its counterparts (see ¶ 2, Article I). Through the inclusion of intervallic distance in the definition of sequence, Rameau helps the reader focus on the melody as an event with specific boundaries, for if the melody were not identifiable to begin with, it could not be recognized at different pitch levels.

Rameau uses one particular means of identifying sequences as closed groups—the pause. The idea of pauses as defining elements of melodic segments surfaces early—in the second paragraph of lesson 17:

> The fundamental bass of an imitated melody is almost always the same in each sequence—especially when there are some pauses, because these pauses are a sure sign that that which has just developed in one key is going to develop

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> in another. Thus, the fundamental bass found in the first key will be the same in each sequence.
>
> (I/17/2-f. 60')

In 17/2, the reader sees how pauses are one means of delineating one sequence from another. This idea is only implied by Rameau in 15/1 and by Gianotti in chapter 10. As closed units, sequences can be used as compositional building blocks. They can also either promote or hamper connection between local keys.

It is this idea of key which becomes another means of defining the boundaries of sequences. In ¶ 2 of Article II, both Rameau (in 15/1) and Gianotti point out that in some sequences, the feeling of closure is so strong that the fundamental bass is forced to begin and end the sequence on the tonic. Now in the example in ¶ 6 of the same article, both Gianotti and Rameau show that each of these sequences begin and end on the tonic at letters E. and F. Furthermore, they point out that there is no connection between the tonics of each sequence because they are a second away from each other. Gianotti takes the initiative to add that this is the only case where elements are allowed to succeed each other by second (recall his strong admonition to avoid the dominant-tonic succeeding the subdominant in the fundamental succession—see ¶ 6 in chapter 2). But only Rameau tries to account for this apparent incongruity.

In the passage from 17/2 quoted alongside Gianotti's second paragraph in Article II, Rameau makes several important points that help to fill in the conceptual gaps here. First of all, he says that the tonic not only ends a cadence, it also serves as the point after which something new begins. Through this comment, Rameau obliquely admits the tonal closure of an sequence. He also tells us that the key of the sequence that follows this one does not have to follow the rules of fundamental succession (i.e. progression by fifths or thirds—not by second) because the rules of the fundamental succession only operate within the confines of sequences. Therefore Rameau allows sequences to follow at the second because these events at the key level are on a different stratum from chord-to-chord events on the note-to-note level.

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Rameau's linguistic analogy in the continuation of the same paragraph of 17/2 helps us to make the connection here. He says that the fundamental succession only follows the rules within the boundaries of one thought, just as a series of words have to follow the constraints of subject and predicate orderings to convey a coherent message. In this analogy, the fundamental notes correspond to the words and the sequences correspond to the thought that they express. Thus, through a linguistic parallel, Rameau conveys a sense of operations on various levels.

Connection and Function

Though Rameau allows the keys of sequences to follow at the second, he does not abandon the concept of connection at larger levels. In ¶ 4 of Article II, both Rameau and Gianotti point to the fundamental bass of the first sequence at letter C. Both Rameau and Gianotti prefer the fundamental note C over the custos A because they say it connects the key of this first sequence to what has occurred previously. That the fundamental C is related to what has preceded is clear, for the fundamental C is related by fifth from the preceding fundamental, G. What is more, since the G chord was not preceded by its dominant-tonic D, the key of C is still in effect from the end of the second sequence at letter B.

What is not clear is the terminology for this link between larger musical units. Curiously, the fundamental note C at letter C. is referred to as a "foreign tonic" by both authors. In chapter 8, the student learned the various subtleties of passing tonics, implied tonics, and foreign tonics—how implied tonics were temporary or local points of arrival and passing tonics were means of getting to these cadential points. The definition of foreign tonics was not as clear; any tonic that did not appear to match the mode of the principal key or the previous or succeeding local tonic seemed relegated to this category.

The use of the label "foreign tonic" in this example sheds light on the nature of sequences as units and the implied function of the fundamental bass within these unit

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divisions. Since Rameau and Gianotti do not provide any additional explanation, the reason must be deduced from the facts of the musical context, as follows: 1) the previous phrase ends on a G chord; 2) the preferred fundamental of sequence 1. is a C; and 3) sequence 1. cadences on a G chord. The question is, why would Rameau deem the fundamental at 1. a "foreign" tonic as opposed to a continuation of the same tonic of the sequence marked B.? The answer to this question can be revealed through an analysis of the function of this fundamental in this particular context. A key factor here is the intervening rest between the fundamentals G and C, for this rest suggests a modicum of closure at the fundamental G. The C that follows, unlike the one five measures ago, is a then a beginning of something new—not an ending of something in progress. Now the fundamental A indicated by the custos is in the same position as C (i.e. the opening note of a new segment), therefore the progression by second between the two distinct segments (the fundamental G ending the previous sequence and the fundamental A at the start of the new sequence) is allowed. Rameau and Gianotti, however, prefer the fundamental C to A here. Note the nomenclature given to each note. Both Gianotti and Rameau designate the fundamental A a "dominant of the dominant-tonic." They call the C, however, a "tonic"—not a dominant—for this C does not continue to progress by fifth as a dominant would, but instead moves by descending third to the A. This "tonic" is deemed a much better solution because it promotes connection between the keys of the separate units even though this proscribed progression by second (G to A) is customarily allowed between two distinct segments. The C is a "foreign" tonic here because, according to the rules, it does not match the mode of the principal key; moreover, it functions as a tonic, not as subdominant of the key of the new segment, G major.

This example is particularly fruitful for integrating several ideas. We see the sequence as a fixed musical unit determined not only by melodic design, but by key. In addition, as these units are demarcated, they are connected at the same time by the thread of a particular fundamental bass. This example illustrates yet another factor—regularity of

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cadential function in the fundamental bass. Rameau and Gianotti's preference for the fundamental G indicated by the custos under letter D. (¶ 5, Art. II) would seem to contradict a consistent reflection of the opening measure of the first sequence, a descending third at C.. However, in the second sequence, there is no need to connect keys as in the first. In fact, the B flat actually breaks the connection here, for the key of the first sequence (G major) now functions as the dominant of the dominant-tonic of the next. The significant progression then is the perfect cadence at the end of the sequence. All other fundamentals that precede this cadence act as simple dominants which lead to this underlying motion. When seen in these terms, the fundamental succession is regular in both sequences. Both have a fundamental that maintains connection followed by a chain of simple dominants which lead to a perfect cadence. It is not just the notes in the fundamental bass that maintain a regular succession, but their function.

Cadential Function

Knowing that it is the underlying function of cadences which constitute "regular" fundamental successions sheds light on two examples included in the first Article division. In ¶ 16, both Rameau and Gianotti say that the pause at letter C. requires a cadence in the fundamental bass. They also say that the subdominant F is an implied tonic. As isolated facts in the context of sequences where the key is not supposed to change, these comments do not make much sense. However, in light of the example in Article II, these facts add up to the idea of regularity of cadential function in the fundamental bass of each sequence. First of all, both authors point out the cadence beneath the sequence. Then, they proceed to state that, contrary to its use as subdominant in the key of C, the fundamental bass F is an "implied tonic." Therefore the fundamental C which precedes it is not a tonic, but a dominant-tonic. This cadential progression from dominant-tonic to tonic in the fundamental bass, remains consistent in each successive sequence. In ¶ 18, the subdominant at F. is an "implied tonic" for the same reason: it is preceded by its dominant-

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tonic as the G was preceded by its dominant-tonic in the first sequence. Similarly, in the first example in Article II (see ¶ 3), both Gianotti and Rameau point out that each of the sequences starts on the dominant of the dominant-tonic in the fundamental bass.

Despite the twists and turns encountered in the convoluted expedition through the land of sequences, the reader arrives at a distinct destination. Through the various detours of key, connection, and function, Rameau has been leading the traveler all along, for he has shown that no matter how irregular the path, it is regularity in the fundamental bass progression that is the sure compass in the course of composition.

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CHAPTER XI

Concerning the case where it is necessary to divide one note of the melody in two values in order to facilitate the prescribed fundamental progression

Gianotti:

1 When it is not possible to observe the prescribed fundamental progression, it is necessary to divide a melody note into two values in order to give a different fundamental note to each one of these values.

2 The note of the melody that one should divide in this fashion can belong to the tonic of a key that one leaves and to the fundamental note of the key one enters. As a result, the choice of these two fundamental notes always depends on either what precedes or what follows the note [that is] divided in this way.*

3 The note [that is] divided in this way sometimes provides the means of passing from one tonic to another. It will be able to become common to its key and to [the key] that follows. By this means, one can still pass from a tonic of a major key to [the key] of

Rameau: draft 1

I/16/1-f. 33v

When it is not possible to observe the fundamental succession under the subject, one is then free to divide a note of this subject into two values in order to give a different fundamental note to each one of these two values.

I/16/1-f. 33v

The choice of the note [that is] divided in this way should consider the [value] which answers to the tonic or at least to its following [note].
The note [that is] divided in this way sometimes provides the means of passing from one tonic to another. It will be able to become common to its key and to the [key] which will follow it—that which is then in accord with what had been said in the lesson XIII concerning a

Rameau: draft 2

I/18/2-f. 60v

Such a case can arise where the fundamental succession cannot be observed—this [case] is only dependant upon dividing a melody note into two equal values. One then gives a different fundamental bass to each of [these values].

* Because very often it is not the subject note that ends the key of a phrase that requires division, but [the note] which follows.

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its relative minor or else take the route of dominants in order to arrive at the tonic of a known key.

subject note which can receive two other different tonics in its repetition.

4 However, if the subject forms a perceptible pause immediately before the note that one is forced to divide, one can interrupt the connection in this place by making two tonics a second apart follow each other—just as in sequences. Since a perceptible pause is to music what the period is to discourse, [the pause] marks the end of a phrase that can have no relation to what follows.

However,when a perceptible pause develops immediately before the subject note that one is forced to divide into two values, one can observe no connection there—just as in sequences, whose tonics follow each other at a second. That is to say, without dividing this note, after the tonic of the key that one is leaving, one first gives [the melody note] the fundamental which fits in the key where one passes. Since a perceptible pause is to music what the period is to discourse—[the pause] marks the end of a phrase which can have no rapport with the one which follows it.

5 But this possibility never should authorize the abuse which one could inflict. *See ex. 17 pl.8*

Observations on this example

6 If one did not give two different fundamental notes to the note A. of the subject, the fundamental bass could not observe its legitimate progression. Instead, through this means, one arrives from one tonic to another through a progression of fifths.

I/16/1-f. 34[r]
Explication

First, after the key of A, the [key] of C begins at A. The mediant which follows A. requires the tonic below it. Consequently, this tonic requires its dominant before it at the note A. of the subject. This dominant cannot follow the tonic A which precedes it. Therefore it is necessary to divide this note A. in two values by providing two different fundamental notes under A. so that the fundamental bass might observe its determined

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succession there.

7 The note B. of the subject is divided in order to receive the tonic of the key of G major first and the key of E minor, its relative minor, next.

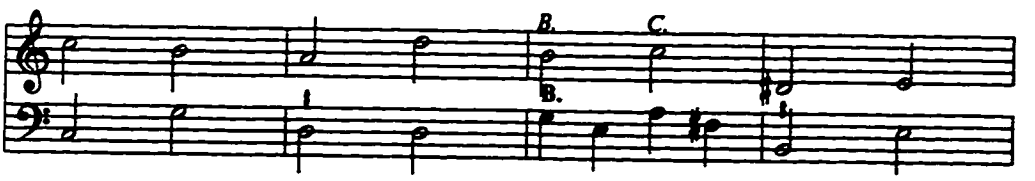
B. and C. are but the same measure:[1] on the one hand, the note B. is divided in order to receive the tonic G of the key that one leaves and the tonic E of the key where one passes successively; and on the other hand, the note C. is divided in order to have a succession of dominants which leads from the tonic G up to the one of the new key which is equally good.

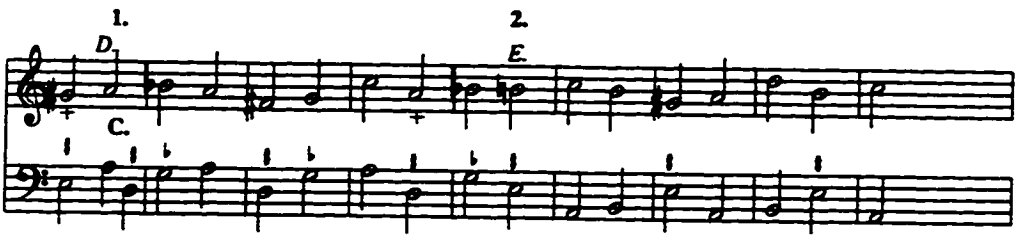
8 One divides the note at C. in order to obtain the

The note D.[2] is divided in order to obtain a

[1] Rameau's example differs from Gianotti's here. While the events at Gianotti's letter B. match Rameau's description of events at the same letter, the note which follows letter B. is another story. Since Rameau states that letters B. and C. are in the same measure, the note that follows B. would be the only option as letter C. here. It is no coincidence that Gianotti provides a faulty progression in the fundamental bass under this very point (E-F#). Rameau's solution, which divides the melody note C into two values, would correct this lack of connection and provide a dominant progression linking the keys of G major and E minor in one stroke. Thus, the missing first value would have to be an A in the fundamental bass.

A reconstruction of Rameau's example would be:



[2] Measures 16-24 of Gianotti's Example 17 with Rameau's guidemarks D. and E.:

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most legitimate progression for the fundamental bass.

9 [At 1. 2.] the fundamental bass of the two sequences a second away is similar in each when only comparing the second black [note] under letter C there.

succession of dominants from one tonic to the other just as at the note C. The melody from D. to E. is imitated from E. up to the end in two different keys with the result that the fundamental bass is the same in each of these keys when only including[3] the second white [note] [**blanche**] under D.

I/16/1-f. 34r
Explication

10 If one takes away the first black [note] under letter A. and under letter C., and the second [black note] under letter B., the connection of harmony will be interrupted. However, this defect can be authorized by virtue of a perceptible pause which precedes—but with much reservation.

Let us cut the first white note under A. C. and D. and the second under B. [As a result], there will no longer be any connection there: this is [made] possible by means of a perceptible pause immediately before this absence of connection—but one should not abuse it.

[3] In this passage, Rameau uses the word *comprenant* instead of Gianotti's *comparant*. Rameau's text in "L'Art" reads: *en n'y comprenant que la deuxieme blanche sous D.* whereas Gianotti's reads: *en n'y comparant que la deuzieme noire sous C.* While it is not clear whether Gianotti might have misread the writing, the intent of the passage remains unchanged by the different words used.

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Editorial Commentary on Chapter XI

In chapter 11, the reader finds a new application for the procedure of dividing a melody note into two values. In earlier chapters, this process brought about a functional shift, not in the melody note itself, but in the fundamental bass note beneath this melody note. In these chapters, the splitting of a melody note into two values was more of a pedagogical device, since both values did not actually appear in the music of the corresponding examples (see exs. 13-16). Through this pedagogical procedure, the student could understand how a note would relate to what had preceded in its first value and what was to follow in its second value. By providing conceptual place holders for each value, Rameau and Gianotti helped the student to picture the changing function of a single note.

But now Rameau's and Gianotti's use of the procedure allows a single melody note to be supported by two separate fundamental bass notes—notes that actually appear in the music. Through the interpolation of the additional fundamental note that this melodic procedure provides, the fundamental succession can either descend a third to another tonic or follow a dominant route instead of ascending or descending by second—a progression banned by Gianotti as far back as chapter 2 for its lack of harmonic connection. This is the main point of the chapter.

However, Gianotti leaves out some important information. While he transmits the procedure accurately enough, he does not explain the ramifications of the procedure. In fact, his example in ¶ 7 shows that though he may follow directions by using correct procedures, his result is faulty due to a misunderstanding of their complete application. Happily, Rameau's second-draft version of this lesson, 18/2, fills in the details.

In ¶ 7, Gianotti divides the melody note at letter B. to allow the fundamental bass note to be a means of transition from the previous key of G major to the key of E minor. Gianotti understands that the interpolation of the G in the fundamental bass prevents the

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progression by second (D to E). However, he fails to recognize that this solution also creates a problem for what follows, for he does not explain the resulting progression E - F#.

Rameau's relation of the same example in 16/1 weaves a different tale. Through two specific clues, he reveals that each melody note in the measure must be divided to provide a correct succession of the fundamental bass. Therefore, Rameau provides an example of a double division in the same measure. He says that the first melody note (B.) must be divided from one side to provide a shift from the tonic of the key of G to that of E—as Gianotti also points out. However, Rameau provides another step. He says that the second melody note (*C.*) must be divided to provide a succession of dominants to lead from the key of G to the new key, E minor. Through this additional step, Rameau not only avoids the proscribed motion by second in the fundamental bass (both D-E and E-F#), he provides a succession that fulfills the rules and maintains a consistent pattern.

Unfortunately, neither author recommends the double application of this procedure in the body of text that precedes the example section. However, in the second draft version of this material, Rameau provides information that fills in the gaps with key details. These details show how to connect elements that are a second away, whether they are single notes with implied chords, or keys of musical units such as sequences or phrases. Through the advice in 18/2, the reader soon understands Rameau's double application of the procedure in the example above.

Unlike the first draft of this lesson, which Gianotti follows very closely, Rameau's second draft does not focus on events from the melodic perspective. Instead, it immediately draws the reader's attention to requirements of the fundamental succession. While all three sources begin the lesson by presenting this melodic procedure as a means of promoting a legitimate fundamental progression in the face of difficulties, only the second draft version makes the fundamental bass the center of study:

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> Such a case can arise where the fundamental succession cannot be observed—this [case] is only dependent upon dividing a melody note into two equal values. One then gives a different fundamental bass to each of [these values].
>
> For example, if one wished to make the tonic descend by third in the case where the melody would only permit making it ascend by second, one would then only have to divide in two equal values the note which answers to the tonic or the note to which it seems that this tonic could ascend only by second.
>
> (I/18/2-f. 60ᵛ)

By using the word "tonic" in the second paragraph, Rameau instantaneously differentiates the fundamental bass from the melody while simultaneously projecting their interdependence. Through this clarification, he immediately immerses the reader into the problematic situation in this draft: the melody requires a progression by ascending second in the fundamental bass (a progression that destroys harmonic connection). He therefore suggests making the tonic descend by third. To facilitate this, he advises dividing the note that answers to the tonic **or** dividing the note which follows this tonic ("the note to which it seems that this tonic could ascend only by second") into two values. This is the additional step that Gianotti fails to provide.

By presenting the division of a melody note as an antidote to a snarl in the fundamental succession, Rameau improves upon his first-draft version where he presents the procedure without discussing its context.[1] Without the context, it is the note of division that is emphasized—not its intended usage. Further details in 18/2 clarify the situation:

> If the note of the melody which answers to the tonic can enter into the harmony of the [note] which is a third below this tonic, one is then free to divide this melody note into two equal values in order to give it the tonic first and the

[1] This is not the first instance where Rameau gives precedence to the underlying procedure over the logical unfolding of detail—see his presentation of rendering a minor subdominant a tonic (¶ 3) in Gianotti's chapter 8. Whereas in chapter 8, Gianotti altered Rameau's presentation by describing the context before the procedure, in this chapter, Gianotti does not follow suit and instead observes Rameau's first-draft version.

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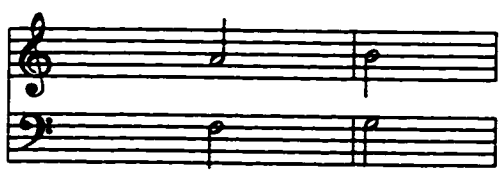
> third below[2] this tonic. If not, one will divide the melody note which answers to the one where the tonic ought to have ascended by second in two equal values in order to give it the note where this tonic descends by third first and the one which should follow according to the prescribed order next, [the note] which is precisely the same [as the note] where this tonic would have had to have ascended by second. Ex.
>
> If the two notes of the melody which answer to the tonic and to its second above occur equally in the harmony of the third below this tonic, the division of one or the other is then arbitrary—{it is no more than} taste concerning the melody that one wishes to give to the basso continuo or to another part which decides [the choice of the note]. At the same time, this [choice] provides the means of following a design [or] a fugue better—not only in this case, but in others which will depend upon the fantasy [of the composer] as long as the prescribed fundamental succession does not suffer on account of it. This is said in passing in order to pay attention to it only when one is permitted to compose [freely] on one's own.
>
> (I/18/2-f. 61[r])

Rameau presents a two-step process of determining the correct fundamental progression. His first step focuses on the first melody note. His determination of the correct fundamentals beneath this initial melody note involves two sub-steps: determining whether this melody note can be supported by the tonic as a fundamental and examining whether the fundamental a third below this same melody note would fit equally well. For example, in the following context:

[2] The manuscript actually reads: *la tierce au dessus de cette tonique*. As in lesson 2/2 (see the commentary of Gianotti's first chapter), the word *dessus* ("above") here should be *dessous* ("below").

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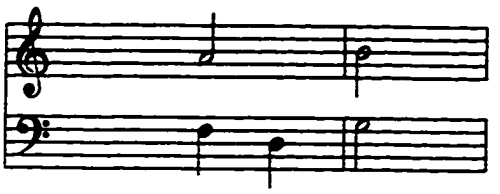
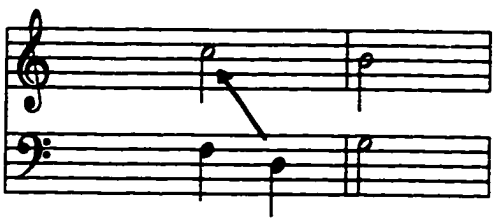
D, the fundamental a third below F, can harmonically support the A in the melody—therefore the first melody note can be divided into two values as such:

However, in the following context,

the fundamental D, a third below F, cannot harmonically support the seventh in the melody:



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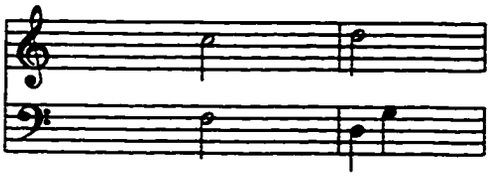
In this situation, the composer must look to another means of avoiding the progression by second in the fundamental bass. Rameau's suggestion for dividing the second melody note provides just such a solution; for when the interpolated note (still a third below the tonic) is placed on the strong beat beneath the second melody note:

the succession of the fundamental bass follows the rules. What is more, the fundamental note that follows on the weak value is the next note in the progression of fifths—a note which is exactly the same note as the second away from the initial tonic. This is Rameau's second step. Thus, through these procedures, the tonic can still proceed to the second above or below without destroying harmonic connection.

It is easy to see how the interpolation of a single fundamental note provides a legitimate alternative to the progression by second. In short, the additional fundamental note provides another simple dominant to facilitate a regular progression in the fundamental bass—progression by fifths. Recall that in Gianotti's fifth chapter, only the tonic could avail itself of additional routes by either ascending a second or descending a third. These new routes were called simple dominants; each of these simple dominants was to be followed by another dominant (descending fifth or its inversion, the ascending fourth). Since the additional note provided through the division of the melody note in this chapter is a simple dominant, and must therefore be followed by fifth, the procedure substitutes a dominant route for a progression by second.

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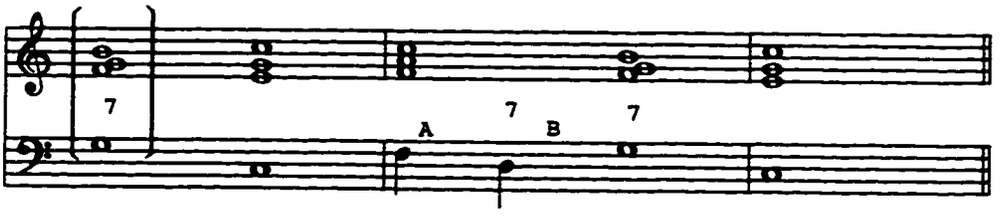
Through the details in 18/2, Rameau not only teaches the procedure, he shows how to apply it in different melodic contexts. The recommended fundamental route remains constant between the two approaches: the tonic descends by third and the third below the tonic progresses by fifth. What changes is the placement of this formula according to the constraints of the melody. When division of the first melody note does not support the alternate route, the composer can resort to supplying it under the second melody note.

It is the fundamental route that is important for Rameau, not the melody, for he says that if either melody note can be supported by the third below the tonic, the choice for division is arbitrary and dependent upon taste.[3] Thus, as Rameau suggests in the final

[3] Two recent scholars have discussed Rameau's understanding of metric issues via his fundamental bass theory. In his dissertation "Theories of Harmonic-Metric Relationships from Rameau to Riemann," William Caplin points to Rameau's awareness of coordinating the arrival of a tonic harmony with the strong or accented beat of the measure. According to this view, then, the interpolated note not only avoids stepwise progression of the fundamental bass, it remains well within the guidelines of Rameau's metric values for placing the tonic on the strong beat. However, when the interpolated note occurs on the downbeat of the following measure as in the example on p. 410, it contradicts Rameau's usual metric preference. Allan Keiler points to Rameau's symbolic representation of the interpolated note as a metalinguistic expression of chord function. Keiler presents two examples of this expression, fig. 4-3 ("Example of the interpolated bass in Rameau"):



and fig. 4-4, ("Example of the use of the fundamental bass in Rameau"):

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paragraph of the lesson, knowing how to apply the procedure in various contexts provides the composer flexibility in composition.

In comparison to Rameau's rather exclusive focus on the preferred dominant route and clear instructions for its use in 18/2, Gianotti's version is quite a contrast. Though Gianotti understands the division of a subject note to be a means of circumventing the proscribed progression by second in the fundamental bass, not merely a melodic procedure, his examples provide rather free applications of this main idea. At letter C., for example, Gianotti interpolates a descending fifth (A) to avoid the progression E to D. He does the same thing at letter A., inserting the descending fifth (G) between D and C. At A., it is the second value which corrects the progression, but at letter C., it is the first value which saves the day. No explanation accounts for the difference in application. In fact, in Gianotti's rendition, these solutions are not really presented as events in the fundamental bass, but as resulting outcomes from the division of a melody note.

In Gianotti's version, by reading between the lines, one might come to the realization that a succession by fifth substitutes for the second progression. However,

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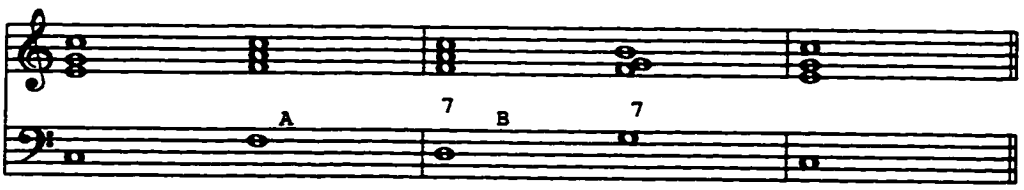

Note the resemblance of Keiler's fig. 4-4 to my illustration of Rameau's second step where the third below the tonic in the fundamental bass occurs on the strong beat of the next measure. While Keiler argues that Rameau intended these expressions as purely abstract representations of chord function, I argue that in "L'Art," Rameau uses the interpolated note as an actual note in the music. For Rameau in "L'Art," use of an interpolated note to avoid step progression of the fundamental bass (in a situation where the subject forces this solution) is the hierarchical rule that takes precedence in this context—one that even preempts Rameau's usual metric preference for placing the interpolated note on the weak beat. See Keiler's "Music as Metalanguage: Rameau's Fundamental Bass," in Music Theory: Special Topics, ed. Richmond Browne, (New York: Academic Press, 1981), 83-100.

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through the lack of accompanying explanation, the reader receives a very general and rather careless relation of events. Luckily, Rameau's first draft version, 16/1, remedies the situation by presenting the details which explain each of the solutions in relation to specific musical contexts. For example, at Gianotti's letter C. (Rameau's D.), Rameau explicitly says that the melody note is divided to provide a succession of dominants where Gianotti uses it "to obtain the most legitimate progression for the fundamental bass" (¶ 8). Rameau provides an even better explanation of events at Gianotti's letter A. He shows how each decision impacts on another: the mediant (E) requires the tonic (C) as a fundamental bass, and this tonic must be preceded by its dominant-tonic (G), but the dominant-tonic cannot follow the key of A. Therefore an interpolated fundamental is required to maintain the connection. Thus, the division of the melody note at letter A. allows the D (the interpolated note) to serve as bridge between the keys of A and C while becoming a link in the chain of dominants. Rameau's explanation surpasses Gianotti's in showing how the procedure facilitates connection between keys, not just how it corrects a prohibited progression.

Through these kinds of additional explanations in 16/1, Rameau continues the line of thought from the previous lesson. Recall that in the last chapter on sequences, Rameau determined a closed musical unit by its key, particularly through the cadence in the key at the end of each musical unit. This idea of the key of musical units still occupies Rameau in this chapter. In the explanation accompanying ¶ 6, Rameau uses the procedure of this chapter to connect the keys of the first two musical units of the example. For Rameau, the keys of the units are a priority, not the procedure itself. His very first sentence in the explanation directs attention to the keys of the illustration: "First, after the key of A, the [key] of C begins at A." Rameau's interest is in providing a legitimate connection between the musical unit in A (the first four bars) and the musical unit in C (the second four bars)—not just showing how the insertion of a fundamental circumvents the progression by second. In this way, we see the use of this procedure as not just a tool, but a means to an end. This is the illustration that reveals the true value of the procedure in composition.

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Although in the same paragraph Gianotti adds that "through this [particular] means, one arrives from one tonic to another through a progression of fifths" (¶ 6), he fails, through the lack of an explanation, to connect the significance of the procedure to the connection of keys.

However, Gianotti does understand the idea that this procedure inherently links events that would ordinarily have no connection. By including information on the role of pauses as defining elements of phrases (in ¶'s 4 and 10), Gianotti tacitly admits several ideas: that there are musical units larger than the measure, that these units are delineated by key, and that the connection from unit to unit depends upon how related each unit's key is to the next. Like Rameau in 16/1, Gianotti points out that a perceptible pause before the note of division can create an ending (¶ 4), that is closure, for the first musical unit. Both authors liken this pause to a period in a sentence. The illustration of this follows in ¶ 10 where the removal of one of the added fundamentals reinstates the progression by second, now authorized through a pause over the first tonic. When a perceptible pause enters the picture, there is no connection between the tonics that follow each other at the second. Each is considered a part of a separate musical unit, the first tonic being the end of the first unit and the second tonic being the beginning of the second unit. Both authors relate this type of event to sequences in which each musical unit is more readily detected through similar melodic design and fundamental route and appears at different pitch levels or keys.

On the whole, Gianotti's chapter does not do Rameau's equivalents justice. There are a number of subtleties which Gianotti misses. Oftentimes it is Gianotti's examples or lack of accompanying commentary that reveal his weaknesses. While he does present the basic gist of Rameau's content adequately in this chapter, he fails to communicate the application and the effect of a given procedure on many different levels. Rameau's two drafts make up for these omissions. Where Rameau's second draft provides integral details concerning the procedure itself, Rameau's first draft helps the reader to associate ideas on larger levels by using the procedure to connect keys of musical units and to maintain

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consistent application of tonic routes that were advised previously, namely the dominant route of descending third plus descending fifth (or ascending fourth). When read in this vein, even the seemingly insignificant comments about preferring one of the inserted fundamentals over the other at the beginning of each sequence (see ¶ 9) makes more sense, for Rameau sees this point as a continuation of an idea from the previous chapter. Since Rameau made a point of maintaining a similar fundamental route in each sequence in the previous chapter, the student, when confronted with this detail in this chapter, understands why one fundamental is preferred to the other in this similar situation. Good teacher that he is, Rameau connects ideas. He continually uses new knowledge to reinforce what he has taught previously.

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CHAPTER XII

Concerning the breve and its consequences for the fundamental bass

Gianotti:

1 One calls every note which follows a dotted [note] a breve.

2 One knows well enough that the dot is worth half the value of the note which precedes it, and that the breve which follows [the dot] is not worth more. From which it is easy to notice that the dot and the breve together have precisely the same value as the note which precedes them. But it is necessary to be well aware beforehand that several breves whose [collective] value is equal to that of a single breve should be considered only as one [breve].

3 The breve should be counted for nothing 1) in the case where it would oblige the fundamental bass to syncopate, especially if this fundamental bass could follow its determined route without allowing for the breve; 2) when this breve is followed by a note on the same degree. It is understood that if a pause developed on the dominant, [the pause] which the subject note would form from its side would be preceded by a breve on the same degree. And, [if] there were no way of giving the fundamental bass its legitimate progression without allowing for this breve, it would then be necessary to give [the breve] its own particular fundamental bass.

4 When a breve is followed stepwise by a note on which there is a pause, [the breve] should still have its own particular fundamental bass. *See ex. 18 pl. 9*

Rameau: Draft 1

I/17/1-f. 34[r]

We call every note which follows a dotted [note] a Breve. The dot which follows a note is only worth half of it and the breve which follows this dot is not worth more. As a result, the value of the dot and of the Breve [together] equals the [value] of the note that precedes them. If there are several breves whose [collective] value is equal to that of a single breve, one then considers [all of] them only as one [breve].

I/17/1-f. 34[r-v]

There are cases where the Breve should be counted for nothing. As a result, the dotted note which precedes [the Breve] is then felt to take up double its value—that is to say: the [note] itself, the dot, and the Breve.

I/17/1-f. 34[v]

These cases are: when the breve obliges [us] to syncopate the fundamental bass, when the fundamental bass can follow its determined route without allowing for the Breve, or when [the Breve] is followed by a note on the same degree.

Yet if a pause developed [in the subject] on the fifth, [and this was] preceded by a Breve on the same degree, and there was no way of giving the bass its cadential succession without allowing for this Breve, then one could not get out of giving it its own particular fundamental bass.

When there is a pause on the note which follows the Breve by step, [the Breve] should have its own particular fundamental bass. Ex.

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Observations on this example

5 Since the note that follows the breve A. does not have a pause, one can count [the breve] for nothing; the fundamental progression will not be less regular [because of it]. One is free also to follow the alternate route indicated by the custos.

6 If one counted the breve B. for nothing, the cadence that the pause that follows this breve requires would not be able to take place.

7 One counts the breves C. for nothing; not only because there is no pause on the note that follows them, but because the fundamental progression must not suffer on account of it there.

8 With regard to the breves at D., one counts them for a single [breve] only; one chooses among those that fit the fundamental progression the best.

9 Sometimes one finds more than one [of these breves] that is subject to the harmony, as in the present case [¶ 8].

10 The breve E. should have its own particular fundamental bass in consequence of the pause that follows it, and moreover to avoid the syncopation that would occur at this point.

11 One clearly sees the necessity of making the breves carry a harmony at 1., 2., and 3.

12 [It is] the perceptible pause ended on the note which follows the breve at F. [that] numbers this [breve] among those that are counted for nothing. One should follow this usage in all similar cases.

I/17/1-f. 34'
Explication

One is free to count the breve A. for nothing as much because there is no pause on the note which follows it by step as because the fundamental succession is not less regular.

Without the fundamental bass given to the Breve at B. the cadential succession necessary to the pause which follows this Breve B. would not be able to take place.

All the Breves C. and D. are worth only one [Breve] and one counts them for nothing as long as there are no pauses on the note which follows them and especially as long as the fundamental succession can dispense with it. If one had need of one of these Breves to retain the obliged fundamental succession, one would have the liberty of choosing the one which would fit best, as at D., where the first, the third, and the last Breves belong equally to the chord of their fundamental bass and where any one of them suffices to guide the composer.[1]

Since the Breve J. [is] followed [by a note] on the same degree where the perceptible pause ends, [the breve] should be counted for nothing.[2]

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[1] Through this additional information, Rameau shows the student how to decide the fundamental bass of a multi-breve unit. Unfortunately, Gianotti offers no specific advice on this point.

[2] Rameau's letter J. is Gianotti's letter F.

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13 The same observation [holds] at G. as at D.

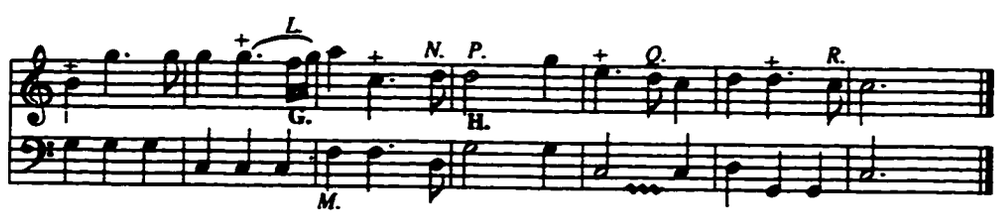
14 The breve before H. requires its own particular fundamental bass, in consequence of the pause which follows on the dominant.

15 The other breves of this example are explained by the preceding observations.

It is the [same] with the two breves L. as at C. and at D.[3]

[Since] the Breve at N. [is] followed on the same degree at P., a fundamental bass is absolutely necessary [for this breve] because the pause that develops on the fifth P. requires a fundamental cadence.

It is [the same] at Q. as at A. And [it is] at R. as at J. The subdominant is perceived a tonic in consequence of the perceptible pause at M..

[3] After letter D., Rameau's guidemarks depart from Gianotti's. As in other examples, Gianotti's guidemarks appear in boldface and Rameau's in italics here:

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Editorial Commentary on Chapter 12

It seems curious that Gianotti should devote a chapter to the breve at this late stage in the first section of the Guide, for his first two paragraphs convey very basic information that could have been included in the Preliminary Introduction. Gianotti gets to the heart of the matter in the third paragraph, however, where he describes the cases where the breve can be counted "for nothing." From this paragraph on, the reader soon learns that the hidden topic of the chapter is not the breve per se, but the opportunity that the breve affords the composer to coordinate cadential requirements in the fundamental bass with an ensuing pause in the subject.

The modern reader encounters a small terminological problem in the very first paragraph, where the breve is defined. Twentieth century musicians understand the breve to be a long durational value. In current durational usage, a breve is the equivalent of two tied whole notes. Since quicker values predominate in modern music, breves are used rather infrequently. In the eighteenth century, however, the breve is an entirely different animal—a note that follows a dot (pictured as an eighth note in the examples), i.e. a short value. Our modern perception is diametrically opposed to the eighteenth century musician's view of this value as a short duration, a view perpetuated from the dawn of modal notation, when the breve was considered a short value in comparison to the longa. Once the modern reader accounts for this difference, the path to understanding the underlying idea of this chapter is clear.

The fact that the breve is not the actual topic of this lesson is the second problem. Once again, focus on a more superficial element displaces the real center of attention: the fundamental bass and its most perfect succession. Notice that Gianotti places this chapter in the latter third of Part I—he does not consider it an introductory topic, but an advanced application of what has preceded. The appearance of this particular lesson in the last third of Part I is not unique to Gianotti's rendition; Rameau includes the lesson on the breve

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(I/17/1) in the same position in the first draft of "L'Art." Save for a passing reference on the breve in the lesson on syncopation (I/6/2), Rameau's second draft version omits this topic as the subject of an entire lesson. That Gianotti follows Rameau in placing this lesson directly after the topic of dividing a melody note (Rameau's lesson 16/1) is no coincidence, for both the division of a melody note and the harmonization of a breve provide means of interpolating an additional fundamental—a procedure used to tailor a progression to a given musical context. Thus, the reader soon recognizes the thread of continuity peering from the weave of the fundamental bass fabric.

The Notion of Breve

Without Gianotti's illustration (see mm. 5-6 of ex. 18) and Rameau's explanation of how a group of breves can function as a single breve (¶ 2), the modern reader could easily be misled. Once again, the problem involves a perceptual gap between centuries. To Rameau and Gianotti, the idea of breve connotes any value that follows a dot—not a specific durational value. As a result, when they say that several "breves" can be equal to a single breve, they assign any note in a note grouping that follows a dot to the breve category. Thus, it is not the actual durational value of each individual constituent that matters, but the function of this duration as a short value that follows a long.

To use a mathematical analogy, Rameau and Gianotti see any kind of note that follows a dot as a member of the set called "breve" regardless of its independant duration. For example, in Gianotti's illustration (ex. 18), the student sees groupings of thirty-second notes (at letters C. and D.) or sixteenth notes (at letter G.) standing in for the value of an eighth note. At letter C., there are seven notes in the grouping, at letter D., six notes, and at letter G., two notes. Each one of these notes is called a "breve" according to the definition. Each individual note is deemed a "breve" because in function, it stands for the shorter value—the note that follows the dot.

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While the modern reader has no problem understanding the collective function of notes to be equivalent to the eighth-note value that follows the dot in this example, the twentieth century pedagogue would be much more specific distinguishing each element's individual duration from its collective use in an aggregate standing in for a breve. To modern sensibility, each single note, as an independant entity, does not share the same function as the collection as a whole, and therefore does not bear the same name as the collection as a whole.

Perhaps this is not a problem for Rameau because of his basic conception of a breve as a non-essential note or a note "counted for nothing." In the third paragraph, both Gianotti and Rameau state that there are cases when the breve should be "counted for nothing." Both authors spell out specific situations where this is the case. However, these situations do not make sense without an important piece of information—a detail that Gianotti omits. Only Rameau points out that "the dotted note which precedes [the Breve] is felt to take up double its value—that is to say: the [note] itself, the dot, and the Breve" (¶ 3). At the conclusion of the second draft version of lesson 6 "Concerning the distinction of beats of the measure, syncopation, the value of fundamental notes in each measure, and the Breve," Rameau includes a remark that communicates this same idea:

> The breve is a note of less value than the [note] that precedes it and almost always [less value] than the [note] that follows it. As long as this Breve note is preceded by a dot and followed by another note on the same degree such as C C D D etc., imagining the first C or the first D for a Breve, this Breve note, shall we say, is counted for nothing. One then assigns it with the dotted note which precedes it as if this one [the dotted note] still occupied the value of it. As a result, the fundamental bass is only made up of the dotted note without having consideration for this breve.
>
> (I/6/2-f. 50ᵛ)

Rameau reveals an important idea here. He presents the breve not merely as a subject event, that is, a note that follows a dotted value, or even as a short value that is sandwiched between two longer values, but as an event that does not receive its own

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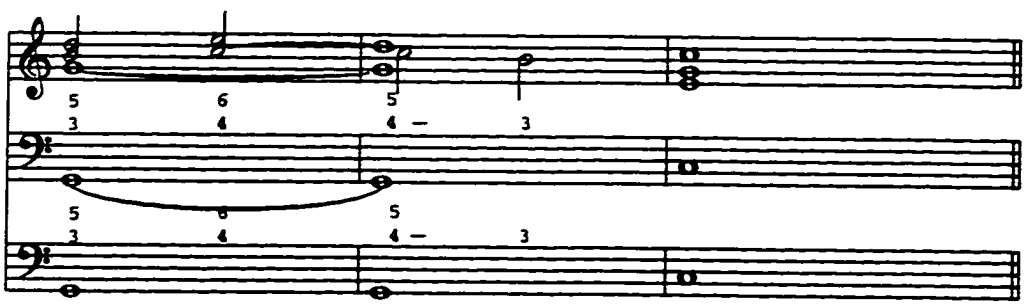
fundamental bass. In the details of both passages, ¶ 3 in this chapter (17/1) and 6/2, Rameau specifically indicates where the fundamental bass fits in the picture: it appears under the dotted note, the strong value, and continues through the weak event. From a temporal perspective then, the breve appears inconsequential because it is the preceding dotted note which receives harmonic weight, or more specifically, a fundamental bass.

The Breve as Pedagogical Link to Dissonance

There is more to Rameau's description of the breve in this chapter than meets the eye, for unbeknownst to the reader, Rameau is already sowing seeds here for the explanation of dissonance in certain characteristic cadential formulae—a topic that appears at a later point in the treatise. As Thomas Christensen has pointed out in his article "Rameau's 'L'Art de la Basse Fondamentale,'" Rameau explains in this work the cadential 6/4 as a suspension above a single fundamental note.[1] In this situation, the sixth suspends or delays the fifth and the fourth suspends or delays the third, as follows:



Example 12- 1: *Christensen's reconstruction of Rameau's suspension example in I/8(24)/2*[2]

[1] Thomas Christensen, "L'Art," Music Theory Spectrum IX (1987), 31-2.

[2] Ibid., p. 31.

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Rameau's own description of this suspension event has a familiar ring:

> a suspended note is only a [product] of taste, it has no fundamental bass and if one assigns one to it, it is only in order to satisfy oneself in seeing that its origin is most often to be found from supposition. But as this is of no use in practice, it is better to recognize the note of suspension as counting for nothing [by itself] and assigning it the fundamental bass of the consonance which it suspends and which immediately follows it.[3]

Christensen sizes up the situation succinctly when he says that "the important point is that the suspended dissonance, from a practical point of view, is a 'note du gout [sic]' or as we would say today, a 'non-harmonic' tone, and it resolves over a single fundamental bass, whereas theoretically it consitutes a change of fundamental bass."[4]

It is no coincidence that Rameau describes both the breve and the note of suspension as notes "counted for nothing." Even though Rameau does not introduce the idea of dissonance in 17/1, through a single supplementary reference in the explication of this chapter on the breve, he already prepares the reader for understanding dissonance as a transitional phenomenon between consonant events. In the last paragraph of his explication of 17/1 (see ¶ 15), Rameau points to four specific locations: Q., A., R., and J. Thanks to Gianotti's example, the reader has no problem recognizing the similarity between the pattern at letter F. (Rameau's *J.*) and the pattern at the final cadence (marked *R.* in footnote 3): each is a perfect cadence with the breve anticipating the appearance of the subject note in the next measure. Unlike the assignment of the "note du gout" of the suspension with the fundamental bass of the following harmony, the breves at *R.* and *J.* receive the fundamental bass of the preceding harmony (though they are actually melody notes belonging to the following harmony). Whether it is a breve or a suspension, each is a "note du gout" for lack of its own fundamental bass. Furthermore, through contextual

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[3] I/8(24)/2, f. 86[r] of "L'Art" as translated by Christensen, "L'Art," 31.

[4] Ibid., 31-2.

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displacement, each is robbed of its true identity. As a result, each is deemed a note "counted for nothing" by Rameau—a non-harmonic tone. In the cadential 6/4, the dissonance is the local disturbance; in chapter 12, the breve is the local disturbance. Though the breve is not actually a dissonance here, in reality, the fundamental that appears below it is not its true fundamental bass.

The Breve and the Cadence

Both Gianotti and Rameau first present the breve as a value that should be counted for nothing. They vary, however, in laying out the exceptions to this rule. Though both authors present the harmonization of the breve in the face of a pause approached by step similarly (¶ 4), in the third paragraph their relation of ideas do not match as closely. Rameau says that the breve can be "counted for nothing" in two general cases: 1) where it would force a syncopation of the fundamental bass, or 2) when the breve is followed by a note on the same degree. Rameau then designates a separate paragraph to present an exception to the latter case, explaining that the breve should have its own fundamental bass when the pause that follows it (at the same pitch as the previous breve) occurs "on the fifth." Though Gianotti also conveys these two general cases under the umbrella of notes "counted for nothing" (especially accentuated through his use of numerals to offset these points), his combination of the rule and its exception under the second heading unfortunately creates confusion for the beginner. What can the student make of the different approaches in the third paragraph? Fortunately, the musical examples give credence to the Chinese adage that "one picture is worth more than ten thousand words."

It is really Gianotti's examples that clarify the various details mentioned in the text of the chapter. For, throughout these examples, Gianotti draws the reader's attention to one particular factor for determining the treatment of a breve: finding a pause as a cadential signal in the breve's immediate environment. Gianotti's procedure becomes simple: if there is no pause following the breve, the breve is usually counted for nothing; if a pause follows

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the breve, other factors must be investigated. Thus, at letters A. and Rameau's *Q.*, the breve is counted for nothing and is considered more of a transitional event because of the absence of a pause. At letter C., since the multiple breves do not contradict the prevailing fundamental bass and there is no pause in sight, there is no change of fundamental.

There are pauses, however, at letters: B., E., F./*J.*, and *R.*. At B. (¶ 6) and E. (¶ 10), the breve is followed stepwise by a note where there is a pause, an example of the advice in ¶ 4. Both Rameau and Gianotti tell the student that it is the pause that commands the cadence in the fundamental succession and ultimately decides for a separate fundamental for the breve.[5] At E., Gianotti adds that this breve's fundamental bass also avoids at the same time a possible syncopation of the fundamental bass.

The rationale behind the decisions at the other pauses, however, is not quite as apparent. For instance, for stylistic and harmonic reasons, Gianotti alone points out the use of a fundamental beneath the breve at numbers 1., 2. (¶ 11). Here, while not stating the idea explicitly, Gianotti shows how the change of fundamental at the breve prevents progressions by second in the fundamental bass and facilitates a modicum of consistency in the fundamental progression beneath each sequence—points that were important in previous chapters.

It is at letter H./*P.* that Gianotti's comments prove particularly fruitful. While both Gianotti and Rameau point out that the pause on the note that follows the breve requires a cadence in the fundamental succession, only Gianotti specifies that this cadence takes place on the dominant. In this context the breve anticipates the next subject note; it does not, however, anticipate the following note's fundamental bass; rather, its own fundamental is the dominant of the dominant tonic cadential goal. This is the difference between the events at H./*P.*, where the breve receives a separate fundamental, and the events at F./*J.* and *Q.*, where the breve does not receive a separate fundamental because it anticipates not only the

[5] Rameau does cite one exception to this rule (¶ 15) at letter *M.*. where there is still a cadence on the subdominant-turned-tonic even though the preceding breves do not receive a new fundamental.

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subject note of the next event, but its harmony as well—the point explained through Rameau's additional comment in ¶ 15. In simple terms, at F. and *Q.*, the breve is a non-harmonic tone while at H./*P.*, it is an integral part of the harmonic progression of events.

In this particular lesson, each author's presentation complements the other by filling gaps that the other omits. In introducing the particulars only after conveying the general rule first, Rameau is strong where Gianotti is weak; but in actually using the examples to illustrate how the exceptions depart from the general rule, Gianotti is strong where Rameau is weak. Each teacher has his own priorities. For Rameau, it is not so much the particulars that are of concern, but comprehension of ideas at a large level. Rameau knows that the idea of a breve as a note "counted for nothing" must be understood before exceptions to this rule can be entertained. Therefore, his additional explanations of the breve's harmonic weight, provided in 17/1 (¶ 3) and 6/2, provide the necessary support for this general idea. It is this kind of concern for the connection of ideas at large levels that also prompts Rameau to refer to both the breve and the note of suspension as "notes counted for nothing."

For Gianotti, however, detail is much more important. Gianotti's priority benefits the modern reader as much as Rameau's does. Through Gianotti's additional remarks in the example section, the reader uncovers an approach for assessing whether a breve is significant or relatively insignificant harmonically. In almost every example, Gianotti directs the reader's attention to the presence or absence of a pause in the musical context and its impact on the decision illustrated in the example. He even takes Rameau's concepts one step further by showing the student how harmonization of the breve, like the procedure of splitting a melody note into two values, often serves to remedy a problem in the fundamental bass, such as progressions by second or deviations in sequences. In a way, Gianotti bridges the gap between Rameau and posterity here by showing the student eager to put Rameau's grand ideas into actual practice how to apply the rules in the text to an actual musical setting. Thus, through the contribution of each author's strengths, the

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modern reader understands how the lowly breve, as significant or insignificant as any other melody note in a composition, can become yet another means of bringing about a sound fundamental progression.

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CHAPTER XIII

Concerning the design of the fundamental bass in consequence of that of the subject

Gianotti:

1 We should direct our primary attention toward grasping the spirit of the subject, especially its visible and perceptible manifestations.

2 To the extent that the melody be designed, all its phrases will start on the same beat of the measure as the first phrase started on, and one subordinates the fundamental bass [to the melody] as much as possible.

3 Often, a taste for variety demands that one deviate from this rule, especially in places where the pause is not very perceptible, such as could make us take what follows for a beginning of a phrase.

4 One should begin each phrase on a new fundamental note as much as the subject permits. If this note is the tonic of a new key, and is preceded by the

I/18/1-f. 35[r]

From now on, one must pay attention to grasping the spirit of the subject—at least in visible and perceptible cases. In order to conclude whether the [subject] is designed, one first notices the beat where the subject begins [because] all the melodic phrases should generally begin on the same beat.

When a pause is not very perceptible, one should not always assume what follows it to be a beginning of a Phrase. After only somewhat perceptible pauses, very often the taste of variety demands that one deviate from the general rule.
Knowing where each phrase should naturally begin, according to the beat of the measure upon which the subject had begun, one tries to conform the fundamental bass to it. One makes the fundamental bass begin on a new note with the beginning of the phrase as much as the subject permits. If this note is the tonic of the new key

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tonic of the key that one is leaving, and since there is some ambiguity surrounding the succession of these two tonics and a progression of dominants that leads further on to the tonic of this new key, this [tonic of the new key] should be preferred according to the spirit of the subject.

that immediately follows the tonic of the key that one is leaving and [the key] that follows it, and since there is then some ambiguity surrounding the immediate succession of the tonics of these two keys and a succession of dominants that lead further on to the tonic of the new key, this [tonic of the new key] should be preferred according to the spirit of the subject.

5 Provided the fundamental progression is well observed, one can retain a tonic [note] that ends its key in order to [let it] take on such quality as it can in [the key] that follows.

One must not refuse to retain a tonic that finishes its phrase either, when it can begin another [phrase] where the fundamental succession, moreover, is observed.

6 If there is some ambiguity among the beats of the measure as to where the tonic might be employed, it is necessary, as much as one can, to reserve the strong beat for it unless [the tonic] serves to commence the phrase in coordination with the subject.

On the other hand, when there is some ambiguity among the beats of the measure [as to] where one can use the tonic, it is necessary, when one can, to reserve the strong beat for it except if it serves to commence the phrase in coordination with the subject.

7 One will take similar care with the dominant-tonic, unless the tonic is preferable.

One will take similar care with regard to the dominant tonic as long as the tonic will not dispute it.

8 If there is some ambiguity among the two weak beats of a measure with three beats, one should prefer the third beat, provided that the spirit of the subject does not oppose it.

If there is some ambiguity among the two weak beats of a measure of 3 beats, the third is the preferable [choice] except that the spirit of the subject does not oppose it.

9 One should also pay [similar] attention to the reposes of the pauses, which we mentioned in the

One must cling to the repose of the pause, the consideration of which [is discussed] in art. IV of the

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observations on the example of the third method for recognizing a key (chap.VII), to consider whether a [given note] should be taken as a repose [of the pause] [i.e. a phrase's end] or, rather, as a phrase's beginning [of the piece, the piece having begun in a similar way].

XIIth Lesson, when examining whether one should actually take it for a repose [of the pause] [i.e. a phrase's end] or whether it is not the commencement of the phrase modeled on the beginning.

I/18/1-f. 35v

10 One should pay no less attention to the subject note that announces a pause, and upon which there is a trill [**tremblement**] because it is necessary to apply to this note the dominant-tonic which announces the perfect cadence and to reserve the dominant of this dominant-tonic for the note that will have preceded on the same degree [the note] that carries the trill. *See exs. 19 and 20, pl. 9*

One should still have no less consideration for the note of the subject that announces the pause. If, of two notes on the same degree, the last [note] bears a trill, called cadence, it is [the last note] alone that announces the pause and consequently, it is under that note alone that one must employ the dominant that announces the fundamental cadence, giving to the first of these two notes on the same degree the dominant of this dominant as a fundamental bass.

The misuse of the term cadence instead of trill seems to have been conceived due to the fact that almost all notes which signal pauses, especially the most perceptible ones, willingly undergo such a trill; from this one must conclude at least that the fundamental cadence can be announced with the "cadenced" note [i.e. trilled] of the subject. Ex.

Observations on these two examples

I/18/1-f. 35v
Explication

11 One could have retained the tonic under the notes at A. and B., but since

The two examples concern the same lesson. Although the subject notes [at] A.

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the subject begins on the second beat of the measure, it is in order to conform to this design that one had given a new fundamental note to these two subject notes, which are common to [both] the tonic and dominant-tonic chords.

correspond to the tonic already employed on the strong beat and as a consequence one had been able to continue it, the spirit of the subject, where one begins on the second beat, demands that one follow it on all the second beats where it is possible to submit to it: this is why one gives new fundamental basses to these notes A. to which they correspond equally.

12 The spirit of the subject could require the same treatment at C., since the beginning of the phrase is ambiguous between C. and D.; but it is better to employ the tonic at D., which is considered a strong beat relative to the second [beat].

Though the spirit of the subject might require the same [treatment] at B., when the beginning of the phrase is ambiguous, as it actually is between B. and C.,[1] it is better to wait for the beat [at] C. in order to give the tonic to it.

13 The trill is only marked on the last of the two notes at E. and F. in the two examples; and it is there that the perfect cadence should be announced by the dominant-tonic, preceded by its [dominant].

In the two examples, the tremblement is marked only on the last of the two notes D. E.[2] on the same degree; thus it is there alone that the fundamental cadence should be announced by the dominant preceded by its [dominant] under the first of these two notes D..

14 One cannot follow the spirit of the subject in the second example [Ex. 20], which begins on the weak beat of the measure, because the melody obliges [us] to retain the same fundamental note in each measure nearly everywhere. But this defect can be corrected in the basso continuo.

Though the second example starts on the weak beat, one cannot follow the spirit of it as much as one would like, because the subject forces [us] to employ the same fundamental note in each measure nearly everywhere. But this is corrected in the Basso continuo.

[1] Rameau's guidemarks B. and C. are equivalent to Gianotti's C. and D.

[2] Rameau's guidemarks D. and E. are equivalent to Gianotti's E. and F.

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I/18/1-f. 36r
Explication

15 The figures 1.2.3. mark some sequences by descending second.

Descending sequences [occur] at the figures 1.2.3. where the fundamental bass successively descends by fifths.

I/18/1-f. 36r
Explication

16 Out of regard for the spirit of the subject, the tonic of the new key is placed on the weak beat at G.. Otherwise, it would have had to wait for the strong beat to be used.[3]

One first seized the tonic of the new key at the weak beat F.[4] nevertheless in favor of this spirit [of the subject] whereas in all other cases, one would have had to wait for the strong beat to employ [the tonic] as the subject sees fit.[5]

17 Although the fundamental bass appears to syncopate at H., this syncopation is avoided by the quality which this fundamental note takes in becoming a dominant-tonic. It is a tonic at first, in consequence of its rapport

One cannot get out of syncopating the fundamental bass G. This should be tolerated in favor of the perceptible pause which precedes G.. However, this syncopation is avoided because the nature of the same fundamental note

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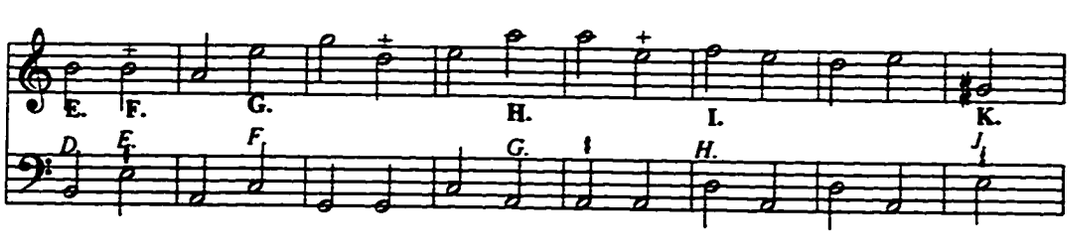
[3] Neither Gianotti or Rameau mention the fact that this decision also prevents a step progression from A to G in the fundamental bass.

[4] A portion of the last line of Gianotti's Ex. 20 appears below with Rameau's guidemarks D. through J. appearing in italics:

[5] This thought is a continuation of the paragraph cited alongside Gianotti's ¶ 14.

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with the key that precedes it; [however] it next becomes a dominant-tonic of the key of D, recognized by the perceptible pause at I..

changes there: if this note is first a tonic as a result of the rapport required with the key that precedes it, it next becomes a dominant tonic especially since the pause at H., though perceptible, suffices to make the key of D recognizable. The next lesson will clarify the advantage this makes.

18 Notice from H. to before K. the two fundamental tones common to the keys of both A and D. [These tones] can be assigned indifferently to one or the other of these two keys, but one cannot doubt [the key] indicated by the leading tone at K..

In the meantime, let us always notice that the two fundamental tones common to the keys of A and D, a fifth one from the other, can be applied indifferently to one of these two keys right up until one can no longer shut one's eyes to [the key] of A immediately before the leading tone at J..

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Editorial Commentary on Chapter XIII

Those who would accuse Rameau and his followers of neglecting melody at the expense of harmony will stand corrected after reading this chapter. For in this lesson, both Gianotti and Rameau show how the design of a melody directly influences the choice of one fundamental over another. Although Gianotti has typically presented events from the melodic perspective in his Guide, in this particular chapter, his stance clearly reflects his teacher's predilection.

This is not to say that Rameau has neglected to acknowledge the role that melody often plays in the course of composition, for although his is decidedly a fundamental bass approach, he has continually presented the melody and fundamental bass as wedded partners. From the very first lessons, Rameau has shown how specific melody notes, namely the mediant and the leading tone, are intimately tied to equally specific fundamentals, the tonic and the dominant-tonic respectively. In the chapter on finding the fundamental bass of a given melody in a single key (Gianotti's second chapter), for example, Rameau directed the student to shift attention between the fundamental bass and the subject in determining the course that a fundamental bass should take. It is in the lesson on sequences (Gianotti's chapter ten), however, that Rameau reveals the impact of melodic design on that of the fundamental bass by teaching how the consistency of each melodic imitation often begets an equally consistent fundamental bass below. In this chapter, however, Rameau goes one step further, for it is here that the fundamental bass takes a back seat to the demands of the subject.

Gianotti's sole source for this chapter is Rameau's eighteenth lesson in the first draft of section I: "Concerning the relationship required between the fundamental bass and the subject." The only lesson that remotely corresponds to this topic in the second draft is lesson 20: "Concerning the relationship of the basso continuo to the subject." Since Rameau discusses actual part-writing techniques in I/20/2, a topic that Gianotti reserves for

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the third section of his treatise, understanding of the subject's impact on the fundamental bass is already assumed. As a result, Rameau's second-draft material lies beyond the scope of this chapter. With the exception of one particular passage (the material that appears beside Gianotti's ¶ 16), Gianotti adopts Rameau's exact progression of content within the chapter. He also preserves Rameau's lesson ordering, placing this lesson after that devoted to the breve.

The Ordering of Lessons

In transmitting Rameau's specific ordering, Gianotti also transmits his mentor's analytical shift in perspective from a vertical view of events in lesson 17 to a horizontal view in lesson 18. Recall that in the previous chapter, both Rameau and Gianotti chose to focus on the breve as a harmonic event, not just as a purely rhythmic element. Thus, the student learned to assess the harmonic character of a "note counted for nothing" as either a note that anticipates the harmony that is to follow or a note that receives its own fundamental bass. Either way, the student is forced to think vertically, coordinating the note with a specific fundamental bass. If the breve were purely a rhythmic or melodic phenomenon, on the other hand, the perspective would be decidedly horizontal. In lesson 18, however, Rameau focuses on the melodic line and its design—a horizontal perspective. In pointing out the regularity of melodic patterns in phrases, he shows how these units demand an equally consistent approach in the fundamental bass. Thus, the breve, ordinarily considered a purely melodic detail, becomes a vertical or harmonic event for Rameau; conversely, the fundamental bass, assumes a horizontal character.

In sum, "The Breve" entails a great deal more than simple facts. So too the topic of this chapter, for here the devil is in the details, so to speak. Pedagogically, both Rameau and Gianotti present the general idea first: "the spirit of the melody" often has a specific design which becomes regular. The student's first job, then, is to determine this specific melodic design. Since both authors state that all the phrases of the melody will start on the

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same beat (¶ 2), tailoring the fundamental bass to this patterning becomes the new rule. In theory, the idea is simple. However, the reader also probably knows that this is not the last word; and indeed it is not, because the rest of the lesson is devoted to exceptions to this rule.

The Exceptions to the Rule

Unfortunately, neither Rameau nor Gianotti does anything to help the reader. Neither teacher walks the student from basic applications of the idea to more intricate usage. In fact, there is no coherent progression of ideas, for easier applications of the new rule are intertwined with complex exceptions. For instance, the simplest decisions involve determining whether to place the tonic on a strong or weak beat in a given melodic phrase. Rameau and Gianotti cover this in paragraphs 6-8, not the beginning. In ¶ 6, for example, both point out that it is usually better to reserve the tonic for the strong beat over the weak beat; similarly, in ¶ 8, both prefer the third beat to the second beat in a three-beat measure for the same reason—because it is strong relative to the second. This idea is not new. However, the new rule, adherence to the design of the subject, supersedes the old rule; thus, in the example of ¶ 16, the student is advised to place the tonic on the weak beat in accordance with the melodic design. In this example, Rameau teaches much more than a rule—he teaches artistic decision-making. Typically, the student would retain the A in the fundamental bass through the weak beat of the measure in order to reserve the tonic for the strong beat of the following measure. Anticipating this, Rameau gives an illustration that provides an even better solution, one that coordinates harmonic flow with the natural ebb of the melody. Following the subject's demands, though, can also thwart a consistent patterning in the fundamental bass. Lest the student always prefer the new rule to the old, Rameau and Gianotti provide an exception. In ¶ 14, for example, the harmonic rhythm that the subject requires so severely restricts the harmonic progression of the fundamental bass such that the design of the melody cannot be maintained.

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The other exceptions to the new rule in this chapter are much more complex because the decision whether or not to allow the design of the subject to override previous rules involves a much more detailed evaluation of the musical context. It is the study of the musical context itself which is the forum for inquiry, for examining what constitutes a phrase becomes the secondary topic of the lesson. That the phrase itself should loom large here should come as no surprise, for both Gianotti and Rameau introduce phrases early in this chapter, using them as the clearest vehicle for making the subject's design manifest.

Determining where phrases begin and end in ambiguous situations can be challenging. Unfortunately, the reader encounters this ambiguity as early as the third paragraph. This is where the exception knots begin to tangle and, in effect, detract from the simpler ideas of the lesson.

The Phrase

The idea of the phrase as a unit is not new. Recall that in the lesson on sequences (Gianotti's chapter 10), Rameau introduces the idea of closure in imitation units. In fact, Rameau's second-draft definition of "sequence" reveals his view of sequences as melodic ideas with distinct boundaries.[1] Some important ideas concerning phrases initiated in the discussion pertaining to sequences have particular relevance to this chapter, namely, 1) the function of pauses as indicators of phrase or sequence boundaries, 2) the nature of sequences as fixed units determined not only by melodic design but by key, 3) deviations at borders of these units being permitted to establish key or to maintain harmonic connection between keys of successive units, and 3) the idea of a cadential goal as not only the boundary of the previous phrase, but the point after which something new begins.

The crux of the matter in chapter 13 becomes apparent in ¶ 3. Here, both Gianotti and Rameau say that when the pause is not readily perceived, the rule concerning following

[1] "This sequence consists of a melody which is the same but has one or more degrees of distance." (I/17/2-f. 60ᵛ) See the discussion of the significance of this statement in the section *Connection Between Sequence Units* in the Commentary to Chapter 10, p. 385.

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the subject's design stated in the previous paragraphs cannot always be observed. A comparison of the example in ¶ 11 with that of ¶ 12 illustrates the problem. In ¶ 11, both authors show that indeed either C or G could be used as a fundamental under letter A. or letter B.; the G is preferred to preserve the initial design of the subject characterized by the two-note upbeat. In this situation, following the new rule helps the student choose one particular fundamental over another in the face of two options; the design of the subject becomes the final arbiter—a resource drawn from a higher hierarchical strata of decision making. Note the presence of clear pauses on the downbeat of measures two and four in this example. Without these perceptible pauses, the design of the subject could not be enhanced by the fundamental bass. In ¶ 12, for example, the situation is not as clear. At letter C. (Rameau's B.)[2], both teachers warn the student of a possible trap. They say that one would be tempted to follow the spirit of the melody as in the previous example except for an important factor in this particular context: the ambiguity of the phrase beginning between letters C. and D. When phase unit boundaries are not clear-cut, the rule cannot be grasped from the clouds as the "deus ex machina"; it is here that the original rule of preferring the strong beat to the weak beat takes precedence.

But there are also other factors to consider. Unfortunately, Rameau and Gianotti throw many details at the unsuspecting reader one paragraph after another. In ¶ 4, Rameau and Gianotti introduce key into the conundrum of phrase, and in ¶ 5 the dual function of a fundamental. In ¶ 9, the reader encounters another knot of threads—mention of "the reposes of the pause." Even the directives concerning the specific harmonization of the trill in the preparation of a cadence (¶ 10) contribute to information overload. All of these motifs coexist in the realm of phrase. Fortunately, Rameau leaves enough clues in the grain of his lesson to retrace the common thread.

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[2] Gianotti's guidemarks will be used as reference points throughout the remainder of this commentary.

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The Pause

One particular element helps to identify the common thread: pauses. Indirectly, Rameau devotes considerable discussion to the pauses of the phrase in this chapter, for pauses are the prime means of identifying phrase boundaries. Indeed, no decisions can be made before phrase limits are determined. This is why both Rameau and Gianotti mention the perceptibility of the pause in ¶ 3; it is a high-level concept. Determination of a definitive pause, or lack thereof, constitutes the first step in the decision process, for pauses are points of arrival and can be likened to harmonic landmarks. They provide a sense of orientation, a possibility for continuity or discontinuity. Without landmarks or goals, the melodic road is but an endless blur. Though neither author explains the importance of this high-level concept in the beginning of the lesson, they do provide details later on that help to shed light on the role of pauses.

In ¶ 9, both Rameau and Gianotti introduce a new idea. They say that it is necessary to pay attention to the "repose of the pause." No real definition of this idea is offered. However, the reader arrives at a pretty clear picture of the concept by piecing together the example reference from chapter 7 and the clue in the last clause of this paragraph. The example comes from the third section of Gianotti's chapter 7, "Knowing successive keys through their relationships:"

Gianotti:

8 Since the two notes at the beginning are common to both the major and the minor key, there would be some doubt about the true key if the perceptible pause that makes itself felt at the fourth measure did not decide in favor of the minor. Moreover, the last note of this same measure, a note that one should regard as the **repose of the pause**, indicates the key of A minor well enough.

[emphasis added]
(Chapter VII, Third Method, ¶ 8)

Rameau: draft 1

If the key is doubtful in the beginning, it is no longer [doubtful] at the second perceptible pause D. Moreover, the note B. is like the **repose of the pause** at A., therefore it is the key of A minor.

[emphasis added]
(I/12/1-f. 25^{v}, Art. V, Explication)

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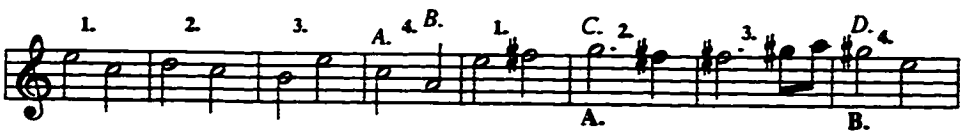

Example 13- 1: *The first line of Gianotti's Ex. 11*

In this paragraph from chapter 7, Gianotti says that the perceptible pause makes itself felt in the fourth measure; he also specifically designates the last note of that particular measure as the "repose of the pause." Although Rameau has different coordinates in his example, it is clear that he is referring to the same notes in the same location as in the corresponding paragraph from 12/1. Rameau is a bit clearer in his description of the example. He designates the note B. specifically as the repose of the pause at A. From this example, then, the reader realizes that the "repose of the pause" is the note that follows the pause on the strong beat. Knowing this sheds light on the passage in ¶ 9, for both Rameau and Gianotti point to the "repose of the pause" as a juncture that is somewhat ambiguous—ambiguous because it can be judged either as the beginning of a new phrase or simply the note on the weak beat that occurs after the pause on the strong beat.

The discussion continues in the tenth paragraph. In this paragraph, however, the focus is on the note that "announces" the pause, not the pause itself or its rest. Both Rameau and Gianotti point to the note which precedes the note of the pause as the note that bears the trill [**tremblement**]. Both reserve the dominant-tonic for the note with the trill and assign the dominant of the dominant-tonic to the note which precedes this one. Gianotti provides a good illustration of this idea in the second line of Ex. 19:

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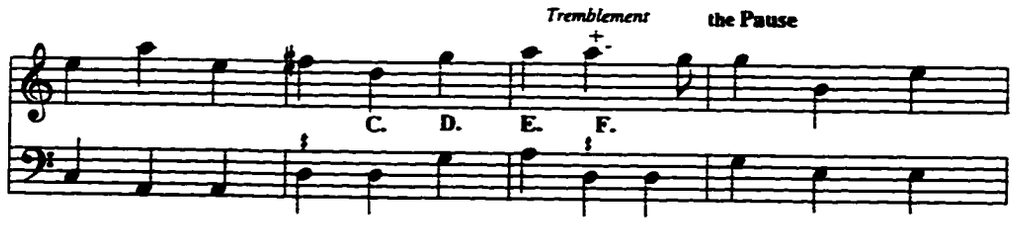

Example 13- 2: *Mm. 7-10 of Gianotti's Ex. 19*

Notice that Rameau has subtly emphasized the pause indirectly by drawing attention to the function of the notes which surround it. This is the same kind of perspective that Rameau used in lesson I/4/1 to present the "snapshot" of the tonic as the center of two dominant poles (see Additional Sources to Chapter I, pp. 93-5). Recall that Rameau also used this perspective in his pedagogical approach for finding an appropriate key in a succession of keys where he advised the student to direct attention to one key, looking to both the previous key and the key which was to follow to determine a precise fit (see the section *Point-to-Point Pedagogy* in the commentary of chapter 7).

Rameau's attention to the harmonic events which precede the note of the pause is also telling. It is Rameau alone who distinguishes the common idiomatic usage of the term "Cadence" from his harmonic understanding of the idea in ¶ 10. Rameau explains that in common eighteenth-century parlance, the word "Cadence" is used synonymously with the word "Tremblement." Furthermore, he points out that the actual note of the ornament is not the pause of the cadence itself, but the announcement of the cadence. This is the reason why Rameau is careful to spell out the fundamental of each note leading up to and including the pause; the fundamental cadence observes specific rules: the pause is always a tonic and is preceded by its dominant-tonic (the announcement), this dominant-tonic in turn is preceded by its dominant. It is the fundamental cadence which is important. The pause

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signifies the fundamental cadence. Therefore, the "repose of the pause," the note which follows the pause, has no real significance for the cadential event which has just occurred.

Now, the "repose of the pause" is a juncture which demands careful attention: it can be either a note that simply follows the true last note of a phrase or an upbeat beginning the next phrase. As a note that simply follows the cadential event, the "repose of the pause" has little harmonic weight: as such, Rameau offers no specific fundamental for its value. In this respect, from the standpoint of harmonic events, the repose of the pause can be considered a note "counted for nothing," similar to the breve in the preceding lesson. Recall that in the lesson on sequences, Rameau determined the key of a phrase by its cadential goal. He also allowed more flexibility in the first sequence of a series to accommodate a smooth transition from what had preceded. Similarly, in this lesson, Rameau is more concerned with the cadential goal as a fixed boundary for the end of the phrase; the beginning of the phrase, by contrast, is far more open ended.

It is this very ambiguity inherent in the "repose of the pause" that makes artistic decisions possible in this lesson though, for as an upbeat beginning of a phrase, the "repose of the pause" has the potential of perpetuating the initial melodic design. Rameau reveals the best solutions by unraveling the context of each individual occurrence. For example, in the example of ¶ 12, he cites the ambiguity at the beginning of the phrase as the factor which decides against invoking the new rule. However, Rameau's statement in ¶ 3 provides another view of the situation here. In the third paragraph, Rameau says that when a pause is not readily perceptible, that which follows should not always be assumed as the beginning of the next phrase. Rameau weighs the perceptibility of the pause in this scenario: if it is not readily perceptible, it does not have sufficient harmonic weight as a cadential event; therefore, what follows it is not necessarily the "repose of the pause" or the beginning of motion toward the next cadential goal. Since a pause is not readily perceptible before Gianotti's letter C. [Ex. 19], the nature of events between C. and D. can neither be classified as a phrase beginning nor a "repose of the pause," hence the tonic occurs on the

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strong beat. Thus, it is only by understanding Rameau's conception of the pause that all the pieces of the puzzle fall into place.

Key

As mentioned earlier, both Gianotti and Rameau introduce the idea of key in the discussion of phrase design in ¶ 4. Gianotti omits the first portion of Rameau's text:

4 One should begin each phrase on a new fundamental note as much as the subject permits. If this note is the tonic of a new key, and is preceded by the tonic of the key that one is leaving, and since there is some ambiguity surrounding the succession of these two tonics and a progression of dominants that leads further on to the tonic of this new key, this [tonic of the new key] should be preferred according to the spirit of the subject.	Knowing where each phrase should naturally begin, according to the beat of the measure upon which the subject had begun, one tries to conform the fundamental bass to it. One makes the fundamental bass begin on a new note with the beginning of the phrase as much as the subject permits. If this note is the tonic of the new key that immediately follows the tonic of the key that one is leaving and [the key] that follows it, and since there is then some ambiguity surrounding the immediate succession of the tonics of these two keys and a succession of dominants that lead further on to the tonic of the new key, this [tonic of the new key] should be preferred according to the spirit of the subject.

Both authors convey that each new phrase should commence with a new fundamental. Rameau includes more. In his passage, he tells the student how to find the natural starting points of phrases simply by determining the beat of the opening. Knowing this helps the student locate similar starting points—points which can now receive new fundamentals. The next idea is more complex. Both authors say that the new fundamental note at the beginning of the phrase can be a tonic of a new key. Furthermore, they say that when this tonic of the new key is preceded by the tonic of the key in the previous phrase, there can be some ambiguity because the succession can either be coined of a succession of tonics or a succession of dominants. Both authors provide an illustration of this context in ¶ 16:

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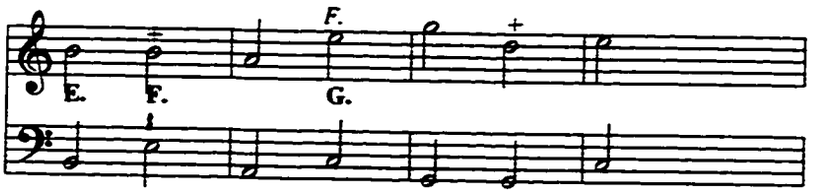
Example 13- 3: *Illustration of the example in ¶ 16 drawn from Gianotti's Ex. 20*

Rameau calls attention to the weak beat *F*.. He points out that this particular note receives a tonic as a fundamental bass—contrary to previous practice. According to earlier rules, the student would retain the A in the fundamental bass under the melody note E to coordinate the placement of the new tonic, C, with the strong beat of the following measure. Now in this situation, the new tonic (C) is favored over continuation of the previous tonic (A) to enhance the anacrusic character of the subject. This new tonic (C) is then confirmed as the cadential goal of the new segment three notes later. Rameau teaches much more than rules here; he teaches the consideration of many subtle compositional nuances, for he knows that the function of a new tonic demands more than casual treatment of much more commonplace successions of passing tonics and dominants.

The exception found in ¶ 5 can only fully be comprehended after understanding the situation in ¶ 4, for its premise amends the dictum given in the previous paragraph. Since we now know that the beginning of a phrase often starts with a new fundamental as much as possible and that this new fundamental can be a new tonic, it is possible to break this rule. Both Gianotti and Rameau state that the tonic of the cadential goal of the first phrase can be retained as the fundamental of the new phrase which follows. In this case, Gianotti gives the better explanation. He tells us that the retained tonic takes on "such quality as it can in the [the key] that follows."

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The example in ¶ 17 illustrates a tonic (the fundamental note A at letter H.) changing function to a dominant-tonic on the strong beat of the following measure through the addition of a major third implied by the sharp indication. Though the fundamental at letter H. is not retained from the key which immediately precedes it (C major), its key is the relative minor of C major and thus fulfills the rapport required between successive tonics (either a minor third or a fifth away—according to the Third Means of Gianotti's chapter 7.) The decision to repeat the fundamental at H. in the strong beat of the next measure, however, gives rise to a syncopation of the fundamental bass (a rule proscribed early on in Chapter 3, rule 3.) Rameau and Gianotti both allow the syncopation in favor of retaining the tonic to facilitate its shift in function as a dominant-tonic of the key of the new phrase. Once again, an older rule (never syncopate the fundamental bass) is superseded by a newer rule on a higher hierarchical level.

From these kinds of decisions, we can infer that Rameau prioritizes certain ideas over others. In this instance, he disregards a more local rhythmic disturbance in the fundamental bass line, i.e. syncopation, in favor of maintaining a sense of key connection between phrase units. This may be the only way Rameau had to explain how this very shift in function serves to dissipate the feel of syncopation across the bar, for the shift in quality immediately signals something new, not the continuation of something old. This kind of thinking is also evident in an extraneous comment in ¶ 14 that Gianotti also transmits. Recall that in this example, the fundamental bass is not able to follow the design of the subject because it is limited to retaining one fundamental note throughout each measure. Both Rameau and Gianotti say that this defect corrects itself in the basso continuo. Through this comment, Rameau reveals an insight into various manifestations of musical operations on different layers or planes.

There is no doubt that the exceptions outnumber the rules in this lesson. In fact, in this chapter, we have even seen a number of previous rules put aside in favor of the new rule. Following the design of the melody is not quite as simple as the first two paragraphs

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would lead us to believe. Despite the knots and snarls, or perhaps because of these very knots and snarls, the reader gradually comes to understand that Rameau is not teaching rules as much as he is teaching artistic judgment. To say that teaching sophistication in decision-making is a complex endeavor would be surely understating the matter. The fact of the matter is: style can never be boiled down to following one rule—let alone several. Rather, it is comprehension of a nexus of connections that involves a constant evaluation of all musical elements in a given context. Seen in this light, Rameau does a pretty good job of showing the reader how and why certain musical elements take precedence over others. Though the variations between Gianotti's version and his are slight, it is Rameau's deviations, his unraveled threads, which serve as clues to the way all the threads work together to create a design. For it is in the process of reweaving of these details that the student learns the true nature of composing.

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CHAPTER XIV

Concerning Modulation

Gianotti:

1 Modulation consists of a pleasing succession of several related keys whose various transitions subtly prepared, whose delicate connections in which art is all the more admirable the more it is hidden, casts upon them this variety which is the charm of music. It is to these interweavings of keys, arranged with taste, that we owe those tender emotions, that inner satisfaction, and those sweet and delightful raptures that we experience in the execution of a beautiful piece. It is this which casts terror and fear into the soul through unexpected digressions and rapid successions of harmony whose relationships, seemingly irregular on the surface and often poorly observed on purpose, make the hearer tremble.

2 We are going to hazard several general rules of modulation for the benefit of young students, and which experience often grants to genius.

3 Of all the keys which can follow one another in a piece of music, the principal key should take precedence over the others and be the most frequently used. [Occurring] at the beginning, it is generally followed by the key of its dominant; and if it is minor, by that of its relative major. Sometimes,

Rameau: draft 1

I/19/1-f. 36'

With regard to all the successive keys in a piece of music, the principal [key] is moreover the most frequently [used] there; in the beginning, it is generally followed only by the key of its dominant or by its relative [key] a minor third away.

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but more rarely, the principal key can be followed by its subdominant, or by that of its second above; and if it is minor, by that a second below. The principal key can return next for a moment. One interweaves it to one's liking with all the relative keys, observing that the less the [phrases] are related to the principal [key], the shorter they should be—especially when they follow each other at the second.

Yet sometimes, but more rarely, [it is followed] by the key of its subdominant, even by [the key] of its second above, if it is major, or of that of its second below, if it is minor. [The Principal key] returns next, at least for a moment. Then, when this same principal key presents itself, one interweaves it to one's liking with all the relative keys. Above all, one notices that the less the [phrases] are related to the principal key, the shorter they should be—all the more when these phrases follow each other at the second.

4 It should be noticed further that when [one] has passed through keys which contain more sharps than the principal key, it is necessary to return imperceptibly to other [keys] that contain fewer [sharps] so that one might always keep the idea of this principal key in mind, alternatively hearing keys now a fifth above, now a fifth below, and sometimes a minor third away from these fifths as well as from the principal key.

Let us add that having passed through some keys which contain more sharps than the principal key, one must return imperceptibly to other [keys] that contain fewer [sharps], without rushing things, in this way [to do] the opposite, with the result that one might always keep the idea of this Principal key in mind, alternately hearing some keys now a fifth above, now a fifth below, and sometimes related a minor third away from these fifths as well as from the Principal key.

5 Passing pauses develop on the dominant-tonic and sometimes on the subdominant then implied a tonic. The most perceptible [pauses] develop on the tonic; and if one forms them on the dominant-tonic, the first [ones] will then belong to the tonic.

The pauses which resemble the hemistich occur on the dominant tonic, sometimes even on the subdominant, perceived for the moment as a tonic, while the most perceptible [pauses] occur on the tonic; whereas if these last end on the dominant tonic, then the first then belong to the tonic.

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6 If a phrase stays in the same key a bit too long, especially at the beginning and end of a piece of music, one finds in the subject some pause by means of which one could change the key for the moment. It is necessary to take advantage of such an opportunity in order to add to the beauty of the harmony and even to add to the gracefulness of the melody. Moreover, through this means one avoids monotony and fully satisfies the listener through this variety.

When one sees a phrase becoming longer in a key, [something] which most often occurs at the beginning and end [of a piece], one must always see whether or not there are any perceptible pauses in the subject, no matter how slight, because through [these pauses] one could have changed the key for the moment.[1] Such a procedure adds infinitely to the beauty of harmony and even to the gracefulness of the melody. Through this means, one avoids monotony, and the variety that one puts to the test there completely satisfies.

7 If only one pays attention, it is nearly impossible to miss the opportunity [of doing this]. One can see models of this at G. of example 18 and at I. of example 20, where one interweaves the key of the subdominant in the middle of the principal [key] when the opportunity presents itself from the more or less perceptible pause which develops in each of these two places.

It would be nearly impossible to miss the opportunity of profiting from this procedure in a similar case if one looks out for it. [For example], one seized the key of the subdominant in the middle of the principal key by means of a more or less perceptible pause at M. of lesson XVII and at H. in lesson XVIII.

---

[1] I have made two significant changes in this passage. Following Gianotti's lead, I have combined Rameau's two original sentences in the opening paragraph of 19/1 into one continuous thought:

> *Des qu'on voit une phrase s'allonger dans un ton, ce qui arrive le plus souvent au debut et a la fin. Il faut toujours examiner s'il ne se trouveroit pas dans le sujet quelques repos si peu sensibles qu'ils fussent, a la faveur des quels on put changer ce ton pour un moment de pareilles attentions ajoutent infiniment a la beaute de l'harmonie et meme a l'agrement du chant: on evite par ce moyen la monotonie, et la variete qu'on y eprouve satisfait pleinement.*
>
> (emphasis added)

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8 Such a procedure will always produce a good effect, especially if the principal [key] in the middle of which one inserts its subdominant is preceded by another key which contains a sharp more or a flat less than the principal [key]. Or, if it contains fewer sharps, [the key] of the dominant will fit better. It is understood that the subject also will lend its support.

When a key that contains a sharp more or a flat less than the principal appears before the principal key, the key of the subdominant will always produce a pleasant effect when inserted in the the middle of the principal key as will be seen once again in the examples to which we will return.

One can use [the subdominant] in the same way in any key other than the principal and the rule that one should then prescribe for it is: if the key contains more sharps than the principal, the [key] of the subdominant can be interwoven agreeably there, if it contains fewer [sharps than the principal], its dominant [key] will then fit there. It is understood that the subject will give rise to it. When it is possible to vary any key whatever through a key that is related to it by a minor third, the effect is always pleasant.

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9 Lastly, when one possesses the manner of making keys follow one another, one possesses the art of composition and the means of solving most problems. *See example 21, pl. 10*

Proposing what one should [now] do is to propose what one will have found done in the lessons one has followed up to now: this is why advice is always good—as long as one knows how to make use of it relative to the point where one is [at the moment]. Knowing the way that keys should follow one another—this is the means of solving most problems that could arise.

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Observations on this example

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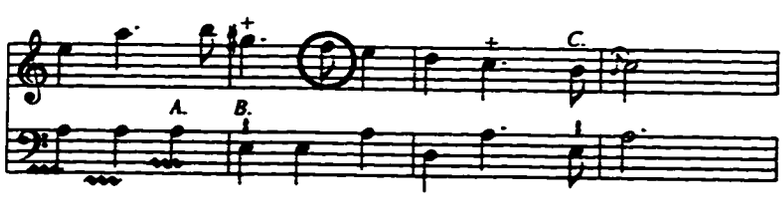
Explication

The breve above A. can be counted for nothing since without any further consideration, the fundamental succession from is [already] perfect from A. to B.—not that one might not give it its own particular fundamental bass according to the custodes.[2] The breve[3] should be counted for nothing for [two] reasons [that are equally valid]: there are no pauses on the note which follows it and the prescribed fundamental succession absolutely forbids [giving it a fundamental].

[2] Rameau's letters A. through C. point to different events than Gianotti's. Gianotti makes no mention of these breves. I have inserted Rameau's first three guidemarks in the opening bars of Gianotti's ex. 21 and circled the breve in the second measure:

[3] Contrary to the way it appears, this reference does not indicate the same breve as the one that appears over Rameau's letter A.; rather, it is the note circled in the example above.

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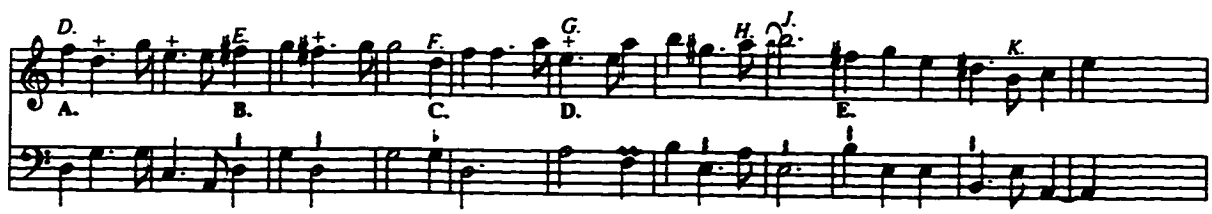
	It is not the same at the breves C. H. K. because they announce a pause; without them, the fundamental succession could not be carried out.[4]
10 After the key of *A* upon which one had begun, comes that of *C*, its relative major to *A*. That of *G*, fifth of *C* at B., that of *D*, fifth of *G* at C. which reenters the principal key at D. The phrases of all these keys are very short.	The key of C major, related to the principal [key] by third, follows it and begins immediately at D. The [key] of G, fifth of C, comes after E., then that of D, fifth of G at F. in order to reenter the principal [key] at G. of which it is yet fifth. The phrases of all these keys are very short.
11 The phrase of the key of the dominant of the principal [key] is longer; it begins at E. and finishes at G. But, seeing a perceptible pause at F., one takes advantage of it in order to seize the relative major key by means of a progression of dominants from one tonic to the other, after which one reenters the first key [E], whose monotony is destroyed through this mixture [of keys].	The phrase of the key of the dominant tonic of the principal [key] is longer at J.; it goes up to M. But [since] the perceptible pause at L. appears possible in the key related to [the dominant-tonic] by third as well as in its [own] key one takes advantage of it, for [through] this relative key, one progresses from K. to L. dominant by dominant from one tonic to the other. After [L.], one returns in the

[4] Unlike the breves in the first two measures, the breves at letters C., H., and K. receive their own individual fundamental bass, a fundamental bass that provides articulation of the cadence. The breve which announces the cadence at letters C. and K. is a dominant-tonic while the one at letter H. is a subdominant. Through inclusion of these additional breve references, Rameau continues to reinforce concepts introduced in the previous lesson on breves. A portion of Gianotti's second line of ex. 21 appears below with Rameau's letters H. and K. in italics. See footnote 2 for the appearance of guidemark C.

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first key [the dominant-tonic of the principal at K.], whose monotony is destroyed by this mixture.[5]

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Explication

12 The figures 1, 2, mark some sequences that descend by second in some different keys.

13 After the key of *C* at H., one takes for a moment that of its subdominant, and then reenters the first [key].

Melodic sequences [occur] in some different keys [at] 1. 2. The key 1. is a fifth below the principal after having finished at M. in the key a fifth above. After having entered in the key related to the principal by third at N., one takes [the key] of its subdominant at P. for a moment in order to reenter [the key of C] immediately.[6]

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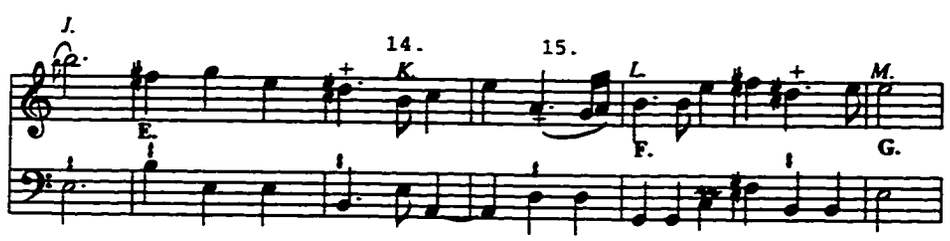
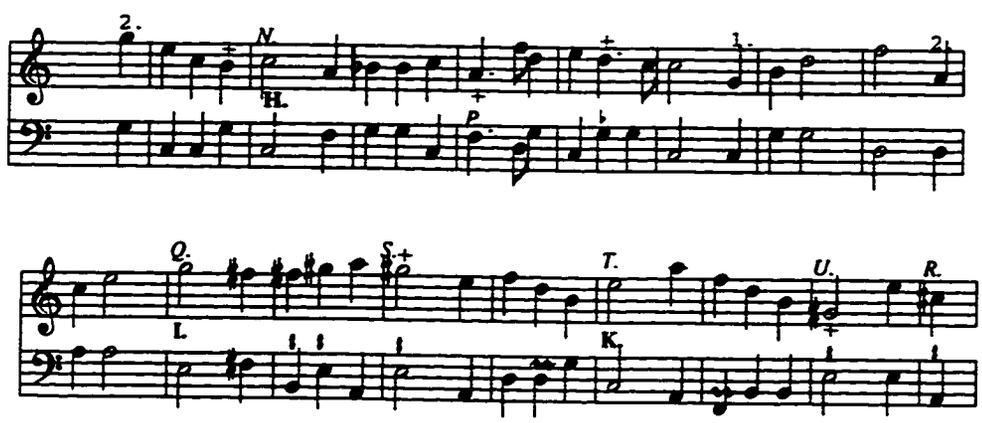
[5] Rameau's guidemarks in the dominant phrase are as follows:



[6] Rameau's guidemarks in lines 3-4 of ex. 21 are as follows:

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14 The sequences 1. 2., ascend by second: the fundamental bass ascends by fifths on several tonics of which the last, at I., has in its key more sharps, of which there have been none since H.

Other ascending sequences [occur at] 1. 2. where the fundamental bass ascends successively by fifths to several tonics, of which the last, Q., receives in its key more sharps than it had had from P.. After [P.] comes the principal key at R.

15 In order to vary the phrase of the principal [key] after I., one profits from the perceptible pause at K. in order to seize the key of *C*, and one arrives there through a progression of dominants. One reenters next the principal key. Sequences in descending fifths at figures 1, 2, 3, 4, 5, 6, in different keys, and in which the fundamental bass descends everywhere by fifth in spite of the irregularity of some intervals in these sequences.

Since the perceptible pause at T. can be admitted in the key related to the principal by third, one does not miss taking advantage of it. One then reenters {this} principal [key at R.] through a progression of dominants which lead from one tonic to another from S. to T.. New descending sequences [occur] at 1.2.3. where the fundamental bass successively descends by fifths.

16 Regarding the syncopation of the fundamental bass between measures 14 and 15, it is necessary to recall here what we have said about this subject in the third rule of chapter III.[7]

I/19/1-f. 37r
Explication

The fundamental bass which appears to syncopate under K. will no longer syncopate if from two measures one makes only one.

[7] Both Gianotti and Rameau are calling attention to an exception mentioned in the third rule of chapter III which allows syncopation of the fundamental bass from one measure to another in triple time when the events in both measures can be reduced to one single measure, i.e. hemiola.

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Editorial Commentary on Chapter XIV

The Ordering of Ideas

Gianotti's definition of "modulation" in the opening paragraph of the chapter is more than pedagogy—it is drama.[1] Not since the preface have we experienced such a swelling of emotion in his prose. Gianotti is quick to point out that it is the mastery of this particular topic, the interweaving of keys, that will leave the most indelible impact on the auditor. Though Gianotti's lead could be considered sensational in approach, he alone clearly conveys the importance of this topic to the budding composer and in so doing, effectively draws the reader to investigate this subject with interest.

Rameau, on the other hand, gets right down to business. Unlike Gianotti, Rameau immerses the reader into the process of inserting a key into a piece. He immediately directs the reader to appropriate contexts for the insertion technique and calls attention to its use in the examples of previous lessons, topics that Gianotti introduces much later in paragraphs 6-8:

> When one sees a phrase becoming longer in a key, [something] which most often occurs at the beginning and end [of a piece], one must always see whether or not there are any perceptible pauses in the subject, no matter how slight, because through [these pauses] one could have changed the key for the moment. Such a procedure adds infinitely to the beauty of harmony and even to the gracefulness of the melody. Through this means, one avoids monotony, and the variety that one puts to the test there completely satisfies. It would be nearly impossible to miss the opportunity of profiting from this procedure in a similar case if one looks out for it. [For example], one seized the key of the subdominant in the middle of the principal key by means of a more or less perceptible pause at M. of lesson XVII and at H. in lesson XVIII.
>
> When a key that contains a sharp more or a flat less than the principal appears before the principal key, the key of

[1] Only Gianotti introduces the term "Modulation" here; Rameau simply refers to the idea as the "interweaving of keys."

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> the subdominant will always produce a pleasant effect when inserted in the the middle of the principal key as will be seen once again in the examples to which we will return.
>
> One can use [the subdominant] in the same way in any key other than the principal and the rule that one should then prescribe for it is: if the key contains more sharps than the principal, the [key] of the subdominant can be interwoven agreeably there, if it contains fewer [sharps than the principal], its dominant [key] will then fit there. It is understood that the subject will give rise to it. When it is possible to vary any key whatever through a key that is related to it by a minor third, the effect is always pleasant.
>
> (I/19/1-f. 36^{r-v})

Though both authors offer the same merchandise for sale, their promotional techniques in the opening paragraphs clearly set their methodological approaches apart. For instance, as mentioned above, Rameau gets right down to the business of selling. His pitch is direct. The poor unsuspecting customer receives a recipe for inserting a key into the midst of a piece as soon as she walks in. At once, Rameau teaches how to look for a phrase of considerable length (usually found at the beginning or end of a piece), find a perceptible pause in the phrase and—voilà: the key of the subdominant can be inserted at that very spot, not to mention the fact that this process can also be applied to any key other than the principal.

Gianotti, on the other hand, is quite an astute businessman; his approach is more subtle and more organized. First of all, through sensational advertising, he makes the buyer think that he needs the item (¶ 1). Then, instead of pushing the item he wants to sell (the insertion of a key into an established key area [see ¶ 6]), he gently directs the buyer's attention to the shelf where the item is displayed by prominently placing related items in the aisles leading to the advertised special. For Gianotti's reader, these related items are not just peripheral purchases, but products that are indispensable to the use of the promotional item. Gianotti's line of related items are a series of facts:

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1) the principal key should pervade a composition (¶ 3)

2) after the initial bow to the dominant, or the relative major, or the subdominant, or the second above or below, the principal key returns (¶ 3)

3) the less keys are related to the principal key, the shorter they should be (¶ 3)

4) one should alternate keys on the sharp side of the principal key with those on the flat side (¶ 4)

5) passing pauses most often develop on the dominant-tonic or the subdominant implied a tonic while more perceptible pauses most often develop on the tonic (¶ 5)

Sitting on the shelves one by one, these facts remain unrelated items. Some items are newer products while others are more established brands. For instance, from previous chapters, the student already has some understanding about pauses (5), the predominance of the principal key in a composition (1), and the way the length of phrases or sequences reflects how closely related the key of the segment is to both the key that precedes and the key that follows as well as to the principal key (3).

Side by side with the established products, however, are newer formulations whose effectiveness in relation to the advertised item remain to be tested. Statement 2 above provides a brief key recipe for getting one's feet wet in the composing process. Statement 4 is a guiding principle for the new technique that will be introduced in ¶ 6. But, the fifth statement concerning pauses is downright nebulous at this point.

Though Gianotti does not yet link the items to a common usage, he plants these facts in full view of the promotional item, the task of inserting a new key into an established key (¶ 6). Once the promotional item comes into view, the relationship of facts to the advertised special gradually emerges. When the new technique is revealed, the reader retroactively understands the importance of each fact leading up to this point; for

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in order to accomplish the new task the composer must discern pauses and ascertain their structural weight, use these pauses to determine phrase boundaries, be able to determine the key of each phrase unit, understand the concept of closely related keys a minor third and fifth apart and the impact this bears on key signatures, and lastly, relate the key of each phrase unit to the principal key.

Gianotti does not spell out all that is required, he does not even explain his facts; he merely uses these facts to lead up to the desired goal. By listing these rules, though, he jogs the shopper's memory, helping the reader to recall important themes and skills acquired in the recent past—specific skills that will be applied to the new idea of the lesson. Though the reader does not yet see the full application of these skills to the topic at hand, Gianotti plants these facts in full view of the promotional item and in so doing initiates the process of associating specific tasks with a particular end. In this way, he subtly links these ideas to his goal. As a result, Gianotti not only sells the mop on sale, but the detergent, the bucket, and the wax as well.

As mentioned earlier, Rameau introduces the technique for inserting a key as soon as the customer walks in. Rameau makes the recipe look so easy that the shopper is not only attracted right away, but very tempted to buy all the required ingredients to make it at home, even though he does not yet know what it is exactly that Rameau is conjuring. Unfortunately, many of the details of his recipe fly by too quickly. Rameau has the same five facts on his shelves, but the reader only encounters them after the demonstration. Disorientation is the unhappy result. Fortunately, though, Rameau is in the aisles happily answering questions, pointing out the simple ingredients on various shelves, and most importantly, reviewing the steps for combining these ingredients in the recipe.

There are benefits and pitfalls to each approach. Though Rameau's sales technique inundates the reader with details of the process at the outset, Gianotti's approach fails to tie the use of each item to the product on sale. One thing is clear, however: Rameau's business is an established business, not a grand opening with buyers' incentives. Since Rameau has

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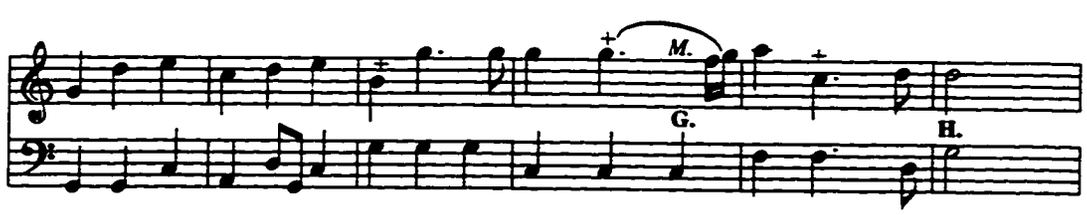
taken great pains to illustrate certain ideas throughout "L'Art," in the long run, he is more successful in attracting long-term customers. Rameau's commodities, namely, the primacy of the tonic (the principal key here) and the special relationship of its dominants a fifth away on either side, appear as basic as bread and butter. In short, once the buyer is in the store, Rameau shows how to whip up an elegant cake from very simple ingredients. This is perhaps Rameau's greatest strength as a teacher: he can reveal a complex recipe to be merely a matter of combining a few simple ingredients in the correct way.

The Pause

The first simple ingredient is the pause. Rameau starts by orienting the student to the setting where the technique will take place: a long phrase usually found at the beginning or end of a piece. After finding a general location for events, Rameau directs the reader to determine whether there are any pauses in the midst of the phrase. It is the pause which is the focal point for insertion of a new key. Rameau's citation of previous examples illustrates this point nicely. In the example of lesson 17/1 (Gianotti's ex. 18), the principal key is C major. Rameau shows how the subdominant of the principal key is inserted at letter M. (Gianotti's G.) following a brief appearance of the principal key in the last line of the example:

Example 14- 1: *The last line of Gianotti's ex. 18 where the key of the subdominant is inserted at guidemark G. (Rameau's M.)*

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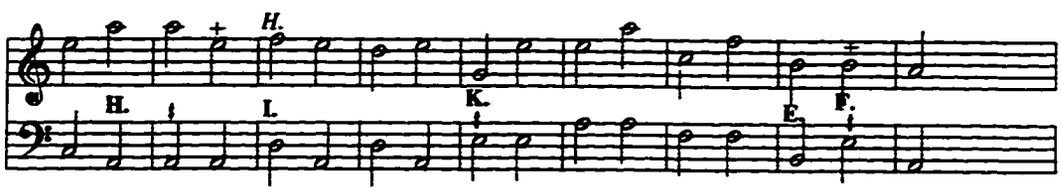
Through this citation, Rameau not only shows the application of the aforementioned technique, he illustrates where this technique occurs in the general progression of a piece.

The other cited example from lesson 18/1 is similar. Though the key is A minor here, the insertion of the subdominant also appears after a brief appearance of the principal tonic in the last line of the piece:

Example 14- 2: *The last line of Gianotti's ex. 20, where the subdominant is inserted at guidemark I. (Rameau's H.)*

Here the change of quality of the principal triad following **H.** effects a change of function: the principal tonic becomes the dominant-tonic of the D minor triad at **I.** (*H.*). This effect subtly highlights the insertion of the subdominant through what we would call tonicization. It is this particular chain of events which sheds light on a comment that both Rameau and Gianotti make in ¶ 5.

In ¶ 5, both Rameau and Gianotti call attention to the fact that passing pauses usually occur on the dominant-tonic while the most perceptible pauses take place on the tonic. However, both say that passing pauses can also take place on the subdominant temporarily implied a tonic. Though neither author explains this particular comment, the case in the last line of ex. 20 illustrates the idea. The subdominant harmony at **I.** (*H.*) is not a point of arrival, it is the dominant-tonic which precedes the subdominant that makes the subdominant feel like a tonic—at least on a local level. Though the cadential formula triggers the "most perceptible pause" response, this event occurs in the midst of a phrase with no real sense of repose. As a result, this event functions as a "passing pause."

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Rameau gives us another clue to the idea he wishes to convey here. He refers to the pauses that appear on the dominant-tonic (or the subdominant implied a tonic) as "pauses which resemble the hemistich." Recall that the hemistich is the half-way point in poetry; this particular juncture is thus open-ended; it requires additional information for closure. Rameau is trying to tell us that the pause for insertion of a key is not a pause which signals a point of arrival, but a more intermediary event. Since Gianotti presents this idea (¶ 5) before he even speaks of the role of pauses in inserting keys (¶ 6) and before he presents the very examples that Rameau cites (¶ 7), the point remains unconnected to the process of inserting keys.

Imagery and the Connection of Ideas

Though Gianotti was off to a good start by providing the composer with a recipe for the initial key plan in ¶ 3 (something that Rameau does only after introducing the insertion technique), as mentioned earlier, he fails to link the use of each of the products on the shelves (the five statements) with the promotional item on sale. For example, in ¶ 4, Gianotti advises alternating keys on the sharp side of the principal key with those on the flat side of the principal in order that "one might always retain the idea of this principal [key]." This is a good general rule of thumb, but without the specifics of the procedure, the advice falls flat on the reader. It is only after seeing an application of this in the example section (see ¶ 15) that the rule makes sense.

Even in the illustration of events in ¶'s 12-15, Gianotti misses a golden opportunity to connect events on a large scale. In paragraphs 12 and 13, Gianotti simply states two seemingly unrelated facts: 1) the figures 1. and 2. mark sequences that descend by second and 2) after the key of C at letter H., one uses the key of its subdominant, F. Rameau, on the other hand, seizes the opportunity to show how this particular progression of events links keys on both local and large-scale levels.

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First of all, Rameau points out that the key of sequence 1., D, is the fifth below the principal key of the piece, A. Second, he draws the reader's attention to the key that appeared before the first sequence at M.. This key, E, is the fifth above the principal key. By stressing the relationship of each of these keys to the principal key, Rameau has subtly suggested the model of the principal tonic flanked by its two dominants (first evoked in I/4/1)[2]—this time applied to the larger level of key:

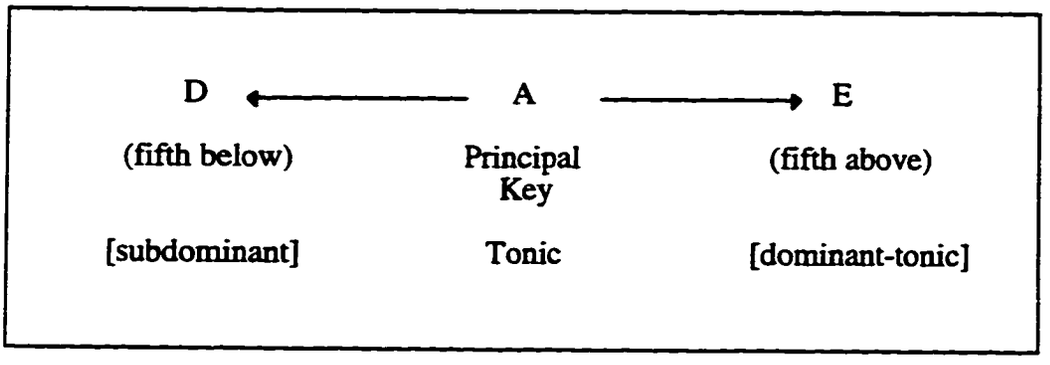

Figure 14- 1: *Model of the tonic flanked by its two fifths in ex. 21*

Unfortunately, Gianotti uses the example merely as an illustration of how to insert the subdominant key into a previously established key, C major here. Rameau, however, manages to do this and more. While making the same point as Gianotti in ¶ 13, Rameau not only tells the reader that the key of C at M. (Gianotti's H.) is followed by that of its subdominant, F; he relates the key of C as the relative major of the principal key, A. He takes greater care to explain the progression of keys as significant events—events that not only serve to promote connection on local levels, but that continually relate to the omnipresent principal key.

Rameau's attention to detail in this regard continually reinforces concepts that he has introduced from the very outset. The model of the principal key flanked by the keys of

[2] See lessons 4/1 and 7/2 in the section Additional Sources to Chapter I (pp. 93-5) and the Editorial Commentary to chapter 2 (p. 125 ff.).

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its dominants on either side here hails from the one of the very first lessons. In the commentary of lesson 1, I likened this "snapshot" of the tonic flanked by its two dominants to a seesaw with the tonic as the fulcrum. This image seems to capture the spirit of the application of the rule that Gianotti gives in ¶ 4 perfectly: even though the key shifts from the subdominant side to the dominant side and vice-versa, the motion never erases the idea of the tonic; on the contrary, the tonic is emphasized through implication. It is this kind of imagery that Rameau's version evokes—imagery that is not suggested by Gianotti's rendition.

This imagery comes to mind so readily because Rameau has taken great care to explain the basic ingredients. Since Rameau has continually emphasized the interaction of the tonic and its two fifths and later expands this information to explain the relationship of keys a fifth away, in a sense, he is selling a ready-made mix that can be applied to the recipe at hand instantly. Unlike Gianotti in this respect, he does not list ingredients; rather, his sales pitch reveals the interaction of specific ingredients to attain a desired goal. The proof lies in the fact that Rameau's customer would likely be able to reconstruct the cake mix at home should he forget to purchase Rameau's special label, while Gianotti's customer would likely remember the individual ingredients, but forget exactly how to combine them.

Tension and Balance:

Imagery as Pedagogy

Through these details, Rameau integrates ideas on many different levels. The reader of his version receives the distinct impression that he is keenly aware of balance and the role that tension serves in order to temporarily suspend a sense of balance in various aspects of a piece. For instance, in the "snapshot" model set up in I/4/1, the tonic is the fulcrum or point of balance.

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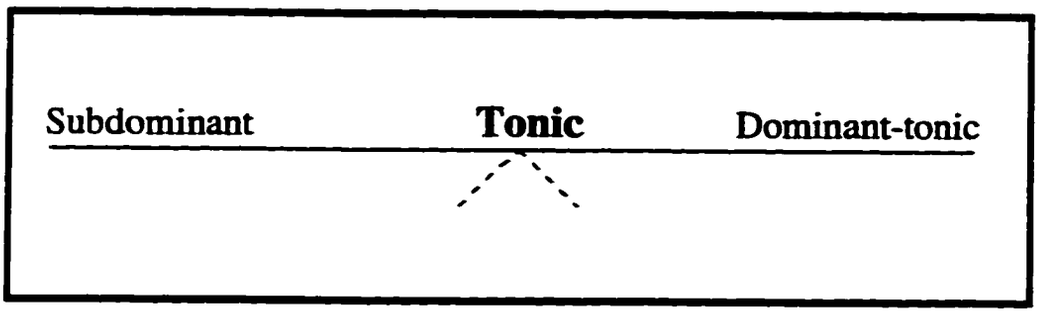

Figure 14- 2: *Model of the Tonic flanked by its two dominants introduced in I/4/1*

However, according to the recipe for the initial progression of keys at the beginning of a piece found in ¶ 3 of this chapter, the tonic is no longer the balance point. Something new is introduced to suspend the balance of the tonic. Here, the element of tension is a non-tonic key:

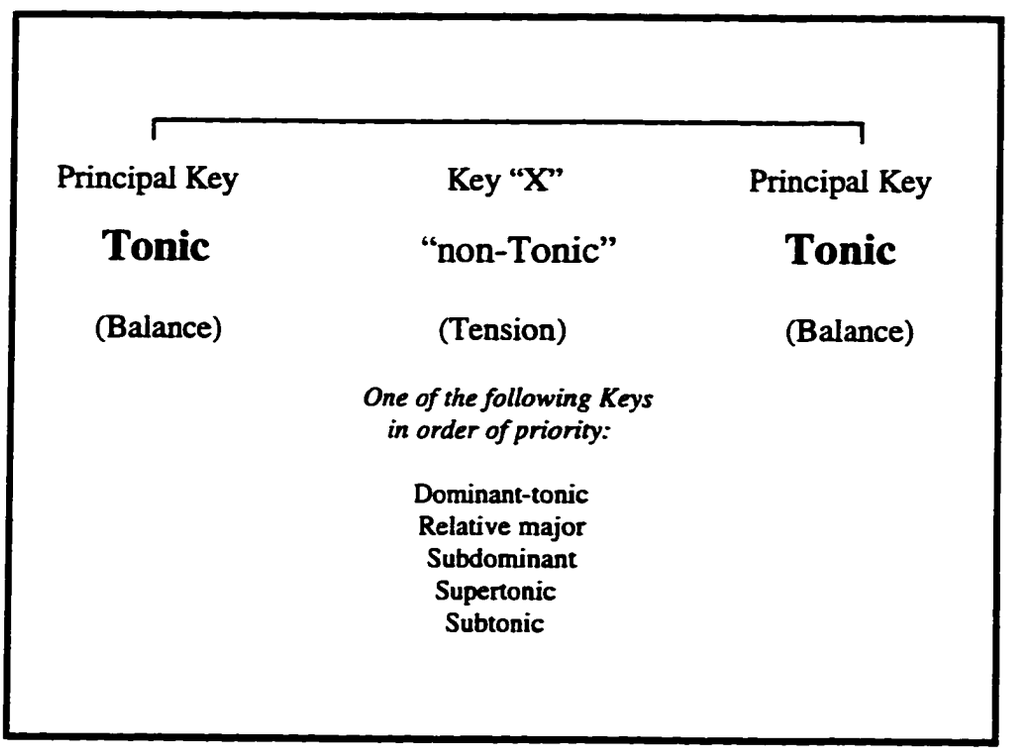

Figure 14- 3: *Model implied by the initial progression of keys*

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It is this particular model that Rameau invokes when he teaches how to insert a new key into an established key for the sake of variety (see ¶ 8). Thus, when the principal key appears in the middle of a piece and is preceded by a key whose key signature is a flat less or a sharp more than that of the principal, Rameau advises inserting the key of the subdominant:

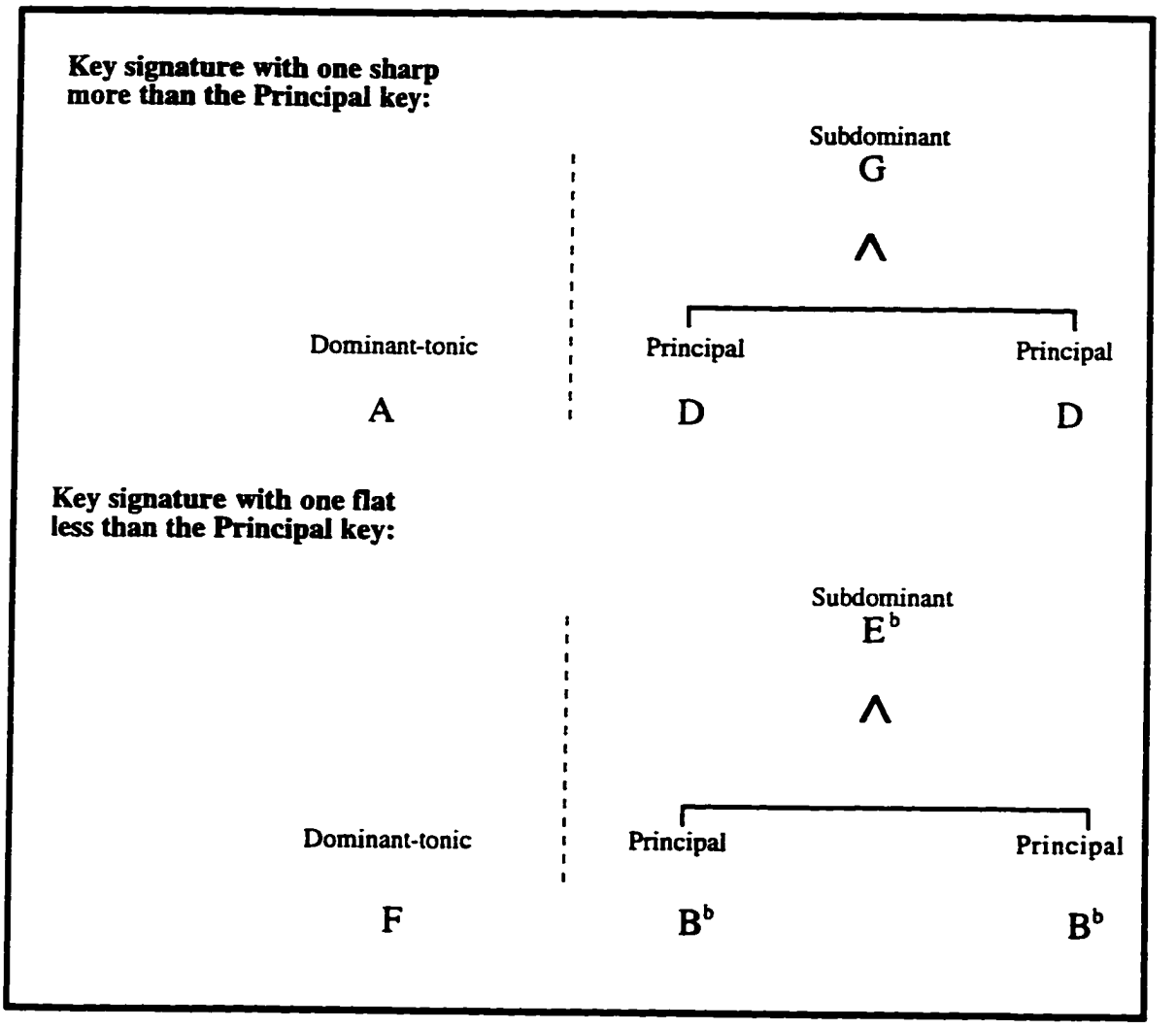

Figure 14- 4: *Examples of Rameau's model for insertion of the subdominant when a key with a flat less or a sharp more than the principal key actually precedes the Principal key in the course of a piece*

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If, on the contrary, the key that precedes the principal key contains less sharps than the principal, the inserted key should be the dominant-tonic:

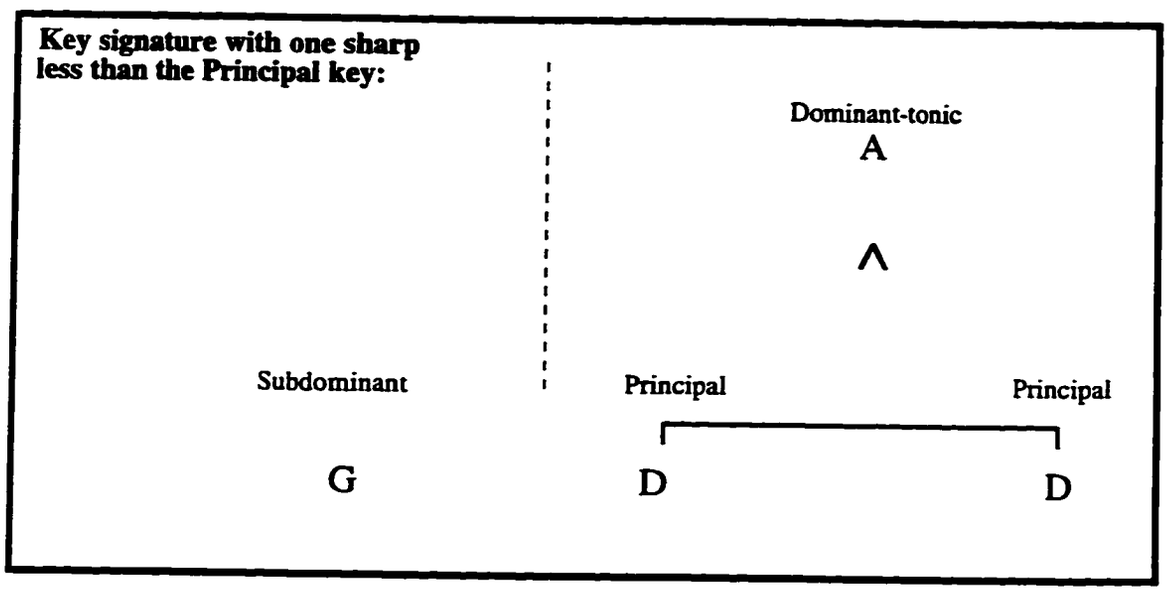

Figure 14- 5: *Example of Rameau's model for insertion of the dominant-tonic when a key with a sharp less than the principal key actually precedes the principal key in the course of a piece*

In teaching this insertion technique, Rameau melds the original image of the tonic flanked by its dominants on either side with the new idea, the reversed image where the insertion of an event causes a temporary disruption of balance. In this case, the inserted key now becomes the agent of balance by providing the compensatory swing to the opposite pole. For, through his insertion technique, Rameau has really shown how to effect the shift of the seesaw from the key of the subdominant to the key of the dominant-tonic and vice-versa while keeping the principal key in check.

Though Rameau does not actually display the models pictured in figures 2-5, he continually expresses ideas throughout "L'Art" in such a way that these images come to mind naturally. For, Rameau does not provide mere facts, he paints a picture of the way harmonic and melodic phenomena interact. His ability to evoke these images reveals his understanding of events on various levels. In this respect, his three-dimensional

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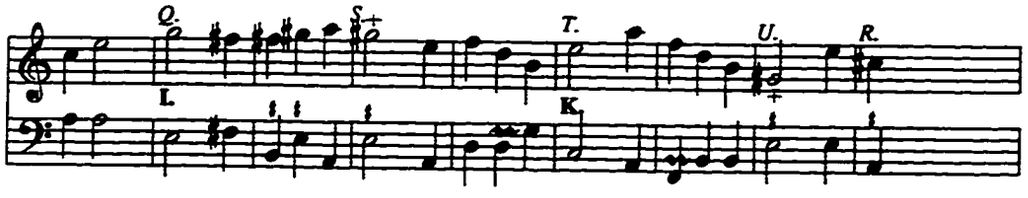
explanations serve to connect ideas on many planes, not just one dimension. This spatial awareness is not restricted to the basic tenets of his theory or his pedagogy; it even infiltrates his use of guidemarks in one illustration.

Symmetry and Key

Throughout "L'Art," Rameau has consistently used guidemarks in strict alphabetical order. In the example that corresponds to Gianotti's ¶'s 14-15 (the fourth line of example 21), however, Rameau refers to events in a different way. His guidemarks occur in the following order: Q., S., T., U., and R.

Example 14- 3: *The fourth line of Gianotti's ex. 21 with Rameau's guidemarks appearing in italics*

While Gianotti uses this example as an illustration of the key insertion technique used for sake of varying the principal key, Rameau reveals much more through his use of guidemarks. Gianotti only refers to two events: the key of the dominant-tonic at I. and the appearance of the key of C major at K. Unlike Gianotti, Rameau points out the relationship of a third between the key at the perceptible pause T. and the principal key. Rameau not only ties the appearance of the key of C major at T. with the principal key, he links the events surrounding T. (the pauses at S. and U.) to the sweep of tonal motion from Q. to R.:

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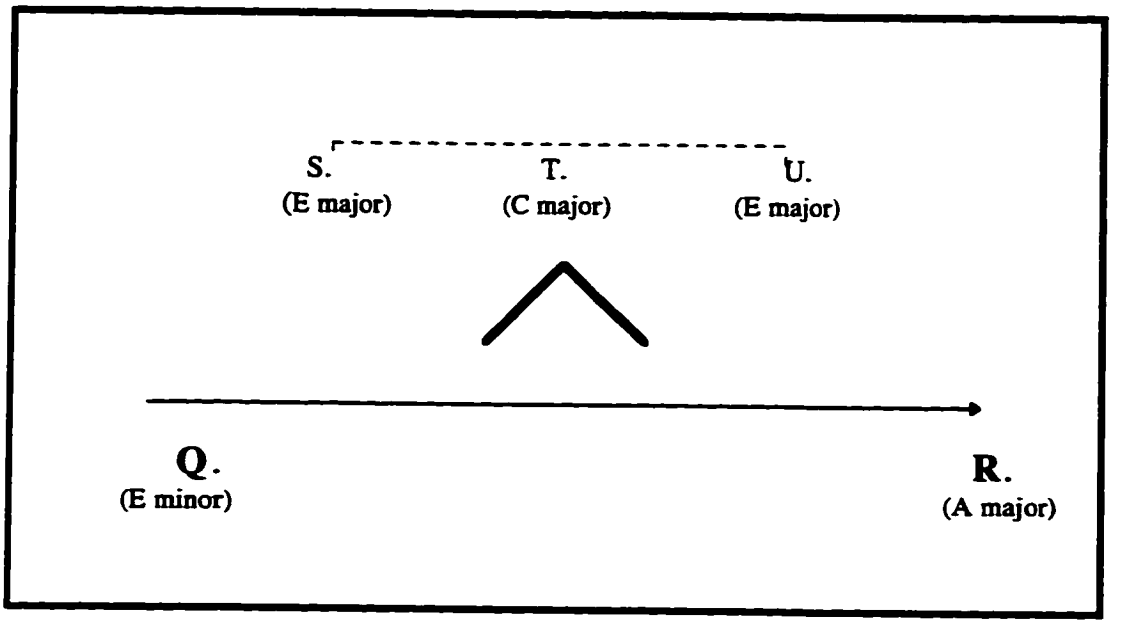

Figure 14- 6: *Keys of cadential points at Rameau's guidemarks*

By labeling events the way he does, it is clear that Rameau links the arrival of the dominant-tonic key (E minor) at Q. with the eventual arrival of the principal key (albeit in a major inflection) at R. In between these events, the interpolation of the relative major occurs at T. flanked by the appearances of the dominant-tonic key at letters S. and U.

Rameau combines many ideas through the use of guidemarks here. At a very basic level, he inserts a new key into a previously established key center for the sake of variety. Through his additional guidemarks S. and U., however, he also emphasizes the key at T. as a point of symmetry between two appearances of the dominant-tonic key just as he established the tonic as a center equidistant between two dominants a fifth away on either side in I/4/1. Through this same illustration, he subtly shows how the flow of the events from Q. to R. also reflects the advice to shift from the sharp side to the flat side of the principal key (¶ 4). The sojourn in the dominant-tonic major (E major) adds some sharps. To balance this, Rameau travels in the other direction, via the relative major, to check this effect. What becomes evident here is the idea of the events between Q. and R. as an

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insertion to vary the musical fabric through a chiaroscuro of key—a pure application of the pedagogical technique Rameau uses to teach the idea. Though Gianotti conveys the main idea here (the introduction of the relative major key for the sake of variety), his version by comparison, falls short.

Structural Tension: Phrase Length and Key

The insertion technique not only offers variety, it serves to extend the length of a particular key center that is related to the principal key. In ¶ 11, both Gianotti and Rameau point out the length of the dominant-tonic phrase from guidemarks E. to G. and describe the next events as sequences (see ¶ 12). While neither author contrasts the length of the two-measure sequence units with that of the six-bar unit from E. to G. directly, the idea of phrase length as a manifestation of both local and long-range key relationships begins to emerge—an idea which was foreshadowed as early as ¶ 2.

The key of the dominant-tonic is firmly established by the perceptible pause on the dotted half before letter E. The next perceptible pause, the half note at G., is also on the dominant-tonic, this time in minor. In between these events is a point of symmetry at letter F., the key of G, the relative major to the minor dominant-tonic. By inserting the key of G major in between these two points, Rameau effects a modal shift from the key of the major dominant-tonic (the sharp side) to the key of the minor dominant-tonic (the flat side) through a succession of dominants. There is no doubt that the insertion of the relative major, the point of symmetry between the two arrivals on the dominant-tonic at E. and G. extends the length of this phrase unit, for the two sequences at the second could have easily followed a pause on the minor dominant-tonic six measures earlier without serious repercussions—or significant alterations, for that matter. The insertion at this particular juncture, then, provides much more than variety: through the extension of length, it establishes the dominant-tonic key center as a tonal move away from the principal tonic. The span of this particular key center stands in stark contrast to the length of the sequences

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which follow—sequences whose keys are not as intrinsic to the tonal progression of events. Viewed at the level of the principal key, this emphasis of the dominant-tonic key center through sheer phrase length serves as a type of structural dissonance or disruption of the sense of balance that the tonic or home key implies.

The Fundamental Routes

The idea of tension and balance also operates on a much more subtle layer--the fundamental routes themselves. Gianotti picks up on this clue in the six sequences of the last line of his example when he notes that: "the fundamental bass descends by fifth everywhere in spite of the disparity of some intervals in its sequences" (¶ 15). By calling attention to this flurry of motion at the end of the piece, Gianotti inadvertently stumbles on another source of tension and balance--dominant routes and tonic routes. Though Gianotti has not definitively contrasted the keys of sequences (where the key of each unit relates to its neighbor at the second) with those that relate to the principal key, he not only illustrates the use of sequences as local events (as proclaimed in ¶ 3) by pointing out the dominants that descend by fifth in all six sequences of the last line, but also hints that these particular dominants take more of an active role in local activity.

Throughout the example that accompanies this chapter, the reader gets a sense that tonic routes such as the descending third (used to travel to passing tonics introduced in chapter 8) carry more of a sense of repose than dominant routes that descend by fifth, their more powerful counterparts. The dominant routes assigned to the tonic's domain as early as chapter 5 (the ascending second and the descending third) serve to halt the direct motion that the descending fifths usher in. In a sense, they serve to counterbalance the flurry of activity just as the compensatory swing to the key of the opposite pole a fifth away serves to restore balance. It is the combination of routes which contributes to establishing the keys or points of arrival at letters S., T., and U.:

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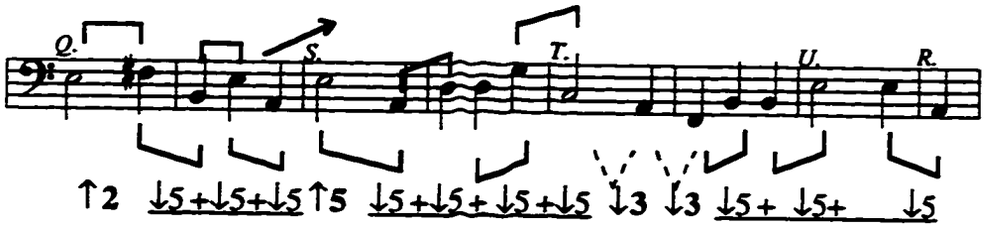
Example 14- 4: *Fundamental bass routes from Q. to R. (Rameau's guidemarks), fourth line of ex. 21*

In this particular example, there is more dominant activity before the point of symmetry T. than after it. The use of the ascending fifth, in combination with the duration of a half note at S. helps to create a temporary halt to the flow of events. The descending thirds after T. curb the drive to the home key at R. even more by lessening the momentum created earlier. In a sense, the use of these tonic routes at this juncture (after the appearance of the relative major at T.) prolongs the feel of the point of arrival by gradually easing into motion toward the next goal, rather than erasing the sense of repose at this center through the immediate use of dominant routes.

The notion of tension and balance comes to a head in this chapter, particularly in Rameau's presentation of events. Though Rameau has not yet introduced dissonance into the picture, he has set the stage for the role that the dissonant seventh plays as both a source of tension (a sound that requires resolution for completion) and a source of activity (drive toward a tonic goal.)[3] While neither author formally discusses the dynamic role of dominant-tonic routes in contrast to tonic routes, this idea surfaces in examination of the musical contexts such as the line above in example 21. Moreover, as a subliminal theme, it has continually pervaded the atmosphere of lessons in the first section. In fact, in "L'Art,"

[3] Both Lester and Christensen bring up Rameau's idea of dissonance as a form of tension: Lester refers to dissonant chords as mobile events and consonant tonics as goals while Christensen characterizes the dissonant seventh needing to resolve as the "force that drives all tonal music onwards." See Lester's discussion of a "floating tonic" in chapter 5 of Compositional Theory in the Eighteenth Century and Christensen's discussion of harmonic motion in the fundamental cadence in chapter 5 of Rameau and Musical Thought in the Enlightenment.

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Rameau has started from the very first chapter to inculcate a true understanding of the primacy of the tonic. As the lessons unfold, the reader learns extensions of this idea: the prerogative of the tonic to progress by any route, the use of tonics as cadential goals, the key of tonic goals used to designate keys of phrase units, and the use of specific tonic routes such as the passing tonic and foreign tonic to maintain connection between cadential points or key centers. Set against this idea of the sovereign tonic, dominant routes are mere servants, progressions that must slavishly follow certain guidelines and always remain subservient to the directives of the reigning tonic. In defining the tonic as a cadential goal, these dominants provide the very activity which the tonic requires to maintain its preeminence, for this activity also serves as a foil for the sense of repose that the tonic carries with it. Thus, although dissonance as a form of tension is not yet a factor in the equation here, it is not hard to see how Rameau subtly provides the requisite preparation to bridge the gap between the study of consonance in the first section and the study of dissonance in the second.

Thus, in the end, Rameau makes the same sales as Gianotti, and without even advertising. Moreover, through his advice in the aisles, Rameau guarantees a satisfied customer, for even though he mixes a number of elements into the batter in his initial demonstration, Rameau prioritizes connecting ingredients in his approach. Through Rameau's simple pedagogical presentations which utilize one particular idea in various ways, shoppers happily find new techniques to improve their culinary efforts with some very simple staples. Customers can always count on a friendly and helpful explanation to accompany their search for these ingredients in the aisles—ingredients which turn out to be the very basics they went to market for in the first place. At Rameau's establishment, professional expertise, solicitous assistance, and personal magnetism continually draw a steady and devoted clientele.

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CHAPTER XV

Where one indicates the methods of finding the Fundamental bass by going backwards

Gianotti:

1 · The rules given so far for finding the fundamental bass of all possible melodies through the consonances ought to suffice to lead to the desired goal. [For example,] knowing how to distinguish the signals in the subject, seizing the places where pauses begin and where the key changes, recognizing implied tonics, the possibility of passing tonics, sequences in the melody, the possible division of a subject note into two values, and above all the basic fundamental progression which is the same in each key and in which the subject decides only the note which should follow the tonic or implied tonic.

2 All these aids, sustained by a little patience and attention, are more than sufficient to succeed in this undertaking. Therefore, in order to leave nothing to be desired we will add to these rules the methods of composing the fundamental bass backwards, [a procedure] that can verify the operation that one will have already undertaken in the forward direction, and, moreover, to make it known in all its guises.

Rameau: draft 1

I/20/1-f. 37'

For beginners, the greatest difficulty consists in finding the true fundamental note which fits after the tonic—especially when the key changes; in order to be able to progress next in the dictated fundamental order until a new tonic [is reached]. Though we have given some sufficient rules for avoiding a mistake in this circumstance, there remains a method of composing the fundamental bass backwards which can make the operation much easier and which will be very useful even when it would only serve to make it known in all its guises.

Rameau: draft 2

I/16/2-f. 58'

There is a way of composing the Bass backwards which can be very useful when one encounters difficulties—especially when the key changes.

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3 As soon as difficulties present themselves, it is necessary to stop at the last known tonic and try to ascertain through the rules given in chapter VII the key which follows this tonic. If the same key continues, the fundamental progression of it is soon found.

4 When the new key is known, one looks for the mediant or the leading tone of it, whose fundamental basses are known. [If they are found in the subject,] one writes [the fundamental bass] below one or the other of these two notes. If these two known notes do not appear in the subject, one chooses the note which ends the pause of this new key and, after having written the fundamental bass of it below, one says: the tonic should be preceded by its dominant or by its subdominant, or if not, by another tonic. Every dominant should be preceded by its [dominant] or else by a tonic; and every subdominant should be preceded or followed by its tonic unless one employs it as a tonic or as a dominant

I/20/1-f. 37^{v}-38^{r}

If the same key continues after a tonic, the fundamental succession of it is soon found; but if [the key] is doubtful, especially if it is going to change, this is where difficulties present themselves and this is what one must try to remedy if possible.

As soon as one is arrested by some doubts, it is also necessary to stop at the last known tonic; then one tries to ascertain the key which comes next either through the signals in the subject, or through pauses, or through the rapport [required] between successive keys as well as the [rapport required] with the principal [key].

Once one is certain of the new key, one finds a known note there, either the mediant or the leading tone, and one writes the fundamental bass of it: to wit, the tonic for the mediant and the dominant tonic for the leading tone.

In the absence of the known note, one chooses the note where the pause of the new key ends in order to give it a fundamental bass. This being done, one says: the tonic can be preceded by its dominant or by its subdominant: if not, by another tonic. Every dominant can be preceded by its [dominant], if not by a tonic; and every subdominant can be preceded and followed by its tonic, except when one employs it as a tonic or as a dominant as is possible.

I/16/2-f. 58^{v}

When one is at a loss for finding the fundamental note which should follow a tonic where one will have stopped: either the same key continues or it changes. First, it is necessary to ascertain the key which exists after this tonic where one has stopped. Then, [one should] find in the melody a known note of this key of which one is certain, that is to say, its mediant or its leading tone.

When one has found the known note, one places its fundamental bass below, then one continues this fundamental bass backwards in the following manner.

Since the fundamental bass of the known note here can be after the tonic or the dominant tonic, one says to oneself: the tonic should be preceded by its dominant, if not, by the subdominant; and the dominanttonic should be preceded by the dominant, if not by its tonic.

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as is possible. And one progresses in this way from one note to the other, going backwards in accordance to what the subject requires.

5 One must see whether the subject permits retaining the same fundamental note in one or in several consecutive measures. One must avoid making it syncopate and even avoid repeating it in a strong beat, unless it could continue through the [whole] measure.

One progresses backwards in this way from one note to the other according to what the subject directs. First , one examines whether the subject permits retaining the same fundamental [note] in the whole measure. If it does not require retaining it in the same way in several consecutive measures, one avoids making it syncopate even repeating it in a strong beat when it cannot continue throughout the entire measure. One [proceeds] backwards in this manner according to the given rule, making [each note] precede the [last] from one [note] to the other until one arrives at this tonic through any interval whatsoever in a way that all will nearly be well.

I/16/2-f. 58ᵛ-59ʳ

If the fundamental note written under the known note of the melody occurs in a weak beat, it is necessary to see whether the melody permits continuing it throughout the whole measure because this is always better, as one should [already] know. It is even necessary to see whether, after having employed it in the whole measure, it could also occur throughout the [entire] measure which follows [precedes] in retrograde [proceeding] in this way from one measure to the other, all in relation to the melody because if [the fundamental bass] can only occur on weak beats, after having been employed on the strong beats of the preceding retrograde measure, then for the moment it would syncopate. And this would be a sign that it would be necessary to take another [fundamental bass] on this weak beat. Notice that the ambiguity which could present itself in a similar case would come from [the fact] that the fifth of the written fundamental note is both the octave of the dominant which can precede it and that the octave of this same fundamental note at the same time. This octave of the fundamental note,

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implied as a tonic, is also the fifth of the subdominant; or if it is a dominant-tonic, its octave is also the fifth of the tonic.

All these considerations should urge beginners to progress only with weight and measure. One then writes dots in place of fundamental notes in order not to muddy anything and one writes notes only when one has recognized [these solutions] as good [ones].

What we have just said of the fundamental note placed below the known note of the melody should be understood of all the other fundamental notes which will precede it. One retains them throughout the whole measure as much as the melody permits, or else one makes them precede according to the rule because, to repeat once again, although the melody permits retaining the same fundamental note there, it [does so] only as long as the prescribed fundamental succession does not suffer from it. The melody and this fundamental succession are the two guides that [one] must always keep in sight.

6 It is still necessary to avoid ascending by second going backwards because one would descend by a similar interval going forward.

One cannot ascend by second to the tonic going backwards because this tonic would then descend by second going forward against the general rule: one cannot descend by third there either, unless the two fundamental notes were

7 One could not descend by third either, unless the two fundamental

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notes were equally tonics or implied [tonics].

equally tonics or implied [tonics], recalling then the progressions where notes are implied tonics.

I/20/1-f. 38r-v

8 If one finds a tonic in the middle of its route and it is the tonic of a new key, there is nothing more to say concerning the above. But, if it is the [tonic] of the key which existed previously, it is necessary to make sure there are no signals in the subject that lie outside this first key from the fundamental note where one had stopped up to that [note], and if none are found, one will have judged well. If, on the contrary, the signs of the subject decide in favor of the first key, it is a sign that one had stopped too soon and that one could still have continued the first key up to its tonic which presents itself in the middle of the route in this way.

When a tonic occurs in the middle of the route, one uses it with consideration as if it were the fundamental bass of the known note. If this tonic of the middle of the route is the[tonic] of a new key, there is nothing to say: but if it is the [tonic] of the key which existed previously, it is necessary to see whether there are any signals in the subject which exclude this first key from the fundamental note where one had stopped up to that [note], and if none are found, all will be well. No doubt then that one had stopped too soon, and that one could still have continued the first key up to the tonic which presents itself in the middle of the route in this way.

I/16/2-f. 59r

If the melody permits making the subdominant precede the tonic, one should adopt this subdominant only when it will be able to be preceded by the same tonic in turn. However, if it occurred between this last tonic and the [tonic] where one had stopped, and it then forms a possible succession with these two tonics, one could do no better than adopt it. There is more: even when this subdominant could be preceded not by the tonic where one would be stopped, but by a similar tonic in the order which has just been specified, it is necessary to see whether or not the same key could still remain from this last tonic up to the [tonic] where one had stopped. In this case, one would have stopped too soon; it would have been necessary to continue the same key up to the same tonic which presents itself there for the second time. Ex.[1]

[1] In draft 1, Rameau presents the idea of the tonic in the middle of its route as a way of confirming the key of a passage from the last known tonic up to the tonic which is the next possible stopping point when proceeding forwards (see the discussion of this in the editorial commentary, p. 487 ff.) Gianotti follows suit. If, in examining the melodic context, the old key is still in effect, Rameau says that one would have stopped too soon. The same holds true in Rameau's 16/2; however, in this version, Rameau presents the process in reverse, in retrograde order. Rameau also changes his emphasis in this draft, choosing to present the idea in terms of the reverse ordering of fundamentals. The tonic in the middle of its route in the direct order is equivalent to the tonic which precedes the subdominant or the succession of tonics which precede the subdominant in the retrograde order. Though the direction in each draft is different, the end result remains the same, because Rameau's concern is examination of the context for key change.

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9 Since the notes that the subject traverses can be common to several related keys, this can sometimes deceive us. But in the absence of the most evident signs, [other signs such as] a somewhat perceptible pause, the relationship that the imagined key should have with [the key] that precedes it and [the key] that follows it, the very fundamental progression itself—all these come together to refine ideas and to prefer the true key which exists in the subject.

Since relative keys have several common notes in the subject, one can well be mistaken there sometimes. But in the absence of the most evident signs, a pause, however slight, the relationship that the imagined key should have with the [key] that precedes it and the [key] that follows it, the very fundamental succession itself—all these come together to refine ideas and to prefer the true key which exists in this subject.

I/16/2-f. 59r-v

Since relative keys have several common diatonic degrees, one can sometimes assign to one [key] [a note] that can equally fit the other. However, the determined fundamental succession does not allow [one] to make a mistake there; and this, along with the exclusion of syncopation, is precisely what gives rise to the best basso continuos and the best succession of harmony.

10 When one cannot make a fundamental note precede in the prescribed order, this is where it is necessary to examine whether it would be possible to insert one or two foreign tonics.

When one cannot prefer[2] a fundamental note in the prescribed order, this is where it is necessary to see whether it would be possible to insert one or two foreign tonics.

I/16/2-f. 59v

It is necessary to cling to finding the dominant of the fundamental note written under the known note of the melody first, because it is most often in a fundamental succession of dominants that one is uncertain of [the fundamental] that one sees to choose after the tonic where one had stopped. It is only when the melody refuses this dominant that one has recourse to other means.

Let us especially recall that the same rule that says that, after a dominant, it is necessary to progress dominant by dominant until the tonic, is observed here and there—either when

[2] Gianotti and Rameau differ by one word here. Gianotti uses the word "proceed" while Rameau uses "prefer." Compare Gianotti's: *Des qu'on ne peut faire preceder une note fondamentale dans l'ordre prescrit* with Rameau's: *Des qu'on ne peut faire preferer une note fond.le dans l'ordre prescrit.* By using the word "precede" here, Gianotti limits himself to proceeding in the retrograde order only. Typically, Rameau's use of the word "prefer" leaves the door open for following the prescribed order in either direction—another detail which betrays Rameau's view of both procedures as a common compositional process.

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11 If the fundamental note in question is a dominant, it can be preceded by a tonic, [or] by any interval whatsoever except the ascending second and the descending third. If, on the contrary, it is a tonic, it can be preceded by another tonic, [or] by all consonant intervals. And, if it is a subdominant, it is then necessary to regard it as an implied tonic. One can still have recourse to the possibility of dividing a subject note in two values, but as a last resort.

If the fundamental note in question is a dominant, it can be preceded by a tonic by any interval whatsoever except the ascending second and the descending third. If this fundamental note is tonic, it can be preceded by another tonic through all consonant intervals. If it was a subdominant, it would then be necessary to regard it as an implied tonic. One still has the division of a subject note in two values, but only as a last resort.

working in a forward or backward direction.[3]

I/16/2-f. 59r-v

If the melody permits making the dominant precede the tonic, one will adopt this dominant only under the same conditions and in the circumstances as the subdominant of which we have just spoken, except that it might then be preceded by its dominant, and this [dominant] by its [dominant] and always thus until the tonic of the new key or up to the [tonic] where one had stopped. Ex.

If the known tonic of the melody demands the dominant tonic as a fundamental bass, one makes it [the dominant] precede [the tonic] as has already been stated: for whether it is written before or after the tonic changes nothing in the retrograde succession. Ex.

I/16/2-f. 59'

When going backwards, take care to notice that the last fundamental note through which one arrives at the tonic where one had stopped is [in accordance] with [the tonic] in the prescribed order, that is to say: that it is either the fifth from it, or the fourth, or the second, or the third below. It is [also] true that it can be the third above it as well, taking place then as a

[3] See the example of the foreign tonic in ¶ 25. As applied to his example, Rameau advises imagining the dominant-tonic of the tonic where one has stopped. If the subject does not support this dominant-tonic following the tonic, he suggests resorting to other means: namely, a foreign tonic. Also see the discussion of this topic in the commentary, pp. 489-90.

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foreign tonic which will still have been employed as dominant of the one which follows or precedes it in the retrograde order.

12 Since the leading tone of a major key can also be the second note of the relative minor key, it is necessary to be on guard so as not to make a mistake.

One should be very careful of making a mistake concerning the leading tone of a major key which can [also] be the second of a minor key which relates to it equally, and to this effect,

13 In this case, it is not necessary to put one's faith in the first sign of the subject, however evident it appear, but to examine the whole phrase attentively up to the perceptible pause.

one must not hold onto the first sign of the subject however evident it appears—one must rather examine the whole phrase up to a somewhat perceptible pause.

14 One must not neglect the rapport required between successive keys either, in which case one judges whether this first sign had indicated correctly. *See example 22, p. 11*

The rapport required between successive keys should not be forgotten either, and if this first sign indicates correctly, all the rest will without a doubt be favorable to it. Ex.

Observations on this example

I/20/1-f. 38ᵛ-39ʳ
Explication

15 Without a sharp, the note at B., sufficiently proves that the key of *A*, recognized by the interval of a fifth at the beginning, no longer exists; and, moreover, the interval of a descending third on the strong beat at C. proves the key of *C* well enough. Since this key is known, the note at A. is consequently its leading tone, under which one writes the dominant-tonic as a fundamental bass. One knows that this dominant should be preceded by its [dominant] or by its tonic; in examining the subject,

Scarcely is the principal key of A, recognized through the fifth of the beginning, established than one sees it change at B. It is not only the lack of a sharp at the note at B. that proves that one is no longer in the key of A, but also its succession by descending third to the strong beat at C. which proves the key of C.

Since this last key is known, its leading tone is consequently at A., thus, giving this leading tone the dominant tonic as a fundamental bass, one

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one sees that it is its dominant which should precede it and one writes it below. Since this occurs on a weak beat, one sees whether it can be retained in the [previous] strong beat without this preventing it being preceded by its [dominant] or by the first tonic. One arrives in this way—going backwards from one dominant to the other, up to the tonic of the beginning.

knows that this dominant wants to be preceded by its own [dominant] to which one sees the subject lend itself [and] one writes it down. Since it occurs on a weak beat, one sees whether it can still comply [with the subject] on the strong beat without this preventing it being [preceded] by its dominant as well, if not by a tonic as the first: and since the subject equally lends itself there, one arrives in this way from one dominant to the other going backwards until the tonic of the beginning.

16 The key of *A*, recognized through the interval of a fourth at D., recommences on the tonic preceded by the one of *C*. As soon as the tonic has already been employed, it is pointless to go searching for the mediant or the leading tone of this new key in order to compose backwards.

One should recognize the [key of A] through the fourth D. in the same way that one recognized the key of A at the beginning through [the interval] of a fifth. [At D.], the [key] [A] recommences with its tonic preceded by [the tonic] of C, since it is impossible to find another fundamental bass there without continuing the tonic C through the strong beat. [Continuing the tonic C on the strong beat] would not be valid, first, because the key of C finishes at C. whose weak beat is only a repose of the pause; second, because the tonic cannot fill the whole measure D. after having already existed in the measure C.; third, because the new key always begins after the tonic or one implied as such, of the key which precedes it; fourth, and finally, because the spirit of the melody gives the beginning of the phrase at D..

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This manner of passing from one tonic to another in this way always makes a good effect when it agrees with the spirit of the subject—a [factor] that must always be considered according to what had already been said about it in the preceding lesson.

Once the tonic has already been employed, it is pointless to go searching for the leading tone of this new key in order to compose backwards: if it is not [done] in order to verify the order of the fundamental bass from whatever direction that one takes it.

I/20/1-f. 39r-v
Explication

After the pause on the dominant-tonic at E., this one passes going forwards to the tonic at F., which through the major third that it received through the change, becomes common to its key and to the [key] which follows it. The leading tone F. makes the key of D minor recognizable enough. Consequently, since the B which should be flat [in that key] is not [flat] at G., it should be taken for the leading tone of a new key

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as long as no other sign disputes this right.[4]

17 Retrograding the fundamental bass is useless from D. to E., where the signs of the subject well enough indicate the keys that one traverses there.

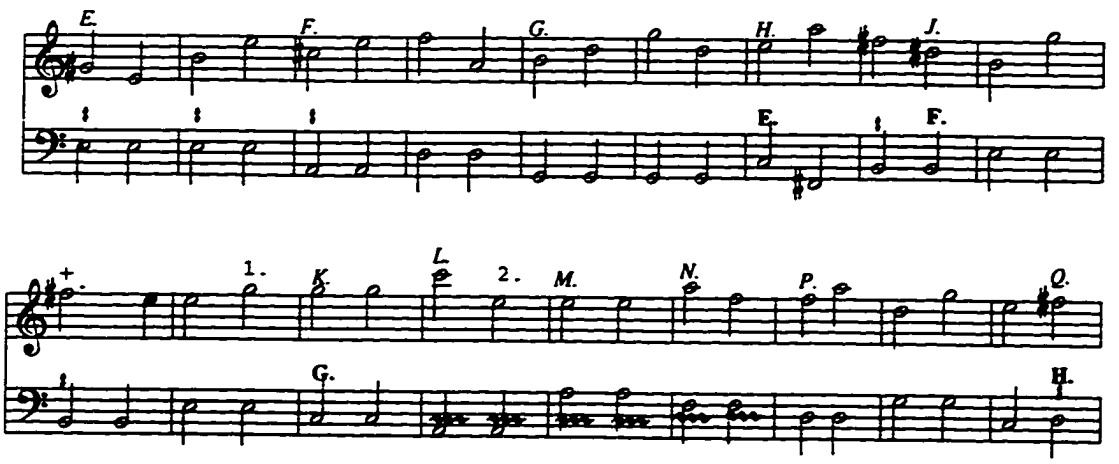
Retrograding the fundamental bass is thus useless when other signs rule out the need to do so.

18 Seeing the key of *E* declared by its leading tone at F., one can write the dominant tonic of this key below [this leading tone] and continue backwards up to the tonic *C* where one has stopped at E., the whole in the order [dictated] [by the rules].[5]

But, seeing the key of E declared by the leading tone J., one can write the fundamental bass of it and progress going backwards until the tonic C where one will have been able to stop at H. the whole thing according to the order dictated [by the rules].

19 The syncopation at G. should encourage [us] to examine the continuation of the subject in which one finds an interval of a fourth,

The key of E ends. One sees a syncopation at K.; one then examines the continuation of the subject [where] one finds a fourth

[4] Rameau's guidemarks *E.* to *Q.* are as follows:

[5] Gianotti uses the word "direct" order here while the word is clearly "dictated" or *dicté* in 20/1. Given the retrograde context in this example, the choice "dictated order" would make much more sense here, since both Rameau and Gianotti are clearly conveying the idea of following the prescribed order of fundamentals backwards from F. to E.

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which declares the key of *C* after the syncopation in question. The rest of the phrase conforms [to the key of C] up to the sharp at H. As a result, one should in this case take the tonic *C* after that of *E*, [placing it] at G., [that is] under the second value of the syncopation.

which declares the key of C —the rest conforms up to the F sharp at Q., which was not [there] previously. As a result, in this case, one takes the tonic C on the second value of the syncopation at K. [that is] immediately after [the key] of E.

20 The solution that would arise by following custodes of the fundamental bass after G. would be very insipid because of the successive tonics which occur there. The first two [tonics] [at G. itself] are unavoidable and the last two [tonics] [at m. 23] are simply passing. Note well that the last of these two [tonics] is common to both its key and to the principal [key] of the phrase, becoming dominant of the dominant-tonic there.

The tonic C could well be retained up to M., even up to N. where it will then ascend by second. [The tonic] [C] could still descend a third to a dominant [A] between the two notes [the tonic at M. and the ascending second D at N.]. [However,] it could not [descend by third] at N. because the fundamental bass would be forced to syncopate next under the syncopation of the subject P.. But this simple [solution], which does not agree enough with the spirit of the melody, moreover, is insipid in comparison with the successive tonics at the third which occur there.

If one examines the spirit of the subject or the melody carefully, one will feel a small pause at L. that is imitated at N. One is forced to change the fundamental bass at N.; therefore the known sequence should urge us to change [the fundamental bass] at L. as well without consideration for the syncopation M. since it would be opposed to the sequence. In this way, since the first progression by descending third under the syncopation K. can be imitated successively under the syncopations L., N.,

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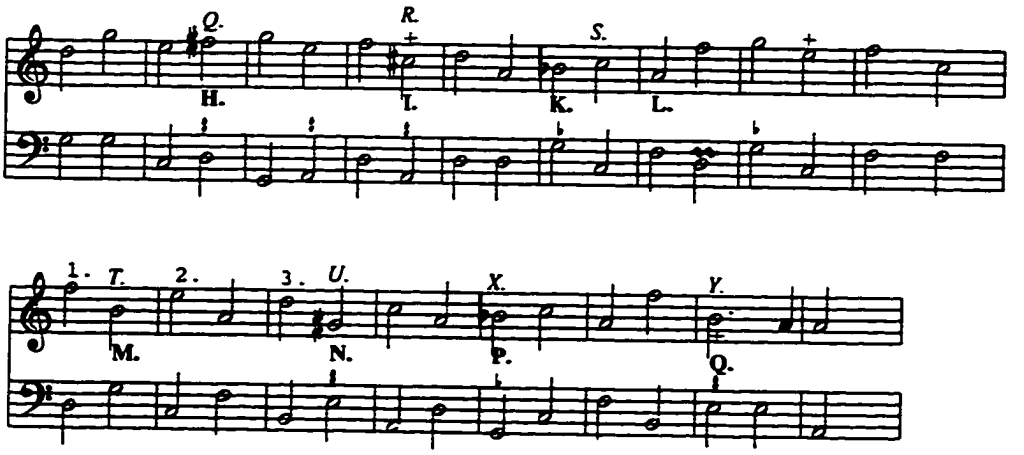
and P., five tonics occur in a row: the first two are unavoidable, but the last three are simply passing. Note well that the last of these three at P. is common to its key and to the true [key], becoming a dominant of the Dominant-tonic.

21 · The leading tone at I. establishes the key of *D*. After having written the dominant-tonic as fundamental bass below [it], one sees whether this [dominant-tonic] should be preceded by its [dominant-tonic] or by its tonic and one finds that the subject indicates the last, [the tonic]. This [tonic] [in turn] is preceded by its dominant [A] with respect to the tonic which precedes it [G], where one will have stopped. This dominant is a second above [thereby] according with the possible progression from a tonic.

I/20/1-f. 39ᵛ-40ʳ
Explication

The key of D minor is declared through the leading tone R..[6] Consequently, after having given [the leading tone] the Dominant tonic as a fundamental bass, one makes its dominant or a tonic precede it and it is precisely its tonic that the subject indicates. This tonic finds a place in the same subject in order to be preceded by its dominant, and this [dominant] [A], compared to the tonic known through its leading tone Q., where one will have stopped no doubt, is a second above—thus in

[6] Rameau's guidemarks *Q.* to *Y.*:

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accord with the possible progression from a tonic.

22 The flat at K. decides for the key of *F*, whose mediant at L., requires the tonic. The subject provides the means of preceding [this tonic] [F] with dominants [following] the previous tonic [D].

Since the sharp R. no longer exists at S., the flat between them then decides the key: therefore, it is the key of F major—so it is its mediant to which the note S. descends a third on the strong beat. Therefore, one writes the tonic below this mediant. The subject provides the means of preceding [this tonic] [F] with dominants until the previous tonic [D].

23 If the note M. without a flat makes [us] suspect the key of *C*, the sharp N. declares [the key] of *A*. But the relationship between the successive keys should lean toward that of *C* which occurs between *F* major and *A* minor; because it connects them in a way that renders their relationship pleasant. Moreover, the sequence of the melody in three consecutive measures from the measure M. necessarily requires a progression by descending fifths.

The B, which no longer has a flat at T., should make[us] suspect the key of C, but soon the [key] of A is declared at the sharp U.— it doesn't matter: because according to the rapport between successive keys, one should promptly seize that of C which occurs between the key of F major and the key of A minor since it connects them in a way that renders their rapport pleasant. Yet, if one adhered to giving the leading tone U. the dominant tonic for a fundamental bass, the prescribed succession backwards would always bring back [the note] that T. requires up to the tonic F beforehand. But do we not perceive an sequence of the melody in the three measures that descend from T. and isn't this the [usual] case of making the fundamental bass descend by fifths?

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24 The key of *F* is declared anew by the flat P. and by the interval of a third which comes after. The note Q. without a flat, and the perceptible pause which comes after proves the key of *A*. Notice here that despite the variety of keys that one traverses from L., the fundamental bass always progresses by dominants.[7]

In addition to [the fact] that one descends next by third to the strong beat, the flat X. declares the key of F anew. Since this flat disappears at Y., [this], in addition to the perceptible pause which follows there, proves that [one has] left the key of F for a moment. Despite all these changes of key from T., the fundamental bass always progresses by dominants until after Y.

25 Following the pause in *A*, one should prefer the notes to the alternates at the first of the two sequences, not only to model the sequence of the fundamental bass to that of the subject, but also to connect the key of *G* to that of *A* which precedes it through the means of the foreign tonic [F] upon which one descends by third and which immediately becomes a subdominant of *C*. As a

I/20/1-f. 40r-v
Explication

The sequences 1.2. which follow urge [us] to prefer the notes to the custodes under sequence 1. And, if one did not at first perceive the necessity of a similar fundamental bass under sequence 2., the idea should arise through the repetition [of the subject] itself and because there should be a reciprocity between the subject and the fundamental bass. What is

[7] Gianotti once again associates the dominant route with travel through a variety of keys. Recall that in the previous chapter, Gianotti called attention to the momentum carried by a flurry of dominants in ushering in a succession of keys within a very short span in contrast to the inertia of passing tonics, where the progression seems slower and less direct.

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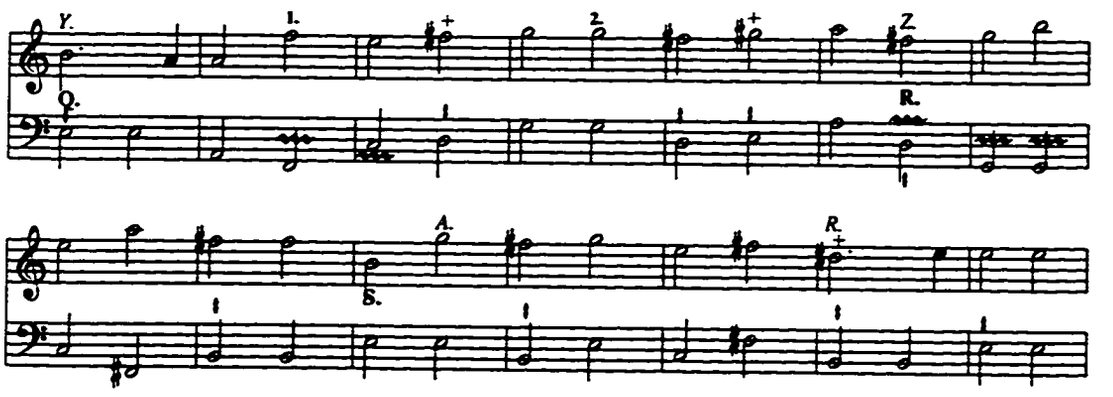
result, the connection is perfect between these three keys and the two very regular sequences in the fundamental bass.[8]

more, one has just left the key of A. The [key] of G, a second away from it, occurs after figure 1. It would be hoped that one could have found [a tonic] between these two keys to connect them and this is precisely what the two subject notes from the figure provide. One sees the possibility of making the tonic A descend by third to a tonic which becomes the subdominant of C there at the same time. As a result, through this means, the connection is perfect between these three keys.

I/20/1-f. 40v
Explication

26 The key of *D*, after figure 2, ought to be minor naturally. This passing tonic exists only to connect successive keys. More than this, though, it is the

This C ascends a second in order to pass to the key of G; and the next sequence a key higher is regular. The first of two accidental sharps in a minor

[8] Lines 4 - 6 of Gianotti's ex. 22 with Rameau's guidemarks in italics:

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necessity of the two accidental sharps to ascend to the tonic which should override every other consideration.

27 The sharp at R. announces the key of *G*, but the key of *A* which precedes [it] should make [us] suspect the key of *E* even more on account of their relationship. All the intervals of a fifth or a fourth in the subject confirm this [key of E]; and a bit further on, the pause announced by its leading tone no longer leaves room for any doubt. However, the progression of dominants from the tonic *A* up to the tonic *E* at S. can make [us] consider the key of *G* a passing [key]; if one would rather not treat it as a dominant like the others, one is free [to do so].

28 When the succession of dominants which leads to a minor key is a bit long, the tonic of the relative major key is always inserted there; and one is free to remain in the major key of this tonic for the moment—all the better since it has been preceded by its dominant tonic.

key often renders a major passing beat, [a beat] which [ordinarily] should be minor—as one sees at the sharp which immediately follows figure 2 where the tonic D occurs below. This tonic is there only to connect successive keys. More than this, though, it is the necessity of these two accidental sharps to ascend to the tonic of a minor key which should override every other consideration.

After the key of A minor comes a sharp at Z. which makes [us] suspect the key of G major—but doesn't this key of A minor suffice to make [us] suspect the key of E minor next even more [than the key of G major]?

All the intervals of a fifth or of a fourth in the subject already confirm this key of E minor; and soon the pause announced by its leading tone no longer leaves room for any doubt. However, the succession of dominants from the tonic A before Z. up to the tonic E at A., can make [us] consider G a passing key. If one would rather not treat G as a dominant like the others in all dominant successions which lead to a minor key, the tonic of a major key relative to this minor always occurs when the [dominant successions] are a bit lengthy. And then, one is free to remain in the major key of this tonic for a moment, because it is preceded by its dominant-tonic.

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29 Having recognized the key of *E* at R. perhaps though its relationship with [the key] of *A* which [both] precedes and follows it, its mediant after S. will be known at the same time. After having written the tonic E under [this mediant], one will progress backwards up to the tonic *A*, where one might have stopped, via a succession of dominants that the forwards progression would equally have given from this same *A*. However, as soon as the key of *E* is recognized, one can make the tonic *A* ascend a second under R. in order to arrive at the tonic *E* immediately after according to the custodes. But if one recalls the preference that one should give to one progression over another, one will feel the force of it much more in this place. In addition, through this means, one avoids too many frequent pauses on the same tonic.[9]

I/20/1-f. 40ᵛ-41ʳ
Explication

Once the key of E is known either at R. or through its rapport with [the key] of A which [both] precedes and follows it, its mediant at A. will be known at the same time. Now, if after having stopped at the tonic A before Z., one takes the tonic E as the fundamental bass of the mediant at A. and from there [A.], one progresses backwards up to A, one will naturally have the same dominants that the forwards succession will equally have given from this same A.

However, one can make the tonic A ascend by second at Z. in order to arrive thereafter at the tonic E as soon as this last key is known. But if one recalls a remark made in lesson XVIII concerning the preference that this succession merits over the use of dominants when the subject can be harmonized

[9] This passage is somewhat confusing. In 20/1, Rameau refers the reader to the eighteenth lesson. This lesson corresponds to Gianotti's chapter 13: "Concerning the design of the fundamental bass in consequence of that of the subject." Recall that in this lesson, both authors allow the design of the subject to influence the choice of fundamental bass. In ¶ 3 of ch. 13, (see p. 418) both teachers alert the student to a context where there is no definitive pause--a context where phrase outlines are rather inconclusive. Since this nebulous juncture can be considered either a continuation of the previous phrase or the beginning of a new phrase, in ¶ 4 Rameau and Gianotti advise preferring the tonic of the key that is to be confirmed a bit futher on (i.e. "the tonic of the new key") over a succession of dominants which eventually lead to the new tonic at the end of the phrase. Both admit the choice to be somewhat ambiguous. Thus the decision in chapter 13 centers on deciding whether to use a succession of tonics or a succession of dominants. In chapter 15, however, Rameau not only wants the student to discover both options (the use of successive tonics or successive dominants) for a passage through the retrograde process, but also wants to show the benefit of using a dominant succession here over an ascending second progression (exclusively a tonic route). In this particular context, the use of a dominant route promotes much more consistency in sequential patterning than an ascending second would. Therefore, Rameau opts for the use of dominants here. Though Rameau's outcome in ¶ 29 of this chapter seems at odds with his advice in lesson 18 (Gianotti's chapter 13), he is consistent in his approach, for in the end he allows the melodic context a hand in the decision-making process.

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as such, one will feel the force of [this idea] much more in this place where it is a matter of preferring this succession [of dominants] to the one by second [tonics], when [in lesson XVIII] it was a matter of preferring it even to two successive tonics. Besides, through this means one avoids very frequent pauses on the same tonic.

After the fundamental bass had been composed backwards, it is necessary to verify it in its direct order—one serves as proof of the other. This manner of composing the fundamental bass is not at all favorable to the ear. This is why it is necessary to use it only as a last resort. One sees how the first lessons should be presented before passing to others and one should always fear running aground when wanting to arrive too early. One can count on certain success if one feels in full possession of all that had been said up to the present, but in a manner of being able to teach it without being obliged to read it again.

End of the first Part.

I/16/2-f. 59^{v}-60^{r}

These different methods of composing the fundamental bass add to the practice of what one should have done up to the present. Imperceptibly, [these different methods] shed great light in the mind of the beginner: soon that which cost one a little, costs one nothing [in the long run]; one makes an observation in proportion: and that which costs one still more becomes a game at the end—especially when it will be permitted to call upon the ear entirely for assistance. One ought to clearly recognize that this is only to better illuminate what one prohibits use of for some time—not that it might still lack {duality} in this regard, but at least, that this be only after having employed all the jurisdictions of art, and this only in order to give oneself the satisfaction of having art and nature in agreement together.

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Editorial Commentary on Chapter XV

Given the titles of the lessons among the sources: "Concerning the fundamental bass going backwards" (20/1), "Method of composing the bass backwards from which one can easily prevent several difficulties" (16/2), and Gianotti's own "Where one indicates the methods of finding the fundamental bass by going backwards," perhaps the most surprising aspect of this lesson is the fact that the beginner does not learn to compose backwards right away. But far from being a mere flaw in the presentation of material, this peculiarity has deeper roots, for the problem actually stems from the way each teacher views retrograde composition as a technique. Each teacher's view becomes apparent in the opening paragraphs of the lesson. In the first two paragraphs, Gianotti presents retrograde composition as the last tool in a long line of techniques for composing in the usual manner, a tool which "can verify the operation that one will have already undertaken in the forward direction." Rameau's opening paragraph in I/20/1, however, differs in approach. Rameau clearly presents the retrograde technique as much more than a mere verification of previous choices—for he points to its use as a specific compositional technique to solve a particular problem when composing in a forward direction: finding the next fundamental after the last known tonic when the key is in a state of flux.

Using a backwards method to benefit a forward approach might seem paradoxical. The technique, however, is not new to the reader of "L'Art." Recall that Rameau used various pedagogical means throughout "L'Art" to help the beginner solve several anticipated difficulties.[1] The basic idea is to stop at the last known point and then to travel a bit further on to find another known point. In this chapter, both Rameau and Gianotti

[1] One of the best of examples of this kind of thinking appears in lesson 12: determining the key of the subject. In this lesson, Rameau teaches the student to ascertain the key that would maintain the best connection between successive keys on a local level (i.e. note to note) by viewing the unknown key as a point between two known factors: the preceding and following keys. He also used a non-adjacent key to solve the first known key by reasoning backwards: using the third key away from the first to find the second key, and using the second key, in turn, to find the first. See my discussion of Rameau's *Point-to-Point Pedagogy* in the commentary of Gianotti's seventh chapter.

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refer to the last known factor as "the last known tonic." After this point is determined, they direct the student to look for "known notes" in the melody further on, for when a "known note" is found (i.e. the mediant or the leading tone), its respective fundamental bass is also known (i.e. the tonic for the mediant and the dominant-tonic for the leading tone). Once the "known" fundamental is ascertained, the student can then reason backwards to the initial stopping point (the last known tonic). In a sense, the process is more of a zigzag approach than pure retrograde, because in essence, the student travels in both directions to figure out the best fundamental bass route between point A and point B. So, the fact that both Rameau and Gianotti do not begin the lesson by teaching the beginner to compose backwards is, in retrospect, quite appropriate.

The idea of a retrograde approach to composition is also not new; it surfaces now and again in teaching methods. In the Gradus ad Parnassum (1725), Johann Joseph Fux had already alluded to the process of working backwards from a point somewhat ahead of the difficulty in his interlocution between Joseph and Aloys in the second chapter of part II:

> *Joseph.*— I found this work to be so full of difficulties that it seemed to me in some places nearly impossible to proceed from measure to measure.
>
> *Aloys.*—I must admit that it is not easy to write in this species, where two half notes must agree well with whole notes of the other voices and everything else be observed that need be observed. However, it becomes most difficult, indeed nearly impossible, if one does not consider one or two measures in advance before deciding to write, as I have already told you...[2]

Much later after Rameau, Adolph Bernhard Marx, the German theorist noted for his 19th-century thematic versions of sonata form, also refers to this technique when teaching composition. In the Theory and Practice of Musical Composition, Marx provides musical examples that reveal the thinking that Rameau suggests:

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[2] Johann Joseph Fux, Gradus ad Parnassum, (Vienna, 1725), translated and edited by Alfred Mann as The Study of Counterpoint (New York: W.W. Norton, 1965), 90.

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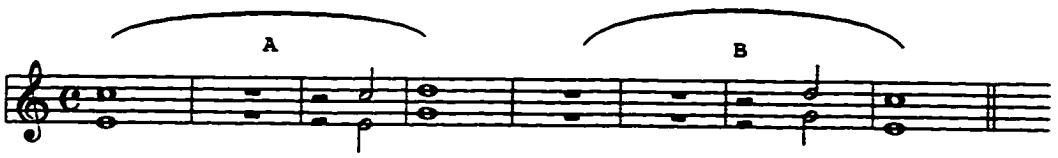
> Now, at last, we can resume our actual work. It is our object to form tone-chains of the most perfect form at present known to us—in the form of a Period.
>
> First of all, let us regulate our two masses [phrases] into a Period.

Example 15- 1: *Example of a Period in A.B. Marx's Theory and Practice of Musical Composition, Bk. I, Part II -Composition for Two Parts, Ch. III - The Duophonic Composition, p.81*

> The beginning with the first mass lies probably nearest. The thesis (A) makes its cadence from the first into the second mass. The antithesis (B) makes its cadence from the second mass into the first. The vacant space can be filled out according to the general laws of Tone-succession, Progression, Harmony, and Phraseology which we have learned.[3]

The beginnings and ends of the phrases are clearly marked while the medial content is left blank for completion at a later date. Marx provides another example in the same vein when teaching the student modulatory planning:

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[3] Adolph Bernhard Marx, Die Lehre von der musidalischen Komposition, praktisch-theoretisch. (Leipzig, 1837), translated and edited from the 3rd German edition by Herrman S. Saroni as The Theory and Practice of Musical Composition, 6th Amer. Ed. With Appendix and notes by Emilius Girac, (New York: S.T. Gordon, 1854?), 81.

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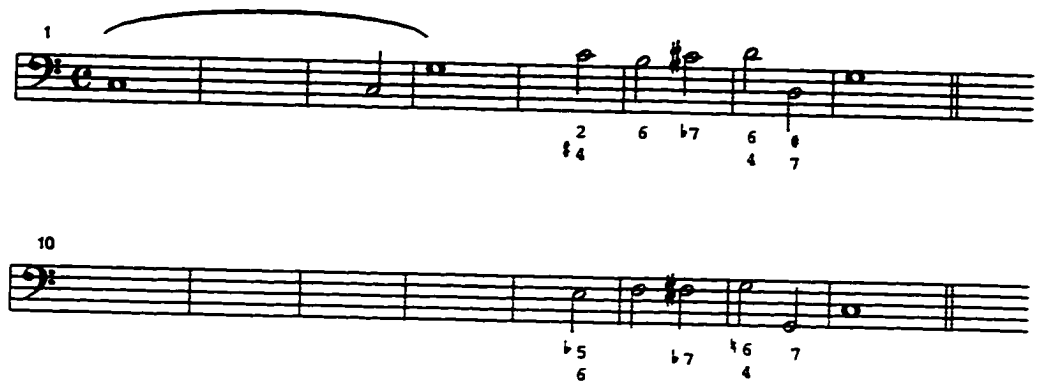
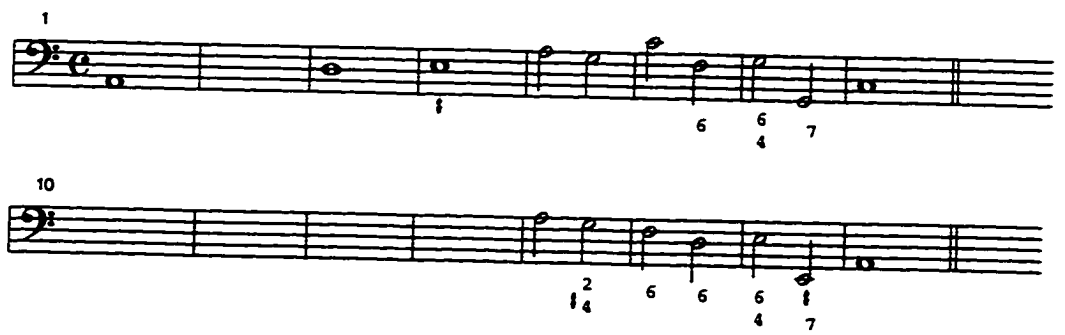
in major:



and in minor:

Example 15- 2: *Modulatory plans in A.B. Marx's Theory and Practice of Musical Composition, Bk. I, Part VII- Modulation into Foreign Keys, Ch. V - General Order of Construction, 204.*

From these examples, then, we see that it is not uncommon for teachers of composition to suggest proceeding to a point further on in the composition only to fill in the gaps later on. In fact, one of Rameau's most famed contemporaries, and a purported fundamental bass adversary at that, was not immune to using this approach in the process of composing—for

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there is evidence that even J.S. Bach composed in a non-consecutive manner. In his study of Bach's compositional process in the vocal works, Robert Marshall points out that the original draft of movement 22 from the Christmas Oratorio BWV 248 reveals a complete bass part and an incomplete continuo part.[4] According to Marshall: "Bach had written the bass part to the end of the movement in E minor. He then began to compose the continuo part to this original voice part but abandoned it before writing down the concluding cadential tones and transposed the final phrase up a third to G major."[5] From this we can infer that Bach returned to the beginning to complete the movement after sketching the final cadence. Thus, there is ample evidence to support Rameau's value of the retrograde approach as both a composing and teaching tool.

Conceptually, Rameau sees the retrograde approach as a shadow of the forward approach much as he sees the fourth as the shadow of the fifth in interval inversion, for each aspect of the concept is not inseparable, but rather a different manifestation of the same idea. Thus, it does not matter whether one composes forwards or backwards, or whether one ascends a fourth rather than descends a fifth: both means, in actuality, achieve the same end. This is where Gianotti misses the boat. Though he relays all the nuts and bolts of Rameau's approach accurately enough, he does not always take the time to show how this particular approach is truly valuable to the composer. To Gianotti, it seems another mere procedure, a technique which acts as a fitting close to the first stage of the composer's journey through the Composer's Guide. Rameau, however, thinks otherwise. He does not introduce this technique out of sheer philosophy, he is a practical musician who has continually presented this method as an important way to think about compositional problems throughout the first section of "L'Art." In fact, in two particular examples which will be discussed later, Rameau surpasses Gianotti in showing how the

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[4] Robert Lewis Marshall, The Compositional Process of J.S. Bach: A Study of the Autograph Scores of the Vocal Works, 2 vols., (Princeton, N.J.: Princeton University Press, 1972), I, 94.

[5] Ibid.

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retrograde procedure not only rescues the beginner in the face of an impasse, but serves to help the student distinguish the best stylistic solution in the face of many possible options.

There is one particular area in this chapter, however, which could cause potential confusion for the beginner. The gray area concerns the "stop on the last known tonic" and the "tonic in the middle of its route." Both teachers use the retrograde technique to help the student find the best fundamental route when the key is in a state of flux. The first step of the retrograde technique then is to stop on the "last known tonic," for it is only after this point that the student can begin to look for signs of a change of key (be they signs in the subject, pauses, or key relationships). There is only one problem: neither teacher has previously introduced this idea explicitly. While the terminology might seem deceptively simple at first glance, it could be potentially confusing to the uninitiated, for the real issue concerns a very subtle task: determining when a recurring tonic is a true point of arrival (i.e. cadential point) or when it is a mobile tonic in the midst of a key change. Rameau must have thought about this while writing his second draft version, for he inserts a lesson prior to this discussion which helps to shed light on this matter.

In the second draft, Rameau includes "Concerning the precise moment where the key changes" as lesson 15 before lesson 16, "Concerning the fundamental bass going backwards," the lesson which corresponds to Gianotti's chapter. Lesson 15/2, which is about a half a folio long, provides the missing information:

> The precise moment where the key changes always happens immediately after the tonic or after the note implied as tonic in the fundamental bass. As a result, it is always at this tonic or note implied as such—never elsewhere—that it is necessary to stop to see whether or not the key changes after. If this same key continues, one progresses according to the usual practice, but if it changes, it is directly after this tonic or note implied as such that it is necessary to find either the tonic of the new key, or its subdominant, or any dominant whatsoever which leads dominant by dominant up to the tonic of the new key—the whole [accomplished] through the progressions arranged in relation to the tonic.
>
> (I/15/2-f. 58r)

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Rameau clears up a number of difficulties in this passage. First of all, he teaches the beginner to look for a change of key following a tonic. By emphasizing that the change of key can follow a tonic alone, he not only reinforces the hierarchical status of the tonic over the other fundamentals on a local level, but reinforces the idea of tonic at the larger level of key. He introduces the idea of stopping on this tonic as well, and in so doing, helps the reader to recognize the tonic as a known element in a context that is unfamiliar in many other respects. In this way, as in other lessons of "L'Art," Rameau teaches the student to start the reasoning process one step at a time by determining just one known variable at a time.

Other relevant ideas surface in this passage from 15/2. After the student recognizes a change of key, Rameau teaches the beginner to look for a fundamental—not a melody note. He advises finding a tonic first, a subdominant next, and a dominant last. There is a reason for this particular ordering. It is obvious that the tonic of the new key would be the best way to confirm a change of key; however, since the subdominant can only be preceded and followed by the tonic in the ordering of the fundamental succession, it is the next best solution—for, through its relationship to the tonic, it would reveal the desired fundamental relatively quickly. Since a dominant can occur anywhere in a chain of dominants that ultimately leads to a tonic, it does not necessarily have to appear in close proximity to the tonic. As a result, it is not as useful as the subdominant for immediately signaling a new tonic.

By including lesson 15 in the second draft, Rameau has accomplished several things. He has established the tonic as a specific cue for a change of key and used this cue to draw the beginner to the musical context where a change of key typically takes place. He has also subtly introduced the idea of stopping on the last known tonic in order to find a new tonic while reviewing how other fundamentals relate to a tonic in general—a point that will have significance for subtle aspects of the retrograde process discussed in some examples later. Inclusion of this particular lesson in the second draft is also evidence of

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Rameau's continuing evaluation of his own pedagogical methodology; for in this lesson, where he points out all the cues to determine a change of key in the forward order, he has subtly laid the foundation for using these tools in reverse in the lesson to follow while simultaneously reinforcing the interrelation of the two compositional processes.

A passage from lesson 15/2 also happens to shed light on specific nomenclature that Gianotti uses to describe an event without accompanying explanation in one of the examples of chapter 15. In ¶ 25, both Gianotti and Rameau suggest descending a third from A to F in the fundamental bass rather than using the subdominant D indicated by the custos. They say that the descending third not only enhances pattern consistency between two sequences, but more importantly, that the F connects events between the key of A and the next key, G. Spelling out the descent of a third from A to F, Rameau provides the description of the action only. He provides no specific nomenclature for the means of connection, referring to it as only "the tonic which simultaneously becomes the subdominant of C." Gianotti not only transmits exactly the same description of events, he calls the tonic at F a "foreign tonic." Presumably, this example illustrates the comment that both authors make in ¶ 10 concerning the insertion of one or more foreign tonics when a snag occurs in the prescribed order. Though Gianotti offers no further explanation of this term here, once again it is Rameau's lesson 15/2 which fills in the details.

In his closing statement of 15/2, Rameau provides a very general observation concerning the use of successive tonics in the course of a melodic line: "It is in the continuation of a melody that one can pass from one tonic to the other as well as in every other case." (I/15/2-f. 58v) However, it is a far more pointed discussion which sheds light on the example of ¶ 25:

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> If there is no means of finding what one is looking for, in a similar situation, one is permitted to take another foreign tonic following the first tonic. [This foreign tonic], however, might be recognized for the subdominant of the new key or for a dominant from which one might progress dominant by dominant up to the tonic of this new key.
>
> (*I*/15/2-f. 58[v])

This paragraph describes the exact solution provided by both Rameau and Gianotti in ¶ 25: the first tonic, A, is not able to progress by second to G; therefore another tonic must be inserted. This inserted tonic, F, serves as subdominant of the next tonic, C. The progression from C to G, the tonic of the new key, is then made through a dominant route. Thus, through the passage in 15/2, Rameau confirms Gianotti's use of the term "foreign tonic" here. But what distinguishes this "foreign tonic" from a garden variety "passing tonic"? Though neither author explains this idea here, the relationship of keys sheds light on the issue, for F natural appears in neither the key of A minor (recall that there are two raised leading tones, scale degrees 6 and 7) nor in G major—therefore, it is deemed a "foreign tonic."

The Examples

Rameau often shows how the best solution provides answers to problems on many levels. For instance, in paragraphs 19 and 20, Rameau surpasses Gianotti in explaining why the use of passing tonics are better than any other solutions. In doing so, he not only anticipates problems in the decision process for the beginner, he directs the beginner to specific clues that are not immediately apparent. Rameau explains that the tonic C under K. could very well be used throughout the following measure since the subject continues the same harmony. In fact, he states that the fundamental C could even be used for three measures in a row here:

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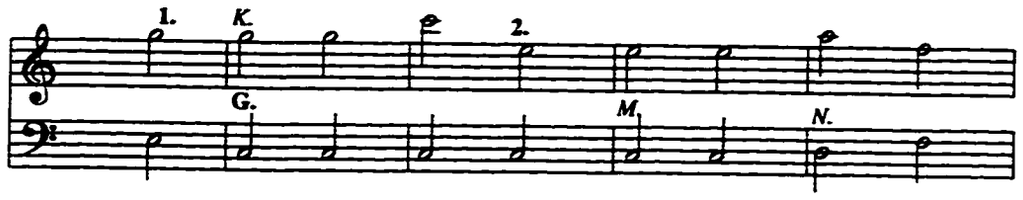
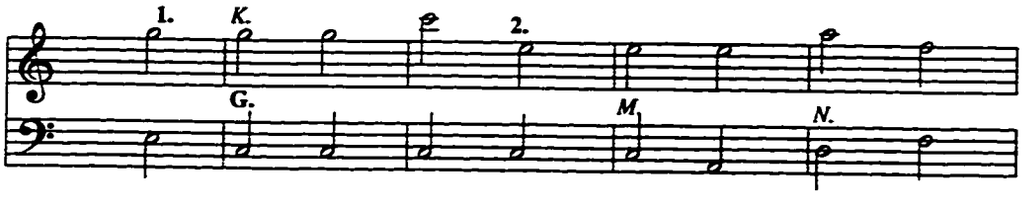
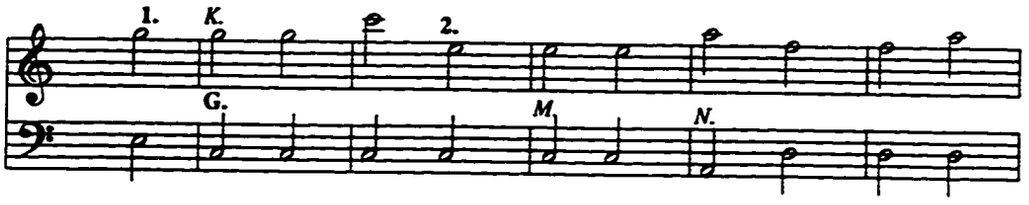

Example 15- 3: *Reconstruction of Gianotti's example where the tonic C is retained for 3 measures*

This would provide a legitimate progression where the tonic at M. could ascend to the strong beat N. by second. However, Rameau also points out that the student might also think to descend by third first before ascending by second as is possible in a tonic route. Through two pithy remarks, he reveals that this operation can only happen one way—where the descending third occurs on the weak beat after M.:

Example 15- 4: *Reconstruction of Gianotti's example where the descending third progression occurs in the weak beat after M.*

Now, the subject note A would allow the descending third to occur at N.:

Example 15- 5: *Reconstruction of Gianotti's example where the descending third occurs at N.*

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but the subject note F in the weak beat of the measure would require a change of fundamental: either D or F. Either of these options would cause a syncopation across the bar. Thus, Rameau has shown the student why the use of passing tonics is the best solution in this particular context. But his explanation is not yet finished. He calls attention to another detail that recalls a suggestion from the recent past: maintaining consistency in sequences. In determining the best fundamental line for this passage, Rameau also utilizes the technique of working backwards from an invariable factor, the change of fundamental at N. here. He reasons that since the change of fundamental at N. is required, it is a known factor which can alter the solution of the sequence that precedes it. Therefore, Rameau urges changing the fundamental at L., the pause which is parallel to N. in the first sequence. He acknowledges the pattern of descending thirds at K., L., N., and P. (the strong beat in the measure following N.) and explains their specific relationships as tonics: the first two (the descent from C to E at letter K. and the descent from C to A at L. are "unavoidable"—the first because it avoids a syncopation and the second because it maintains a parallel connection with the corresponding point in the second sequence. The next three passing tonics at M., N., and P. (from A to F and from F to D) are not integral to the unfolding of events since they are purely options. Aside from providing variety, however, these particular options also invariably maintain connection through the dual relationship of the fundamental at P. (D); it attains dual citizenship by nature of being considered a passing tonic in the previous succession and a dominant of the dominant-tonic which follows it in the next measure (G).

Thus, through some additional insights, Rameau has shown the retrograde process to be an invaluable tool to weaving a solution that integrates many threads: connection, consistency, and adherence to the basic rules of fundamental succession. Though Gianotti quotes Rameau's bottom line in ¶ 20: "the first two [tonics] are unavoidable and the last two [tonics] simply passing," he provides no accompanying explanation for the reader to make a connection between the remark and the retrograde process. As a result, the rich

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texture of the fabric, the result of the intricate weaving of various threads, goes unappreciated.

In the example of ¶ 26, Rameau's added comments reveals a comprehensive understanding of chord function at both local and higher levels of key. Gianotti merely states that the key of D (the measure before guidemark R.) is usually minor, but that the two accidental sharps in the melody take precedence in this case: therefore the D is major. From Gianotti's perspective, it is a matter of the subject temporarily overriding the fundamental bass in order to progress to the goal of A. As can be expected, Rameau sees things differently. He introduces a new concept in this context: a "major passing beat." Using a little logic helps to fill in the details. Now, we already know that only tonics have the right to pass—dominants and subdominants are excluded from this action. One would ordinarily associate a minor-to-major third shift only with a dominant-tonic function in the fundamental bass (where a minor tonic becomes a dominant-tonic through this third). And, according to the progression of keys, coming from the key of G, the D major chord would seem to function as the previous key's dominant-tonic. However, in this situation, Rameau specifically calls it a "passing" beat. Note too that the D in the fundamental bass ascends by second to E (another motion granted solely to the tonic). Thus, the fundamental D, like the two accidental sharps in the melody, passes (as a tonic) to the next cadential point: the key of A. The D is not a dominant-tonic here, but a passing tonic. In terms of key, the key of A, though not yet in effect, usurps the local context.

The last example serves as a fitting close to the chapter, for in this example, both Rameau and Gianotti use the retrograde technique not merely as a proof, but as an evaluative tool for retrospectively assessing one's compositional decisions. After walking the student through the process of determining the key of E operating between guidemarks R. and S., both teachers direct the student's attention to a possible insertion of the key much earlier: under the first mediant, the note that follows R. Supplying the E as tonic beneath this note, they now reason backwards and find that the dominant-tonic of E is a

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viable option beneath the F sharp in the melody. What is more, by right, the tonic A, which precedes the F sharp with a dominant-tonic fundamental, can ascend a second to B in the direct order. Thus, both authors have presented yet another viable solution for this particular context. Though in the end, Rameau and Gianotti prefer the route of dominants here to avoid frequent stops on the tonic (variety is invoked yet again!), both teachers help the beginner to develop considerable flexibility while determining the most appropriate application of the rules for a given passage. In this way, they teach the process of composing, not a mere formulaic employment of the rules.

In effect, through this last example, Rameau has shown the student how to apply the retrograde process to any level, for he reveals the technique to be much more than a means of finding the next fundamental after the last known tonic or a means of confirming previous solutions in a single passage. In this example, Rameau shows the retrograde procedure to be much more than this—for he reveals it to be a process of continuous evaluation, a process that examines how all decisions work together in promoting the flow or coherence of a piece. Once again, it is Rameau's view of the retrograde process as an integral aspect of composition that distinguishes his presentation of this idea from Gianotti's. Rameau's idea of composition is the greater, for he knows it is a creative process which must continually seek out the best solutions in a multitude of options. Revision is a part of this process. And it is an understanding of this process that is the true "composer's guide."

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CONCLUSION

The relationship of Gianotti's Guide du compositeur to Rameau's "L'Art de la basse fondamentale" provokes an obvious question: could Gianotti be considered a plagiarizer of Rameau? While it is true that Gianotti's treatise reflects the content of "L'Art," the author has cleaned up Rameau's phraseology and ordering of topics considerably. In so doing, he provides a practical manual that is accessible to general readership. In this sense, Gianotti realizes Rameau's wish to make his practical composition course available to the public.

There is one particular aspect that I have found in my study of "L'Art" that Gianotti does not transmit: views of Rameau as teacher. In "L'Art," Rameau reveals a spatial conception of the fundamental bass. He sets up a model of the tonic flanked by its dominants a fifth away on each side, a view which I refer to as the "snapshot" approach. This view is based on the most prominent constituents of the triple geometric progression: fifths. Although Rameau included the idea of the triple geometric progression in discussion of speculative matters as early as the Nouveau système of 1726, and even revealed a cursory application of this idea in a practical vein through the chapter on composition in chapter 18 of the Génération harmonique of 1737, in "L'Art," we find Rameau actually teaching this model.

Through various asides throughout section I, Rameau consistently introduces new theoretical ideas invoking this model of the tonic flanked by its two fifths (the subdominant and the dominant-tonic). He also shows this to be a dynamic model, not a mere static "snapshot." For example, when Rameau presents the idea of using various related keys in the course of a work, he offers the new key as a compensatory swing to the opposite pole (either the sharp side or the flat side) depending upon what has preceded the insertion. Throughout additional explanations in "L'Art," Rameau also reveals this spatial understanding of the way musical elements interrelate by presenting ideas utilizing both

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vertical and horizontal approaches. For instance, he shows how traditional nomenclature for specific scale degrees, namely the mediant and the leading tone, which usually appear only in a horizontal environment (i.e. the scale), actually have vertical implications—for these "known notes" point to equally specific fundamental basses which should appear below them.

In "L'Art," we view "Rameau the teacher" and benefit from his keen sense of solving compositional problems. We see him as pragmatist and scientist alternating pedagogy based on reason with a healthy dose of pedagogy drawn from experience. On the rational side, we see how he uses a non-adjacent key to determine an unknown key like a chain of dominoes, while on the practical side, we see him suggesting the use of dots as placeholders in the determination of a solution. Then too, we have the only surviving advice for singing to find pauses both in the melody and the fundamental bass. Rameau's later treatise, the Code of 1760, transmits some aspects of this approach but the method in "L'Art" is far more detailed. Though Rameau might not be the most organized mind, he is consistent when it comes to linking concepts on various levels. He sees the big picture and often uses one concept to launch an application of the idea at the next highest level. For instance, Rameau's presentation of the breve as a *note du gout* or note that is "counted for nothing" anticipates his presentation of the cadential 6/4 in his second section concerning dissonance.

Though Gianotti omits many of the anecdotes that permit a better understanding of "Rameau the teacher," he devotes considerable attention to topics that never received full explanation in any other of Rameau's treatises. For example, through the inclusion of lessons on the interpolation of a fundamental provided by the splitting of a note value, the idea of composing backwards, and presentation of the various tonic routes, Gianotti transmits from "L'Art" detailed lessons on topics merely hinted at by Rameau in the précis of chapter 18 of the Génération. One particular idea is peculiar to "L'Art" and the Guide alone: the "repose of the pause" [**reste du repos**], an idea that helps the student to

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determine phrase boundaries. Thus, through publication of these ideas, Gianotti actually does preserve a more complete picture of Rameau's pedagogy for posterity.

While Gianotti does not always share Rameau's great vision of the interaction of ideas, as redactor he does not distort any of Rameau's theories. An excerpt taken from a more famous redactor of Rameau's work sheds light on this matter. Recall from the introduction that Jean d'Alembert published a successful (and profitable) adaptation of Rameau's work as Elemens de musique, théorique et pratique, suivant les principes de M. Rameau in 1752. As Christensen points out, while d'Alembert can be congratulated for making Rameau's fundamental bass theory accessible for a general readership, his work was not without its problems.[1] Take, for example, d'Alembert's five rules of composition:[2]

Given T as a *tonique*, DT as the *dominante-tonique*, DS as a *dominante simple*, and S as the *sous-dominante*, then:

1 Any T or DT must have at least one common tone with the preceding chord.

2 The seventh of any DS must be prepared as a consonance in the preceding chord.

3 Any S must have at least one of its consonances prepared in the preceding chord.

4 The fundamentals of all dominants must descend a fifth at resolution.
  a DS may resolve to either another DS or to a DT
  b DT may resolve to any chord type.

5 The fundamental of every S must ascend a fifth to a T, DT, or S.

[1] See Christensen's chapter on d'Alembert in Rameau and Musical Thought, 252-290 for a more detailed comparison of his Elemens with Rameau's theory.

[2] Ibid., 282-283.

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D'Alembert's summary of Rameau's theory puts his ideas in a nutshell. In providing this kind of summary, though, d'Alembert reveals his own stamp as redactor, for we know that Rameau did not reduce the art of composition to a series of rules. In fact, through Rameau's copious asides and examples (which Gianotti did not transmit) we see that "Rameau, the pragmatic teacher of composition" in "L'Art" allows room for the individual application of general guidelines. For Rameau in "L'Art," composition was a process—not a science of following rules.[3] His advice for using dots as temporary placeholders for possible fundamental bass solutions beneath a given subject exemplifies this approach.

To what extent, then, can each author's reworking be considered an original work? D'Alembert and Gianotti credit Rameau in two different ways: d'Alembert includes Rameau's name in the title of his work while Gianotti only cites Rameau in the preface. While this evidence might suggest that Gianotti wants to take more credit than is his due in contrast to d'Alembert, actually the opposite is true. In his preface, Gianotti says that "if I have succeeded at acquiring some knowledge, I owe it to Mr. Rameau. The work that I give today is the result of studies that I made under his very eyes. His attention has deigned to guide me. The reputation he enjoys, the justice that the whole of Europe gives

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[3] Gessele points out that many of Rameau's disciples in the following generation, notably Abbé Roussier, actually distorted his theory by imposing their own agenda on fundamental bass theory. She notes:

> The restrictive nature of Roussier's system is further seen in his system of chord classification. Roussier believed that the great advantage of the system of fundamental bass lay in its ability to simplify chord classification by rules that were established on the model of the fundamental chords. Like Rameau, he defined two fundamental chords: the consonant and the dissonant. In Roussier's system, however, "chords" became strict categories of chords.

Cynthia Gessele, The Institutionalization of Music Theory in France: 1764-1802, (Ph.D. dissertation, Princeton University, 1989), 69-70.

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him, authorizes my confidence."[4] Gianotti is perfectly frank; he does not claim to have devised the theory himself. In yet another passage, Gianotti says:

> After having accounted for my aim, my plan, and my method, I will acknowledge yet another end to propose. Some endeavor to lower the method of the fundamental bass. Some blame the inadequacy of it, others the uselessness of it. Yet others find it an oddity. Lastly, perhaps each speaks ill of it the less he knows of it. I hope that my method will serve as an answer to all these reproaches. One will find the solution of all one's difficulties [once] one deigns to examine it without partiality, to study it, to contemplate it, and to delve into it deeply. One will see the means of succeeding in this; [the means] are simple, easy, and sure—it is Mr. Rameau who has discovered them.[5]

Gianotti's faithfulness to his teacher is heartwarming. There can be no doubt of his loyalty, devotion, and vindication of his teacher's own fundamental bass theory, a theory which provoked unbridled controversy—even in Gianotti's and Rameau's day. Anyone familiar with Rameau's approach would recognize that Gianotti had studied with the master just by reading his manual, for unlike d'Alembert (whose work was criticized by Jean-Laurent Bethizy in "Réflexions sur les Elémens de Musique Théorique & Pratique, suivant les Principes de M. Rameau" in the Journal Oeconomique [1752]),[6] Gianotti provides an adaptation that does not stray far from the original source. Though Gianotti has exercised use of the editorial pen in dispensing with Rameau's asides, he sometimes borrows Rameau's exact wording to explain a concept. As a result, the reader still receives the flavor of Rameau's text throughout Gianotti's Guide.

In his methodology and intent, Gianotti is much more the disciple of Rameau than d'Alembert ever was. Moreover, Gianotti, like Rameau, does not just provide rules; he

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[4] Gianotti, Guide, Preface, vi.

[5] Gianotti, op.cit., xi.

[6] Reproduced in CTW, 244-255.

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walks the student through the process of composing. If the reader of the Composer's Guide has learned anything, he has learned that specific musical contexts warrant equally specific musical decisions. It is no wonder that Gianotti's reputation as teacher overshadows that of composer and performer, for in presenting The Composer's Guide, Gianotti has successfully managed to present Rameau's ideas accurately and concisely while preserving the same methodology as the master—not an easy task for any redactor. As author, though, he has made his own valuable contribution to the work by imposing an organization on the flow of material and by adhering to the strict parameters he sets out (unlike his master!).

Gianotti always maintains a good pedagogical progression of ideas. He presents concepts in their simplest form before proceeding to more complex applications. Granted, Gianotti does not always grasp the insight of many of the intricacies that Rameau introduces, but this weakness actually turns out to be an advantage for the musical beginner because Gianotti's approach is devoid of the very topics (often introduced in an extraneous fashion by Rameau) that could cause potential roadblocks for the uninitiated. Though Rameau wished to take the beginner on a very practical musical journey from the basic to the more complicated applications of the fundamental bass in "L'Art," his bird's eye view of music is not particularly easy to grasp. "L'Art" is not of much use as a composition text, but with Gianotti's assistance the "Art of the Fundamental Bass" truly becomes the Composer's Guide.

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Appendix: Table of Contents for Sect. I of "L'Art"

Thomas Christensen includes a full listing of contents for "L'Art" in the Appendix of his article "Rameau's 'L'Art de la basse fondamentale," Music Theory Spectrum 9 (1987). I have reproduced his complete listing for the first section on consonances here so that the reader can compare the differences among the drafts.

Christensen uses the symbol * to designate lessons that bear an example section. I take this idea one step further in this chart by differentiating between Rameau's "Explication" and "Ex." designations in the manuscript. Rameau's "Explication" sections are the prose of the examples corresponding to Gianotti's "Observations" and accompanying music plates while the abbreviations "Ex." are just plain markers indicating a reference to an example that does not actually exist in the following text—either in prose or music form. Most likely, these markers referred to a separate volume which contained the musical illustrations.

Also, the presence of numbers in brackets [] indicate problematic numbering in the manuscript. For example, the seventh article under lesson 19 in the first draft was incorrectly labeled as "article 6" again—hence there are two different articles in a row in this lesson bearing the number 6. This problematic numbering carries to the next article division as well. Christensen had indicated Rameau's numbering first followed by his own renumbering in brackets. I reverse this notation, placing the renumbering first followed by Rameau's original notation in brackets. This is to more nearly approximate the flow of topics as they appear in the manuscript from beginning to end in a section without emphasizing the confusion that the misnumbering can introduce.

Draft 1:	**Draft 2:**
Lesson 1: Scale of degrees, or diatonic and harmonic intervals	Lesson 1: Scales of degrees or diatonic and harmonic intervals
	Lesson 2: Concerning consonances, their inversion, and their position in relation to the note expressed
Lesson 3: Concerning the mode or key and the fundamental notes which compose it	Lesson 3: Concerning the fundamental bass and its harmony or chord (*accord*)
Lesson 4: Concerning the names the fundamental bass notes should bear and those of the subject under the title of known notes	
Lesson 5: Means of finding a fundamental bass under a given subject and its most perfect succession **Explication section*	Lesson 5: Concerning the manner of finding the fundamental bass under a given melody
Lesson 6: Concerning the measure, its beats, syncopation, and the value of fundamental notes in each measure Article 1. the measure 2. syncopation * *Explication section* 3. the fundamental bass and syncopation	Lesson 6: Concerning the distinction of beats of the measure, syncopation, the value of fundamental notes in each measure, and the breve "*Ex.*"

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* *Explication section*	
	Lesson 7: Concerning the name that each note of the fundamental bass should bear
Lesson 8: Concerning cadences or pauses in the subject and in the fundamental bass **Explication section*	Lesson 8: Concerning the fundamental succession by second and by third "*Ex.*"
Lesson 9: Concerning the fundamental succession and the tonic by ascending second and by descending third	Lesson 9: Concerning the mediant and the leading tone
1. Concerning the ascending second * *Explication section* 2. Concerning the descending third * *Explication section* 3. Concerning the preference for the third over the second from which the arbitrariness between these two successions is born and from which comes the necessity of marking the various possible fundamental basses * *Explication section*	
Lesson 10: Concerning natural and transposed keys where one the order and the nature of sharps, flats, and naturals * *Explication section*	Lesson 10: Concerning different keys, either natural or transposed
Lesson 11: Concerning key relationships * *Explication section*	Lesson 11: Concerning key relationships "*Ex.*"
Lesson 12: Means of knowing the key in the subject 1. Concerning the leading tone and accidentals that consequently produce sharps, flats and naturals **Explication section*	Lesson 12: Means of recognizing the key in the melody 1. Concerning pauses or cadences
2. Concerning the doubt that one should develop for the leading tone of major keys	2. Concerning the leading tone and the accidentals that are produced
3. Concerning the appropriate intervals to make the key recognizable in the subject * *Explication section*	3. Concerning the appropriate intervals to make the key recognizable in the melody "*Ex.*"
4. Finding the fundamental bass of all pauses naturally, from which follows the knowledge of key * *Explication section* 5. Means of knowing the successive keys by their reciprocal relations * *Explication section*	
6. Concerning the precise moment where the	

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key changes and the fundamental succession in a similar case
* *Explication section*

13. Concerning the passage from one tonic to another, notes felt to be tonics, and foreign or passing tonics
* *Explication section*

14. Concerning liaison, where one recalls all that harmony has in common with chords, with the fundamental succession and with successive keys
* *Explication section*

15. Concerning imitations of the melody and of the fundamental bass in consequence
1. Concerning imitations in the same key
* *Explication section*
2. Concerning imitations of the melody in different keys
* *Explication section*

16. Concerning the possibility of dividing a subject note in two values to facilitate the prescribed fundamental succession
* *Explication section*

17. Concerning the breve

* *Explication section*

18. Concerning the necessary rapport between the fundamental bass and the subject
* *Explication section*

19. Concerning the interlacing of keys

* *Explication section*

13. Concerning pauses or cadences in the fundamental bass

"*Ex.e*"

14. Recapitulation of the fundamental succession with some augmentations where one recalls the rights of the tonic
"*Ex.e*"

15. Concerning the precise moment where the key changes
"*Ex.e*"

16. Means of composing the bass in reverse/going backwards from which one can easily avoid several difficulties
"*Ex.e*"

17. Concerning imitations of the melody where the key can change and of the fundamental succession in consequence
"*Ex.e*"

18. Concerning the possibility of dividing a melody note in two equal values
"*Ex.e*"

19. Concerning the various fundamental basses of which a melody is susceptible
"*Ex.e*"
* *Explication section*

2. Concerning double employment that occasions successive thirds and sixths
* *Explication section*

3. The mutual assistance which the parties lend themselves for saving a dissonance
* *Explication section*

4. Concerning the mutual assistance that the third and the seventh of a dominant-tonic lend in the preceding case where it is a matter of successive fifths

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[*The presence of letter markers implies reference to an example—these are not relegated to an "Explication" section nor are they indicated by "Ex.ᵉ"*.]

5. What is necessary to observe in practice of thirds and sixths
    * *Explication section*
6. The succession of thirds or sixths where the key changes

7.[6] Concerning the interrupted cadence inverted in the subject
    [*The presence of letter markers implies reference to an example—these are not relegated to an "Explication" section nor are they indicated by "Ex.ᵉ"*.]

[** INSERTION?]
8.[7] Concerning a succession of thirds and sixths founded on the interrupted cadence
    * *Explication section*

20. Concerning the fundamental bass in retrograde
    * *Explication section*
1. Concerning figures in particular and the light of figuring the fundamental bass from which one extracts new assistance
    * *Explication section*
2. Verification of the fundamental bass by means of figures
    * *Explication section*

20.[4] Concerning the relationship of the basso continuo with the subject
    * *Explication section*

21. Recapitulation
1. Concerning the fundamental succession
2. Concerning the rapport of the fundamental bass with the subject

21.[5] Concerning the choice that one should make in the fundamental harmony for the basso continuo
    * *Explication section*

22.[6] New observations on the same subject
    * *Explication section*

23.[7] Concerning supposition
1. Concerning the ninth
    * *Explication section*
2. Concerning the eleventh, called fourth
    * *Explication section*
3. Concerning added dissonances that supposition introduces
    * *Explication section*
4. Supposition can be implied without any

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dissonance appearing in the subject
* *Explication section*
5. The leading tone as a fundamental can be substituted for the dominant-tonic
[*The presence of letter markers implies reference to an example—these are not relegated to an "Explication" section nor are they indicated by "Ex.ᵉ".*]

24. Concerning suspension
1. Concerning the chord of the fourth by suspension
2. Concerning the sixth by suspension joined to the fourth
3. Concerning the fundamental succession and that of the basso continuo in the suspension
4.How the suspension can be implied and how one figures it
5. Concerning the fourth and the sixth by suspension above the dominant-tonic
* *Explication section*
6. Concerning the same suspension over successive dominants
"*Ex.ᵉ*"
7. Concerning the fourth, the sixth, and the ninth by suspension above a tonic
* *Explication section*
8. Concerning the suspension over successive dominants where the leading tone is joined as a fundamental
* *Explication section*
9. Concerning successive suspensions where supposition and the diminished seventh are joined
* *Explication section*
10. The case where the suspension can be saved over a single fundamental note
* *Explication section*
11. Concerning suspensions in the bass

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PIETRO GIANOTTI'S LE GUIDE DU COMPOSITEUR: A REWORKING OF RAMEAU'S "L'ART DE LA BASSE FONDAMENTALE"

An Annotated Translation and Critical Edition of Part I

by

Lauren M. Longo

VOLUME II

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PART I

REPRODUCTION OF PIETRO GIANOTTI'S

LE GUIDE DU COMPOSITEUR

CONTENANT

DES REGLES SURES POUR TROUVER, PAR LES CONSONANCES, LA BASSE FONDAMENTALE DE TOUS LES CHANTS POSSIBLES

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LE GUIDE

DU

COMPOSITEUR,

CONTENANT

DES REGLES SURES POUR TROUVER D'ABORD, par les conſonnances, enſuite par les diſſonnances, la baſſe fondamentale de tous les chants poſſibles, & dans tous les genres de muſique; avec les moyens les plus sûrs pour réuſſir dans la recherche & la connoiſſance du ton dans le ſujet: ce qui forme une des plus grandes difficultés de la compoſition.

Ouvrage utile pour la connoiſſance & la pratique de la compoſition, & de l'accompagnement.

Par M. GIANOTTI.

A PARIS,

Chez DURAND, rue du Foin.

Et chez M. LE CLERC, rue S. Honoré, entre la rue du Roule & la rue de l'Arbre-Sec, à l'Image Ste Geneviève, au premier ſur le devant.

M. DCC. LIX.

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PRE'FACE.

DANS un ſiècle auſſi éclairé que le nôtre, les arts devoient néceſſairement s'élever au point de conſidération où nous les voyons en France.

La muſique y acquiert chaque jour un nouveau dégré de faveur.

Les grands l'aiment, la protégent & la cultivent.

Les philoſophes en font un des objets de leurs ſpéculations.

Le goût s'étend même à tous les états.

Mais, plus la nation montre d'amour pour la muſique, plus il eſt important de lui donner des règles sûres pour y acquérir des connoiſſances.

Avouons-le. La muſique n'eſt bien connue que d'un petit nombre de vrais muſiciens, *qui ne ſont parvenus à en ſaiſir les principes, que par des veilles*

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pénibles & des réflexions profondes.

*On s'expoſe à s'égarer, lorſqu'on ſe laiſſe conduire à une fauſſe lumière préſentée par la préſomption, & reçue par l'ignorance. Jetter au hazard, ſur le papier, quelques notes auxquelles on donne le nom d'*accords *; ſuivre ſervilement non des règles, mais une routine enſeignée autrefois, en tâtonnant, par des maîtres qui l'avoient appriſe de même, c'eſt uſurper le nom de muſicien.*

Etudier l'art dans ſes principes fondamentaux, démêler ſa route, & la ſucceſſion des ſons ; diſtinguer la marche propre au ſujet, chercher la ſource, les variétés, la place des différens accords ; voilà ce qu'on doit appeller être muſicien véritablement.

Le vrai muſicien préfére la raiſon au caprice ; il ſçait voir le pourquoi, *le* quand, *le* comment; *ce ne ſont point là de vaines ſubtilités, ce ſont des choſes eſſentielles à l'art.*

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Qu'on ſe garde bien de prendre pour l'effet du génie les boutades *d'une imagination échauffée. Je plains un auteur qui s'y laiſſe emporter. Si, par malheur, il lui arrive d'être applaudi, il ſe croit déja ſçavant; mais ſon triomphe eſt de peu de durée. Qu'il eſt à craindre qu'on ne le voie mettre le comble à ſon égarement!*

Les idées les plus brillantes, la plus heureuſe facilité, tous les dons de la nature réunis, ne donnent point la ſcience. Pour réuſſir, il faut une étude profonde des principes & des bons modèles: il faut apprendre & bien apprendre.

Mais, ces principes d'après leſquels on doit partir, où les trouver? Un homme (M. Rameau), *dont le nom ſeul fait l'éloge, étoit bien capable de les établir. Content d'expoſer nettement ſon ſyſtême, de le dévoiler, d'en démontrer l'utilité, il a cru pouvoir ſe diſpenſer des détails.*

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Le génie créateur produit, expoſe, perſuade. Sa vue paſſe, avec rapidité, ſur les petits objets; il laiſſe aux autres le ſoin de les ſaiſir, d'en combiner les rapports.

Si je ſuis parvenu à acquérir quelques connoiſſances, c'eſt à M. Rameau *que je les dois. L'ouvrage que je donne aujourd'hui eſt le réſultat des études que j'ai faites ſous ſes yeux. Ses ſoins ont daigné me guider. La réputation dont il jouit, la juſtice que l'Europe entière lui rend, autoriſent ma confiance.*

On ne trouvera ici ni diſſertations, ni érudition; je n'écris que pour des muſiciens de pratique. Je cherche à leur indiquer une voie ſimple & facile.

Ce qu'on a fait pour les autres ſciences, pour les langues, *par exemple, j'oſe le tenter pour la muſique.*

Mon livre eſt proprement une grammaire, *que je crois néceſſaire.*

Rien de plus important que l'uniſor-

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mité dans la manière d'enſeigner.

Rien n'applanit mieux les difficultés, dans les écoles, que d'y ſuivre toujours les mêmes règles, d'y employer les mêmes expreſſions.

Quels inconvéniens ne réſulte-t-il pas des différentes méthodes employées par les différens maîtres ?

Les écoles de province ont ſans doute, à leur tête, des maîtres habiles : mais, qu'il me ſoit permis de dire qu'il régne dans ces écoles un abus dangereux. On y ſuit des règles arbitraires ; chaque maître a les ſiennes, ſouvent en oppoſition avec celles d'un autre.

S'il arrive, comme on le voit ſouvent, que, dans le cours de dix années, une école vienne à changer trois ou quatre fois de maître, la tête des élèves ſe trouve remplie d'une foule d'opinions vagues ; les voilà livrés pour le reſte de leur vie, peut-être, à l'incertitude & à la contradiction.

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Au contraire, ſi les idées leur étoient toujours préſentées ſous la même forme, on viendroit à bout de faire violence aux diſpoſitions même les moins favorables. Et quels progrès ne feroient pas les élèves que la nature a heureuſement partagés !

Qu'on ne s'y trompe pas ; on peut avoir un génie ſupérieur, & ignorer l'art d'enſeigner.

Je ne prétends point offenſer les maîtres dont je parle. J'aſpire à leur être utile ; je me flatte qu'ils recevront favorablement un ouvrage deſtiné à abréger leur travail : voilà mon principal objet.

Si mon livre peut faciliter les leçons qu'ils ſont chargés de donner aux enfans, ils trouveront plus de temps pour contribuer, par leurs travaux, à la gloire de l'art.

Le titre de mon livre en annonce le deſſein.

Enſeigner à trouver la baſſe fonda-

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mentale de tout chant donné, & dans tous les genres de muſique, voilà la fin que je me propoſe.

Je commence par les conſonnances. *Cet objet remplira la première partie.*

Dans la ſeconde, je traite la même matière par les diſſonnances.

La troiſième donnera des règles pour trouver cette même baſſe fondamentale, par conſonnances *&* diſſonnances, *dans le genre* chromatique *& l'*enharmonique, *avec un traité de la* ſuppoſition *& de la* ſuſpenſion.

Ce dernier objet me donnera lieu de dire un mot, en paſſant, de la baſſe continue, en attendant le livre dans lequel je traite cette matière à fonds, & auquel je travaille actuellement.

J'expoſe d'abord les principes les plus ſimples, ceux des conſonnances.

Ils deviennent enſuite plus compliqués, à proportion des lumières que les premiers ont procurées.

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Ces principes ainſi liés, forment une chaîne, dont la plus légère interruption jetteroit dans le déſordre, & peut-être dans l'erreur. Il faut donc lire de ſuite, & prendre garde ſur-tout qu'une vérité connue ne faſſe oublier celles qui y ont conduit, ou qui l'ont précédée.

La première & la plus triviale peut avoir ſon application à la fin de l'ouvrage.

Chaque chapitre eſt une leçon, chaque leçon eſt ſoutenue d'un exemple, & chaque exemple eſt expliqué par des obſervations relatives.

Mais le ſoin que j'ai pris ſeroit en pure perte pour le lecteur, s'il paſſoit d'un chapitre à un autre, avant que de s'être bien mis dans la téte le précédent.

Après avoir rendu compte de mon objet, de mon plan, de ma méthode, j'avouerai qu'il eſt encore un autre but que je me propoſe.

Quelques perſonnes s'efforcent de dé-

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primer la méthode de la baſſe fondamentale.

Les uns l'accuſent d'inſuffiſance; les autres d'inutilité.

D'autres encore y trouvent de la bizarrerie. Chacun enfin en parle plus mal, à proportion, peut-être, qu'il la connoît moins.

J'eſpère que ma méthode ſervira de réponſe à tous ces reproches.

Qu'on daigne l'examiner ſans partialité, l'étudier, la méditer, l'approfondir, on y trouvera la ſolution de toutes les difficultés.

On verra que la plus grande de notre art conſiſte à connoître le ton. On verra les moyens d'y réuſſir; ils ſont ſimples, faciles & sûrs. C'eſt M. Rameau *qui les a découverts.*

Outre ce traité, & celui de la baſſe continue que j'ai annoncé, je compte donner encore un traité particulier, qui contiendra des règles pour ſe conduire

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dans les trio *& les* quatuor. *Les ouvrages réunis formeront un traité complet de compoſition.*

J'oſerois preſque me flatter que le livre que je donne au public, pourra mettre en état de ſe paſſer de maître, pour peu qu'on ſoit initié dans la muſique.

En effet, étant une fois aſſuré de la perfection de la baſſe fondamentale, ſous les chants qu'on aura imaginés, on le ſera en même tems de toute l'harmonie, & des routes que doivent tenir les conſonnances & les diſſonnances. Le génie fait le reſte.

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INTRODUCTION

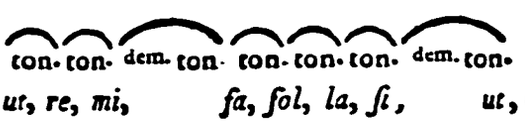
PRE'LIMINAIRE.

SECTION I.

Des intervalles.

L'INTERVALLE en muſique eſt, la diſtance qu'il y a d'une note à l'autre. Il y en a de deux eſpeces ; l'intervalle *diatonique* & l'intervalle *harmonique*.

Echelle ou gamme des intervalles diatoniques.



Cette échelle ou gamme renferme une *octave* dans ſon étendue. Cette octave eſt compoſée de huit notes diatoniques, qui forment entr'elles cinq *tons* & deux *demi-tons*. On a marqué au-deſſus, l'intervalle qu'elles forment de l'un à l'autre. Cet intervalle ſe nomme auſſi de ſeconde, & ſe

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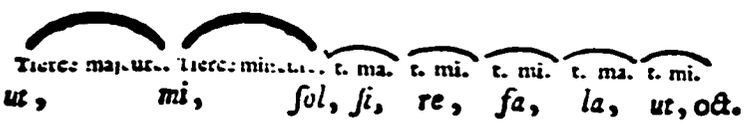
diſtingue en *majeure* & *mineure*. En commençant cette échelle ou gamme, de droite à gauche, par la derniere note, & finiſſant par la premiere, on trouvera tous les intervalles de *ſeptième*. Mais ce n'eſt pas ici le lieu de parler de cette *diſſonnance*. * Qu'il ſuffiſe à préſent de ſçavoir, que monter de ſeconde, ou deſcendre de ſeptième, monter de ſeptième ou deſcendre de ſeconde, ſont des expreſſions équivalentes. C'eſt l'unique objet de cette obſervation.

Des intervalles harmoniques.

Le moindre intervalle harmoniqu e ſt, celui de *tierce*.

La tierce compoſée de deux tons, ſe nomme majeure; elle eſt mineure, ſi elle n'eſt compoſée que d'un ton & d'un demi-ton.

Première échelle des intervalles harmoniques, par tierces.



On obſervera dans cette échelle, que monter de *tierce* ou deſcendre de *ſixte*,

* *Voyez la ſeconde partie, où l'on traite des diſſonnances.*

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monter de *ſixte* ou deſcendre de *tierce*, eſt une même choſe.

Seconde échelle des intervalles harmoniques; par quintes.

ut, ſol, re, la, mi, ſi, fa, ut, oct.

Pour ne point fatiguer le lecteur par des préceptes qui ne peuvent encore avoir leur application, nous ne parlerons ici que de la *quinte* proprement dite.

Elle eſt compoſée de deux *tierces*, l'une *majeure*, l'autre *mineure*, c'eſt-à-dire, de trois *tons* & *demi*. Cet intervalle, lorſqu'il eſt complet, ſe nomme *accord parfait*, auquel, ſi l'on veut, on joint l'*octave* du premier *ſon*.

Ces quintes fourniſſent de plus, tous les *dièzes* & les *bémols* qui entrent dans les tons tranſpoſés; ce qui fera le ſujet de la troiſieme ſection.

Cette échelle offre une ſuite de *quartes* conſécutives en deſcendant, & commençant de droite à gauche; d'où il ſuit que, monter de *quinte* ou deſcendre de *quarte*, & *vice verſâ*, ſont des expreſſions ſynonimes.

On ne ſçauroit ſe rendre ces trois échel-

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les ou gammes trop familieres, puiſqu'elles contiennent tous les intervalles poſſibles, & tous les accords propres à la baſſe fondamentale. La deuxième ſurtout, dans l'ordre de ces gammes, eſt de la plus grande utilité. Il faut s'accoutumer de bonne heure, à ne point penſer à une note, ſans avoir en même tems préſentes à l'eſprit, les deux *tierces* qui la ſuivent. Si l'on penſe à *ut* par exemple, il faut que *ut*, *mi*, *ſol*, ſe préſentent enſemble à l'idée. Nous ne pouvons trop recommander cette pratique, on en reconnoîtra l'utilité par la ſuite.

SECTION II.

*Du ton *, ou mode, & des noms différens que l'on donne aux différens intervalles diatoniques.*

Le *ton* ou *mode*, eſt une ſucceſſion de *ſons* arrangés, relativement à un *ſon* arbitrairement choiſi. Ainſi, le ton d'*ut* par exemple, lequel eſt renfermé dans les trois gammes précédentes, ſoit dans l'ordre diatonique, ſoit dans l'ordre harmonique, eſt celui ſur lequel on a formé un chant, qui eſt propre à ce ton.

* *On ſe ſervira toujours de ce nom pour déſigner les modes.*

Le

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Le ton eſt *majeur* ou *mineur*; *majeur*, quand ſa tierce eſt majeure, c'eſt-à-dire, compoſée de deux tons; *mineur*, quand ſa tierce eſt mineure, ou compoſée d'un ton & d'un demiton.

Toutes les notes compriſes dans l'étendue de l'octave de ce ton arbitrairement choiſi, peuvent lui appartenir & portent des noms différens.

La note principale, celle que l'on a choiſie pour être le fondement du mode, s'appelle *tonique*, la ſeconde note, *ſus-tonique*. &c. Comme dans la gamme ſuivante, où l'on a choiſi le ton d'*ut* pour exemple.

Dénomination des notes de la gamme.

Tonique.	Sus-tonique.	Médiante.	Sous-dominante.
ut,	*re*,	*mi*,	*fa*,
Dominante tonique.	Sus-dominante.	Note ſenſible.	
ſol,	*la*,	*ſi*.	

Cette dénomination appartient également aux notes du chant, & à celles de la baſſe. Nous nous en ſervirons toujours dans le cours de cet ouvrage.

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SECTION III.

Des tons naturels & tranſpoſés. De l'ordre & de la nature des dièzes ; des bémols & des bécares.

Le ton d'*ut* eſt le ſeul naturel & le *modele des tons majeurs*. Celui de *la*, eſt le modele des mineurs. Les autres, ſont appellés *tranſpoſés*. Pour les conformer à leurs modeles, pour fixer ou varier leur genre de majeur ou mineur, on eſt obligé de placer à côté de la *clef*, des *dièzes* ou des *bémols*. Le dièze hauſſe la note d'un demiton ; le bémol la baiſſe d'un demiton, & le bécare la remet dans ſon état naturel.

Les dièzes ou bémols qui ſont à la clef, influent ſur toutes les notes ſur leſquelles ils ſont placés. Tous les dièzes qui ne ſont point à la clef, & qui ſe rencontrent dans une piece de muſique, ſont nommés accidentels, & ne commandent que la note qui les ſuit, ou du moins n'étendent pas leur pouvoir au-delà de la meſure où ils ſont placés.

Les dièzes ſe placent de *quinte* en *quinte* en montant ; le premier ſur le *fa*, le ſecond ſur l'*ut*. On en trouvera tout d'un coup

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la ſuite, en ſe rappellant la troiſieme gamme qu'on commencera par *fa*.

Le premier bémol ſe place ſur le *ſi*, le ſecond ſur le *mi*, & ainſi de quinte en quinte en deſcendant. La même gamme renverſée ou priſe à rebours, préſente l'ordre de tous les bémols en commençant par *ſi*.

Nous avons dit, qu'excepté le ton majeur d'*ut*, & le ton mineur de *la*, tous les autres étoient appellés tranſpoſés.

On leur a donné ce nom, parce que pour plus de facilité, on eſt dans l'uſage, bon ou mauvais, de tranſpoſer tous les tons majeurs en celui d'*ut*, & tous les mineurs en celui de *la*. * Mais cette tranſpoſition ſeroit preſque impraticable, ou du moins plus difficile, ſi on ignoroit le nombre des dièzes & des bémols qui doivent entrer dans les différens tons, & conſtituer leur genre. On en dreſſera une table, d'autant plus volontiers, que tous les Muſiciens ne ſont pas généralement d'accord à cet égard; les uns en mettent le juſte nombre, les autres en mettent moins.

* *La méthode la plus ordinaire de tranſpoſer, eſt de nommer ſi, la note ſur laquelle on poſe le dernier dièze de la clef; & fa, la note ſur laquelle on poſe le dernier bémol, & de ſuppoſer enſuite une clef relative à ce changement.*

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TABLE DES DIEZES.

Tons majeurs.	Tons mineurs relatifs.	Nombre des dièzes.
Sol.	*Mi.*	1. *Fa.*
Re.	*Si.*	2. *Fa, ut.*
La.	*Fa, dièze.*	3. *Fa, ut, ſol.*
Mi.	*Ut, dièze.*	4. *Fa, ut, ſol, re.*
Si.	*Sol, dièze.*	5. *Fa, ut, ſol, re, la.*
Fa, dièze.	*Re, dièze.*	6. *Fa, ut, ſol, re, la, mi.*

TABLE DES BE'MOLS.

Tons majeurs.	Tons mineurs relatifs.	Nombre des bémols.
Fa.	*Re.*	1. *Si.*
Si, bémol.	*Sol.*	2. *Si, mi.*
Mi, bémol.	*Ut.*	3. *Si, mi, la.*
La, bémol.	*Fa.*	4. *Si, mi, la, re.*
Re, bémol.	*Si, bémol.*	5. *Si, mi, la, re, ſol.*

Une regle également ſimple & ſolide, confirme les tables que nous venons de donner. C'eſt que dans les tons majeurs, il faut autant de dièzes ou de bémols à la clef, que l'échelle diatonique du ton en contient en montant; & dans les tons mineurs, autant qu'elle en contient en deſcendant.

On remarquera dans ces deux tables au premier coup d'œil, que la tonique des tons majeurs, fait toujours la tierce mineure du ton mineur qui lui répond, & qui a le même nombre de dièzes ou de

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bémols. Nous développerons dans la ſuite les rapports importans qui leur ont acquis le titre de relatifs.

Mais avant de finir cette ſection, il eſt à propos de faire une obſervation, dont l'omiſſion pourroit jetter dans l'embarras ou dans l'incertitude. C'eſt que les tons mineurs montant diatoniquement depuis leur quinte juſqu'à l'octave, par les mêmes intervalles que leurs majeurs relatifs, ſont obligés de prendra deux dièzes qui ne ſe placent point à côté de la clef, & qu'à cet effet on nomme accidentels. Voyez l'exemple à la fin de l'introduction.

SECTION IV.

De la meſure, & de la ſyncope.

On peut réduire les différentes meſures en uſage, à deux; la meſure à deux tems, & celle à trois tems. Celle à quatre tems, doit être conſiderée comme compoſée de deux meſures à deux tems.

Le premier tems de quelque meſure que ce ſoit, s'appelle fort, les autres foibles. * Ainſi, dans la meſure à deux tems, il y

* *On appelle tems fort, celui du frappé, & tems foible, celui du levé.*

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a un tems fort & un foible. Dans la mē-ſure à quatre tems, deux tems fort & deux foibles. Dans celle à trois tems, un tems fort & deux foibles. Mais il faut remarquer que dans cette derniere meſure, le troiſieme tems peut être conſidéré comme tems fort, relativement au deuxième; pourvu que la note qui le forme, ne continue pas dans le tems fort de la meſure ſuivante.

Toute note qui appartient à deux tems différens, eſt ſyncopée ou cenſée ſyncoper; il en eſt ainſi quand elle appartient à deux meſures différentes, ſans remplir entiérement ces deux meſures. Telle ſeroit une note, qui, commençant au tems foible d'une meſure, finiroit ſur le tems fort de la meſure ſuivante; ou, qui, commençant ſur la partie foible d'un tems, finiroit ſur la partie forte du ſuivant, ou, qui, commençant par la derniere moitié d'un tems, continueroit dans le tems ſuivant.

Delà il faut conclure, 1°. qu'une note qui rempliroit entiérement une, deux ou trois meſures, ne ſeroit point ſyncopée. 2°. Que la ſyncope, a deux valeurs différentes proportionnellement aux deux tems différens qu'elle comprend. 3°. Qu'une note qui contient les deux tems foibles

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d'une meſure à trois tems, & finit ſur le tems fort de la meſure ſuivante, eſt cenſée ſyncoper. 4°. Qu'il eſt des occaſions où on peut aſſujettir à la ſyncope, les deux tems foibles d'une meſure à trois tems, puiſque nous avons dit que le troiſième, pouvoit être regardé comme tems fort relativement au deuxième. 5°. Que dans les cas propoſés, la ſyncope, pour n'être pas marquée d'un demi-cercle, n'en ſubſiſte pas moins, & exige deux notes fondamentales différentes. Tout ceci eſt eſſentiel & aura bientôt ſon application.

Après cette introduction que nous avons crue indiſpenſable, pour préparer le lecteur aux vraies connoiſſances de la baſſe fondamentale, nous allons entrer en matiere. Mais on ne doit point perdre de vue, que cette première partie eſt uniquement deſtinée aux conſonnances.

Cette précaution ſuffit pour écarter toutes les chicanes qu'on pourroit faire ſur certains principes, définitions ou diviſions plus ou moins ſuſceptibles d'étendue, de reſtriction ou de diſcuſſion.

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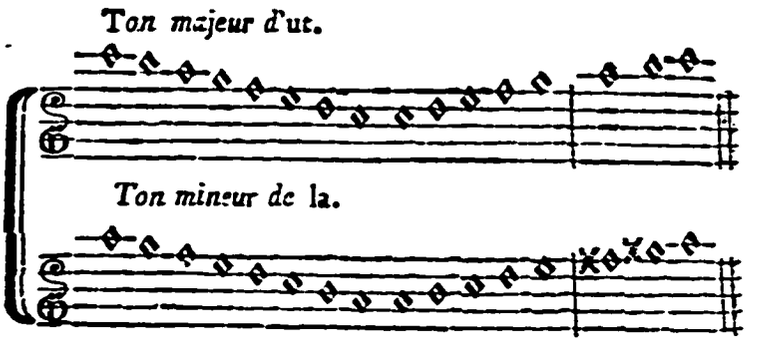
EXEMPLE.

Obſervations ſur cet exemple.

On voit dans cet exemple, que pour rendre l'intervalle du *mi* au *fa* du ton mineur, égal à celui du *ſol* au *la* du ton majeur, & celui du *fa* au *ſol* du mineur, égal à celui du *la* au *ſi* du majeur, on a été obligé d'avoir recours à deux dièzes accidentels, l'un ſur le *fa*, l'autre ſur le *ſol* note ſenſible du ton, de laquelle à la tonique, il ne doit jamais y avoir plus d'un demiton d'intervalle. Remarquons de plus, que les degrés diatoniques du ton mineur, ſont les mêmes en deſcendant, que ceux du majeur. Cette obſervation aura ſon application dans ſon lieu.

Fin de l'introduction.

LE GUIDE

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LE GUIDE
DU
COMPOSITEUR,
CONTENANT

DES REGLES SURES POUR TROUVER, PAR LES CONSONNANCES, LA BASSE FONDAMENTALE DE TOUS LES CHANTS POSSIBLES.

PREMIERE PARTIE.

CHAPITRE PREMIER.

De la baſſe fondamentale, de ſon harmonie, & de ſa marche la plus parfaite.

LA BASSE fondamentale eſt le principe & la baſe de l'harmonie.

L'harmonie eſt l'union de pluſieurs ſons diſpoſés par tierce dans l'étendue d'une octave : c'eſt ce qu'on appelle accord.

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La baſſe fondamentale eſt la ſucceſſion des notes les plus baſſes des accords qu'elle comporte.

Ces accords ſont conſonnans ou diſſonnans. Il ne ſera queſtion, dans cette première partie, que des conſonnans, appellés ainſi parce qu'ils ſont formés de ſons qui ſe marient agréablement.

La deuxième échelle ou gamme, *ſection I.* contient tous les accords conſonnans, & qui ſont propres à la baſſe fondamentale. Deux tierces, qui ſont les moindres intervalles harmoniques, font une quinte; & c'eſt ce que l'on nomme *accord parfait*, auquel on peut joindre l'octave du premier ſon, ſi l'on veut. Cet accord eſt affecté particulièrement à toute note tonique, ou cenſée telle.

La plus parfaite marche fondamentale, eſt celle qu'offre la troiſième échelle de l'introduction, c'eſt-à-dire, celle par quintes, ſoit en montant, ſoit en deſcendant.

Pour former une marche fondamentale, la tonique s'aſſocie ſes deux quintes; l'une au-deſſus, l'autre au-deſſous. Dans le ton d'*ut*, par exemple, la tonique eſt *ut*, ſa dominante tonique *ſol* eſt ſa quinte au-deſſus, & ſa ſous-dominante

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fa eſt ſa quinte au-deſſous. On peut imaginer la quinte au-deſſous de la tonique, comme ſa quarte au-deſſus, par le moyen du renverſement. Ainſi la quarte & la quinte au-deſſus de la tonique, ſont également ſes deux quintes.

Chacune de ces trois notes eſt fondamentale, & porte avec elle ſa tierce & ſa quinte, c'eſt-à-dire, l'accord parfait; & ces trois accords parfaits de la tonique, de la dominante tonique, & de la ſous-dominante, comprennent toutes les notes des trois gammes de l'introduction qui compoſent le ton d'*ut*. De-là il ſuit qu'il ne peut y avoir, dans chaque ton, que ces trois ſons fondamentaux primitifs; ſçavoir, la tonique & ſes deux quintes. De-là encore, la néceſſité d'avoir préſentes à la mémoire les deux dernières gammes de l'introduction; la troiſième, pour trouver tout d'un coup les trois ſons fondamentaux primitifs de quelque ton que ce ſoit; la deuxième, pour trouver leurs accords parfaits: enſorte que, ſi l'on penſe à la tonique *ut*, par exemple, *mi* & *ſol*, qui forment avec elle ſon accord parfait, *ſol*, *ſi*, *re*, & *fa*, *la*, *ut*, qui ſont ſes deux quintes, avec leurs accords parfaits, doivent s'offrir en même temps à notre penſée.

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CHAPITRE II.

Règles pour trouver la baſſe fondamentale d'un chant donné dans un ſeul ton.

NOS premiers exemples ſeront toujours dans le ton majeur d'*ut*. Nous l'avons préféré aux autres tons, comme étant le ſeul naturel dans lequel il n'entre ni *dièzes* ni *bémols*.

Le ſujet *, quant à préſent, ne doit former que la tierce, la quinte, ou l'octave de la note fondamentale qui répondra à l'une de ces conſonnances. Lorſqu'il en ſera tems, nous joindrons la diſſonnance aux accords parfaits de la dominante tonique, & de la ſous-dominante : ce qui fera le ſujet de la ſeconde partie.

Mais, avant de paſſer plus avant, il eſt bon de faire obſerver qu'en examinant le ſujet dont on ſuppoſe que le ton ſera connu, il faut tâcher d'y diſtinguer la médiante & la note ſenſible, parce que la baſſe fondamentale de ces deux notes ſera connue en même temps. La

* *On ſe ſervira toujours de ce terme, pour déſigner la partie ſupérieure.*

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médiante exige la tonique pour baſſe fondamentale, & la note ſenſible exige la dominante tonique.

Comme toute pièce de muſique doit commencer & finir par la note principale du ton, on ne peut courir riſque de ſe tromper, en donnant à la première note du ſujet, la tonique *ut* pour baſſe fondamentale.

On examinera enſuite dans quel accord des trois notes fondamentales ſe trouve la deuxième note du ſujet. Si elle ſe trouve dans celui de la tonique, on la conſervera; ſi elle dépend de l'accord de la dominante tonique, ou de la ſous-dominante, on paſſera à l'une ou à l'autre de ces deux notes fondamentales, & de-là on retournera à la tonique : bien entendu que le ſujet doit, de ſon côté, s'aſſujettir à cette marche fondamentale.

Remarquons, en paſſant, le privilège de la tonique, qui eſt la ſeule des trois notes fondamentales qui paſſe où l'on veut, & ſelon que le ſujet l'exige. Au lieu que la dominante tonique & la ſous-dominante ne doivent jamais ſe ſuccéder; non ſeulement parce qu'elles interromproient la marche par quintes, mais encore parce qu'elles nuiroient, par cet-

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te marche, à la liaiſon d'harmonie : liaiſon indiſpenſable dans toute pièce de muſique, depuis le commencement juſqu'à la fin, & qui conſiſte en des notes communes aux accords des différentes notes fondamentales qui ſe ſuccèdent à la quinte ; comme entre l'octave de la tonique, & la quinte de la ſous-dominante ; & entre l'octave de la dominante tonique, & la quinte de la tonique.

Or, cette communauté de notes pourroit cauſer de l'embarras, dans le cas où il regneroit de l'arbitraire entre deux notes fondamentales, ſous une note du ſujet qui ſeroit commune à leurs accords : mais la néceſſité de la marche fondamentale, par quintes, diſſiperoit l'embarras, pourvu cependant qu'on ne voulût s'obſtiner à vouloir conſerver la ſous-dominante ſous ſa quinte *ut*, lorſque cette quinte eſt ſuivie diatoniquement.

Enfin, en conſidérant attentivement les notes du ſujet, & connoiſſant parfaitement les accords parfaits des trois notes fondamentales primitives, on reconnoîtra aiſément, 1°. que jamais deux notes, en degrés diatoniques, ne peuvent appartenir à la même note fondamentale ; 2°. que les accords fondamen-

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taux étant compoſés de tierces & de quintes, les notes du ſujet qui ſuivent pareils intervalles, c'eſt-à-dire, qui marchent par tierces ou par quintes, peuvent toutes appartenir à la même note fondamentale ; & quoique le contraire puiſſe arriver, le ſoupçon n'en eſt pas moins légitime. Voyez *exemple* 1, *planche* 1.

Obſervation ſur cet exemple.

Pour que le ſujet marche par des intervalles diatoniques, chacune de ſes notes a ſa baſſe fondamentale particulière ; & lorſqu'il marche par des intervalles conſonnans, comme aux lettres *A*, elles ſe trouvent compriſes dans l'accord de la même note fondamentale ; & quand le contraire arrive, comme à *B*, cela ſe voit clairement. Si on conſervoit la ſous-dominante ſous la note *C*, elle ſeroit ſuivie de la dominante tonique, contre la règle, laquelle doit être employée ſous la note *D*. Or cette marche interrompoit celle par quintes, & feroit ceſſer la liaiſon d'harmonie.

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CHAPITRE III.

De quelques règles particulières de la baſſe fondamentale.

ON doit ſe rappeller ici tout ce que nous avons dit de la ſyncope, *ſect. IV.*

Première règle.

Toute note ſyncopée, ou cenſée telle dans le ſujet, exige deux notes fondamentales différentes.

Seconde règle.

Les deux temps foibles d'une meſure à trois temps, ne ſont pas cenſés ſyncoper, quoiqu'on puiſſe les y aſſujettir, pour procurer à la baſſe fondamentale ſa marche légitime.

Troiſième règle.

On doit éviter de faire ſyncoper la baſſe fondamentale, à moins qu'on n'y ſoit abſolument forcé. Cependant elle peut ſyncoper en débutant, & ſans tirer à conſéquence, pourvu que le ſujet com-

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mence par un temps foible, lequel eſt toujours compté pour rien en pareil cas.

Elle peut encore ſyncoper, d'une meſure à l'autre, dans une meſure à trois temps, pourvu qu'on puiſſe réduire les deux meſures où elle ſyncope, en une ſeule. Voyez *exemple* 2. *pl.* 1.

Obſervations ſur cet exemple.

La note du début dans le ſujet ſe trouvant dans un temps foible, on la compte pour rien, & la baſſe fondamentale peut y ſyncoper, ſans tirer à conſéquence.

Les notes *A B* du ſujet ſont cenſées ſyncoper, quoiqu'elles ne ſoient pas liées d'un demi-cercle. Chaque valeur de ces ſyncopes doit avoir ſa baſſe fondamentale particulière.

Si on conſervoit la dominante *C* ſous la note *D* du ſujet, qui pourroit ſervir de quinte à cette ſous-dominante, la baſſe fondamentale ſyncoperoit; c'eſt pourquoi il faut qu'elle paſſe à la tonique *E*, dont la note *D* du ſujet fait l'octave.

Mêmes obſervations aux meſures 8 & 9, 13 & 14.

On auroit pu conſerver à *F* la tonique déjà employée dans la meſure précé-

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dente ; ſans occaſionner une ſyncope ; & ſi on a employé la note du ſujet comme quinte de la ſous-dominante, c'eſt pour changer la baſſe fondamentale à chaque temps fort, lorſque le ſujet le permet, pour conſerver la même note fondamentale dans toute la meſure : ce que l'on doit toujours obſerver dans des cas arbitraires pareils à celui-ci. Il n'en eſt pas de même à la meſure 12, où le ſujet force de conſerver la ſous-dominante déjà employée dans toute la meſure précédente.

Lorſque le cas eſt forcé, il faut s'y ſoumettre.

Si la tonique ſyncope à *G*, c'eſt qu'on peut réduire en une ſeule meſure les deux qu'elle occupe en cet endroit.

On peut ſuivre les notes ou les guidons, dans la baſſe fondamentale, ſous les premières lettres *A B*.

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CHAPITRE IV.

Des cadences, ou repos, dans le ſujet & dans la baſſe fondamentale.*

TOUT ce qui forme concluſion de chant dans le ſujet, s'appelle cadence, ou repos.

Ces cadences ſont formées généralement, dans le ſujet, par deux notes diatoniques. La première de ces deux notes annonce la cadence ; & la deuxième, qui tombe avec le temps fort, la termine.

Elles ſe forment encore très-ſouvent par un intervalle de tierce, ſur la médiante & ſur la note ſenſible.

Enfin elles ſe forment auſſi, mais plus rarement, par une note ſyncopée, ou cenſée ſyncoper; parce que la dernière valeur de cette ſyncope qui tombe avec le temps fort, peut terminer un ſens harmonique, & demande d'ailleurs une

* *Il ne ſera queſtion ici que de la cadence parfaite & de l'imparfaite. Dans la ſeconde partie, nous traiterons des cadences rompues & interrompues, & de leurs imitations.*

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nouvelle note fondamentale.

On diſtingue les cadences ; dans la baſſe fondamentale, en parfaite & imparfaite. La parfaite, ſe fait en deſcendant de quinte ; la dominante tonique l'annonce, & la tonique la termine. L'imparfaite, ſe fait en montant de quinte ſur cette même tonique, ou ſur la dominante tonique. Dans le premier cas, c'eſt la ſous-dominante qui l'annonce ; & dans le ſecond, c'eſt la tonique.

Comme il ne s'agit encore dans nos exemples, que d'un ſeul ton, les cadences ou repos ne peuvent y être bien ſenſibles qu'à la fin de ces exemples. Lorſqu'il en ſera temps, nous joindrons les lumières néceſſaires à ces prémières notions. En attendant, ne nous laiſſons pas ſurprendre par les marches fondamentales par quintes, en les prenant pour autant de cadences. Elles ne doivent être priſes pour telles, que dans les endroits où le ſujet forme un repos ſenſible. Voyez *exemple* 3. *pl.* 2.

Obſervations ſur cet exemple.

Par-tout où la baſſe fondamentale deſcend ou monte de quinte ſur le temps fort, on pourroit prendre toutes ces mar-

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chés pour autant de cadences : mais, comme le ſujet ne forme de repos ſenſible qu'à *A. B. C. D.* on ne doit faire attention qu'à ceux-là.

Les cadences ſont parfaites à *A B* & à *D ;* la dominante tonique les annonce, & la tonique les termine.

Elles ſont imparfaites à *E* & à *C ;* la ſous-dominante annonce la première, & la tonique la termine. Cette même tonique annonce celle qui ſe forme à *C*, & la dominante tonique la termine.

CHAPITRE V.

Des différentes marches fondamentales de la tonique.

LA dominante tonique & la ſous-dominante ſont aſſujetties à la ſeule marche par quintes. Il n'en eſt pas de même de la tonique ; ſes routes vont ſe multiplier, tandis que les deux autres notes fondamentales ſuivront toujours la même.

Ces nouvelles marches de la tonique vont donner plus de variété au ſujet, qui, ſans cela, ſe trouveroit borné à un chant preſque uniforme & monotone. Il faut

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donc regarder déſormais la tonique comme le mobile de la variété & de la beauté du chant, de l'harmonie & de la modulation : ce que nous tâcherons de prouver inſenſiblement par nos exemples.

ARTICLE PREMIER.

De la marche de la tonique, par ſeconde, en montant.

LA tonique peut monter de ſeconde ſur une dominante, que nous appellerons *ſus-tonique*, ſelon la dénomination de la ſeconde ſection.

Il n'y a, dans chaque ton, qu'une tonique & une ſous-dominante. Mais il y a deux ſortes de dominantes; la dominante tonique, qui précède toujours la tonique, & l'autre, que nous appellons ſimplement dominante, précède toujours une autre dominante.

La marche de ces dominantes doit être par-tout la même; elles doivent toutes deſcendre de quintes, & ſe ſuccéder les unes aux autres juſqu'à la tonique précédée de ſa dominante tonique.

Cette marche de ſeconde en montant, ſemble, du premier coup d'œil, interrompre la liaiſon d'harmonie ſur laquelle nous

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avons insisté dans le chapitre II; puisqu'il ne paroit pas réellement y avoir liaison d'harmonie entre *ut, mi, sol* & *re, fa, la*, & il n'y en a nulle en effet, quant à présent: mais, lorsque la dissonance nous sera connue, on verra disparoître le défaut apparent de cette liaison. On verra de plus alors, que ce nouvel accord fondamental n'est formé que du renversement de celui de la sous-dominante. En attendant, profitons de cette nouvelle marche de la tonique, pour varier nos chants & notre harmonie, & tâchons de porter l'un & l'autre à sa plus grande perfection.

La tonique ne devra monter de seconde, que dans le cas où elle ne pourroit observer la marche par quintes, ou lorsqu'on se verroit forcé par le sujet à faire syncoper la basse fondamentale, ou bien encore lorsque la sous-dominante seroit obligée de monter de seconde sur la dominante tonique. Voyez *exemple* 4, *pl.* 2.

Observations sur cet exemple.

La note sensible à *B* exige la dominante tonique pour basse fondamentale. Si l'on emploie cette même dominante sous la note *A* du sujet, la syncope y sera formelle.

Si l'on emploie la sous-dominante à *C*,

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elle ſera forcée de paſſer à la dominante tonique qu'exige la note *D* du ſujet, & la liaiſon d'harmonie y ſera interrompue.

Même obſervation à *E F*.

Si l'on ſuit les guidons à la meſure 9, la baſſe fondamentale ſera forcée de ſyncoper.

On voit, dans cet exemple, la néceſſité de la marche de la tonique par ſeconde en montant, ſoit pour éviter la ſyncope dans la baſſe fondamentale, ſoit pour conſerver la liaiſon d'harmonie.

ARTICLE II.

De la marche de la tonique, par tierce, en deſcendant.

LA tonique peut encore deſcendre de tierce ſur une ſimple dominante, que nous appellerons *ſus-dominante*, ſelon la dénomination de la ſeconde ſection.

Le cas le plus évident d'employer cette nouvelle dominante eſt lorſque la tonique ſeroit forcée de ſyncoper, même en débutant; bien entendu que le ſujet ſe prêtera pour lors à cetre marche.

Cette nouvelle dominante ſera aſſujettie, comme la ſus-tonique, à deſcendre de quinte pour marcher de dominante en dominante

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dominante juſqu'à la tonique, précédée de ſa dominante tonique. Voyez *exemple 5, pl. 2.*

Obſervations ſur cet exemple.

Dans le premier début, on peut faire deſcendre la tonique de tierce, puiſque le ſujet ne s'oppoſe pas à cette marche; au lieu qu'elle eſt forcée de ſyncoper dans le ſecond par l'oppoſition formelle du ſujet à la nouvelle marche indiquée dans cet article.

Le ſujet oblige la tonique à deſcendre de tierce à *A*, puiſque ni la ſous-dominante, ni la ſus-tonique, ne pourroit y être employée ſans ſyncoper à *B*. Si l'on employe la tonique à *C*, elle y ſyncopera; voilà donc un cas abſolu de la faire deſcendre de tierce ſur la ſus-dominante.

Arbitraire entre la ſus-dominante & la ſus-tonique, marquée d'un guidon à *D*.

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ARTICLE III.

Dans les cas arbitraires, la marche par tierce en deſcendant, doit être préférée à celle par ſeconde en montant; d'où naît la néceſſité de marquer, par des guidons, les différentes baſſes fondamentales poſſibles.

L'ARBITRAIRE en queſtion règne dans toutes les notes d'un ton, excepté la note ſenſible. Car, outre ce que nous avons dit, chap. II, au ſujet de la communauté des notes entre les accords des trois ſons fondamentaux primitifs; cette communauté règne encore entre la quinte de la dominante tonique & l'octave de la ſus-tonique, & entre la quinte de celle-ci & l'octave de la ſus-dominante.

D'un autre côté, la ſous-dominante a deux notes communes avec la ſus-tonique & avec la ſus-dominante. D'ailleurs, l'octave de la ſus-dominante fait la tierce de la ſous-dominante, & la quinte de la ſus-tonique.

La même communauté règne encore entre l'octave de la tonique & la tierce de la ſus-dominante, & entre la tierce

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de cette même tonique & la quinte de cette ſus-dominante.

Par cette analyſe, on voit la néceſſité de ſe mettre bien au fait de toutes ces notes communes à différentes notes fondamentales, par des exemples qu'on peut ſe faire ſoi-même, en rangeant de ſuite toutes ces notes avec leurs accords parfaits.

C'eſt de cette communauté de ſons, que naît l'arbitraire en queſtion. Ce qui ſuit ou précède une note commune, détermine preſque toujours le choix de la note fondamentale qui y convient, en conſéquence de la marche preſcrite. Mais il ne faut jamais s'occuper de cet arbitraire dans la baſſe fondamentale, que lorſque pluſieurs marches y ſont régulières. C'eſt à cette occaſion qu'il faut préférer les plus parfaites à celles qui le ſont moins. Comme celle par quinte eſt plus parfaite que celle par tierce, & celle-ci plus que celle par ſeconde, cette connoiſſance doit nous guider dans le choix que nous devons faire. Cependant, comme la perfection conſiſte auſſi dans la variété, dans le beau chant & dans l'eſprit de ce chant, dans l'expreſſion & dans le deſſein, on eſt obligé

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quelquefois, pour s'y ſoumettre ; de tranſgreſſer une règle moins conſidérable. Voyez *exemple 5, pl. 2.*

Obſervations ſur cet exemple.

Quoique nous ayons dit ailleurs que la médiante exigeoit naturellement la tonique pour baſſe fondamentale, cela ne doit s'entendre qu'au cas que cette tonique ne ſoit pas déja employée immédiatement auparavant : car alors il eſt libre d'employer la médiante comme quinte de la ſus-dominante, puiſqu'elle eſt commune à ces deux notes fondamentales. Ainſi, pour varier l'harmonie, on peut ſubſtituer la ſus-dominante marquée d'un guidon, à la tonique, ſous la médiante *A* du ſujet ; au lieu de répéter cette même tonique déja employée.

Puiſque la dominante tonique ſe répéte dans la meſure 2, on peut d'abord employer la ſus-tonique, marquée d'un guidon ſous la note *B* du ſujet, qui eſt commune à ces deux notes fondamentales.

Même obſervation à la pénultième meſure.

Dès que la tonique ſe répète dans la quatrième meſure, on peut ſubſtituer la

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ſus-tonique à la ſous-dominante, qui eſt ſous la note *C*, pour arriver, par une marche de dominantes, à la tonique, ſous la note *E*: car la note *C* du ſujet eſt commune aux accords des deux notes fondamentales en queſtion, de même que la note *D* du ſujet eſt commune aux accords de la tonique & de la dominante tonique.

Les différentes notes fondamentales, marquées par des guidons ſous la note *F* du ſujet, ne peuvent être imaginées que par la répétition de la ſous-dominante précédée & ſuivie de ſa tonique.

Les notes valent mieux que les guidons à *G H*, parce qu'en ſuivant les guidons, la tonique ſous *H* ſeroit obligée de monter de ſeconde; & cette marche n'eſt pas ſi parfaite, ainſi qu'il a été dit, que celle par tierce.

On peut ſuivre indifféremment les notes de la baſſe fondamentale, ou les guidons, aux meſures 19 & 20 : l'une & l'autre marche y eſt également bonne. Cependant, en ſuivant les guidons, on prend la route des dominantes, qui eſt toujours la meilleure.

On voit, dans les guidons de cet exemple, la poſſibilité d'une deuxième baſſe

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fondamentale, dont il faut ſçavoir profiter dans l'occaſion, ſoit pour varier l'harmonie, ſoit pour le goût du chant de la baſſe continue, ſoit enfin pour l'arrangement des autres parties.

CHAPITRE VI.

Des tons relatifs.

CHAQUE ton majeur en a un mineur qui lui eſt relatif. Ces deux tons relatifs entr'eux ſont à la diſtance d'une tierce mineure, comme ſont le ton majeur d'*ut* & le mineur de *la*.

Leur rapport ſe reconnoît, 1°. dans le même nombre de dièzes & de bémols qui entrent dans l'un & l'autre ton *; 2°. par le grand nombre de notes communes à leurs accords. Car, puiſque leurs toniques ſont à une tierce mineure l'une de l'autre, il doit s'enſuivre que toutes les notes fondamentales de leurs tons ſont à une pareille diſtance. Or, comme on doit ſçavoir que les notes fondamentales, à la tierce l'une de l'autre, ont deux notes communes à leurs accords,

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chap. V, art. III, on concevra aiſément que toutes les notes diatoniques de l'un des deux tons appartiennent également à l'autre, excepté les deux dièzes accidentels du mineur. Voyez *la ſection déja citée, & l'exemple qui y répond.*

De ces deux dièzes accidentels, celui de la note ſenſible eſt le ſeul auquel il faille avoir égard, parce que l'autre ne paroît jamais ſans être ſuivi de celui-ci. Cette note ſenſible du ton mineur, eſt toujours formée d'un dièze ajouté à la quinte du majeur. De ſorte que, ſi l'on voit, dans le ſujet, cette quinte ſans dièze, ce ſera sûrement le ton majeur; à cela près, la baſſe fondamentale eſt arbitraire dans l'un de ces deux tons. Voyez *les exemples* 7 *&* 8. *pl.* 3.

Les autres tons relatifs à l'un de ces deux premiers, ſe trouvent dans leurs dominantes & ſous-dominantes, qui peuvent devenir toniques à leur tour, & dont le genre doit être le même que celui du premier ton auquel elles appartiennent.

De-là, cette règle importante: tous les tons, à la quinte l'un de l'autre, ſont de même genre; & tous ceux à la tierce l'un de l'autre, ſont d'un genre différent.

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Qui plus eſt, les tons relatifs ne doivent jamais avoir qu'un dièze de plus, ou un bémol de moins que le ton principal, ſans faire attention aux dièzes accidentels du mineur; parce que c'eſt toujours ſur le majeur qu'il faut ſe guider, pour ce qui regarde ſon ton mineur relatif.

Obſervations ſur les deux exemples.

On peut faire deſcendre de tierce la tonique ſous *A*, & la faire paſſer à ſa dominante ſous *B*, pour y éviter la triple répétition de la tonique, qui eſt cependant poſſible.

La cauſe de l'arbitraire, qui regne dans la baſſe fondamentale de ces deux exemples, vient de ce que la quinte du ton majeur ne paroît point dans le ſujet, ſoit ſans dièze, ſoit avec un dièze.

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CHAPITRE VII.

Où l'on indique pluſieurs moyens de connoître le ton dans le ſujet.

DANS les chapitres précédens, nous avons montré ſuffiſamment les routes fondamentales poſſibles dans un ſeul ton; celle par quinte, celle par tierce en deſcendant, celle par ſeconde en montant, & l'arbitraire qui règne entre ces différentes routes. Nous allons déſormais entrelacer les tons relatifs au principal; &, dans cet entrelacement, nous découvrirons de nouvelles routes fondamentales, qui, quoique connues par la plupart des artiſtes, ou ſont mal employées, ou ſont mal définies. Mais auparavant, tâchons de remplir l'objet de ce chapitre, en indiquant les différens moyens de connoître le ton dans le ſujet.

La muſique, ainſi que le diſcours, a ſes phraſes & ſes périodes, qui ſe diſtinguent par les fréquens repos qui s'y rencontrent, & dont on trouve naturellement la baſſe fondamentale. Mais, comme elle y eſt tantôt tonique, tantôt do-

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minante tonique, ſelon l'expoſé du chapitre IV, les ſignes viſibles dans le ſujet empêchent de s'y tromper; &, à leur défaut, les rapports, entre les tons ſucceſſifs, diſſipent le doute.

PREMIER MOYEN.

Connoître le ton par la note ſenſible.

LA note ſenſible, qui fait toujours la tierce majeure de la dominante tonique, eſt le plus sûr moyen de reconnoître le ton, ſurtout quand on a ſoin de placer à côté de la clef le juſte nombre de dièzes ou de bémols néceſſaires aux tons tranſpoſés, qui donnent à la règle ſuivante la plus grande évidence.

Dès qu'il paroît un nouveau dièze, ou un nouveau bémol, le ton change, s'il n'eſt déja changé. Si la note eſt dièzée, elle eſt note ſenſible; ſi elle eſt bémoliſée, celle qui devroit avoir un bémol après elle, ſuivant l'ordre des bémols *, eſt pour lors note ſenſible. S'il y a pluſieurs dièzes ou bémols de ſuite entre deux repos, c'eſt ſur le dernier, dans l'ordre des dièzes, que l'on doit appliquer cette règle.

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Deux nouveaux dièzes, en montant diatoniquement, ſont toujours les accidentels d'un ton mineur, & le deuxième eſt toujours la note ſenſible. S'il ſe trouve un bécare aux plus bas des deux dièzes, c'eſt ſigne qu'il y avoit un bémol auparavant ſur la même note. Les nouveaux ſignes du changement de ton, ſe préſentent toujours d'un ton à l'autre, & l'on doit avoir égard aux ſignes qui ont précédé, lorſqu'on n'en voit point de nouveaux qui les ſuppriment. Voyez *exemple 9. pl. 3.*

Obſervations ſur cet exemple.

On ne peut ſe méprendre en prenant les notes *A* pour des ſenſibles. Le bémol *B* pourroit appartenir au ton de *re*, annoncé par l'*ut* dièze qui le précède; mais ce même *ut* paroiſſant ſans dièze à *C*, le *ſi* bémol doit pour lors guider: &, en ce cas, *mi* eſt note ſenſible. Le bémol à *D* n'étant ſuivi ni précédé d'aucun dièze ni bémol, annonce *la* pour note ſenſible.

Le ton de *ſol*, qui vient enſuite, eſt réputé mineur, à cauſe du *mi* bémol qui le précède, quoiqu'il dût

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être majeur ſelon ſon rapport avec le principal : mais, outre cette raiſon, le ton de *re* mineur qui ſuit immédiatement celui de *ſol*, exige que celui-ci ſoit du même genre, ſelon la règle donnée, chap. VI.

Si la note *E* n'a point de bémol, c'eſt qu'elle eſt pour lors le plus bas des deux dièzes accidentels du ton mineur de *re*.

Même obſervation au *fa* dièze, qui paroît enſuite.

Le bémol à *F*, indique *mi* pour note ſenſible ; & cette même note paroiſſant enſuite ſans bémol, ſuivie de la note ſenſible de *re*, fait aſſez reconnoître la note pour le premier dièze accidentel de ce ton mineur.

Le dièze diſparoiſſant à *G*, prouve ſuffiſamment que la note qui précède immédiatement, eſt note ſenſible.

SECOND MOYEN.

De l'incertitude où l'on doit être à l'égard de la note ſenſible des tons majeurs, & des intervalles propres à faire connoître le ton dans le ſujet.

PUISQUE la note ſenſible des tons majeurs fait toujours la ſeconde des

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tons mineurs relatifs *, cette eſpèce d'équivoque doit jetter des doutes ſur le véritable ton, ſurtout quand on n'apperçoit point un nouveau dièze qui puiſſe décider.

Si effectivement il n'y en a point d'autre, & que la quinte du ton majeur indiqué par ce ſeul dièze, paroiſſe dans le ſujet, on aura bien jugé en le prenant pour note ſenſible. Mais, ſi cette quinte ne paroît pas, le doute ſubſiſte, & c'eſt pour lors au repos de la phraſe qu'il faut avoir recours; ou, à ſon défaut, au rapport le plus intime entre les tons ſucceſſifs. Mais ceci regarde plus particulièrement les moyens ſuivans.

A l'égard des intervalles propres à faire connoître le ton dans le ſujet, ils conſiſtent en deux eſpèces: 1°. les chûtes de tierce ſur le temps fort, 2°. les intervalles de quarte ou de quinte.

Les notes ſur leſquelles le ſujet deſcend de tierce ſur le tems fort, & où l'on ſent le moindre repos, ſont ou médiantes, ou ſenſibles. Elles peuvent auſſi ne pas l'être: mais alors on le reconnoît aiſément, ſoit parce que le repos que doit former cette chûte de tierce ſera inſenſi-

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ble, ſoit ſurtout par le défaut des dièzes ou des bémols néceſſaires au ton, qu'indiqueroient de pareilles médiantes ou notes ſenſibles.

D'un autre côté, deux notes à la quarte ou à la quinte dans le ſujet, ſont le plus ſouvent fondamentales du ton qui exiſte. Quelquefois il n'y en a qu'une des deux, & quelquefois auſſi elles ne le ſont ni l'une ni l'autre. Mais il eſt facile de ne s'y pas tromper, en faiſant la même remarque que nous avons faite ci-deſſus pour la médiante & pour la note ſenſible. Le plus sûr moyen de ne ſe point tromper entre deux tons douteux, c'eſt de remarquer, dans le ſujet, deux notes entre leſquelles puiſſe ſe rencontrer le dièze ou le bémol néceſſaire au ton que l'on croira préférable; puis, après avoir chanté tout le ſujet juſqu'au repos qui ſuit ces deux notes, on le recommence une ſeconde fois, en eſſayant de parcourir les degrés diatoniques contenus entre ces deux mêmes notes, ſans altérer le mouvement; &, ſi l'on y entonne naturellement, ſans la moindre réflexion, le dièze ou le bémol en queſtion, on aura auguré juſte: ſinon il faudra s'en tenir à l'autre ton. Voyez *exemple* 10. *pl.* 3.

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Obſervations ſur cet exemple.

Les notes *A*, où le ſujet deſcend de tierce ſur le temps fort, ſont des médiantes; & les notes *B* ſont des ſenſibles.

Si l'on prenoit la première note *B* pour une médiante, on ſeroit bien trompé; car, outre que la baſſe fondamentale ſeroit la même, on ne voit point à *C* le dièze néceſſaire au ton qu'indiqueroit cette médiante mal imaginée; & d'ailleurs on ſeroit forcé de rentrer dans le ton dont elle eſt note ſenſible.

Quiconque prendroit les notes *D* pour des médiantes ou des ſenſibles, ſeroit détrompé par le défaut des dièzes ou des bémols néceſſaires en pareil cas. Si la première note *D* étoit médiante, il faudroit un bémol au *mi* qui la précède, & il faudroit un dièze au *ſol* qui paroît après la ſeconde note *D*, ſi celle-ci étoit auſſi médiante. Si la troiſième note *D* étoit médiante ou ſenſible, il faudroit un bémol au *ſi* qui la ſuit. On doit faire les mêmes obſervations aux autres notes *D*.

S'il ſe trouve quelques médiantes dont les repos ſoient inſenſibles, les notes *D*, qu'on croiroit pouvoir prendre pour telles,

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n'en donnent pas de plus ſenſibles.

Des trois notes qui forment deux intervalles de quarte, meſures 4 & 5, la première eſt dominante tonique, & la deuxième eſt tonique.

Des deux notes à la quarte, meſures 10 & 11, la derniere eſt dominante tonique.

Les deux notes encore à la quarte, meſures 20 & 21, ſont fondamentales, la première eſt dominante tonique, & la deuxième tonique.

Aucune des deux notes *E*, *F* n'eſt fondamentale, puiſqu'elles forment un intervalle de fauſſe quinte, & non pas une quinte juſte. D'ailleurs la note *E*, comme fondamentale, exigeroit un bémol à *F*, & celle-ci un dièze à la note *E*.

Les deux notes *G*, *H* ſont fondamentales, l'une dominante tonique, l'autre tonique.

A l'égard du *ſi* bémol qu'exige le ton qu'elles indiquent, il ſuffit de chanter le ſujet depuis la note avant *G*, juſqu'au tems fort de l'autre meſure qui ſuit la lettre *H*, tel qu'il eſt, & recommencer immédiatement, en rempliſſant tous les intervalles, on y entonnera le *ſi* bémol, qui fait le demi ton dont nous avons parlé.

Des

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Des deux notes à la quarte en deſcendant, meſures 27 & 28, aucune n'eſt fondamentale ; l'une eſt médiante, l'autre note ſenſible. Et des deux notes qui ſuivent ces deux-là, qui forment un intervalle de quarte en montant, la derniere eſt dominante tonique.

Il reſte encore dans cet exemple, des intervalles de tierce, de quarte & de quinte, ſur leſquels nos obſervations ne ſont point tombées. La crainte de fatiguer le lecteur nous retient ; d'ailleurs, il eſt bon de ſuivre de ſoi-même, la route que nous avons indiquée.

TROISIÉME MOYEN.

Connoître les tons ſucceſſifs par leurs rapports.

Le ſujet peut être tourné de façon, qu'aucun des ſignes évidens déja cités, n'y paroiſſe. C'eſt alors qu'il faut avoir recours au plus intime rapport entre les tons ſucceſſifs.

Ces rapports conſiſtent, en ce que deux tons qui ſe ſuccédent immédiatement, doivent être à la quinte l'un de l'autre,

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s'ils ne ſont pas à la tierce comme le majeur & le mineur relatif; il faut de plus que les tons qui ſe ſuccédent dans le courant d'une piece, ſoient relatifs entr'eux & le ton principal.

Cependant, dès que ces tons ſe trouvent tous relatifs au principal, ils peuvent donc ſe ſuccéder à la ſeconde l'un de l'autre; mais pour lors la tonique du premier ton, deſcend toujours de tierce mineure, ou de quinte; de tierce mineure, pour paſſer au ton à la ſeconde au-deſſus, & de quinte, pour paſſer au ton à la ſeconde au-deſſous. De ſorte que cette tierce ou quinte, pouvant être regardée comme une tonique paſſagere, mais relative à ces deux tons qui ſe ſuccédent à la ſeconde; elle entretient les rapports néceſſaires.

Jamais deux toniques à la ſeconde ne peuvent ſe ſuccéder, que dans un cas où l'on ſuppoſeroit le ſens abſolument fini ſur la premiere, de ſorte que la ſeconde, en recommençât un tout nouveau, comme ſi c'étoit deux piéces de muſique différentes. Mais cette obſervation n'eſt pas encore de la compétence de nos premieres regles.

Tous ces principes, une fois bien conçus, jettent de grandes lumieres pour ſe

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conduire dans les cas douteux ; & il eſt impoſſibe qu'avec de tels ſecours, on ne vienne à bout de ſe relever de ſon doute. Car ſi une fois on eſt parvenu à connoître un ton par les ſecours indiqués, on parviendra aiſément à connoître le douteux, par les rapports réciproques, entre les tons ſucceſſifs, au défaut d'autres ſignes. *Voyez exemple 2. pl. 1.*

Au reſte, comme le ton majeur d'*ut* & le mineur de *la*, ſont les modèles de tous les autres tons, nous nous ſervirons indifféremment de l'un ou de l'autre de ces deux tons, dans nos exemples, étant facile d'y conformer les autres, quand on veut s'en ſervir, en mettant à côté de la clef, les dièzes ou les bémols qui leur conviennent.

Obſervations ſur cet exemple.

Les chifres poſés au-deſſus des notes dans tout le cours de cet exemple, ſervent à marquer les repos, qui ſe font de deux en deux meſures ; mais celui qui ſe fait au chifre 4 eſt toujours beaucoup plus ſenſible ; que celui d'auparavant.

Les deux notes du début étant communes au ton majeur & au mineur, le vé-

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ritable ton paroîtroit douteux, ſi le repos ſenſible qui ſe fait ſentir à la quatriéme meſure, ne décidoit pour le mineur. D'ailleurs la derniere note de cette même meſure, que l'on doit regarder comme le reſte du repos, indique aſſez le ton mineur de *la*.

En examinant bien cette premiere phraſe, on y trouvera deux notes à la quarte ſous le chifre 3, qui ne peuvent être fondamentales dans le ton d'*ut*, au lieu que la derniere des deux, eſt dominante tonique du ton de *la*.

Le ton de *ſol* à *A*. eſt paſſager; le dièze qui l'annonce, eſt un des deux dièzes accidentels du ton principal, dont l'autre paroît enſuite: auſſi le repos n'y eſt pas ſi ſenſible que celui qui ſe fait à *B*.

Le ton de *re*, quinte du principal, eſt viſible à *C*. Il en eſt de même de celui d'*ut* qui finit à *D*; celui-ci eſt à la ſeconde de celui de *re* qui le précéde: mais en examinant les guidons qui tiennent lieu de la baſſe fondamentale, on voit le premier deſcendre de quinte ſur *ſol*, & celui-ci ſur *ut*, d'où les rapports néceſſaires ſont bien entretenus par des tons relatifs, entr'eux & le principal.

Le ton de *ſol*, quinte d'*ut*, paroît à *E*;

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enſuite celui de *mi* à *F*: celui-ci eſt le mineur relatif du majeur de *ſol*, & par conſéquent à la tierce mineure du premier.

Le ton de *re* qui paroît enſuite précédé de celui de *mi*, & ſuivi de celui d'*ut*, tous trois à la ſeconde l'un de l'autre; mais en examinant les guidons, on les trouvera relatifs entr'eux & le principal: il faut cependant obſerver que les phraſes en ſont très-courtes, comme elles doivent l'être entre les tons qui ſe ſuccèdent à la ſeconde.

Le ton de *fa*, quinte d'*ut*, paroît à *G*, d'où l'exemple continue par des tons aſſez viſibles pour pouvoir les expliquer de ſoi-même.

QUATRIEME MOYEN.

Du moment précis où le ton change, & de la marche fondamentale en pareil cas.

Le ton ne change qu'après un repos ou cadence ſur la tonique, ou ſur ſa dominante. C'eſt après ce repos, que l'on doit diſpoſer la marche fondamentale pour arriver à la tonique du nouveau ton par les routes preſcrites.

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Si le même ton continue après le repos, il n'y a rien à ſavoir de nouveau.

Si le ton change, la note fondamentale du repos quelle qu'elle ſoit, doit être cenſée tonique, & l'on choiſit parmi les différentes routes poſſibles, celle qui convient, pour conduire à la tonique du nouveau ton.

On doit préférer ici comme ailleurs les plus parfaites marches fondamentales; celle par quintes eſt la plus parfaite: ſi celle-ci eſt impraticable, on peut faire deſcendre de tierce, la tonique qui a conclu le repos, ou faire monter de ſeconde, la dominante qui l'aura terminé; enſuite on paſſe à un autre ton.

Cette même dominante, peut encore être ſuivie de ſa tonique, avant de paſſer à un autre ton, ſi le ſujet le permet. Voyez *exemple* 12, *pl.* 4.

Obſervations ſur cet exemple.

Le premier intervalle de quarte dans le ſujet, pourroit indiquer le ton majeur d'*ut*, mais outre que le deuxieme doit faire pancher pour le mineur de *la*, le dièze qui ſuit, détermine en faveur de ce dernier ton.

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La dominante tonique termine le repos qui ſe fait à *A;* elle eſt ſuivie de ſa tonique à la meſure ſuivante, qui devient à ſon tour dominante tonique de *re*, en conſéquence du dièze.

La note *ſi* n'étant point bémoliſée à *B*, annonce aſſez le ton d'*ut*, & pour y arriver, la tonique *re* deſcend de quinte ſur *ſol*, qui paſſe à la tonique *ut* ſelon la regle déja donnée, pour les tons qui ſe ſuccèdent à la ſeconde. Remarquons, que dans le cas préſent, *ſol* ne peut pas être tonique après la tonique de *re* mineur, mais dominante tonique. Cette obſervation doit auſſi ſervir pour une pareille ſucceſſion, dans l'exemple précédent, avant la lettre *G*, & pout tout autre cas pareil qui pourroit ſe rencontrer par la ſuite, juſqu'à ce que la diſſonance vienne diſſiper le doute par l'addition du chifre.

Après avoir terminé le ton d'*ut* par la tonique, on prend une marche de dominantes, pour arriver à celle qu'indique la note ſenſible *C*.

Même obſervation & même marche fondamentale, pour arriver au ton indiqué par la note ſenſible *D*.

Ayant terminé le ton de *re* par la tonique, on la conſerve ſous la ſyncope du

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ſujet, pour y devenir dominante tonique de *ſol*, indiqué dans le ſujet par le repos ſenſible à *E*.

Après le ton de *ſol*, vient celui d'*ut*, & enſuite celui de *fa*. La marche fondamentale eſt par-tout la même. Chaque tonique y devient par-tout dominante tonique, & les rapports s'y obſervent régulierement.

Deux raiſons nous ont engagé à prendre le ton de *fa* à *F*, aulieu d'y continuer celui d'*ut*: la premiere, parce qu'il y a repos à *F*, & qu'un pareil repos, ne pouvant être formé que par une médiante ou par une note ſenſible, la note du ſujet n'eſt ni l'une ni l'autre dans le ton d'*ut*. La ſeconde, parce que le ton mineur de *re*, annoncé par le dièze *G*, eſt le mineur relatif du majeur de *fa*, au lieu qu'il eſt à la ſeconde de celui d'*ut*. Cette derniere raiſon eſt plus que ſuffiſante, lorſqu'à l'occaſion d'un ton douteux, on a égard comme on le doit à celui qui le ſuit, & par rapport auquel on doit ſe conduire.

Du ton de *re* annoncé par la note ſenſible *G*, on paſſe au ton d'*ut* par les routes preſcrites, d'où la tonique deſcend de tierce ſur la tonique du ton principal à *H*, dont le ton continue juſqu'à la fin.

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CHAPITRE VIII.

De la poſſibilité de paſſer d'une tonique à une autre par tous les intervalles conſonnans, & des toniques étrangeres ou paſſageres dans le ton qui exiſte.

UNE tonique pouvant paſſer à une autre tonique par tous les intervalles conſonnans, il ſuit, que la dominante tonique, la ſous-dominante & la ſus-dominante peuvent être cenſées toniques, puiſque tous ces intervalles ſont conſonnants.

On excepte cependant de cette regle, la ſous-dominante d'un ton mineur, laquelle ne peut jamais être cenſée tonique après ſa tonique. Mais ſi le ton de cette ſous-dominante ſe déclaroit en même tems qu'elle ſuit ſa tonique, on doit dans ce moment donner à celle-ci, la tierce majeure, & le ſujet ne manque pas de la donner en ce cas, comme à la cinquieme meſure du dernier exemple, où la tonique en finiſſant ſon ton mineur, reçoit cependant la tierce majeure, pour entrer dans le ton de ſa ſous-dominante. Par ce moyen, une tonique devient commune à

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ſon ton & à celui qui ſuit, queſtion que nous agiterons dans le chapitre ſuivant.

Si le ſujet ne donnoit pas cette tierce majeure, comme cela peut arriver, & que par néceſſité, on fut obligé de rendre tonique la ſous-dominante d'un ton mineur, on ſeroit forcé alors de partager en deux valeurs la tonique qui la précéde, de lui ſuppoſer la tierce majeure à la deuxieme valeur. Bien entendu que ni l'une ni l'autre tierce ne paroîtroit dans le ſujet; car on ſeroit forcé pour lors de ſe conformer à ce qu'il exigeroit, ſans que la ſuppoſition avancée put avoir lieu.

Le cas le plus évident d'employer une tonique étrangere ou paſſagere, c'eſt, lorſqu'on a épuiſé tous les moyens indiqués juſqu'à préſent pour paſſer d'un ton à un autre. On peut dans ce cas en introduire juſqu'à trois en deſcendant de tierce, mais il faut abſolument que la derniere employée, ſe trouve commune à ſon ton, & à celui dans lequel on entre, en y devenant dominante ou ſous-dominante.

Lorſque le ſujet fournit une note qui vaut pluſieurs tems, ou pluſieurs meſures, c'eſt un des cas où on peut lui donner pour baſſe fondamentale différentes toniques étrangeres.

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Il reſte à ajouter, qu'une tonique peut encore monter de tierce ſur une autre tonique. Au reſte il ne faut point abuſer de toutes ces poſſibilités, & on ne doit point y avoir recours qu'à la derniere extrémité. Voyez *exemple* 13, *pl.* 5.

Obſervations ſur cet exemple.

Si l'on conſervoit la tonique principale ſous les quatre premieres meſures, le chant du ſujet paroîtroit inſipide, au lieu qu'il ſera plus agréable par la variété des deux toniques paſſageres *A B.* la derniere deſquelles devient ſous-dominante de la tonique principale.

Après avoir terminé le repos ſur la dominante tonique à *C.* on paſſe à ſa tonique, & de-là au ton d'*ut* par une marche de dominantes.

Les notes *D E F G.* ſont toutes toniques paſſageres. Le ton de *re* à *F* y eſt étranger; c'eſt-à-dire qu'il n'eſt pas du même genre que le principal; car le dièze du ſujet, n'eſt que le premier des deux accidentels du ton mineur de *la*; mais ce ton entretient pour lors les rapports qui ſont tous à la quinte les uns des autres.

La dominante tonique termine encore

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le repos après *G*. & ſe trouve ſuivie de ſa tonique à *H*. d'où l'on marche par une ſuite de dominantes juſqu'à la tonique I, moyennant quoi, on n'a nul égard aux ſignes du ſujet qui pourroient indiquer une autre baſſe fondamentale.

Ne voyant plus de dièze aux notes qui en avoient auparavant dans le ton de *mi*; le dièze *K* prouve ſuffiſamment le ton de *re*, auquel on arrive par une marche de dominantes.

Du ton mineur de *re*, on voit paſſer le ſujet au ton majeur d'*ut*; le *ſi* naturel *M* l'indique aſſez, & d'ailleurs on ne voit aucun dièze. Ces deux tons ſont à la ſeconde, & n'ont aucun rapport; mais la tonique étrangere *L*. où l'on monte de tierce, les lie: car le ton de *fa* eſt le majeur relatif du mineur de *re*, & devient en même tems ſous-dominante d'*ut*.

La dominante tonique *N* eſt cenſée tonique, puiſquelle n'eſt pas ſuivie de la ſienne. Ainſi l'on paſſe depuis le ton d'*ut*. juſqu'au ton de *mi*, par des tons relatifs toujours à la quinte.

Quoique ce ton de *mi* ſoit mineur, on le voit finir à *O* par la tierce majeure, pour ſe ſoumettre à la tonique du nouveau ton qui le ſuit: c'eſt le ſujet du chapitre ſuivant.

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CHAPITRE IX.

De la liaiſon d'harmonie.

L'OBJET le plus important qui doit occuper le compoſiteur, eſt ſans contredit la liaiſon; elle conſiſte non ſeulement, comme on ſçait déja, dans les notes communes aux accords de différentes notes fondamentales, mais encore dans une tonique ou cenſée telle, commune à ſon ton, & à celui qui ſuit.

Outre ce que nous avons dit chap. V, art. 3, au ſujet de la communauté de ſons dans les accords fondamentaux, on peut ſe repréſenter ici, que puiſque les accords ſont compoſés de tierces & de quintes, il s'enſuit, que l'une des deux notes fondamentales qui ſe ſuccédent à la tierce, ou à la quinte, doit être compriſe dans l'accord de l'autre.

Les deux notes fondamentales qui ſe ſuccéderont à la ſeconde, ſeront exceptées en apparence de cette regle, juſqu'à ce que la diſſonance nous ſoit connue.

Il reſte donc à ſavoir de quelle maniere une tonique, ou cenſée telle, ſe rend com-

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mune à ſon ton & à celui qui ſuit.

Pour être tout d'un coup au fait de cette liaiſon, il faut ſavoir que le moment du repos d'une phraſe, qui en marque par conſéquent la fin, peut être en même tems, le commencement de la phraſe ſuivante. Ainſi la tonique, ou cenſée telle, peut dans le moment qu'elle termine ſon repos, prendre la qualité qui lui convient dans le ton qui la ſuit, & recevoir en conſéquence l'harmonie convenable à ſon nouveau caractere.

C'eſt ainſi qu'on a vu dans les deux derniers exemples des toniques d'un ton mineur, finir leur ton par une tierce majeure, parce qu'elles deviennent dans le même moment, dominantes toniques du ton qui les ſuit.

Un repos peut finir par une note ſenſible appartenante au ton dans lequel on paſſe, & nullement à celui d'auparavant. Cependant après avoir bien examiné la phraſe qui précéde cette note ſenſible, on pourra encore ſe tromper, ſi aucun ſigne évident ne nous raſſure; mais le rapport néceſſaire entre les tons ſucceſſifs, ſuffiroit alors pour lever le doute.

Le ton mineur exiſte juſqu'au moment du repos, où ſa tierce marquée majeure,

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annonce le commencement d'un autre ton, auquel cette tonique ſert de dominante tonique. Ce cas peut arriver, ſans que la tierce majeure paroiſſe dans le ſujet, mais c'eſt à nous de la ſous-entendre.

Si la tonique d'un ton majeur devient ſous-dominante d'un ton mineur, & qu'on ne puiſſe répéter cette tonique, il faut la partager en deux valeurs, pour donner à ſa premiere valeur la tierce majeure, & à la deuxieme la tierce mineure. Ceci eſt relatif à ce que nous avons déja preſcrit chapitre VI, pour les tons qui ſe ſuccèdent à la quinte.

Il reſte à ſavoir, que la tonique d'un ton mineur, ne peut jamais devenir ſous-dominante d'un ton majeur. Ainſi *la*, tierce mineure, ne peut jamais être cenſée ſous-dominante de *mi*, tierce majeure.

Nous pouvons conclure de tout ce qui vient d'être dit, que toute tonique qui paſſe à ſa dominante, peut en être regardée comme la ſous-dominante; & que toute tonique qui paſſe à ſa ſous-dominante, peut en être regardée comme la dominante tonique, mais avec plus de circonſpection, car il faut pour lors, que le ton de cette ſous-dominante, ſoit annoncée dans le ſujet par un repos un peu ſenſible,

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quand ce ne ſeroit qu'un repos paſſager.

Toutes ces réflexions jettent de grandes lumieres, ſur tout ce qu'on a nommé juſqu'à préſent licence, faute d'en connoître le principe. Voyez *exemple* 14, *pl.* 5.

Obſervations ſur cet exemple.

La tonique *A* devient ſous-dominante de la tonique *B*.

La tonique *C* finit ſon ton par la tierce majeure, & devient par conſéquent dominante tonique de celle qui la ſuit à *D*; celle-ci prend la même qualité par rapport au ton qui ſuit. Ces deux notes ſont donc toniques par rapport à leur ton, & dominantes toniques par rapport au ton qui les ſuit.

On imagine tonique la note *E*, en faveur du repos un peu ſenſible qui ſe forme dans le ſujet en cet endroit, & pour lors la note qui précéde, devient dominante tonique de ſa ſous-dominante, imaginée tonique, laquelle deſcend immédiatement après de tierce, pour rentrer dans le ton d'où l'on étoit ſorti par le moyen de cette ſuppoſition.

La tonique *F* devient dans ſa deuxieme valeur, ſous-dominante de la tonique *G*; leur

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leur ton eſt également majeur : mais celui de la tonique *H* étant mineur, la tonique *G* qui la précéde, devient ſa ſous-dominante, & reçoit par conſéquent la tierce mineure à ſa deuxieme valeur, pour ſe conformer à la regle preſcrite pour les tons qui ſe ſuccèdent à la quinte.

Dès qu'une tonique monte de quinte, la deuxieme jouit du même droit, & peut en faire autant, pourvu que le ſujet s'y prête ; ſur tout lorſque le ton eſt indécis comme après *H*, juſqu'à ce qu'il ſoit parfaitement connu, comme à *I* où la derniere tonique, à laquelle la précédente a ſervi de ſous-dominante, devient de ſon côté dominante.

CHAPITRE X.

Des imitations de chant & de la baſſe fondamentale en conſéquence.

On diſtingue deux ſortes d'imitations de chant ; les unes ſe font en conſervant le même ton, les autres en changeant de ton à chaque imitation.

Nous diſtribuerons en deux articles ces deux ſortes d'imitations. Dans le premier

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nous traiterons des imitations de chant dans le même ton. Dans le deuxieme il ſera queſtion des imitations de chant dans différens tons.

ARTICLE I.

Des imitations de chant dans le même ton.

ON reconnoît les imitations de chant dans le même ton, en voyant le ſujet marcher toujours en montant, ou toujours en deſcendant d'une meſure à l'autre, de deux en deux, ou de quatre en quatre, par des intervalles pareils, ſans qu'il paroiſſe aucun ſigne qui puiſſe faire ſoupçonner un changement de ton.

Lorſqu'on voit un chant pareil à la ſeconde au-deſſus ou au-deſſous de celui qui précéde, la baſſe fondamentale marche généralement par quinte en montant, ſi l'imitation ſe fait en montant; & par quintes en deſcendant, ſi l'imitation ſe fait en deſcendant.

Dans les imitations en montant, quelquefois une note ſenſible, une ſyncope, ou quelque autre ſigne évident, oblige la baſſe fondamentale à deſcendre de tierce, pour monter enſuite de quinte ou de quarte,

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& toujours de même dans chaque imitation.

Les imitations ſe terminent généralement ſur le tems fort; & ſi le contraire arrive, il faut pour lors ſuivre les premieres regles, ſans s'obſtiner à faire monter ou deſcendre continuellement la baſſe fondamentale par quinte; il eſt bon même de s'en tenir à ces premieres regles, dans le cas où il paroîtroit quelques imitations dans le ſujet d'une meſure à l'autre; non qu'on ne puiſſe quelquefois la faire deſcendre de tierce, pour monter enſuite de quinte, lorſque l'imitation marche en montant. Mais dans ce cas comme en tout autre, lorſqu'on arrive à la derniere de ces imitations, il faut avoir égard au ton dans lequel elle finit, pour y ſoumettre la baſſe fondamentale, dont chaque note pouvant être cenſée tonique lorſqu'elle marche par quinte en montant, on donne à l'une de ces notes la route qui lui convient pour conduire à la tonique de ce ton.

L'inconvénient qui peut ſe rencontrer dans le ſujet, occaſionné par l'inégalité des intervalles dans les imitations, n'aura jamais lieu dans la baſſe fondamentale; car ſi ſa marche peut être uniforme dans chaque imitation, on doit peu ſe mettre en peine d'un intervalle que le goût aura

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introduit d'une imitation à l'autre.

La baſſe fondamentale doit ſervir partout de preuve. La régularité de ſes imitations ne peut ceſſer, que lorſqu'on eſt forcé de changer la route d'une tonique, pour ſe ſoumettre au ton où la derniere imitation va finir.

Les imitations qui ſe terminent ſur le tems fort, y introduiſent toujours un repos plus ou moins ſenſible.

On doit ſavoir à préſent, que dans le cas où la baſſe fondamentale deſcend de quinte, elle paſſe d'une dominante à une autre; & que lorſqu'elle monte de quinte elle paſſe d'une tonique à une autre. Dans le premier cas, la tonique d'où l'on part, peut dans ſa deuxieme valeur prendre la qualité de dominante; & dans le ſecond, celle de ſous-dominante.

Lorſque la baſſe fondamentale deſcend de tierce pour monter enſuite de quinte, ces deux notes peuvent être cenſées toniques, quoique celle où l'on deſcend de tierce puiſſe être traitée comme dominante; du moins on peut la ſuppoſer telle dans ſa deuxieme valeur.

Les tons étant preſque toujours indécis dans les imitations en montant; cette incertitude ſuffit pour y adopter la mar-

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che fondamentale par quinte en montant.

Si après une ou pluſieurs imitations à la ſeconde en montant il en ſurvenoit une à la tierce de celle-ci, on eſt forcé pour lors de faire deſcendre une tonique de tierce pour monter enſuite de quinte. Voyez *exemple* 15, *pl.* 6.

Obſervations ſur cet exemple.

Les chifres poſés au-deſſus des notes du ſujet, marquent la premiere note de chaque imitation.

Comme il faut toujours aſſurer le ton dans le début d'une piece de muſique, la baſſe fondamentale eſt conforme à nos premieres regles depuis le commencement juſqu'à *A*; & quand même une autre y ſeroit arbitraire elle y conviendroit moins qu'ailleurs.

Les imitations à la ſeconde en montant depuis *A*, exigent une baſſe fondamentale par quintes en montant. Mais comme la troiſieme de ces imitations eſt à la tierce de celle qui la précéde, on eſt forcé d'y faire deſcendre de tierce la baſſe fondamentale pour monter enſuite de quinte.

L'intervalle *B* de la troiſieme imitation n'eſt point pareil à celui de la premiere

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ni de la ſeconde ; mais il ſuffit que les notes de cette meſure appartiennent au même accord, pour que la baſſe fondamentale y ſoit pareille à celle des imitations qui ont précédé celle-ci.

On pourroit ſuivre les premieres regles à *C* ſelon le guidon, ſans le repos ſenſible qui ſe fait ſentir en cet endroit, & qui va s'imiter à chaque imitation, lequel exige une cadence parfaite, où la ſous-dominante eſt cenſée tonique, après laquelle la baſſe fondamentale eſt contrainte à deſcendre de tierce pour monter enſuite de quarte en conſéquence de la note ſenſible *D*, ce qui s'obſerve encore dans l'imitation ſuivante.

La baſſe fondamentale ne peut pas ſuivre la même route à la quatrieme imitation, où le deuxieme intervalle n'eſt pas pareil à ceux des imitations qui ont précédé ; mais quand même elle le pourroit, la note ſenſible *E* ſuffit, pour que la baſſe fondamentale conſerve la ſeule note qui peut précéder cette note ſenſible.

La ſous-dominante eſt cenſée tonique à *F*, non ſeulement parce que le repos y eſt ſenſible, mais pour ſe conformer à l'imitation qui a précédé.

Les imitations après *F* ſont à la ſeconde

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en deſcendant. La marche fondamentale par quinte y eſt autoriſée, & pour y parvenir après la ſous-dominante cenſée tonique à *F*, on voit la néceſſité de la faire deſcendre de tierce en conſéquence de la note ſenſible qui vient immédiatement après.

On eſt obligé de changer la baſſe fondamentale à chaque tems fort aux ſyncopes des imitations entre *G* & *H*; cependant on ne peut obſerver cette marche immédiatement après *G*, par la raiſon, que ſi on deſcendoit de tierce en cet endroit, on ne pourroit pas remonter de quarte, & on manqueroit par-là de conformer la baſſe fondamentale aux imitations du ſujet.

La note ſenſible à *H* décide tout d'un coup ce que doit devenir la tonique qui eſt ſous le chifre 4, laquelle ne peut arriver à la dominante tonique qu'exige cette note ſenſible que par une marche de dominantes, ſans s'embarraſſer de l'irrégularité de cette derniere imitation, par rapport à celles qui ont précédé.

Les imitations à *I* ſont à la tierce en deſcendant; la baſſe fondamentale y deſcend par-tout de tierce ſur des toniques paſſageres pour arriver au ton qui ſe déclare enſuite.

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Il eſt libre de ſuivre la route des guidons ou celle des notes immédiatement après la lettre *I.*

ARTICLE II.

Des imitations de chant dans différens tons.

LES difficultés s'applaniſſent dans les imitations de chant dans des tons différens. La premiere de ces ſortes d'imitations ſert de guide aux ſuivantes. Même route partout & mêmes notes fondamentales à chaque tems des mêmes meſures relativement à la tonique de chaque ton.

Il y a des cas où l'on ne peut obſerver aucune liaiſon d'une imitation à l'autre, parce que le chant de ces imitations eſt tellement fini, que la baſſe fondamentale eſt forcée de commencer & de finir chaque imitation par la tonique. Remarquons bien que ce n'eſt jamais que dans un cas pareil, que l'on peut faire ſuccéder deux toniques à la ſeconde l'une de l'autre. Voyez *exemple* 16, *pl.* 7.

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Obſervation ſur cet exemple.

Les imitations *A* & *B* ſont à la ſeconde en deſcendant ; la premiere dans le ton de *re*, la ſeconde dans le ton d'*ut*. Les notes de la baſſe fondamentale de la deuxieme imitation, ſont pareilles à celles de la premiere un ton plus bas. Chacune de ces imitations commence par la dominante de la dominante tonique dans la baſſe fondamentale.

Pour obſerver plus de liaiſon entre la note fondamentale de la premiere imitation *C* & celle qui la précéde, il eſt libre de la commencer par une tonique étrangere, quoiqu'on puiſſe auſſi la faire commencer par la dominante de la dominante tonique, ſelon le guidon.

On peut pratiquer la même choſe à *D* ; mais cependant on fera mieux ici de préférer le guidon à la note, ſans vouloir s'obſtiner à ſuivre exactement l'imitation dans la baſſe fondamentale.

Les deux imitations *E F* commencent & finiſſent par la tonique de leur ton. Or comme elles ſont à la ſeconde l'une de l'autre, il ne peut y avoir aucune liaiſon entre ces deux toniques qui ſe ſuccédent

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immédiatement. Voilà le ſeul cas, où l'on peut tranſgreſſer la regle donnée à l'égard de la liaiſon d'harmonie entre les tons ſucceſſifs.

Il eſt libre de faire commencer la premiere des quatre dernieres imitations, par la tonique ſelon le guidon; mais il ne l'eſt pas, de vouloir rendre conforme la baſſe fondamentale des deux premieres; car comme elles ſont dans le même ton, il faut y ſuivre ce qu'exige le ſujet.

Lorſque les imitations ſe trouvent dans des tons différens, c'eſt ſouvent ſur la deuxieme imitation qu'on doit regler la baſſe fondamentale des autres.

CHAPITRE XI.

Des cas où il faut partager une note du ſujet en deux valeurs pour faciliter la marche fondamentale preſcrite.

LORSQU'IL n'eſt pas poſſible d'obſerver la marche fondamentale preſcrite, c'eſt là le cas où il faut partager une note du ſujet en deux valeurs, pour donner à chacune de ces valeurs une note fondamentale différente.

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La note du ſujet que l'on doit partager ainſi, peut appartenir à la tonique du ton que l'on quitte, & à la note fondamentale du ton où l'on entre. De ſorte que le choix de ces deux notes fondamentales dépend toujours ou de celle qui précéde, ou de celle qui ſuit cette note ainſi partagée (*a*).

Cette note ainſi partagée, fournit quelquefois le moyen de paſſer d'une tonique à une autre, qui pourra devenir commune à ſon ton, & à celui qui ſuit. On peut encore par ce moyen, paſſer de la tonique d'un ton majeur à celle de ſon ton mineur relatif, ou bien prendre la route des dominantes pour arriver à la tonique du ton connu.

Cependant ſi le ſujet forme un repos ſenſible, immédiatement avant la note qu'on eſt forcé de partager, on peut en cet endroit interrompre la liaiſon, en faiſant ſuccéder deux toniques à la ſeconde l'une de l'autre, de même que dans les imitations. Car un repos ſenſible eſt en muſique, ce que le point eſt dans le diſcours; il marque la fin d'une phraſe qui

(*a*) Car ſouvent ce n'eſt pas la note du ſujet qui termine le ton d'une phraſe qu'il faut partager, mais celle qui ſuit.

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peut n'avoir aucun rapport avec celle qui la ſuit.

Mais cette poſſibilité ne doit jamais autoriſer l'abus qu'on en pourroit faire. Voyez *exemple* 17, *pl.* 8.

Obſervations ſur cet exemple.

Si l'on ne donnoit deux notes fondamentales différentes à la note *A* du ſujet, la baſſe fondamentale ne pourroit pas obſerver ſa marche légitime. Aulieu que par ce moyen, on arrive d'une tonique à l'autre par une marche par quintes.

La note *B* du ſujet ſe partage pour recevoir d'abord la tonique du ton majeur de *ſol*, & ſucceſſivement celle du ton mineur de *mi* ſon mineur relatif.

On partage la note *C* pour procurer à la baſſe fondamentale ſa marche la plus légitime.

La baſſe fondamentale des deux imitations à la ſeconde eſt pareille dans chacune, en n'y comparant que la deuxieme noire ſous *C*.

Si on retranche la premiere noire ſous *A* & ſous *C*, & la deuxieme ſous *B*, la liaiſon d'harmonie ſera interrompue. Ce défaut peut cependant être autoriſé à la

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faveur du repos ſenſible qui précéde, mais avec beaucoup de reſerve.

CHAPITRE XII.

De la brêve & de la baſſe fondamentale en conſéquence.

ON appelle brêve toute note qui en ſuit une pointée.

On ſçait aſſez que le point vaut la moitié de la valeur de la note qui le précéde, & que la brêve qui le ſuit ne vaut pas davantage. D'où il eſt aiſé de remarquer, que le point & la brêve enſemble, ont préciſément la même valeur que la note qui les précéde. Mais il faut faire attention d'avance, que pluſieurs brêves dont la valeur eſt égale à celle d'une ſeule brêve ne doivent être conſidérées que comme une ſeule.

La brêve doit être comptée pour rien 1°. dans le cas où elle obligeroit la baſſe fondamentale de ſyncoper, ſurtout ſi cette baſſe fondamentale peut ſuivre ſa route determinée ſans avoir égard à la brêve. 2°. Lorſque cette brêve eſt ſuivie d'une note ſur le même dégré, bien entendu,

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que s'il ſe formoit un repos ſur la dominante, dont la note du ſujet qui le formeroit de ſon côté, ſeroit précédée d'une brêve ſur le même dégré, & qu'il n'y eut pas moyen de donner à la baſſe fondamentale ſa marche légitime ſans avoir égard à cette brêve, il faudroit pour lors lui donner ſa baſſe fondamentale particuliere.

Lorſqu'une brêve eſt ſuivie diatoniquement d'une note ſur laquelle il y a repos, elle doit encore avoir ſa baſſe fondamentale particuliere. Voyez *exemple* 18, *pl.* 9.

Obſervations ſur cet exemple.

Comme il n'y a point de repos ſur la note qui ſuit la brêve *A*, on peut la compter pour rien puiſque la marche fondamentale n'en ſera pas moins réguliere. Il eſt libre auſſi de ſuivre l'autre route indiquée par le guidon.

Si l'on comptoit la brêve *B* pour rien, la cadence néceſſaire au repos qui ſuit cette brêve ne pourroit avoir lieu.

On compte les brêves *C* pour rien, non ſeulement parce qu'il n'y a point de repos ſur la note qui les ſuit, mais parce que la marche fondamentale n'en ſouffre point.

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A l'égard des brêves *D* on les compte pour une ſeule, que l'on choiſit parmi celles qui conviennent le mieux à la marche fondamentale.

Quelque fois il s'en trouve plus d'une qui dépendent de l'harmonie, comme cela ſe voit en cet endroit.

La brêve *E* doit avoir ſa baſſe fondamentale particuliere, conſéquemment au repos qui la ſuit, & pour éviter d'ailleurs la ſyncope qu'il y auroit en cet endroit.

On voit clairement la néceſſité de faire porter harmonie aux brêves 1, 2 & 3.

Le repos ſenſible terminé ſur la note qui ſuit la brêve *F*, met celle-ci au nombre de celles qui ſont comptées pour rien. On doit toujours en uſer de même en pareil cas.

Même obſervation à *G* qu'à *D*.

La brêve avant *H* exige ſa baſſe fondamentale particuliere, en conſéquence du repos qui vient après ſur la dominante.

Les autres brêves de cet exemple, ſont expliquées par les obſervations précédentes.

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CHAPITRE XIII.

Du deſſein de la baſſe fondamentale en conſéquence de celui du ſujet.

NOTRE premiere attention doit ſe porter à ſaiſir l'eſprit du ſujet, ſur-tout dans les cas viſibles & ſenſibles.

Pour peu que le chant ſoit deſſiné, toutes ſes phraſes commenceront par le même tems de la meſure qu'aura commencé la premiere phraſe, & on y ſoumet la baſſe fondamentale autant qu'il eſt poſſible.

Souvent le goût de variété demande qu'on s'écarte de cette regle, ſur-tout dans les endroits où le repos n'eſt pas bien ſenſible, & qui pourroit faire prendre ce qui ſuit pour un commencement de phraſe.

On doit faire commencer chaque phraſe par une nouvelle note fondamentale autant que le ſujet le permet. Si cette note eſt la tonique d'un nouveau ton, laquelle ſe trouve précédée de la tonique du ton que l'on quitte & qu'il ſe trouve de l'arbitraire entre la ſucceſſion de ces deux toniques, & une ſuite de dominantes qui conduiſent

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conduiſent plus loin à la tonique de ce nouveau ton, celle-ci doit être préférée en conſéquence de l'eſprit du ſujet.

Pourvu que la marche fondamentale ſoit bien obſervée, on peut conſerver une tonique qui termine ſon ton, pour prendre la qualité qui lui conviendra dans celui qui ſuit.

S'il y a de l'arbitraire entre les tems de la meſure, où la tonique pourroit être employée, il faut, autant qu'on le peut, lui reſerver le tems fort, à moins qu'elle ne ſervit à commencer la phraſe avec le ſujet.

On aura la même attention pour la dominante tonique, à moins que la tonique ne ſoit préferable.

S'il y a de l'arbitraire entre les deux tems foibles de la meſure à trois tems, on doit préférer le troiſième, pourvu que l'eſprit du ſujet ne s'y oppoſe.

On doit auſſi faire attention aux reſtes de repos dont nous avons fait mention aux obſervations de l'exemple du troiſième moyen de connoître le ton, chap. VII. en examinant ſi on doit le prendre pour un reſte, ou bien pour un commencement de phraſe en conſéquence du début.

On ne doit pas moins faire attention à

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la note du ſujet qui annonce un repos, & ſur laquelle il y a un tremblement, car c'eſt à celle-ci qu'il faut appliquer la dominante tonique qui annonce la cadence parfaite, & reſerver la dominante de cette dominante tonique, pour la note qui aura précédé ſur le même degré, celle qui porte le tremblement. Voyez *les exemples 19. & 20. pl. 9*

Obſervations ſur ces deux exemples.

On auroit pu conſerver la tonique ſous les notes *A B*, mais comme le ſujet débute par le deuxième tems de la meſure, c'eſt pour ſe ſoumettre à ce deſſein, que l'on a donné une nouvelle note fondamentale à ces deux notes du ſujet qui ſont d'ailleurs communes à l'accord de la tonique & à celui de la dominante tonique.

L'eſprit du ſujet pourroit exiger la même choſe à *C*, puiſque le commencement de la phraſe s'y trouve arbitraire entre *C* & *D*; mais il vaut cependant mieux employer la tonique à *D*, qui eſt réputé tems fort, relativement au deuxième.

Le tremblement n'eſt marqué que ſur la dernière des deux notes *E F*, dans les

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deux exemples ; & c'eſt là que la cadence parfaite doit être annoncée par la dominante tonique, précédée de la ſienne.

On ne peut ſuivre l'eſprit du ſujet dans le deuxième exemple, qui débute par le tems foible de la meſure, parce que le chant oblige preſque par-tout à conſerver la même note fondamentale dans chaque meſure. Mais ce défaut peut ſe corriger dans la baſſe-continue.

Les chiffres 1. 2. 3. marquent des imitations à la ſeconde en deſcendant.

En ſaiſiſſant la tonique du nouveau ton au tems foible *G*. on a eu égard à l'eſprit du ſujet ; au lieu que dans tout autre cas, il auroit fallu attendre le tems fort pour l'employer.

Quoique la baſſe fondamentale paroiſſe ſyncoper à *H*. cette ſyncope eſt évitée par la qualité que prend cette note fondamentale en devenant dominante tonique. Elle eſt d'abord tonique, en conſéquence de ſon rapport avec le ton qui la précede ; & devient enſuite dominante tonique du ton de *re*. connu par le repos ſenſible à *I*.

Remarquons depuis *H*. juſqu'avant *K*. deux ſons fondamentaux communs aux tons de *la* & de *re*. leſquels peuvent être appliqués indifféremment, à l'un ou à

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l'autre de ces deux tons, juſqu'à ce qu'on ne puiſſe douter de celui indiqué par la note ſenſible *K*.

CHAPITRE XIV.

De la modulation.

LA modulation conſiſte dans une ſucceſſion agréable de pluſieurs tons relatifs. Leurs différentes tranſitions finement préparées; leurs liaiſons délicates, où l'art eſt d'autant plus admirable qu'il eſt plus caché, y jettent cette variété qui fait le charme de la muſique. C'eſt aux entrelacements des tons ménagés avec goût, que nous devons ces tendres émotions, cette ſatisfaction interieure, ces tranſports doux & raviſſans que nous éprouvons dans l'exécution d'un beau morceau. C'eſt lui qui jette dans l'ame, la terreur & l'effroi par des écarts imprévus, & des ſucceſſions rapides d'harmonie, dont les rapports irréguliers en apparence, & ſouvent mal obſervés à deſſein, font frémir l'auditeur.

Nous allons hazarder quelques règles générales de modulation, en faveur des jeunes éleves, en qui l'expérience cede ſouvent au génie.

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De tous les tons qui peuvent ſe ſuccéder dans une piece de muſique, le ton principal doit avoir le pas ſur les autres & y être le plus fréquent. Il eſt ſuivi généralement dans le début, du ton de ſa dominante ; & s'il eſt mineur, de celui de ſon ton majeur relatif. Quelquesfois, mais plus rarement, le principal peut être ſuivi de celui de ſa ſous-dominante, ou de celui de ſa ſeconde au-deſſus ; & s'il eſt mineur, de celui de ſa ſeconde au-deſſous. Le principal peut revenir enſuite pour un moment, avec lequel on entrelace tous les tons relatifs à ſon gré, en obſervant que moins ils ſont relatifs au principal, & plus les phraſes de ces tons doivent être courtes, & ſur-tout lorſqu'ils ſe ſuccédent à la ſeconde.

Il faut obſerver encore, qu'ayant paſſé par des tons qui contiennent plus de dièzes que le principal, il faut inſenſiblement revenir à d'autres qui en contiennent moins, pour qu'on puiſſe toujours conſerver l'idée de ce principal, en entendant alternativement, des tons tantôt à la quinte au-deſſus, tantôt à la quinte au-deſſous, & tantôt relatifs à la tierce mineure de ces quintes auſſi bien que du principal.

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Les repos paſſagers ſe font ſur la dominante tonique ; quelquefois ſur la ſous-dominante cenſée pour lors tonique. Les plus ſenſibles ſe font ſur la tonique ; & ſi on fait ceux-ci ſur la dominante tonique, les premiers appartiendront pour lors à la tonique.

Si dans une phraſe un peu longue dans le même ton, ſur-tout au début & à la fin d'une piece de muſique, on trouve dans le ſujet quelque repos, par le moyen duquel, on puiſſe changer ce ton pour un moment, il en faut profiter, afin d'ajouter à la beauté de l'harmonie & même à l'agrément du chant. D'ailleurs on évite par ce moyen, la monotonie, & on ſatisfait pleinement l'auditeur par cette variété.

Pour peu qu'on y faſſe attention, il eſt preſqu'impoſſible d'en manquer l'occaſion. On en peut voir des modèles à la lettre *G*. de l'exemple 18, & à la lettre *I*. de l'exemple 20, où l'on entrelace le ton de la ſous-dominante au milieu du principal, à l'occaſion du repos plus ou moins ſenſible qui ſe forme en ces deux endroits.

Cette attention produira toujours un bon effet, ſur-tout ſi le principal au milieu duquel on inſere celui de ſa ſous-domi-

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nante, eſt précédé par un autre ton qui contient un dièze de plus, ou un bémol de moins que le principal. Au lieu que s'il contient moins de dièzes, celui de ſa dominante y conviendra mieux, bien entendu que le ſujet s'y prêtera de ſon côté.

Enfin, lorſqu'on poſſéde la manière de faire ſuccéder les tons les uns aux autres, on poſſéde l'art de la compoſition, & le moyen de ſe relever de bien des doutes. Voyez *exemple* 21. *pl.* 10.

Obſervations ſur cet exemple.

Après le ton de *la* par où l'on a débuté, vient celui d'*ut* ſon majeur relatif à *A.* Celui de *ſol* quinte d'*ut* à *B*, celui de *re* quinte de *ſol* à *C*, lequel rentre dans le ton principal à *D.* Les phraſes de tous ces tons ſont très-courtes.

La phraſe du ton de la dominante du principal, eſt plns longue; elle commence à *E*, & finit à *G.* Mais voyant un repos ſenſible à *F*, on en profite pour y ſaiſir le ton majeur relatif, par le moyen d'une marche de dominantes d'une tonique à l'autre, après quoi on rentre dans le premier ton, dont la monotonie eſt détruite par ce mêlange.

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Les chiffres 1 ,2, marquent des imitations en deſcendant de ſeconde dans des tons différens.

Après le ton d'*ut* à *H*, on prend pour un moment celui de ſa ſous-dominante, & l'on rentre enſuite dans le premier.

Les imitations 1. 2., ſont à la ſeconde en montant; la baſſe fondamentale monte ſucceſſivement de quinte ſur des toniques, dont la dernière à *I* reçoit plus de dièzes dans ſon ton, qu'il n'y en a eu depuis *H*.

Pour varier la phraſe du ton principal après *I*, on profite du repos ſenſible à *K* pour y ſaiſir le ton d'*ut*, & on y arrive par une marche de dominantes. On rentre enſuite dans le ton principal. Imitations à la quinte en deſcendant aux chiffres 1,2,3,4,5,6, dans des tons différens, & où la baſſe fondamentale deſcend partout de quinte, malgré l'inégalité de quelques intervalles dans ces imitations.

A l'égard de la ſyncope de la baſſe fondamentale entre les meſures 14 & 15, il faut ſe rappeller ici, ce que nous avons dit à ce ſujet à la troiſieme règle du chap. III.

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CHAPITRE XV.

Où l'on indique les moyens de trouver la baſſe fondamentale en rétrogradant.

LES règles données juſqu'à préſent pour trouver la baſſe fondamentale de tous les chants poſſibles par les conſonnances, devroient ſuffire pour conduire au but deſiré. Sçavoir bien diſtinguer les ſignes du ſujet; ſaiſir les momens où les repos s'annoncent; celui où le ton change; connoître les notes cenſées toniques; la poſſibilité des toniques paſſageres; les imitations du chant; la diviſion poſſible d'une note du ſujet en deux valeurs, & ſur-tout la marche fondamentale déterminée qui eſt la même dans chaque ton, & où le ſujet ne décide que pour la note qui doit ſuivre la tonique, ou cenſée telle.

Tous ces ſecours, ſoutenus d'un peu de patience & d'attention, ſont plus que ſuffiſans, pour réuſſir dans ſon entrepriſe. Cependant pour ne rien laiſſer à deſirer, nous ajouterons à toutes ces règles, les moyens de compoſer la baſſe fondamentale en rétrogradant, ce qui pourra ſervir

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de preuve à l'opération que l'on auroit déjà faite dans l'ordre direct, & faire connoître d'ailleurs la choſe dans toutes ſes forces.

Dès que les difficultés ſe préſentent, il faut s'arrêter à la dernière tonique connue, & tâcher de s'aſſurer du ton qui ſuit cette tonique par les moyens donnés chap. VII. Si le même ton continue, ſa marche fondamentale en eſt bientôt trouvée.

Le nouveau ton étant connu, on en diſtingue la médiante, ou la note ſenſible dont la baſſe fondamentale eſt connue; on l'écrit au deſſous de l'une ou de l'autre de ces deux notes. Si ces deux notes connues n'exiſtent pas dans le ſujet, on choiſit la note qui termine le repos de ce nouveau ton, & après en avoir écrit la baſſe fondamentale au-deſſous, on dit; la tonique doit être précédée de ſa dominante ou de ſa ſous-dominante, ſinon d'une autre tonique. Toute dominante doit être précédée de la ſienne, ou bien d'une tonique; & toute ſous-dominante doit être précédée ou ſuivie de ſa tonique, à moins qu'on ne l'employe pour tonique ou pour dominante comme cela eſt poſſible. Et on marche ainſi d'une note à l'autre en rétrogradant, conformément à ce que le ſujet exige.

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Il faut examiner ſi le ſujet permet de conſerver la même note fondamentale, dans une ou pluſieurs meſures conſécutives. Il faut éviter de la faire ſyncoper, & même de la répéter dans un tems fort, à moins qu'elle ne puiſſe continuer dans toute la meſure.

Il faut éviter encore de monter de ſeconde en rétrogradant, parce qu'on deſcendroit par un pareil intervalle dans l'ordre direct.

On ne peut non plus deſcendre de tierce, à moins que les deux notes fondamentales ne ſoient également toniques ou cenſées telles.

Si l'on trouve une tonique au milieu de ſa route, & qu'elle ſoit la tonique d'un nouveau ton, il n'y a rien à dire là deſſus. Mais ſi c'eſt celle du ton qui exiſtoit auparavant, il faut examiner, ſi depuis la note fondamentale où l'on s'étoit arrêté, juſqu'à celle-là, il n'y a point de ſignes dans le ſujet, qui donnent l'excluſion à ce premier ton, & s'il ne s'en trouve point, on aura bien jugé. Si au contraire les ſignes du ſujet concluent pour le premier ton, c'eſt ſigne qu'on s'étoit arrêté trop-tôt, & que l'on pouvoit encore continuer le premier ton, juſqu'à ſa tonique

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qui ſe préſente ainſi au milieu de la route:

Les notes que le ſujet parcourt pouvant être communes à pluſieurs tons relatifs, cela peut quelquefois nous tromper, mais au défaut des ſignes les plus évidens, un repos un peu ſenſible, le rapport que doit avoir le ton imaginé avec celui qui le précède, & celui qui le ſuit; la marche fondamentale même, tout cela concourt à rectifier les idées, & à faire préférer le véritable ton qui exiſte dans le ſujet.

Dès qu'on ne peut faire précéder une note fondamentale dans l'ordre preſcrit, c'eſt là qu'il faut examiner s'il ne ſeroit pas poſſible d'inférer une ou deux toniques étrangeres.

Si la note fondamentale en queſtion eſt dominante, elle peut être précédée d'une tonique, par quelque intervalle que ce ſoit, excepté de ſeconde en montant & de tierce en deſcendant. Si au contraire elle eſt tonique, elle peut être précédée d'une autre tonique, par tous les intervalles conſonnans. Et ſi elle eſt ſous-dominante, il faut la regarder pour lors comme cenſée tonique. On peut encore avoir recours à la poſſibilité de partager une note du ſujet en deux valeurs, mais à la dernière extrémité.

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Comme la note ſenſible d un ton majeur, peut auſſi être ſeconde note du ton mineur relatif, il faut être ſur ſes gardes pour ne pas s'y laiſſer tromper.

Dans ce cas, il ne faut pas s'en rapporter au premier ſigne du ſujet quelque évident qu'il paroiſſe, mais examiner attentivement toute la phraſe, juſqu'à un repos ſenſible.

Il ne faut pas non plus négliger le rapport néceſſaire entre les tons ſucceſſifs, & pour lors on juge ſi ce premier ſigne avoit indiqué juſte. Voyez *exemple* 22. *pl.* 11.

Obſervations ſur cet exemple.

La note *B*. ſans dièze, prouve ſuffiſamment que le ton de *la*. reconnu par l'intervalle de quinte du début, n'exiſte plus, & d'ailleurs l'intervalle de tierce en deſcendant ſur le tems fort à *C*. prouve aſſez le ton d'*ut*. Ce ton étant connu, la note *A*. eſt par conſéquent ſa note ſenſible, ſous laquelle on écrit la dominante tonique pour baſſe fondamentale. On ſçait que cette dominante doit être précédée de la ſienne, ou de la tonique; en examinant le ſujet on voit que c'eſt ſa

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dominante qui doit la précéder, & on l'écrit au-deſſous, & comme elle ſe trouve dans le tems foible, on examine ſi elle peut ſe conſerver dans le tems fort, ſans que cela empêche de la faire précéder de la ſienne, ou de la premiere tonique, & on arrive ainſi d'une dominante à l'autre en rétrogradant, juſqu'à la tonique du début.

Le ton de *la* reconnu par l'intervalle de quarte à *D*, recommence par la tonique, précédée de celle d'*ut*. Dès que la tonique eſt une fois employée, il eſt inutile d'aller chercher la médiante, ou la note ſenſible de ce nouveau ton, pour compoſer en rétrogradant.

La baſſe fondamentale en rétrogradant, devient inutile depuis *D* juſqu'à *E*, où les ſignes du ſujet indiquent aſſez les tons que l'on y parcourt.

Voyant le ton de *mi* déclaré par ſa note ſenſible *F*, on peut écrire au-deſſous la dominante tonique de ce ton, & marcher en rétrogradant juſqu'à la tonique *ut*, où l'on auroit pu s'arrêter à *E*, le tout dans l'ordre direct.

La ſyncope à *G* doit engager à examiner la ſuite du ſujet, dans lequel on trouve après la ſyncope en queſtion, un intervalle de quarte, qui déclare le ton d'*ut*, le reſte

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de la phraſe s'y conforme juſqu'au dièze *H*. de ſorte qu'on eſt dans le cas de prendre la tonique *ut* après celle de *mi*, ſous la deuxiéme valeur de la ſyncope *G*.

L'idée qui pourroit naître en faveur des guidons de la baſſe fondamentale depuis *G* ſeroit bien inſipide, en comparaiſon des toniques ſucceſſives qui s'y rencontrent, & dont les deux premières ſont inévitables & les deux dernières ſont ſimplement paſſagères. Remarquons bien, que la dernière de ces deux, eſt commune à ſon ton & au principal de la phraſe, en y devenant dominante de la dominante tonique.

La note ſenſible *I*. déclare le ton de *re* après avoir écrit au-deſſous la dominante tonique pour baſſe fondamentale, on examine ſi celle-ci doit être précédée de la ſienne, ou de ſa tonique, & on trouve que le ſujet indique la dernière, précédée par ſa dominante, laquelle comparée à la tonique qui la précéde, & où l'on aura pu s'arrêter, ſe trouve à la ſeconde au-deſſus ſelon la marche poſſible d'une tonique.

Le bémol à *K* décide pour le ton de *fa*, dont la médiante *L* exige la tonique, & le ſujet fournit les moyens de la faire précéder par des dominantes juſqn'à la tonique d'auparavant.

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Si la note *M* ſans bémol fait ſoupçonner le ton d'*ut*, le dièze *N* déclare celui de *la*. Mais le rapport entre les tons ſucceſſifs, doit déterminer en faveur de celui d'*ut* qui ſe préſente entre le majeur de *fa*, & le mineur de *la*; car il les lie de manière à rendre leurs rapports agréables. D'ailleurs l'imitation de chant dans trois meſures conſécutives, depuis la meſure *M* exige néceſſairement une marche par quintes en deſcendant.

Le ton de *fa* eſt déclaré de nouveau par le bémol *P*, & par l'intervalle de tierce qui vient après. La note *Q* ſans bémol, & le repos ſenſible qui vient après, prouve le ton de *la*. Remarquons ici, que malgré la variété des tons que l'on parcourt depuis *L*, la baſſe fondamentale marche toujours par des dominantes.

On doit préférer les notes aux guidons à la première des deux imitations, qui ſuit le repos en *la*, non ſeulement pour conformer l'imitation de la baſſe fondamentale à celle du ſujet, mais pour lier le ton de *ſol* à celui de *la* qui le précéde, par le moyen de la tonique étrangere ſur laquelle on deſcend de tierce, & qui devient ſur le champ ſous-dominante d'*ut*. De ſorte que la liaiſon ſe trouve parfaite entre ces trois tons,

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tons, & les deux imitations bien régulières dans la baſſe fondamentale.

Le ton de *re*. après le chiffre 2, devroit être naturellement mineur, mais outre que cette tonique paſſagere n'eſt là que pour lier les tons ſucceſſifs, c'eſt que la néceſſité des deux dièzes accidentels qui montent à la tonique, doit l'emporter ſur toute autre conſidération.

Le dièze *R* annonce le ton de *ſol*. mais le ton de *la* qui précéde, doit plutôt faire ſoupçonner le ton de *mi* en conſéquence de leur rapport. Tous les intervalles de quinte ou de quarte dans le ſujet, ſe déclarent pour celui-ci, & un peu plus loin, le repos annoncé par ſa note ſenſible, ne permet plus d'en douter. Cependant la marche des dominantes depuis la tonique *la*. juſqu'à la tonique *mi* à *S*. peut faire regarder le ton de *ſol* comme paſſager, ſi l'on n'aime mieux le traiter de dominante comme les autres, ce qui eſt libre.

Lorſque les ſuites de dominantes qui conduiſent à un ton mineur, ſont un peu longues, la tonique du ton majeur relatif s'y trouve toujours inſérée; & il eſt libre de traiter pour ce moment, le ton majeur de cette tonique, d'autant mieux qu'elle y eſt précédée de ſa dominante tonique.

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Ayant reconnu le ton de *mi* ſoit à *R*. ſoit par ſon rapport avec celui de *la* qui le précéde & le ſuit; ſa médiante après *S*, ſera en même tems connue; ſous laquelle la tonique *mi* ayant été écrite, on marchera en rétrogradant par une ſuite de dominantes, juſqu'à la tonique *la*, où l'on ſe feroit peut-être arrêté, & que la marche directe auroit également donnée depuis ce même *la*. Cependant dès que le ton de *mi* eſt reconnu, on peut faire monter de ſeconde la tonique *la* ſous *R*, pour arriver immédiatement après, à la tonique *mi* ſelon les guidons. Mais ſi l'on ſe ſouvient de la préférence que l'on doit donner à une marche plutôt qu'à une autre, on en ſentira bien plus la force en cet endroit. Outre qu'on évite par ce moyen, de trop fréquens repos ſur la même tonique.

Fin de la première Partie.

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EXEMPLES RELATIFS

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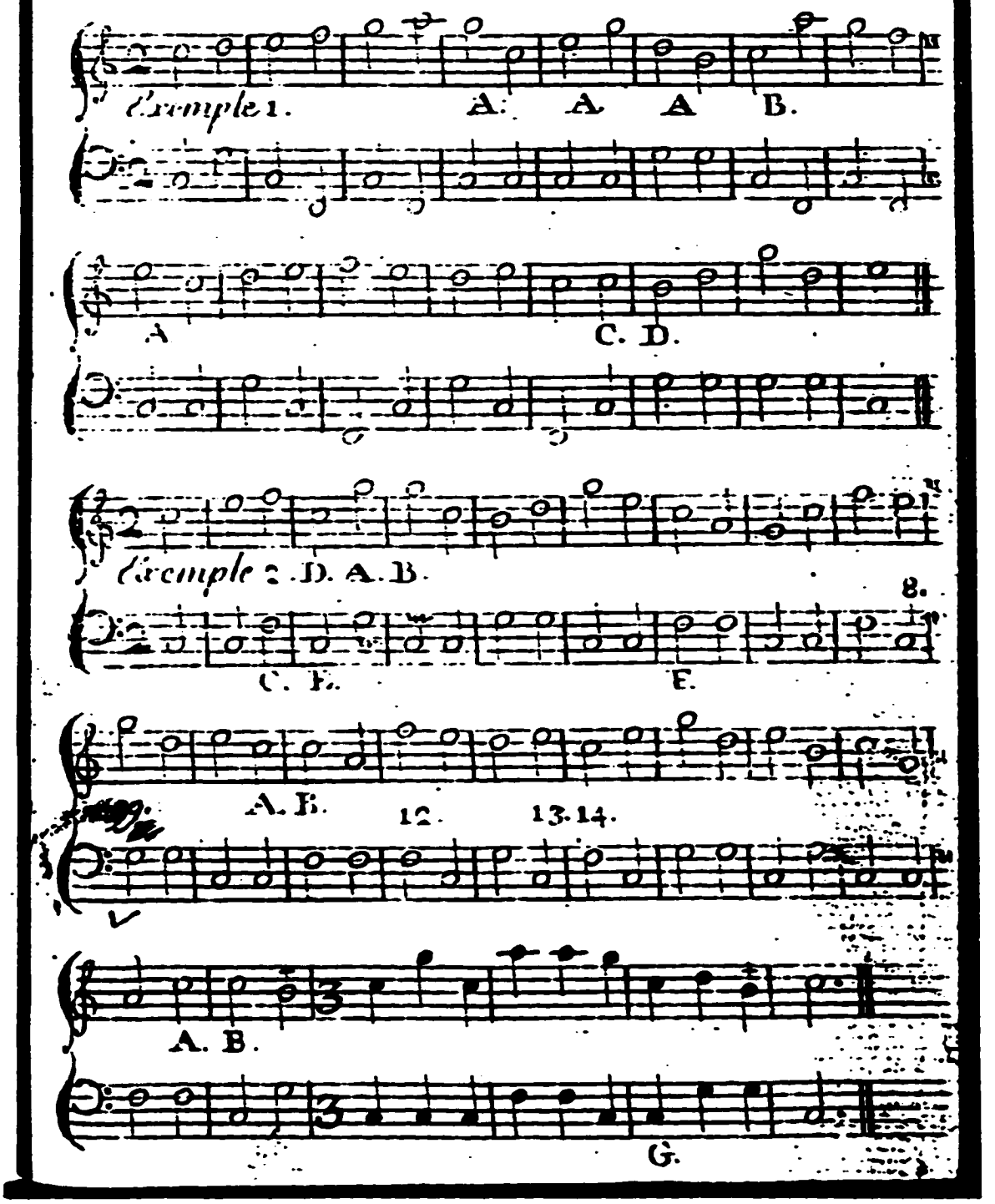
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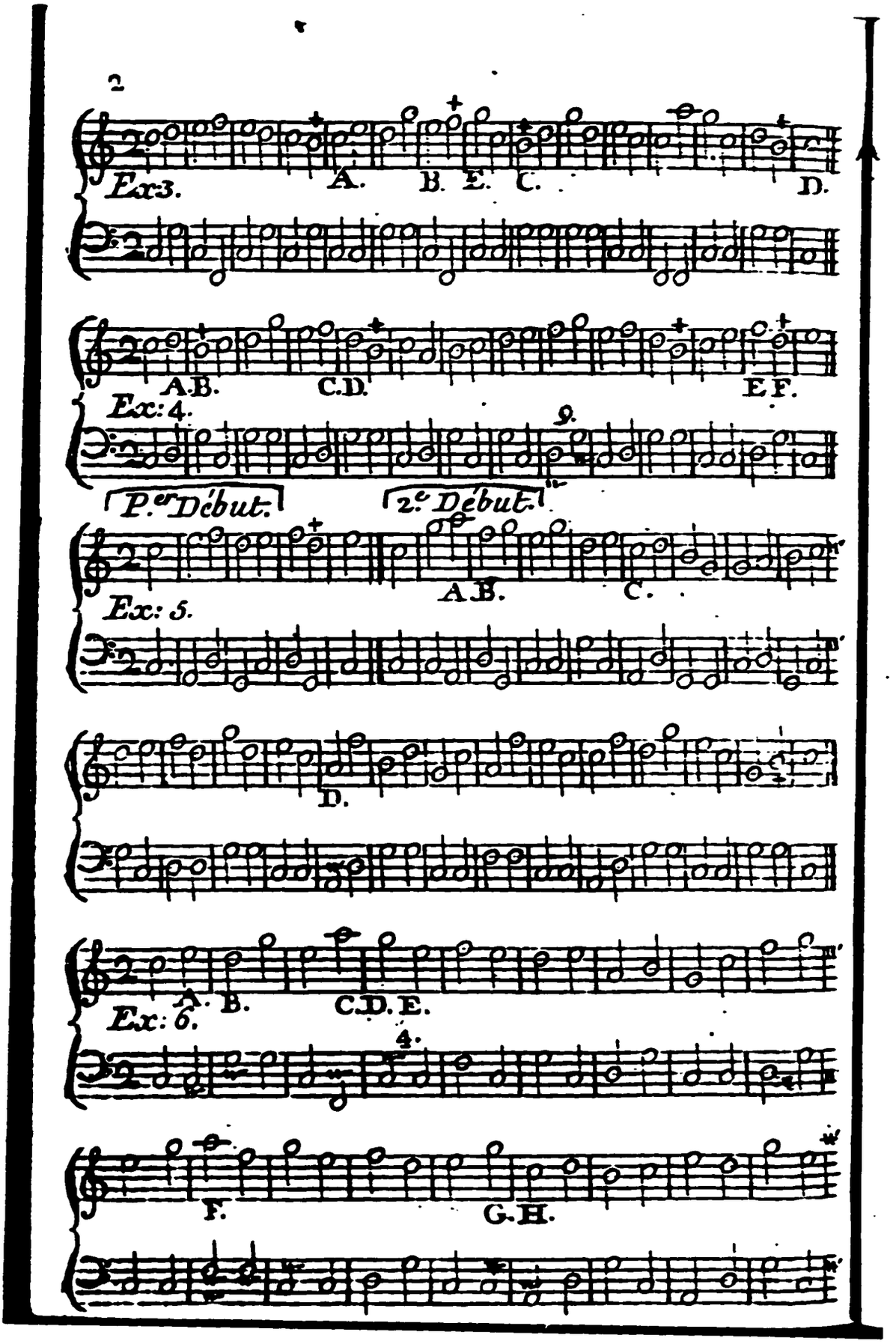
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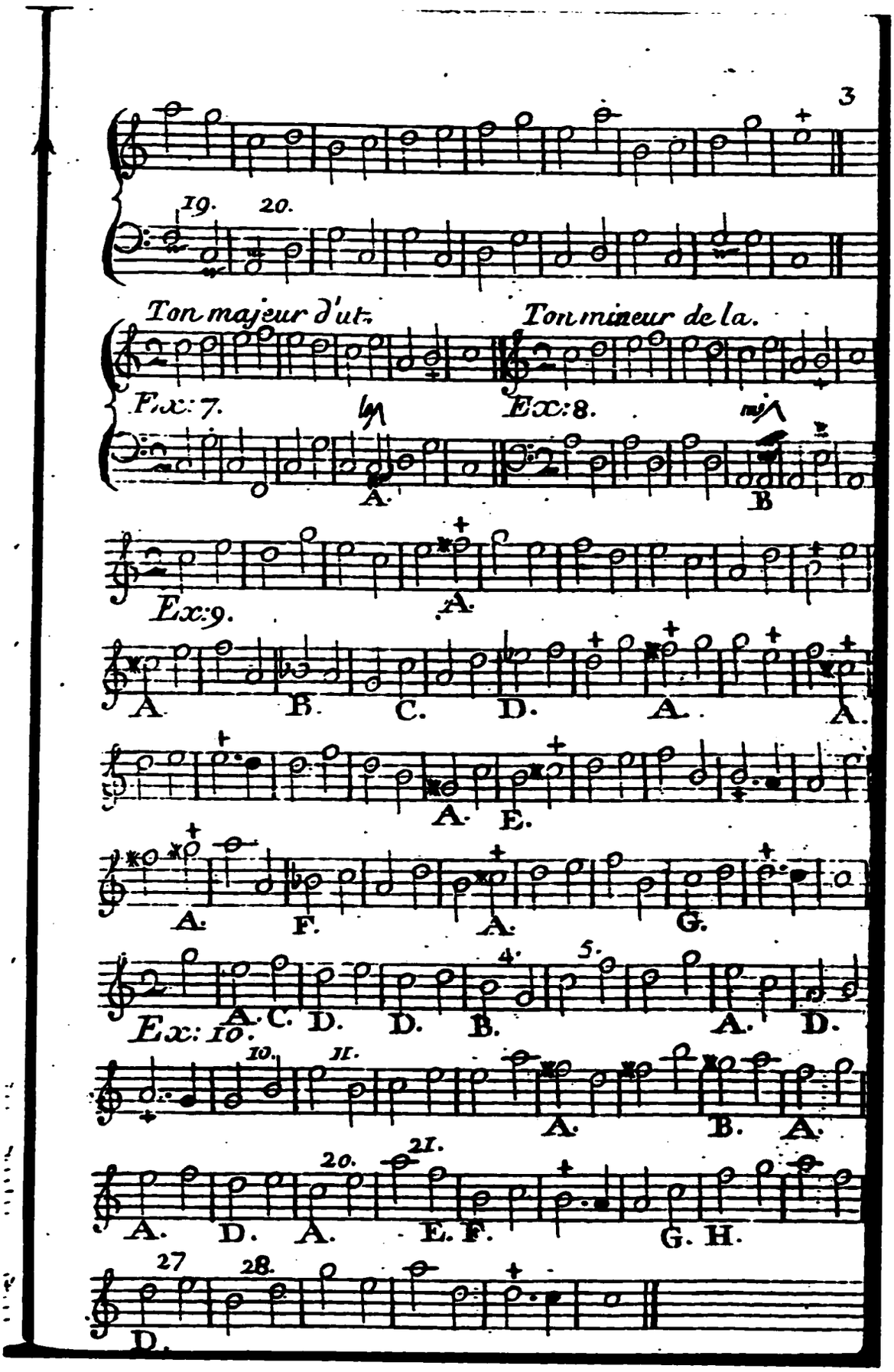
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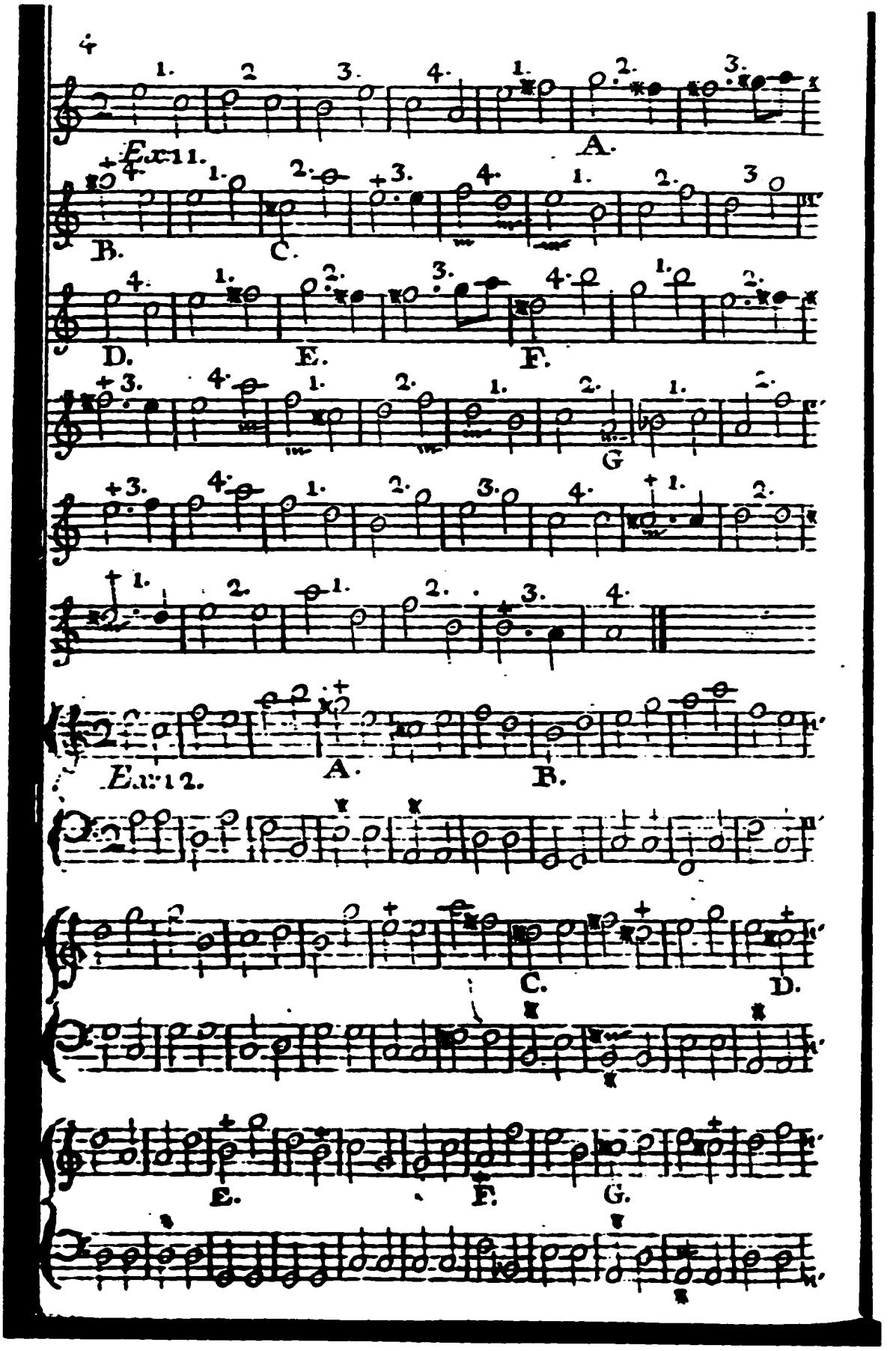
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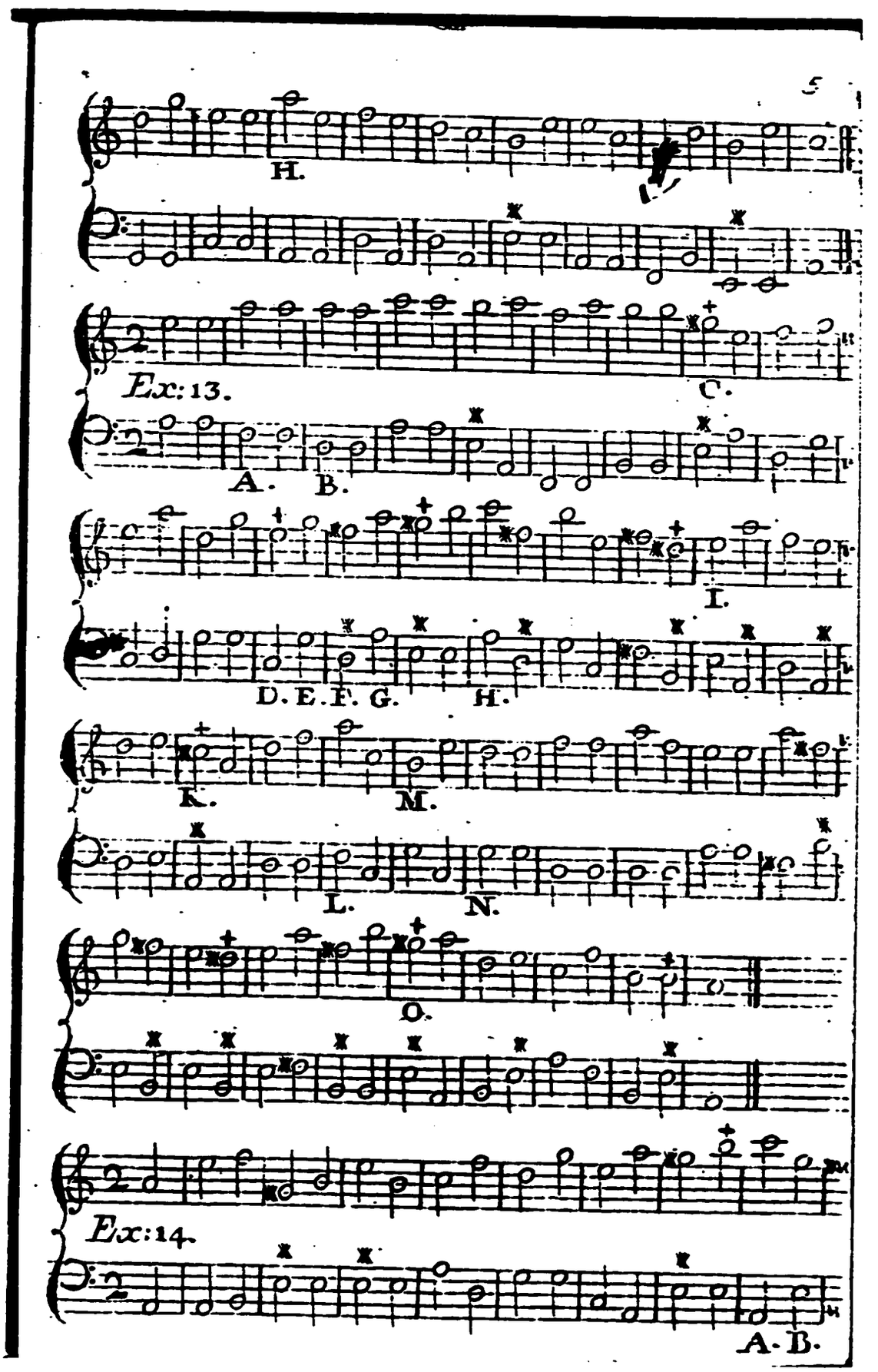
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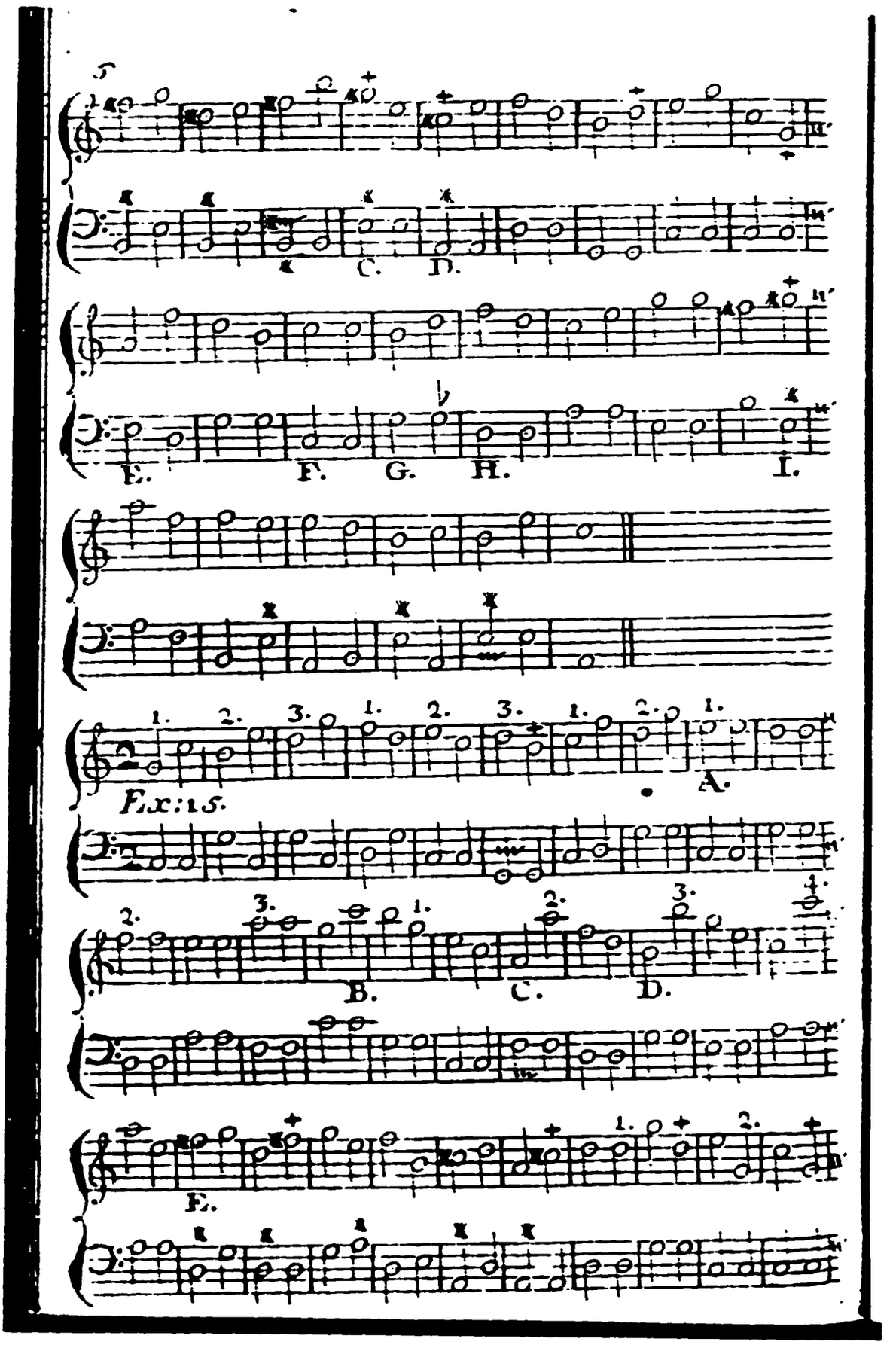
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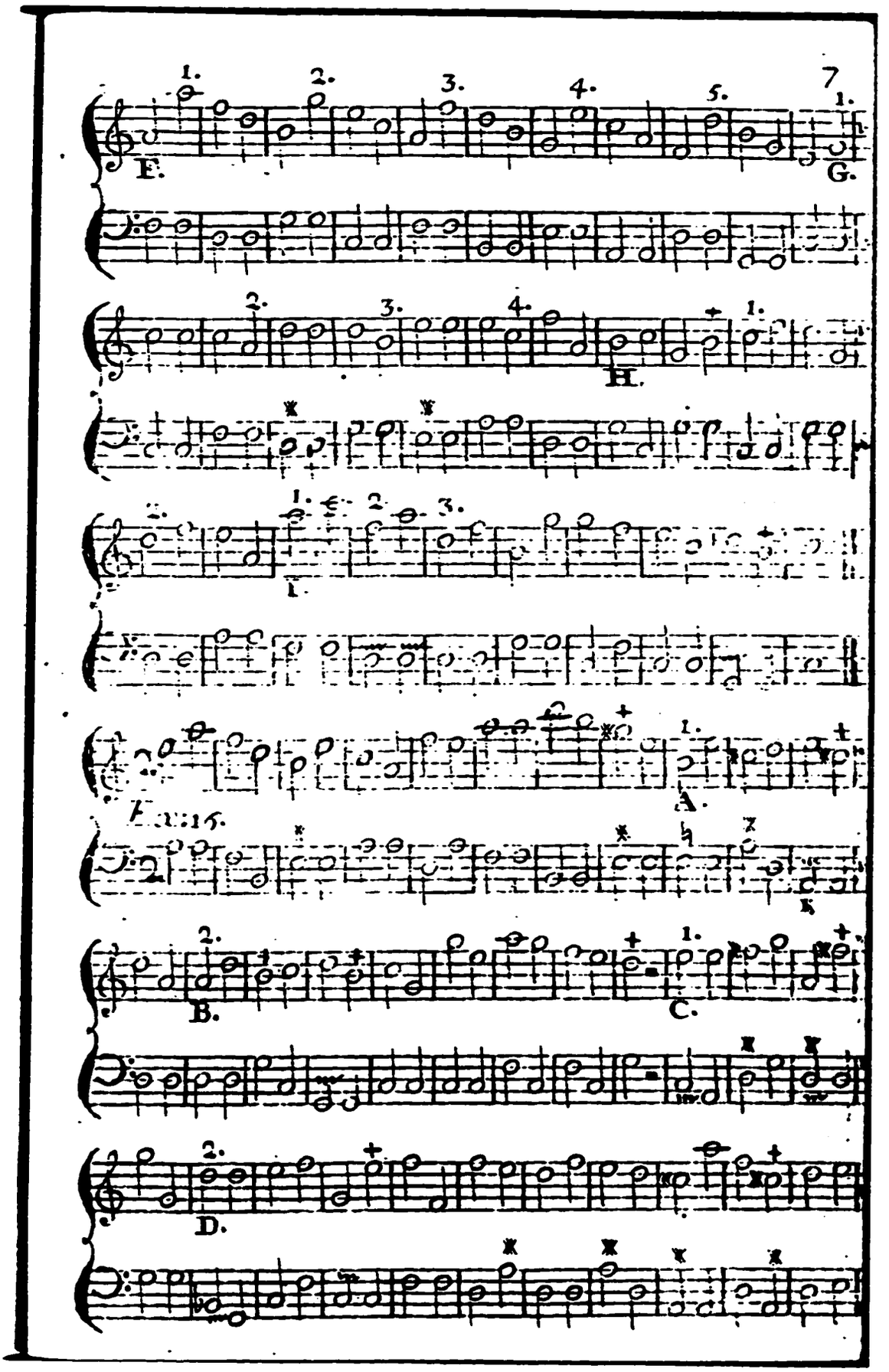
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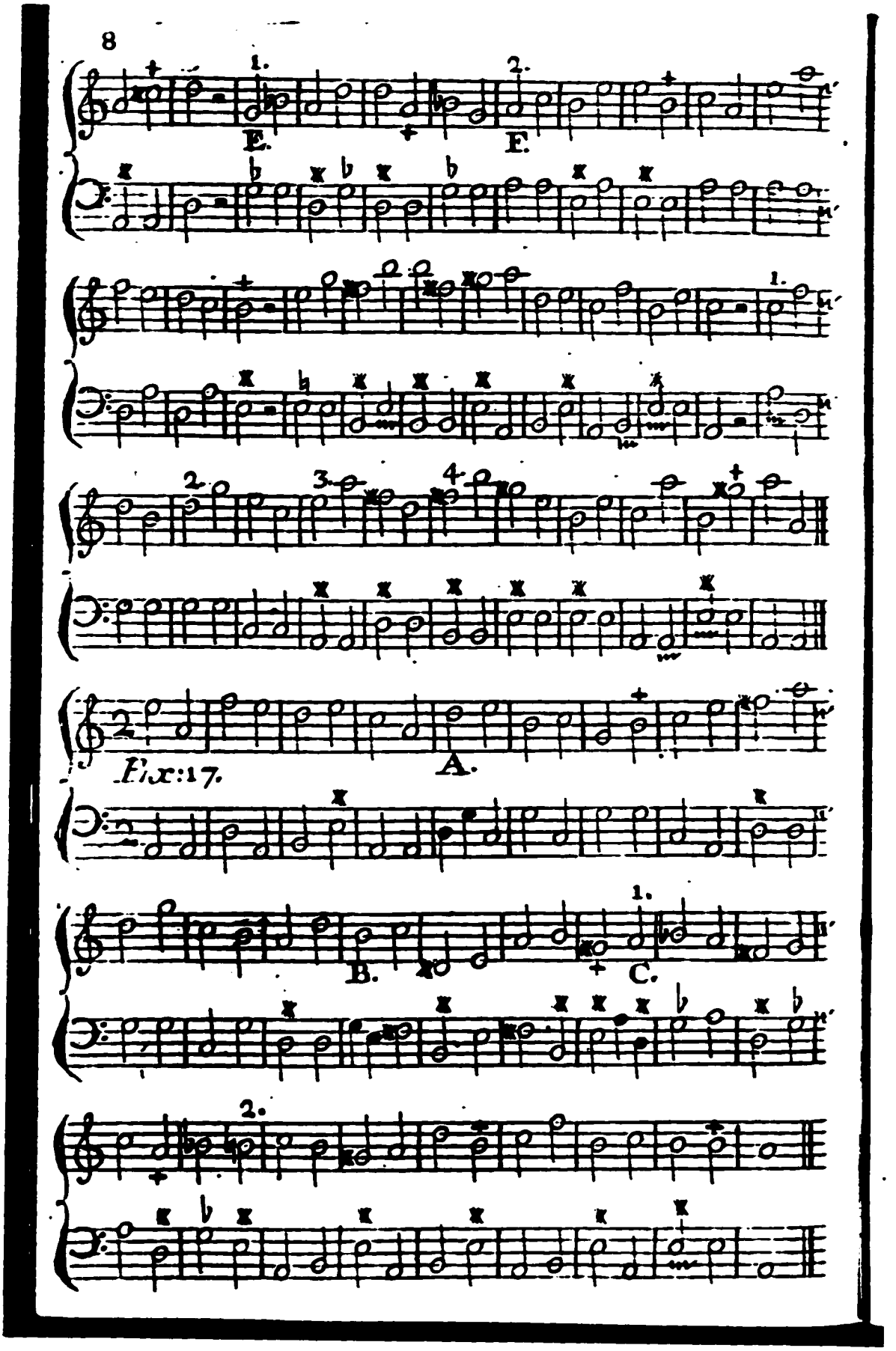
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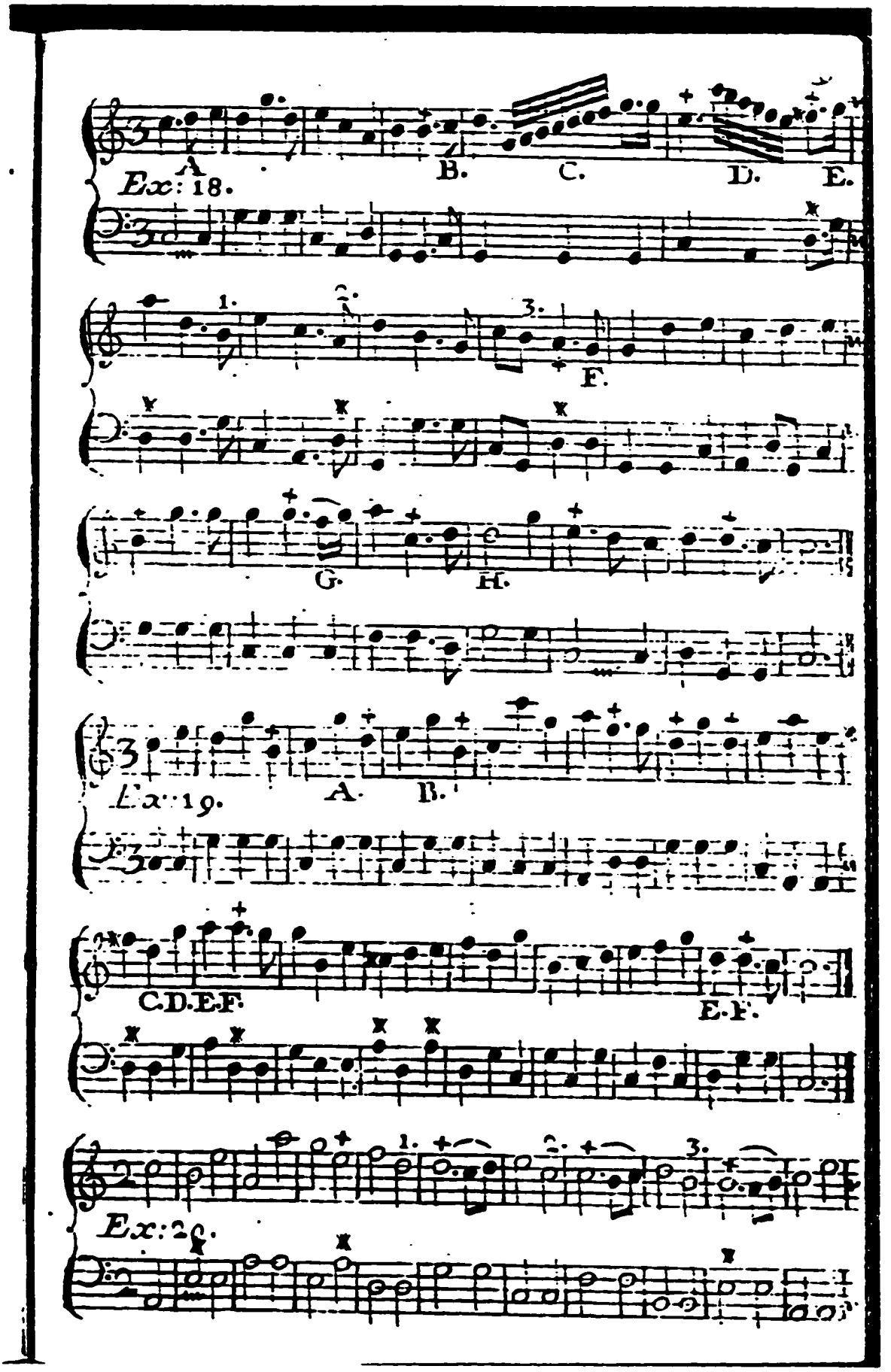
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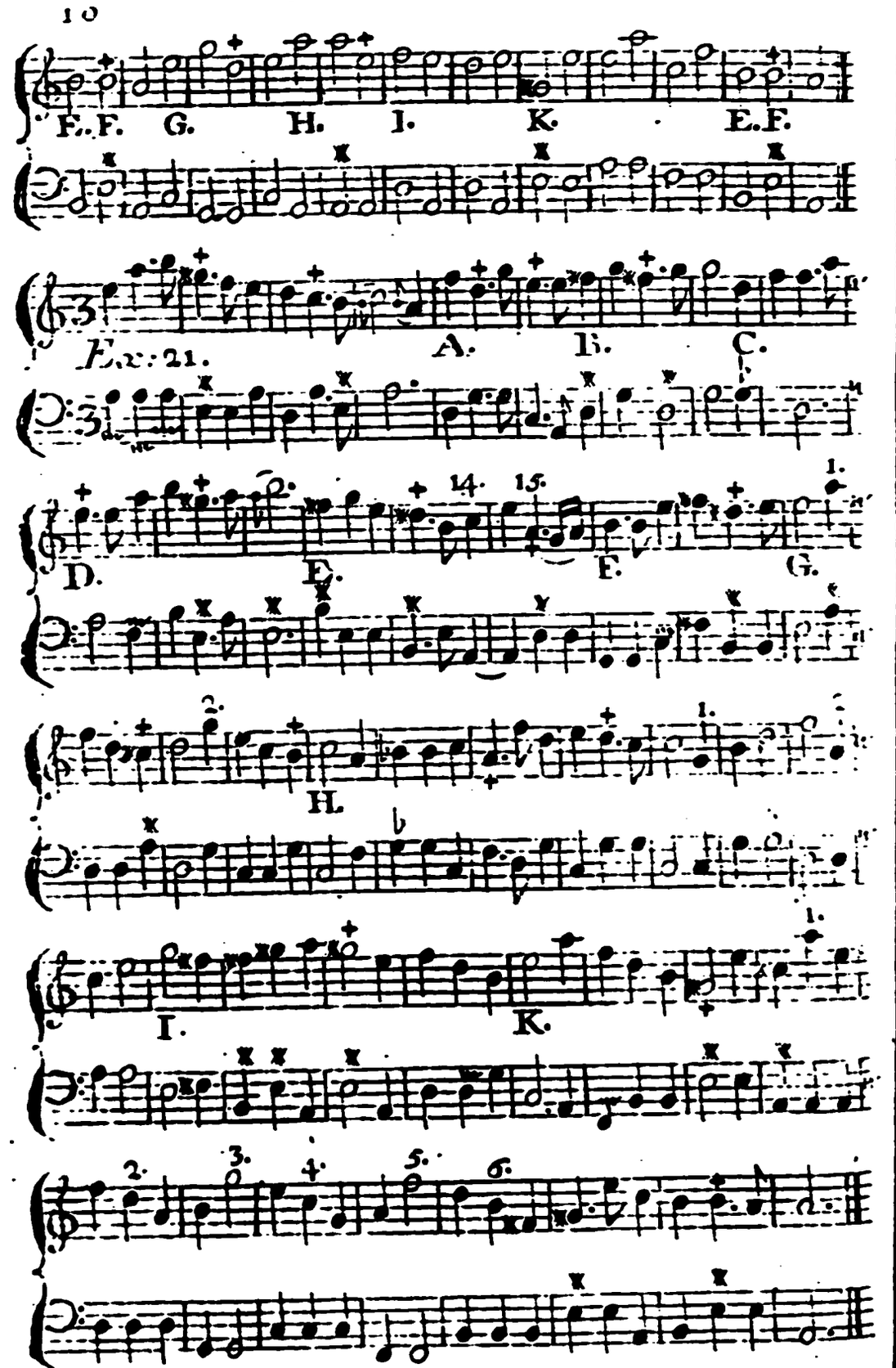
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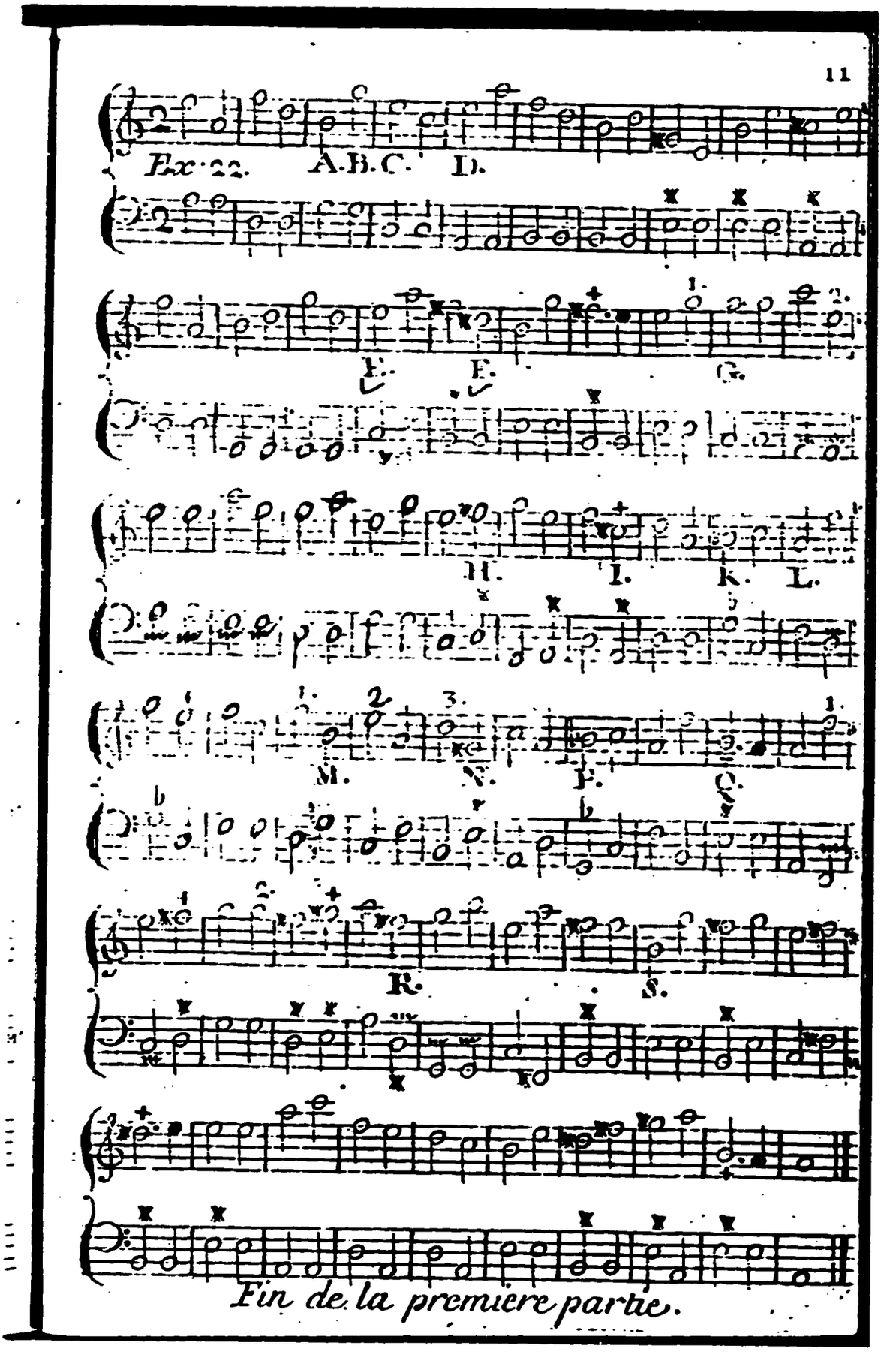
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PART II

TRANSCRIPTION OF JEAN PHILIPPE RAMEAU'S "L'ART DE LA BASSE FONDAMENTALE" D'OU SE TIRENT LA CONNOISSANCE ET LA PRATIQUE DE LA COMPOSITION ET DE L'ACCOMPAGNEMENT

Premiere partie

SECTION I: DEVELOPPEMENT DE LA BASSE FONDAMENTALE SOUS TOUS LES CHANTS POSSIBLES

**Editor's note:

While the transcription of the contents is continuous in each draft, the reader is reminded that this is only a partial transcription of the contents of the first section of "L'Art" containing lessons that are parallel to those of Gianotti in the Guide. As a result, sections 1 and 2 of 20/1, lesson 21/1, and lessons 19-24/2 are not included here.

This diplomatic transcription reflects the original in all respects. I have also chosen to transmit all scribal corrections. Therefore, words that are crossed out in the manuscript are depicted through the use of overstrike type such as "~~trouver.~~" Insertions above the written text are in a raised font, while crossed out passages bear the identical markings of the manuscript. Repeated words from the bottom of one folio to the top of the next also reflect the original source. In the occasion of a dropped word ending at the right edge of the folio, I have supplied the continuation in brackets [ ]. Foliation idiosyncrasies are also duly noted.

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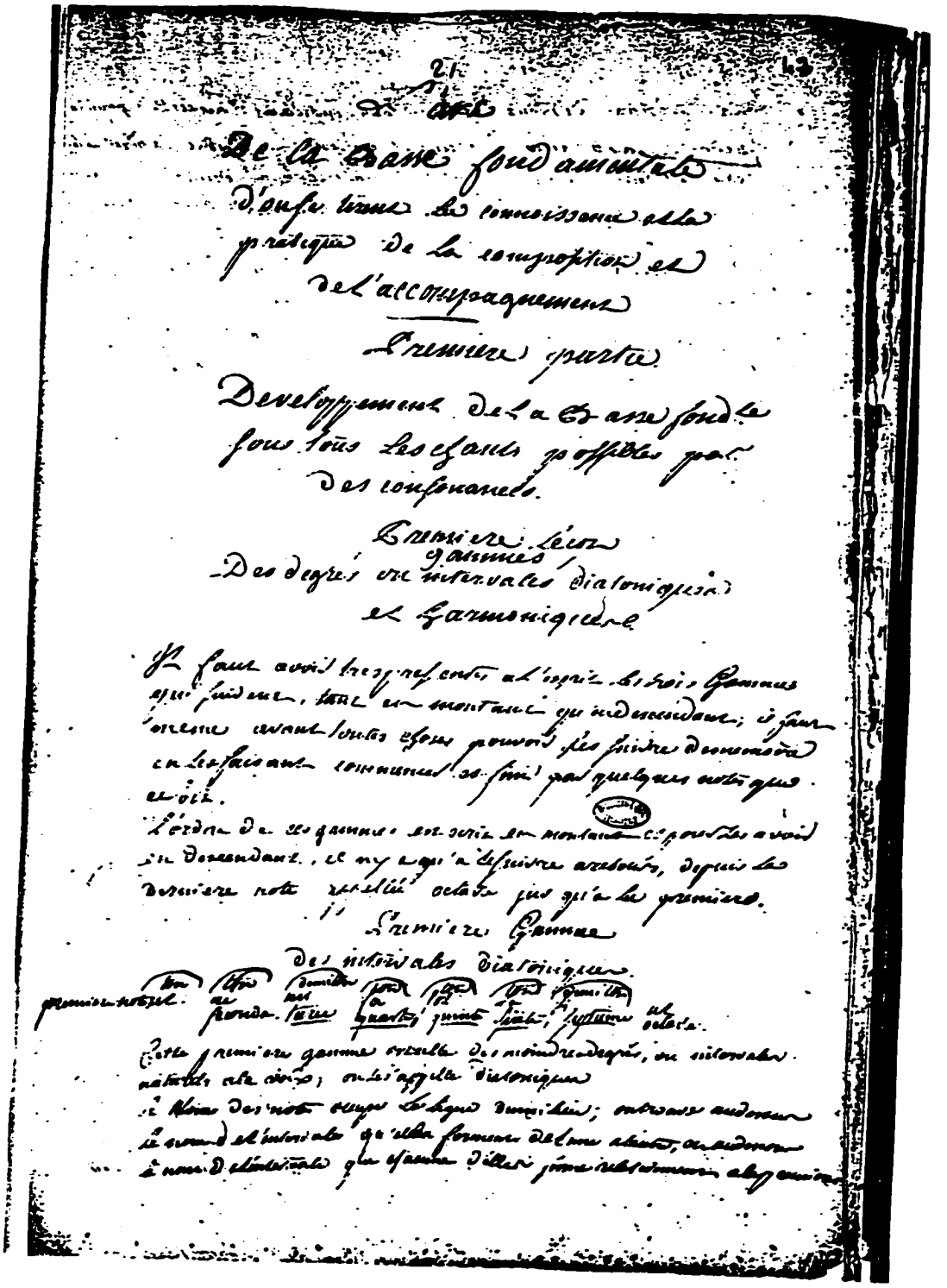

De la Basse fondamentale
D'après toutes les connoissances de la
pratique de la composition et
de l'accompagnement
Premiere partie
Developpement de la Basse fondamentale
sous tous les chants qu'elle peut
avoir
Premiere Leçon
Des degrés ou intervalles diatoniques
et Harmoniques

Premiere Gamme
Des intervalles diatoniques

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Plate 2: *Rameau's "L'Art de la basse fondamentale" f. 47', draft 2, part I.*

[f. 7r]

L'art De la Basse fondamentale, d'ou se tirent la connoissance et la pratique de la composition, et de l'accompagnement

Premiere partie

Developpement de la Basse fondamentale sous tous Les chants possibles

Premiere Leçon

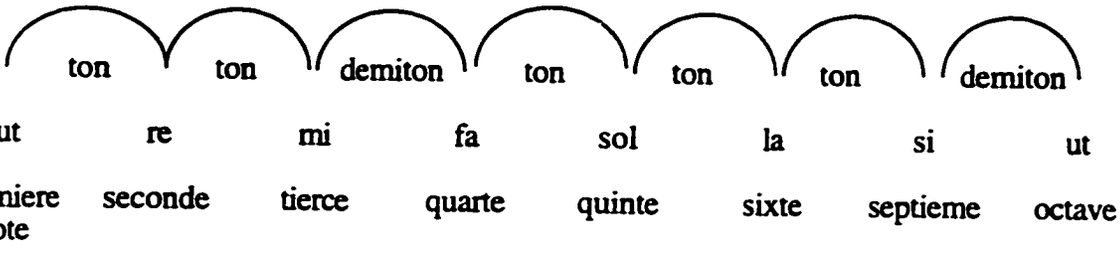
Gamme des degrés, ou intervalles diatoniques et harmoniques

Les gammes qui suivent doivent d'apprendre de memoire tant en montant qu'en descendant; en les faisant meme commencer et finir par quelque note que ce soit

L'ordre de ces gammes est ecrit en montant, et pour l'avoir en descendant, il n'y a qua le suivre en retrogradant depuis La derniere note appellée octave jusqu'a La premiere.

Premiere gamme

en degrés diatoniques:



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Cette premiere gamme est celle des moindres degrés; ou intervales naturels à la voix on Les appelle Diatoniques; et nous les appellerons toujours de meme. au dessus du nom du chaque note se trouve celuy de l'intervale qu'elles forment de l'une à l'autre; et au dessous se trouve le Nom des degrés de chaque note forme relativement a la premiere.

[f.7']

La difference des tons et des demi-tons, qui l'entrelacent dans cette gamme ne doit pas beaucoup occuper a present, L'ordre naturel La fait observer sans qu'on y pense. on y remarquera seulement qu'il n'y a jamais que deux demi tons dans L'etendue de L'octave, composée de huit notes Diatoniques, et qu'on n'entonne pas naturellement trois tons de suitte; excepté qu'on ne suppose un repos sur la notte qui termine Le premier, et qui est La quinte dans La gamme, ainsy Le demi ton vient naturellement apres un ou deux tons.

Celuy qui ne sauroit pas faire La difference du ton au demi ton par Le seul secours de L'oreille; doit se mefier de ses forces pour entreprendre de nous suivre, excepté qu'il ne veuille s'en tenir a la simple theorie jusqu'a ce que son oreille soit formée; car ce n'est qu'une affaire d'habitude.

Quelque note de cette gamme qu'on prenne pour la premiere, La suivante en montant sera La seconde, L'autre La tierce, ainsy de suitte.

Deuxieme Gamme

par tierces

ut, mi, sol, si, Ré, fa, la ut
octave

troisieme Gamme

par quintes

ut, sol, re, La, mi, si, fa, ut
octave

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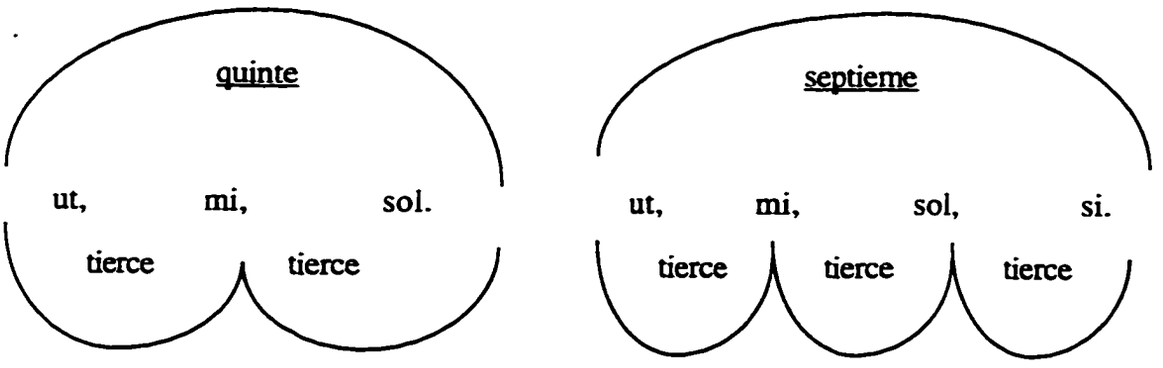
Ces deux dermieres gammes exposent tous les degrés, ou intervales harmoniques et les tierces doivent y etre reconnues pour Les moindres intervales harmoniques.
Tous les accords propres a la Basse fondamentale se composent des moindres intervalles harmoniques dans l'étendue d'une octave. deux tierces y font une quinte et trois tierces y font une septieme, en y comparant pour Lors La premiere note avec la derniere.



La plus parfaite succession de la basse fondamentale se forme des quintes données dans La troiseime gamme; et ces quintes ~~fournis~~ fournissent

[f.8r]

fournissent [sic] de plus des Diezes, et des Bemols.
L'octave qu'on [sous entend] neamoins dans le nom meme de la notte prise pour Basse fondamentale.
Le tout ensemble s'appelle accord parfait. ou accord fondamental: on donne cependant quelquefois Le nom d'accord a un seul intervale. tout ce qui porte Le nom de fondamental suppose celuy de Basse en meme tems; par exemple, note, ou ton fondamentale c'est a dire, note, ou son qui est Basse fondamentale; accord fondamental, c'est a dire La Basse fondamentale avec sa tierce, sa quinte, et son octave; succession ou marche fondamentale, c'est a dire succession, ou marche d'une Basse fondamentale, ou chaque note est toujours sensée porter avec elle son accord fondamental.
La deuxieme gamme par tierces donne L'ordre des accords fondamentaux dans trois notes consecutives, sans y comprendre L'octave dont on peut se passer pour Les raisons deja

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alloquées: ainsy des que cette gamme est familiere on ne pense pas plutots a une note; que Les deux qui La suivent doivent se presenter sur le champ a l'esprit: si L'on pense à sol par exemple sol, si, ré, Se presenteront en meme tems et par ce moyen l'accord fondamental de quelque note que ce soit sera connu.

Une note au dessus de L'octave ou au dessus de La premiere note, est toujours La meme a L'octave près.

on doit voir par Là, qu'il ne faut pas passer trop legerement sur Les gammes de la premiere Leçon, La suitte en prouvera La necessité encore plus fortement. +

III[e] Leçon

Du mode, ou Ton, et des notes fondamentales qui Le composent.

Nous nous servirons partout de mot de Ton, au lieu de celuy de mode pour suivre L'usage: et pour eviter l'Equivoque de ce mot avec celuy qui indique en meme tems L'intervale de seconde, nous ne nous'y servirons que du T. majescule que L'orsqu'il signifiera mode.
Le Ton consiste dans une note quelqonque avec La quelle on comprend toutes Les notes diatoniques que renferme L'etendue de son octave d'ou L'on dit Le Ton d'ut, Le Ton de ré et Le Ton de mi &c.
Le Ton d'ut par exemple est tout renfermé dans chacune des trois Gammes

[f. 8[v]]

dont La premiere donne ses degrés diatoniques. Le Ton par on commence et finit une piece de musique s'appelle Principal.
La note sous la quelle roule quelque Ton que ce soit s'appelle tonique. La tonique s'associe ses deux quintes pour former avec elles une succession fondamentale dans le Ton d'ut par exemple, ces deux quintes sont fa et sol.

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La quinte au dessous d'ut, qui est fa peut etre imaginée sa quarte a la faveur du renversement: ainsy La quarte et La quinte de la tonique sont egalement ses deux quintes L'une au dessous, L'autre au dessus.

Chacune de ces trois notes est fondamentale, et porte par consequent avec elle son accord fondamental: avec ut vont de droit ut mi sol, avec sol, sol, si, ré. et avec fa, fa, la, ut, et ces trois accords comprennent justement toutes Les notes de trois gammes qui composent Le Ton d'ut, soit dans L'ordre Diatonique soit dans L'ordre harmonique.

IV^{e} Leçon

Du nom que doivent porter Les notes de la Basse fondamentale, et celles du sujet, sous le titre de notes connues

La quinte de la tonique s'appelle dominante tonique, et sa quarte sous dominante.
La troisieme gamme donne dans trois notes consecutives Les trois fondamentales de chaque ton: La premiere de ces notes y est sousdominante, celle du milieu tonique, et La troisieme dominante tonique on peut Les arranger de cette sorte.

Ton d'ut			Ton de sol			Ton de ré		
Fa	ut	sol	ut	sol	re	sol.	re	La
sousdominante	Tonique	Dominant-tonique	soute	T.que	D.^{te}	soud.^{te}	Tque.	D.^{te}

on remarquera dans cet ordre que Lorsque fa est Tonique il faut ajouter un Bemol a si et que Lors que si est Tonique il faut ajouter un Dieze a Fa on voit par cet exposé que tous les tons à la quinte l'un de l'autre, comme sont ceux d'ut et de sol, ont deux notes fondamentales communes qui se pretent mutuellement L'une a L'autre ut et sol sont egalement fondamentaux de chaque coté avec cette difference que dans Le Ton d'ut sol est dominante-tonique, et que dans le Ton de sol ut est sousdominante.

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Il ne faut plus désormais concevoir Les notes fondamentales de chaque ton,

[f.9ʳ]

que par Les Epithétes qui Les caracterisent; de sorte qu'en parlant d'une tonique on puisse se representer sur Le champ qu'elle est sa dominante tonique et sa sousdominante.

Les notes du Chant que nous appellerons Le sujet ne doivent imaginées que comme Tierces quintes et octaves de la Basse fondamentale sans jamais Leur attribuer Les epithétes seules convenables a Cette Basse fondamentale parmy Les notes du sujet on distingue principalement La tierce de La Tonique et celle de la dominante tonique.

La tierce de la tonique s'appelle mediante, et celle de la dominante tonique note sensible: on doit toujours Les regarder comme des notes connues, qui indiquent generalement Leur basse fondamentale: La mediante exige La tonique pour Basse fondamentale, et La note sensible exige La dominante tonique.

par consequent en examinant Le sujet dont on suppose que le Ton sera connu; il faut tacher d'y distinguer toujours La mediante et La note sensible parce que Leur Basse fondamentale sera connue en meme tems.

Outre que La note sensible fait toujours La tierce majeure de la dominante tonique, elle aussy toujours un demi ton au dessus de la Tonique ou de son octave, tel qu'est si a l'Egard d'ut nous aurons aussy dans La suitte des sutoniques, et des sudominantes egallement relatives au sujet, et a la Basse fondamentalle, dont Le degré relatif à La Tonique est facile a reconnoitre; La sutonique est La seconde au dessous de la tonique, ou de son octave; et la sudominante est La seconde au dessus de sa dominante-tonique, ou de son octave.

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V^e Leçon

Moyen de trouver La Basse fondamentale sous un sujet donné et de sa plus parfaite succession.

Tout sujet donné peut etre un dessus, une haute contre, une Basse cela est indifferent. et c'est Le maitre qui Le donne d'abord, parce qu'il doit s'assujettir a L'ordre des regles. on a deux porteés L'une au dessus de l'autre, celle d'en haut est pour Le sujet et celle d'au dessus pour La Basse fondamentale, ou l'on place Les notes perpendiculairement au dessous de celles du sujet.

Quoique nous ne remplissionon [sic] generalement Les exemples que de rondes; on peut Les supposer noires, croches, cela n'y fait rien; puisque cette difference

[f. 9^v]

ne regard que celle du mouvement qu'on est Libre de supposer Lent ou vif: qui plus est nous nous servons pour Le sujet d'une clef qui presente Les memes notes dans Les memes espaces que celles de la Basse fondamentale, pour n'y etre point occupé d'une difference inutile.

Dans tous nos exemples nous joignons La Basse fondamentale au sujet, pour qu'elle y tienne Lieu du maitre. il faut par consequent copier ou faire copier a part le sujet, en Laissant au dessous une portée en blanc, pour y placer Le [sic] Basse fondamentale qu'on composera pour Lors, sur Les regles qui vous etre prescrites, sans se guider aucunement sur La Basse fondamentale de L'Exemple cependant Lors qu'elle sera composée on la confrontera avec La notre, pour voir si elles s'accordent. et si L'on y trouve quelques differences, il faudra sans examiner en quoi elles consistent reflechir de nouveau sur Les regles prescrites, pour voir si on Les a bien observées, et si L'on en est une foix assuré Le tout se trouvera conforme.

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on ne doit s'attacher a present qu'au seul accord parfait composé de La tierce, de La quinte, et de L'octave de La Basse fondamentale. Nos premiers exemples seront toujours dans le ton d'ut; et comme il est de droit que toute piece de musique commence et finisse par Le principal, on ne pourra se tromper a present en plaçant d'abord La tonique ut sous La premiere note du sujet.

Il n'en faut pas moins examiner si effectivement Le sujet débute par une des notes comprises dans L'accord de La Tonique, pour etre encore plus assuré de ce que L'on fait. Tant que Le sujet continuera par des notes comprises dans L'accord de La tonique deja employée, on la conservera toujours: mais s'il passe a d'autres notres, cette tonique doit pour Lors passer de son coté, a sa dominante-tonique ou a sa soudominante.

on scait deja qu'il n'y a dans un ton que ces trois notes fondamentales primitives, La tonique, La dominante, et La soudominante. on scait encore que ces trois notes sont a La quinte L'une de L'autre comme fa. quinte, ut quinte, sol. dans Le Ton d'ut . or il ne reste a savoir que La plus parfaite succession fondamentale est justement celle de ces quintes: et qu'on ne doit a present s'occuper que de celle Là qui dit quinte. dit quarte comme on La deja specifié.

La Basse fondamentale ayant debuté par La Tonique ut elle peut donc egalement passer a sa dominant-tonique sol ou a sa soudominante fa, d'ou L'on doit commencer a conjecturer que La Tonique passe ou L'on veut, et que

[f. 10r]

et que c'est pour Lors Le sujet qui en ordonne.

Il n'en est pas de meme de la dominante-tonique, n'y de La soudominante, ces deux notes fondamentales ne peuvent jamais se succeder, puisque Loin d'etre a La quinte L'une de L'autre, elles sont au contraire, une seconde entre elles: donc chacune d'elles doit passer a la Tonique, et pour Lors Le sujet doit y etre fournit.

Remarquons donc bien que si Le sujet decide de La succession de La Tonique, en ce qu'elle peut indifferement passer a sa dominante-tonique ou a sa soudominante; il doit au

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contraire se soumettre a la succession prescrite a ces deux dernieres notes fondamentales, de sorte qu'apres avoir employé l'une des deux, on est sur qu'il faut passer a la Tonique.

Tous ce qui depend du sujet dans ce dernier cas, c'est d'obliger a conserver plus ou moins longtems. La note fondamentale qu'il aura d'abord exigée, et cela du meme qu'en debutant; c'est a dire que tant qu'il continuera par des notes comprises dans L'accord de la fondamentale deja employée, il faudra La conserver.

des que Le sujet ne donner a plus de notes comprises dans L'accord de La tonique, et en donnera certainement une de L'accord de La dominante-tonique, ou de La sousdominant; puisque Les accords de ces trois notes fondamentales comprennent toutes Les Diatoniques du Ton.

pour savoir La quelle des deux de La dominant-tonique, ou de la soudominante, Le sujet exige apres La Tonique: on imagine d'abord celle qu'on veut avec son accord, si c'est sol par exemple on dit sol: si. ré. de Sorte que si L'une de ces notes se trouve dans Le sujet, Le sol aura eté bien imaginé; au Lieu que s'il ne s'y en trouve aucune; c'est le fa qui sera fon.[a] Il n'y a point La demi Lieu, et Le sujet ne manquera pas de donner pour Lors une des notes de L'accord de fa, Savoir fa la ou ut.

Pour ne point faire de Brouillon et pour avoir L'objet plus present, on met un point au Lieu de La note fondamentale imaginée, jusqu'a ce qu'on soit assuré de celle qui convient dans La Basse fondamentale.

On en use ensuite comme a l'Egard de La tonique, on conserve La note fondamentale deja employée, tant que Le sujet continue par des notes de son accord, et on La fait passer ensuitte au qui doit La suivre, selon La regle prescrite.

Joignons a cela, quelques remarques utiles, comme par exemple; puisque Les accords sont composés de Tierces et de quintes dont Le renversement donne des Sixtes ou des quartes, il en doit suivre que si Le sujet marche par de pareilles consonnances, elles peuvent bien toutes appartenir a la meme note fondamentale, non que Le contraire ne puisse arriver

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souvent, mais Le soupçon n'en est pas moins Legitime: d'un autre coté, et cela est toujours certain.

[f.10ᵛ]

Jamais deux notes en degrés Diatoniques comme d'ut, a ré ou a si ne peuvent appartenir a la meme note fondamentale. on peut se representer encore que Les notes voisines de La tonique ou de son octave appartiennent a l'accord de la dominante tonique. et que ses voisines de sa quinte appartiennent a l'accord de sa soudominante.

Il reste un arbitraire a resoudre entre l'octave d'une Note fondamentale, qui peut faire en meme tems La quinte d'un autre; car L'octave de La Tonique ut fait quinte de la soudominante fa; et L'octave de La dominante Tonique sol fait La quinte de la Tonique ut: mais La necessité de La succession fondamentale par quinte fait evanouer cet arbitraire; pourvu cependant qu'on ne s'obstine pas a vouloir conserver La soudominante fa sous La quinte ut, Lorsque cette quinte est suivre Diatoniquement: car Si Les notes Diatoniques voisines d'ut qui est L'octave de La Tonique, appartiennent a L'accord de La dominante-Tonique, et si cette dominante Tonique ne peut suivre La soudominante Il faut par consequent que celle cy cede sa place à la Tonique dans Le cas dont il s'agit c'est en qu'oy consiste toute La difficulté; exemple dans Le volume separé.

Explication.

on voit partout dans cet exemple Les notes Diatoniques du sujet avoir chacune Leur Basse fondamentale particuliere.

Si deux ou quatre notes de ce sujet marchent par des intervales consonans comme à A. et a C., elles se trouvent pour Lors comprises dans l'accord de La meme Basse fondamentale, et quand Le contraire arrive, comme à B. cela se voit clairement.

La quinte X. de La soudominant deja employée sous u, fait aussy L'octave de La Tonique. elle est suivie Diatoniquement à y par une des notes comprises dans L'accord de La Dominante tonique, celle cy ne peut etre precedée de La sousdominante il faut donc abbandonner Cette soudominante à x. comme octave de La Tonique, a la faveur de La

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quelle La succession fondamentale conservera partout son ordre de quintes, comme cela se voit presentement.

[f.10v]

VIe Lecon

de la mesure de ses tems, de la syncope, et de la valeur des notes fondamentales dans chaque mesure

article I

La mesure est ce que se trouve {contenu} entre chaque Barre; elle peut avoir 2. 3. ou 4. tems. ces tems sont a present autant de rondes, aux quelles ou peut substituer quelle autre note on voudra.

[f.11r]

La mesure a quatre tems doit toujours etre divisée dans l'imagination en deux mesures a 2. tems pour pouvoir y appliquer Les regles suivantes. Le premier tems de la mesure s'appelle fort, et les autres foibles.

article III [sic]

La Syncope consiste dans une note dont la valeur commence par un tems foible et continue dans Le tems fort qui vient apres. que cette note qui Syncope soit repetée, ou quelle soit Liée par un demi cercle comme ou qu'elle Soit meme encore partagée de la sorte par La barre qui separe La mesure, c'est tous un.

La Syncope se reconnoit encore dans une notte dans la valeur commence par La derniere moitié d'un tems et continue dans Le tems qui suit celuy La. Une note qui ne comprand que Les deux tems foibles d'une mesure a 3 tems n'est pas sensée Syncoper, bien qu'on puisse S'assujettir aux regles de La Syncope; lorsque Le besoin s'en presenter, pour donner a la Basse fondamentale La Succession Legitime.

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La Syncope se distingue en deux valeurs; Sa premiere valeur est celle qui comprend Le tems foible, meme Les deux tems foibles d'une mesure a trois tems Lorsqu'elle continue dans Le tems fort, et La deuxieme valeur, est toujours Le tems fort.

La troisieme tems d'une mesure a 3 tems est regardé comme Le fort relativement au 2e; pourvu que La note qui s'y trouve ne continue pas dans Le tems fort car celuy cy donne L'exclusion a tous Les autres.

Si La Syncope Se fait d'un tems a un autre; Sa deuxieme valeur sera toujours celle qui tombe avec Le tems. exemple.

Explication

A marque la premiere valeur de la Syncope et B Sa deuxieme valeur.

Le point qui suit une note, en vaut la moitié comme il est supposé qu'on doit Le Savoir: ainsy ce point qui se trouve dans Le tems fort marque la deuxieme valeur de La Syncope.

article III

La Basse fondamentale ne doit jamais syncoper a moins qu'on n'y soit absolument forcé. encore y a t il presque toujours moyen de L'Eviter; connue lorsqu'une note fondamentale change de nature en devenant dominante ou soudominante, apres avoir eté Tonique ce qui ne peut avoir Lieu que dans des changement de ton dont il ne s'agit point encore.

cette Basse fondamentale doit occuper toute La mesure autant que Le sujet Le permit, elle doit surtout changer a chaque tems fort excepté qu'elle ne

[f.11v]

Puisse continuer dans plusieurs mesures entieres.

Cependant des qu'une note fondamentale a commencé la valeur par Le tems fort elle peut continuer autant que Le sujet y oblige, sans avoir egard aux regles precedentes, mais il faut tacher de ne jamais s'ecarter de ces regles a moins que Le sujet n'y force absolument.

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C'est en ce cas qu'il faut bien remarquer si la note du sujet ne fait pas La quinte ou L'octave de celle de La Basse fondamentale qu'on voudroit conserver puisque cette meme note du sujet peut faire aussy bien L'octave ou la quinte d'une autre fondamentale, qu'il sera Libre de substituer a cela qu'on auroit voulu conserver.

au reste La Basse fondamentale peut syncoper en debutant, parce que Le tems foible par ou L'on debute pour Lors, est compté pour rien. elle peut meme syncoper encore dans une mesure a trois tems pourvu qu'on puisse y reduire en une seule mesure Les deux ou elle Syncope connue on Le verra dans L'explication.

Toute syncope du sujet exige generalement deux notes fondamentales et differentes; L'une pour La premiere valeur de La Syncope, L'autre, L'autre [sic] pour La deuxieme valeur.

La note fondamentale qui sert a La premiere valeur de La Syncope peut etre La meme qui La precede immediatement et La ne souffre point de difficultés.

une note meme du Sujet qui auroit commencé par un tems fort et qui continueroit dans un autre tems fort, seroit sensée syncoper, par rapport a la nouvelle note fondamentale qu'exigeroit cet autre tems fort.

Le changement necessaire de La Basse fondamentale a chaque tems fort en facilite beaucoup L'operation; surtout Lorsque Le sujet syncope, ou peut etre sensé syncoper. non que ce changement soit absolu des qu'il n'y a point de syncope depart, n'y d'autre, puisque La Basse fondamentale peut occuper d'ailleurs plusieurs mesures entieres de suitte, qu'elle peut meme continuer d'un tems fort a L'autre des que Le sujet y force et des que La succession fond.^{ale} prescrite peut y etre observee. exemple.

Explication

La premiere note du debut se trouvant dans un tems foible, ou La compte pour rien; et pour Lors La Basse fondamentale peut y Syncoper, sans tirer a consequence.

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quoique La note B du sujet fasse La quinte de la soudominante A deja employée; celle cy ne peut rester sous cette quinte sans syncoper. il faut par consequent qu'elle passe a La tonique E. sous La meme note B.

[f.12r]

qui en fait L'octave par La meme raison L'on ne peut conserver La tonique J. sous sa quinte P. puisqu'elle y syncoperoit de sorte qu'elle passe pour Lors a La dominante tonique K., dont P. fait l'octave.

La note du Sujet Syncope de C. a D. donc chaque valeur de cette syncope doit avoir sa Basse fondamentale particuliere. et pour que cela soit on ne peut conserver La Tonique E dans La premiere, ou dans La deuxieme valeur de La Syncope pour y revenir ensuitte: ce qui est arbitraire comme Le marquent Les Guidons un: et de cette sorte on execute ponctuellement La regle.

quoiqu'on puisse conserver La Tonique f. sous son octave H., puisqu'elle n'y Syncoperoit pas et qu'elle peut passer ensuitte a la soudominante. La neccessité de changer La Basse fondamentale a chaque tems fort, autant qu'il est possible et d'y conserver La meme note dans toute La mesure doit engager a Saisir d'abord cette soudominante à G, dont La note H du sujet fait La quinte, de meme qu'elle fait L'octave dans La tonique F.

Il n'en est pas de meme a M. ou Le sujet force de conserver La soudominante que La Syncope Q. R. de ce meme sujet a encore forcé d'employer apres La tonique L.: ainsy des qu'on ne peut mieux faire il faut bien S'y Soumettre.

Il n'est a S. et a U. de la Basse fondamentale comme à A.: car elle syncoperoit si l'on conservoit S Sous Son octave Y. et u. sous sa quinte Z.: donc il faut absolument que S. passe à T. ou l'octave y de La Tonique S. devient quinte de La soudominante T. et il faut de meme que U passe a X, ou La quinte de La tonique U devient octave de La dominante tonique X.

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La syncope V. du sujet exige, comme ailleurs deux notes fond[ales] differentes pour ses deux valeurs.

Si La Tonique à {A} Syncope; remarquons que Les deux mesures qu'elles occuppe dans ses trois rondes peuvent se reduire en une seule, dont ces trois rondes marquent Les trois tems Sans syncoper.

VIII[e] Leçon.

Des Cadences ou repos dans le sujet, et dans la B.[sse] fond.[le]

on appelle cadence tout ce qui forme repos ou conclusion de chant dans le sujet.

Les repos du Sujet se forment generalement de deux notes Diatoniques, dont

[f.12[v]]

dont [sic] la premiere doit etre reconnue pour annoncer Le repos et La derniere qui tombe generalement avec Le tems fort pour La terminer.

Ces memes repos se forment aussy tres souvent en descendant de Tierce sur La mediante, ou sur La note sensible. Ils se forment encore mais beaucoup plus rarement, d'une note syncopee ou sensee telle parce que sa derniere valeur qui tombe avec Le tems fort, peut en certains cas finir un Sens, et demande d'ailleurs une nouvelle note fondamentale.

La Succession fondamentale par quinte est celle de toutes Les cadences et par consequent de tout Les repos du Sujet. Des deux notes a la quinte L'une de L'autre, La premiere annonce La cadence et La derniere La termine dans Le tems fort. ces cadences se terminent sur la tonique ou sur La dominante tonique jamais sur La soudominante. elles se distinguent en parfaites et imparfaites.

La cadence parfaite se fait en descendant de quinte sur La Tonique et l'imparfaite en montant de quinte sur cette meme Tonique ou sur La dominante tonique.

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La Dominante tonique annonce La cadence parfaite et la soudominante L'imparfaite, Lorsque La Tonique La termine car Si c'est La dominante tonique qui La termine, La Tonique L'annonce pour Lors.

on ne doit prendre pour cadences que Les successions fondamentales par quintes que Lorsque Le sujet forme en meme tems un repos.

Les premieres exemples ne fournissent encore de repos bien sensible qu'en finissant; parce qu'il ne s'y agit que d'un seul Ton: mais Lorsqu'il sera tems d'y faire attention; nous aurons soin d'apprendre aux premieres notions, Les Lumieres necessaires. il n'est pas hors de propos d'ailleurs de faire {sentir} de bonne heure jusqu'on s'etendent Les choses Les plus simples. Exemples.

Explication

Toutes Les successions diatoniques du Sujet sont autant de cadences possibles La Basse fond.[ale] y marche toujours par quintes. on peut du moins prendre pout autant de repos Les chantes sur D. E. F. et G. par ce quelles S'y font dans Le tems fort: mais meme Le sujet ne donne de repos sensibles qu'à A. à B. à C. et à la fin on ne doit considerer que ceux La pour tels.

[f. 13r]

Les Cadences sont parfaites à A. a B. et a la fin. La dominante tonique Les annonce, et La Tonique Les termine. Elles sont imparfaites à E. et a G. La soudominante annonce celle qui se trouve E. et La Tonique La termine, au lieu que La Tonique annonce celle qui est a G. et La dominante Tonique La termine.

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IX Leçon

De La Succession fond.^{ale} de La Tonique

par seconde en montant, et par tierce en descendant.

Toute succession fond.^{ale} outre que celle de quinte ne regarde generalement que La Tonique.

Ces nouvelles successions fondamentales donnent une change plus varie au sujet et nous Le porterons insensiblement a sa plus grande variete. regardons desormais La Tonique comme Le principal mobile de La varieté du chant, de L'harmonie, et de La modulation. Ces routes se multiplient pendant que Les deux autres notes fond.^{ales} restent Les memes: de sorte qu'on doit se dire de bonne heure, La Tonique a plusieurs routes differentes, dont Le choix depend de La tournure du sujet, au lieu que toute autre note fond.^{ale} a sa succession determinée, a laquelle Le sujet doit se preter jusqu'a ce que d'une note fond.^{ale} a L'autre, supposé qu'il y en doive avoir plusieurs, on soit arrivé de nouveau a la Tonique.

article 1.

de La seconde en montant

La Tonique peut a present monter de La seconde sur une dominante, que nous appellerons desormais sutonique.

Il n'y a qu'une seule Tonique une seule soudominante, mais il y a deux sortes de dominantes, qui cependant ne different entre elles, ou qu'en ce que L'une, savoir La dominante tonique precede toujours La tonique; d'ou nous Luy donnons L'Epithete de Tonique; et L'autre que nous appellons simplement Dominant precede toujours une autre dominante.

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La succession de ces dominantes est d'ailleurs La meme. elles doivent toutes descendre de quinte, qui plus est elles doivent se succeder Les unes aux autres, jusqu'a La tonique toujours precedée immediatement de sa dominante tonique.

[f.13^{v}]

Ainsy d'abord apres La premiere dominante on passe La Tonique.

Il faut toujours marcher de dominante en dominante, jusqu'a ce qu'on arrive de nouveau a la Tonique.

Comme La succession des Dominantes, est La plus frequent que meme La soudominante mais renversée; on ne Sauroit trop L'avoir presente a L'Esprit, de sorte qu'on puisse se rappeller sur Le champ quelle note en domine une autre.

Si L'on a suivi exactement ce que nous avons recommandé des La premiere Leçon, on doit etre au fait de ce que nous proposons a present; car chaque note de La troisieme gamme y est suivie de sa dominante ou bien en La prenant {par/a rebours}, La premiere note sous Le nom d'octave y est dominante de celle qui La suit; et toujours de meme de L'une a L'autre, ut y est dominante de fa, fa de si, si de mi &c.. Si ut est dominante de fa par conseque fa est soudominante d'ut selon ce qui en a deja été suggeré dans La V.^{e} Leçon ainsy La premiere note de La gamme par quintes prise dans son ordre direct, {est la} soudominante de sa Suivante, celle cy L'est encore de La suivante et toujours de meme. ut est soudominante de sol, sol de Ré, ré de La &c. ne negligeons point jusqu'aux moindres minuties; un objet distrait de L'autre; et Si L'on differe a Se mettre en possession de celuy dont l'autre depend bientot La confusion se mele dans Les idees; en un mot L'impatience L'envie d'aller en avant; est Le plus grand obstacle a nos desirs. on passe legerement sur des principes quon croit posseder suffisament, puis L'on se trouve tout d'un coup arrete parce qu'ils ne se presentent pas assez promptement a L'esprit parce que pour y penser, L'on perd La trace de celuy dont on doit principalement s'occuper.

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Pour en revenir a La nouvelle Dominante en question; on peut voir que cette dominante ou La Tonique ut montera de seconde, sera ré que Ré est dominant de Sol et que sol est dominante-tonique d'ut telle est sa marche jusqu'a La tonique selon cequi a deja éte declaré.

Il ne reste plus qu'a scavoir quand est ce que La tonique devra monter de seconde et ce sera justement Lorsqu'elle ne pourra par quinte sans qu'il ne se rencontre une syncope dans La Basse fond.[ale] ou Lorsqu'on se verra forcé de faire succeder La dominante tonique

[f.14r]

à la soudominante.

on peut ne Se servir que de points, au lieu de notes, jusqu'a ce qu'on soit arrivé de nouveau a la Tonique pour y placer ensuitte des notes Lorsqu'on est sur de La marche.

apres avoir mis un point sur La dominante tonique ou sur La soudominante, Selon ce que Le sujet semble exiger a la suitte de La Tonique on examine si l'on peut retourner a cette tonique, sans qu'aucune note fondamentale ne Se syncope, fut ce La Tonique meme, apres y etre arrivé. et Si cela ne Le peut c'est justement La Le cas de substituer La sutonique a cette Dominante tonique ou a cette soudominante qu'on avoit d'abord ponctuée quand cette sutonique est placée on examine comme ailleurs, si Le sujet exige de La continuer, ou non. Si en La continuant on ne manque pas L'occasion de saisir La dominante, qui doit La suivre, pour .... arriver de L'une a L'autre, ou Si en La quittant trop tot on n'occasionne pas une syncope: car il en faut toujours revenir a cette preuve, avant que {de se de saisir} d'une note fondamentale quelqu'elle soit, que Le sujet aura fait choisir.

La moindre distraction peut occasionner une faute, sans que l'esprit se porte d'abord du coté d'ou elle vient: c'est pourquoy, il faut se rappeller a chaque instant toutes Les regles qui doivent concourir a remettre dans La voie. exemple.

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Explication

si L'on employe La dominante Tonique a A elle sera forcé de syncoper a B. si L'on prend un soudominant a C: elle sera forcée de passer a la dominant Tonique sous D., il en sera de meme entre H et J.

si L'on observe Les premieres regles sous E. F. ou La soudominante suit et precede La Tonique selon Les guidons; cette Tonique sera forcée de Syncoper a G.
quoique Les deux notes H. et J. soient comprises dans l'accord de La sutonique qui repond a H. on ne peut cependant La conserver sous J. sans detruire La succession fondamentale prescrite. il faut par consequent qu'elle soit immediatement suivie de La dominante tonique sous J., d'ailleurs cette remarque est La meme qu'autre C. et D.

[f. 14ᵛ]

on voit dans tout ces cas La necessite de faire monter La Tonique a la sutonique, soit pour eviter La syncope future a G. soit pour eviter La syncope de La dominante Tonique a {B}; soit pour eviter {que} celle cy ne suivre immediatement La soudominante a D. et a H. — ainsy Les premieres regles servent toujours de guides aux dernieres.

article II.

de La Tierce en descendant

La Tonique peut encore descendre de Tierce toujours sur une Dominante que nous appellerons desormais sudominante. Les regles qui regardent cette sudominante, sont Les memes que pour La sutonique, a quoi nous ajouteront seulement que Le cas Le plus evident de L'employer c'est Lorsque La Tonique est force de syncoper, meme en debutant;

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supposé que Le Sujet s'y prete pour Lors. nous aurons une dominante de plus apres Laquelle il faudra comme auparavant marcher de dominante en dominante Jusqu'a La Tonique. La tonique ut descendra de tierce sur La qui est dominante de Ré et Le reste comme dans L'article precedent. ex^{e}

Explication

Dans Le premier debut Le sujet se prete a ce que La Tonique puisse descendre de Tierce, au lieu qu'il ne La permet pas dans Le deuxieme de sorte que cette Tonique est forcée d'y syncoper.

si L'on profite de La Liberte qu'on a de faire Syncoper La tonique dans Le premier début; on voit L'impossibilite qu'il y auroit d'employer La soudominante sous A. puis qu'elle seroit forcée de passer ensuitte a La dominante tonique sous B.

Il est vray que Selon L'article précedent il n'y a qu'a prendre La sutonique au lieu de La soudominante, sous A.— de sorte qu'il y a La vraisemblaillement de l'arbitraire. et c'est ce qu'on aura soin de resoudre dans L'article suivant.

Si l'on employait La soudominante, meme La sutonique sous C. L'une et L'autre Seroit forcée de syncoper a D. donc La tonique doit absolument y descendre de Tierce. La Tonique ne peut rester a E. sans syncoper, donc voila un cas ... de La faire descendre de Tierce des que Le sujet s'y prete.

F. et G. regardent L'article precedent.

arbitraire entre la {sudomina} a H. et La sutonique marquée d'un Guidon.

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[f. 15r]

article III

De La preference de La tierce sur La seconde
d'ou nait L'arbitraire entre ces deux successions
et de La necessité de marquer Les differentes
Basses fondamentales possibles.

Le plus parfait doit toujours etre preferé: ainsy quand on saura que La quinte est plus parfaite que La tierce, et celle cy plus que La seconde, on ne pourra manquer d'observer cette regle dans Les cas arbitraires.

cependant comme La perfection consiste aussy dans La varieté dans Le beau chant, dans L'esprit de ce chant, dans L'expression et dans Le dessein, on est quelquefois obligé pour s'y preter de transgresser une regle moins considerable. c'est pourquoy en attendant qu'on Sache a quoy L'on devra S'en tenir, on ne fera pas mal de marquer des a present Les differentes Basses fondamentales, qu'on apercevra possibles sous Le meme chant du Sujet. on marquera la plus parfaite Basse fondamentale avec des notes L'autre avec des guidons, et L'autre S'il s'en trouve une troisieme possible avec des points.

on ne doit point trop s'alambiquer l'esprit pour trouver a present ces differentes Basses fond.les possibles; et pourvu qu'on en compose une conforme a celle de nos exemples on doit etre satisfait a mesure qu'on {aquerera} des connoissances et que Les talens se developperont, Les arbitraire se presenteront petit a petit plus familierement et c'est a mesure qu'on Les distinguera qu'il faudra Les marquer.

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La cause de ces differentes Basses fond.[les] possibles reside dans Les notes communes a Leurs accords. Les notes fondamentales a la quinte L'une de L'autre n'ont qu'une note commune dans leurs accords, et celles a La tierce en ont deux.

Il faut d'abord remarquer quelle note des accords est commune aux fondamentales a La quinte, et quelles sont Les deux notes communes+ + aux fond.[ales] a La tierce puis on remarque Les intervales que ces notes forment en meme tems avec La plus haute, et avec La plus basse des deux notes fond.[les]

voicy de quoy faciliter ces remarques.

[f. 15ᵛ]

on voit dans tout ces accords La pointe du demicercle repondre a la quinte d'une note fond.[le] et a L'octave de L'autre: de sorte qu'on ne doit appercevoir d'abord de L'alternatif entre La dominante tonique et La sutonique que dans La note ré; c'est a dire que Lorsque La note ré occupera Le Sujet il faudra se tenir sur ses gardes, et examiner Si c'est La dominante tonique, dont ce ré fait La quinte qu'il faut employer, ou Si c'est La sutonique dont ce meme ré fait L'octave. Il en est de ces deux notes fondamentales comme de la Tonique avec sa dominante tonique et avec sa soudominante, qui ont L'octave et La quinte commune entre elles. ainsy de toutes Les deux notes fond.[les] a la quinte L'une de L'autre; comme font encore La Sudominante et La sutonique d'un autre coté La sudominante qui est tierce de La sutonique et dont La sudominante fait La tierce a deux notes ces communes avec L'une, et deux avec L'autre: parmi ces notes communes encore il y en a une de commune a toutes les trois, Savoir L'octave de La sudominante qui est tierce de La soudominante, et quinte de La sutonique Meme communauté entre L'octave de la tonique, La tierce de La sudominante, et La quinte de La soudominante.

pour se mettre au fait de La note du Sujet commune a trois notes fond.[les] differentes, il suffit de s'y rappeller, d'un coté, L'octave de sudominante et de l'autre celle de La Tonique.

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La Tonique a de plus deux notes communes avec La sudominante puisqu'elle en est La tierce.

ainsy toutes Les notes d'un ton excepté La sensible sont communes aux accords de ~~deux~~ differentes fond.les parce que ce qui suit, ou precede une note commune dans Le sujet determine presque toujours Le choix de La note fondamentale qui y convient, en consequence de La succession fond.le prescrite.

Il ne faut jamais s'occuper de L'arbitraire dans La Basse fond.ale, que Lorsque sa succession se trouve reguliere de part, et d'autre; c'est pour Lors qu'il y a plus d'une Basse fond.le possible: Si non il n'y a point d'arbitraire +

on ne peut se tromper au reste, dans tout cecy, qu'on ne Se reconnoisse.

[f.15bis]

Possible entre cette soudominante et l'une de ces deux autres notes fondamentales, dont il faut L'assurer.

La tonique a aussy deux notes communes avec sa tierce au dessous de sorte que toutes ses remarques bien entendues, bien digerees ne peuvent pas manque de mettre au fait.

[f.16r]

La succession fond.le doit etre observée partout en rigeur: sans recommencer tant de fois L'operation qu'a La fin on en vienne a bout.

La Dominant Tonique, n'y La soudominante ne peuvent etre employées si elles ne sont suivies de La Tonique; on ne peut employer une dominante qu'elle ne marche de L'une a L'autre jusqu'a la Tonique. La Basse fond.le ne doit pas syncoper: qu'est ce qui peut

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donc arreter? Sera ce d'avoir pris une note fond.le pour L'autre dans cas arbitraire? cela se voit, cela se corrige. ce sera donc apparemment comme nous L'avons deja insinué, pour avoir trop conservé une meme note fond.le ou pour ne L'avoir pas assez conservees.
on decouvrira insensiblement La possibilité des differentes Basses fondamentales, soit a force de pratique, soit a L'aide des explications que nous en donnerons, et des Guidons, ou des points qui serviront a Les marquer. ex.e

Explication.

B. fait La quinte de La dominante tonique qui suit La Tonique, et qui se repete a C. pour passer ensuitte a cette meme tonique sous La mediante D. or des que cette dominante Tonique se repete, rien n'empeche de luy preparer d'abord La sutonique sous B., selon Le Guidon puisque La note B. du sujet est commune aux accords de ces deux notes fondamentales et puisque La succession s'y trouve dans L'ordre prescrit.
des qu'on peut prendre La sutonique a B. qui est ce qui empeche de descendre d'abord de tierce au Guidon A., apres La premiere Tonique au Lieu de La repeter La note A. du sujet n'est elle pas commune aux accords de ces deux notes fondamentales, et La marche des dominantes jusqu'a La Tonique sous D., n'y est elle pas bien observée par Les guidons? Il est vray que La mediante A. et D. exige naturellement La Tonique pour Basse fond.le, mais cela ne doit s'entendre qu'au cas que cette tonique ne soit pas deja employée immediatement auparavant; car Lorsqu'on La tient une fois il est Libre d'appliquer La mediante sous La quelle cette Tonique peut se repeter, a telle autre note fond.le que La succession determiné peut autoriser.

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[f. 16v]

Des que La Tonique F. se repete a G. on examine si L'on ne pourroit pas substituer La sutonique a La soudominante E. pour arriver, par une succession de Dominante a la Tonique G. car La note E. du sujet est commune aux accords des deux notes fond.les en question, de meme que La note F. du sujet est commune aux accords de La tonique et de La dominante tonique. ainsy L'on voit La possibilité d'une deuxieme Basse fond.le dans Les guidons sous E. F.

ce qui suit jusqu'a H. regarde Le premier article.

L'octave H. de La soudominante est commune aux accords de trois notes fond.les differentes, qui peuvent etre employées, de sorte qu'il en suit trois Basses fond.les differentes jusqu'a un certain point, et deux dans Le reste. L'idée de ces differentes Basses fond.les doit etre suggerée par La repetition de La soudominante H. et de La Tonique qui La suit.

La plus parfaite succession est marquée avec Les notes, L'autre avec des Guidons, et La moins parfaite avec un point qui {se reunir} aux Guidons.

au Lieu de Conserver La tonique à J. on peut Luy substituer sa dominante, parce qu'il y a Lieu d'y revenir a K. apres cette dominante cependant comme elle est obligée de monter ensuitte de seconde a L. Les notes vallent mieux, puisqu'elle y descend de tierce a K. et que La tierce doit L'emporter sur La seconde.

La mediante M. ne peut recevoir La tonique puisque celle cy syncoperoit pour Lors.

apres La plus parfaite succession trouvée d'N. a {P.} on seroit forcé de faire syncoper La tonique a Q.; si L'on ne savoit pas qu'elle y peut descendre de tierce, a des conditions a [la] verité, dont il faut S'assurer en examinant Si La suitte du Sujet ne S'y oppose pas: car d'ailleurs La soudominante dont Q. fait La quinte n'est pas possible attendu que Le sujet ne permet pas qu'elle y soit suivie de La Tonique.

cependant La possibilité d'employer La Tonique a Q., si elle n'y Syncopoit pas doit faire examiner si on ne pourroit pas y arriver en cet endroit par une autre route; comme en faisant

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monter La Tonique de seconde a N. d'ou L'on marche ensuitte par des dominantes marquées d'un Guidon jusqu'a La derniere Tonique Q.

La cause de ces differentes Basses fondamentales reside dans La note Q.

[f. 17r]

Du sujet, commune aux accords de La Tonique de La soudominante et de La sudominante, et qui suffit pour en occasionner La recherche. La dominante-tonique qui se repete d'R. a S. peut etre remplacée a R. par La dominante ~~Tonique~~ marquée d'un Guidon. attendu que La note P. du Sujet est commune a Leurs accords, et que La succession prescrite n'en souffre point.

Il suit un autre Exemple sans explication, mais absolument relatif a toutes Les Leçons precedentes dont chacun fera de soy meme Les applications aux regles données.

[f. 17r]

Leçon

Des Tons naturels, et Transposés ou L'on explique L'ordre, et La nature des Diezes, Bemols, et Bequares

Les tons se distinguent en deux genres L'un majeur, L'autre mineur.

~~Celle~~ Cette difference consiste dans La tierce de La Tonique; si cette tierce est majeure, Le ton est majeur. si elle est mineure Le ton est mineur.

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La tierce majeure est composée de deux tons Diatoniques. voyez La premiere Gamme. elle surpasse La mineure d'un demi-ton, qui par consequent n'est composée que d'un ton et demi.

Il y a plusieurs tons dont Les tierces sont naturellement majeures ou mineurs, dans La premiere, et dans La seconde Gammes. Les tierces d'ut, de sol, et de fa par exemple, sont naturellement majeur et celles de La de re, de mi, et de si sont naturellent mineures.

Pour changer Le genre de ces tierces on Leur a noeie un Dieze, ou un Bemol.

Le Dieze augmente La note d'un demi-ton, et Le Bemol La diminue d'autant:

pour ce qui est du Bequare il rend a la note sa premiere nature. il tient Lieu de Bemol parmy Les Diezes, et de Dieze parmy Les Bemols.

par consequent Si L'on associe un ~~Dieze~~ Bemol a la note mi qui fait La tierce majeure d'ut cette tierce sera pour Lors mineure, et si L'on associe un Dieze a La note ut, qui fait La tierce mineure de La, cette tierce sera pour Lors majeure; ainsy des autres.

Si La Tonique ut, etoit diezée, sa tierce qui etait auparavant majeure deviendroit mineure; de meme que si La Tonique La etoit Bemolisée sa tierce qui etoit auparavant mineure deviendroit majeure. ainsy des autres.

[f. 17ᵛ]

Le Ton d'ut est Le modele de tout Les tons majeurs et celuy de La est Le modele de tout Les tons mineurs. Tous Les autres tons s'appellent transposés; et pour Les conformer a Leur modeles, on place des Diezes, ou des Bemols a coté de La clef. pour marquer que Les notes qui se rencontreront au meme endroit que ces Diezes, et ces bemols seront toujours sensées Leur etre associées.

Le premier Dieze s'associe a La note fa et le premier Bemol a note Si.

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en faisant commencer La troiseime Gamme par La note fa on y trouvera L'ordre Des Diezes jusqu'a La note Si, et en La suivant a rebours depuis cette note si on y trouvera L'ordre des Bemols.

Les deux ordres s'accordent avec celuy des dominantes, specifie dans La IX Leçon art. 1. La note sensible qui est toujours Le demiton au dessous de La tonique ou de son octave determine tous les diezes qui doivent entrer dans Le ton majeur; en comptant depuis Le Dieze de fa jusqu'a celuy de cette note sensible. ~~incl~~ inclusivement. toutes Les Toniques bemolisées d'un ton majeur exigent un Bemol de plus que {Le seul/le leur}, on comptant depuis si, et ce premier Bemol sur si appartient au ton majeur de fa.

Commençons par example, La 3 gamme par sol pour Les toniques des Tons majeurs et par fa pour Les Diezes; autant de toniques successives autant de Diezes.

Commencons de meme cette Gamme en retrogradant par fa pour Les Toniques des tons majeurs, et par si pour Les Bemols, autant de Toniques autant de Bemols ou l'on suppose que toutes Les Toniques apres celle de fa sont Bemolisées. A l'egard des tons mineurs, ils suivent L'ordre des majeurs, qui en sont La tierce mineure. Ici sont entre Eux comme La Tonique du Ton majeur d'ut est a l'Egard de La Tonique du ton mineur de La Le denombrement qui suit va tout eclaircir.

Denombrement des Tons transposés
avec Leurs diezes, et Leurs Bemols.

[f. 18r]

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Tons majeurs.	Tons mineurs	notes Diezées
sol	mi	fa
ré	si	fa. ut.
La	fa diezé	fa. ut. sol.
Mi	ut dieze	fa. ut. sol. ré.
Si	sol dieze	fa. ut. sol. ré. La.
fa diezé	ré dieze	fa.ut.sol.ré.La.mi.

Tons majeurs	Tons mineurs	notes bemolisées
fa	re	si
si bemol	sol	si. mi.
mi bemol	ut	si. mi. La.
La bemol	fa	si. mi. La. ré.
ré bemol	si bemol	si.mi.La.re.sol.

on pourroit pousser ce denombrement encore plus Loin mais cela est inutile. Si par exemple on ajoutoit aux tons majeurs celuy d'ut Dieze, il y auroit sept Diezes mais ce ton est Le meme que re Bemol avec six Bemols.

remarquons dans ce denombrement que La tonique des Tons majeurs fait partout La tierce mineure de La Tonique des tons mineurs qui Luy repond et qui a Le meme nombre de Diezes, ou de bemols.

Les tons mineurs montent diatoniquement de meme que Les majeurs, depuis La quinte jusqu'a L'octave; et qui y occasionne deux Diezes accidentels, qui ne se placent point a cote de La clef. ex.[e]

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explicat.

Les degrés diatoniques du ton mineur se forment en descendant des memes notes que celles du majeur qui Luy repond; car c'est icy Le ton mineur de La qui repond au majeur d'ut donné dans La premiere gamme mais en montant, il s'y trouve toujours deux diezes accidentels sur deux notes voisines A. B. dont La plus haute B. est toujours La note sensible.

Leçon

du rapport des tons.

chaque Ton est entraine avec Luy cinq autres, qui Luy sont plus

[f. 18^{v}]

ou moins relatifs.

Les deux tons L'un majeur, L'autre mineur, {X.} Leçon dont Les Toniques sont a une Tierce mineure L'une de L'autre, et dans Les quels entre Le meme nombre de Diezes et de Bemols ont un si grand raport entre Eux. qu'ils ordonnent non seulement de tous Les autres tons relatifs, a L'un des deux mais qu'ils en determinent encore Le genre.

Leur rapport se reconnoit non seulement dans Ce meme nombre de Diezes, et de Bemols, qui Leur est commun, mais encore dans Le grand nombre des notes communes a Leurs accords.

Des que Leurs Toniques sont a une tierce mineure L'une de L'autre, il S'ensuit que toutes Les notes fond.^{les} de Leurs tons sont a une pareille distance or Sachant que Les notes fond.^{les} a la tierce L'une de L'autre, ont deux notes communes a Leurs accords. art. III de La Lec. IX^{e} on concevra bientot que toutes Les notes Diatoniques de L'un des deux

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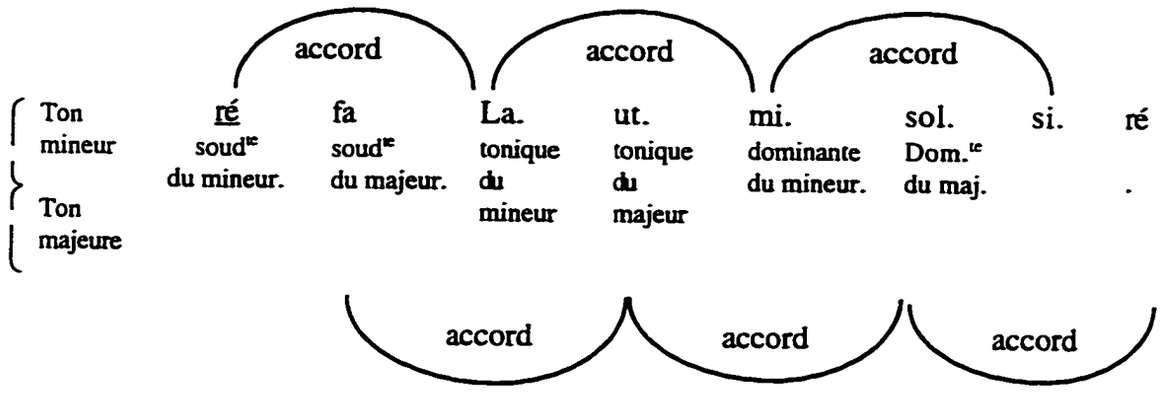
appartient egalement a L'autre excepté Les Diezes accidentels du mineur selon ce qui en a deja eté dit dans La fin de La X^e^ Lecon.

Pour se representer encore mieux, Le rapport, arrangions de suitte, Les accords des trois notes fond.^les^ du ton mineur nous y trouverons en meme tems ceux des trois notes + +fond.^les^ du ton majeur.



on trouve dans L'accord de chaque Tonique quatre notes communes avec Les accords de deux notes fond.^les^ de son ton relatif. La tonique du mineur en a deux communes avec La soudominante du majeur. Savoir La et ut et deux autres communes avec La Tonique du majeur, savoir ut et mi celle cy en a aussy deux autres ~~demineu~~ communes avec La dominante du mineur savoir mi et sol: enfin tout ce qui appartient a L'un de ces tons, appartient egalement a L'autre; excepté Les deux Diezes accidentels du mineur, par Les quels seuls on est assure de ce dernier ton dans Le sujet.

De ces deux Diezes accidentels celuy de La note sensible est Le seul au quel il faille avoir egard; parce que L'autre ne paroit jamais que pour amener La note sensible apres Luy ainsy connoissant une fois que cette note sensible du ton mineur est toujours formée d'un Dieze ajouté a la quinte du majeur, des qu'on verra dans Le sujet cette quinte sans dieze, ce sera seurement Le ton majeur de Sorte qu'a cette note pres La {x} ou fond.^le^ est arbitraire dans l'un de ces deux tons 1.^er^ et 2. ex.^les^

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[f. 19r]

L'un de ces deux tons relatifs se reconnoit par L'autre, {et ce}que non seulement La Tonique du majeur fait toujours La tierce mineure du mineur, mais encore avec La note sensible du majeur, fait en meme tems La seconde du mineur et Se trouve par consequent entre Leurs deux Toniques et qu'il faut se rendre familiers a force de se representer des exemples sur differentes Toniques qui soient entre elles comme ut ~~comme~~ ton majeur, et La ton mineur. Les autres tons relatifs a L'un de ces deux premiers se prennent dans Leurs dominantes, et soudominantes qui peuvent devenir Toniques a Leur tour, et dont Le genre doit etre celuy du premier Ton auquel elles appartiennent, d'ou suit, cette regle qu'il faut bien {retenir}tous Les tons a La quinte L'un de L'autre sont de meme genre, et tous ceux a La tierce L'un de L'autre sont d'un genre different.

outre Le raport intime de ces deux tons, celuy de La dominante du ton principal Luy est tout aussy intime, celuy de sa sudominante. L'est beaucoup moins, et Les tons pris sur La La [sic] dominante, et sur La sudominante de son premier relatif vont toujours en degenerant Le tout donne six tons relatifs y compris Le principal c'est a dire celuy par qui la piece commence, et finit.

on doit juger par cet exposé combien il est necessaire de se representer Le premier ton relatif a la tierce du principal, en meme tems que celuy cy est connu puisqu'il ordonnent ensemble de tous Les tons relatifs a ce principal, et de Leurs genres.

Si Le ton principal est mineur, il faut se representer La majeur ~~a~~ relatif a La tierce; de meme que s'il est majeur, il faut se representer Le mineur relatif a la tierce: car ce qui appartient a L'un appartient egalement a L'autre memes rapports de chaque coté, ils se pretent mutuellement du secours; rien ne convient en un mot a L'un qu'il ne convient a L'autre egalement.

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Si L'on forme une sixte des deux toniques relatives a la tierce comme sont icy. ut et La toutes Les notes Diatoniques comprises dans L'etendue de cette Sixte seront Les toniques de tous Les tons relatifs a L'un des deux en question

ut. re. mi. fa. sol. La.
Sixte

que Le ton majeur d'ut, ou Le mineur de La soit Le principal, tous

[f. 19v]

Les autres compris dans L'etendue de Cette sixte Luy sont egalement relatifs avec cette seule difference que Le ton de La dominante du principal aura toujours Le pas sur Les autres.

qui plus est Les tons relatifs ne doivent jamais avoir qu'un Dieze, ou qu'un Bemol de plus que Le principal, sans y faire attention aux diezes accidentels du mineur, car c'est toujours sur Le majeur qu'il faut se guider en ce cas pour ce qui regarde son mineur relatif. 3e, et 4.e ex.es

Explication

Il ne faut pas s'attacher a composer La Basse fond.le de ces ex.es on doit seulement S'en servir pour remarquer dans Les deux premiers, que quoique Le chant du sujet soit Le meme de part, et d'autre, La Basse fond.le marche cependant d'un coté dans Le ton majeur d'ut, et de l'autre dans Le mineur de La ce que La cause de cette arbitraire vient de ce que La quinte du majeur ne paroit paroit [sic] point dans Le sujet soit sans Dieze soit avec un Dieze.

on voit dans Les deux derniers exemples, Les memes rapports pour Le ton majeur d'ut que pour Le mineur de La; et La Basse fond.le y suit dans chaque ton, de meme que dans Le

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passage d'un ton a un autre, La marche qui Luy a d'abord éte prescrite relativement au ton majeur d'ut.

Cette dernier remarque prouve combien il ont necessaire d'avoir La Dominante, et La soudominante de chaque tonique toujours presente aussy bien que sa mediante et La note sensible, pour ce qui regarde Le sujet; afin que Le nom des notes n'embrouille point L'idée Lors qu'il S'agira d'un autre Ton que celuy d'ut, afin qu'on puisse se dire en un mot, dans quelque ton que ce soit, La Tonique doit passer a La dominante ou a La /sa? soudominante si non elle doit descendre de Tierce, on monter de seconde sur une simple Dominante, qui marche ensuitte d'un Dominante a l'autre jusqu'a La Tonique soit celle du ton actuel, soit celle d'un nouveau Ton qui peut avoir Lieu a la fin de cette marche. +

Leçon

Moyens de connoitre Le ton dans Le sujet

Le chant est un discours harmonique, dont Les phrases Se distinguent[1]

[f.19bis]

XII^{e} Lecon

+

Du passage possible d'une tonique a une autre

Les tons peuvent se varier d'une mesure, meme d'une note a L'autre, de sorte qu'il est Libre de passer immediatement d'une tonique a une autre par tous Les intervales consonans qui sont La tierce, La quarte, La quinte, et La sixte.

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[1] The text, interrupted by the insertion of folio 19bis, resumes on Folio 20^{r}.

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Les toniques qui se Succedent ainsy doivent toujours appartenir au ton principal, de sorte qu'on bien peut guerer faire succeder immediatement que trois differentes, on peut y entrelacer celle du principal, Le tout selon que Le sujet Le permet. Lorsque Le sujet fournit une note qui vaut plusieurs tems c'est un des cas ou on peut Luy donner pour Basse fond.le, differentes toniques.

[f. 20r]

a la faveur des frequent repos qui s'y rencontrent. Ces repos sont sensible au point d'en faire trouver naturellement La Basse fond.le.

Cette Basse fond.le indique pour Lors Le ton, mais comme elle y est tantot Tonique tantot dominante Tonique, Selon L'exposé de La VIIIe Leçon; il y a des signes visibles dans Le sujet dont La connoissance empeche de s'y tromper; et au defaut de ces signes, Les plus intimes rapports entre Les tons successifs font pour Lors pencher La balance.

article 1.

de la note sensible, et des accidens que produisent en consequence Les Diezes, Les Bemols, et Les Besquares

La note sensible qui est toujours Le demiton au dessous de La Tonique ou de son octave et qui fait toujours d'ailleurs, La tierce majeure de La Dominant tonique est Le plus sur moyen de connoitre Le ton.

quand on a soin de placer a coté de La clef Le juste nombre des Diezes ou des bemols necessaires aux Tons transposés Selon Le denombrement de la Xe Leçon; La regle suivante est generale pour tous Les tons. Des qu'un nouveau Dieze, ou Bémol se trouve associe a une note du sujet; c'est signe que Le ton change, S'il n'est deja changé. si La note est Diezée elle est note sensible; si elle est bemolisée, celle qui devroit avoir un bemol

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apres elle selon L'ordre du denombrement deja cité, est pour Lors note sensible: par exemple S'il y a un Bemol sur Si et que Le mi n'en ait point; ce mi qui en devroit avoir un apres Si est par consequent, La note sensible: ainsy des autres notes bemolisées.

Un bequarre parmy Les bemols tient Lieu de Dieze; et parmy Les Diezes il tient Lieu de Bemols. au reste Le Dieze l'emporte toujours sur Le Béquarre.

S'il y a plusieurs Diezes ou Bemols de suitte entre deux repos

[f. 20^{v}]

C'est toujours sur Le dernier Selon L'ordre du meme dénombrement deja cité que La regle S'applique.

Deux nouveaux Diezes en montant Diatoniquement sont toujours Les accidentels d'un ton mineur, et Le plus haut des deux est toujours La note sensible. il se trouve quelquefois un béquarre au lieu du plus bas des deux Diezes parce qu'apparemment il y avoit un Bemol sur La meme note.

Comme La note sensible est toujours a la meme distance de La Tonique que Le Ton soit majeur ou mineur on ne peut jamais se tromper a L'egard du Ton qu'elle indique, si L'on se rappelle Le rapport avec Le principal.

C'est toujours d'un ton a L'autre que se presentent Les nouveaux signes du changement de Ton; et L'on doit avoir egard aux signes qui ont precedés Lorsqu'on n'en voit point de nouveaux qui Les suppriment ex.^{e}

Explication

Les Diezes A. C. G. J. K. P. et S. marquent des note sensibles, auxquelles on ne peut se meprendre. Le Bequarre B. apres Le Dieze A. remet La note comme elle etoit avant ce Dieze. Le Bemol D. appartient au ton mineur de Ré. annoncé par sa note sensible C.

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mais Le Dieze C disparoissant à {E.} Le meme Bemol D. sur Si doit pour Lors guider; et en ce cas mi est note sensible. ~~Le B~~

Le Bemol paroissant ensuitte sur mi à E. sans aucun Dieze ny bequarre d'ailleurs; dont La est note sensible. Si Le Dieze G. est note sensible de sol, Le ton de ce sol soit etre repeté mineur, a cause du Bemol sur mi, qui Le precede à E. et qui ne se trouve point supprimé par aucune nouveau signe jusqu'au Dieze G. quoique ce ton de sol doive etre naturellement majeur, selon son raport avec Le prinicpal; on est forcé de ceder a la Loy du contraire que Le sujet impose.

Le Bemol F. disparoit a H., et il est incontinent suivit d'un dieze a J., reconnu pour note sensible de ré. dont Le ton doit etre mineur relativement au principal.

[f. 21r]

C'est pour se soumettre a La Loy que veut que Les tons a la quinte soient de meme genre; que Le ton de sol a été rendu mineur immediate. [sic] Immediatement avant a luy de ré qui doit etre mineur, et qui est quinte de sol.

Le si doit etre Bemol dans Le ton mineur de ré encore indiqué par sa note sensible L., et si cependant il n'a point de Bemol avant L. c'est qu'il y est pour Lors Le plus bas des deux Diezes accidentels de ce ton mineur.

La raison pour quoy ce si n'a point de Bequarre avant L. c'est qu'il est naturellement bequarre dans Le ton principal, aussy bien que dans Le mineur de La qui precede icy celuy de ré. Mais des que ce ton mineur de ré s'est fait connoitre et que le si n'y monte pas sur La note sensible, comme Dieze accidentel, il doit etre bemol. de sorte que S'il ne L'est point ~~apres~~ M., apres L. c'est signe que Le ton change.

pour ce qui est du ton annoncé par Le si naturel a M.; on n'en pourra bien juger qu'a la fin de cette Lecon. Les Deux Diezes accidentels du ton mineur de La sont tres visibles a N.{P.} et L'on ne peut douter que {P.} ne soit La note sensible. Le Bemol q.

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sur Si indique, comme à D. La note mi pour sensible Le Bequarre a {R.} sur ce meme si Le fait assez reconnoitre pour Le premier des deux accidentels ou s. {c'est} note sensible. Ce meme Bequarre subsistant a T. sans qu'il y ait de Dieze a U., n'y ailleurs prouve non seulement qu'on n'est plus dans le ton mineur de ré, ou il vient de servir de premier dieze accidentel, mais encore qu'il est Luy meme note sensible: car Le defaut du Bemol qu'il doit avoir dans Le ton mineur de ré, Luy suppose pour Lors un Bequarre.

article II.

Du Doute qu'on doit se former sur La note sensible

des tons majeurs

Par la raison que La note sensible d'un ton majeur fait aussy La seconde du ton mineur que s'y rapporte, puis qu'elle se trouve entre Leurs deux Toniques, X Leçon, on ne peut etre trop sur ses gardes,

[f. 21ᵛ]

Lorsqu'on appercoit un Nouveau Dieze reconnu pour note sensible d'un ton majeur.

En voyant ce dieze il faut examiner s'il ne l'en trouver pas un autre dans Le contenu de La meme Phrase: et S'il s'entrouve un autre, certainement Le dernier des deux selon L'ordre du denombrement de La Xᵉ Lecon sera note sensible.

S'il n'y a point d'autres Diezes qui puissent Luy disputer son droit et que La quinte du ton majeur qu'il indique paroisse dans Le sujet: il est veritablement note sensible: voyez La XIᵉ Lecon: mais si cette quinte n'y paroit pas on peut encore se tromper et c'est pour Lors au repos de La Phrase qu'il faut avoir recours, sinon aux plus intime rapport entre Les tons successifs voisins: mais cecy regarde Les articles suivans.

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article III

Des intervales propres a faire connoitre Le ton

dans Le sujet

Toute note ou Le chant du sujet descend de tierce sur un tems fort et ou l'on sent Le moindre repos, est generalement mediante, ou note sensible, faute d'un autre signe qui en donne La certitude; ou ne risquera rien d'ailleurs, parceque La Basse fond.[te] est toujours La tierce au dessous de L'une des deux, et parceque La suitte du sujet ne manquera pas de faire {evanouer/evanouir} Le doute surtout au repos sensible Le plus prochain.

Lorsque La note ou L'on descend ainsy de tierce sur un tems fort n'est n y mediante n y sensible on Le reconnoit aisement, soit parceque Le repos y est insensible, soit surtout parcequ'on ne trouvera point dans Le sujet Les Diezes ou Les Bemols necessaires aux tons qu'indiqueroient de pareilles mediantes, ou notes sensibles. D'un autre coté deux notes a la quarte ou a la quinte dans Le sujet sont Le plus souvent Les fond.[Les] du ton qui existe; quelquefois il n y en a qu'une des deux, quelquefois aussy n y L'une n y L'autre ne L'est. mais il est facile de ne s y pas tromper, parce que L'exclusion, des Diezes, ou des Bemols necessaires au ton dans Lequel on Les prendroit pour fond.[Les] rendroit d'abord L'erreur evidente.

Les fondamentales dont il s'agit sont La Tonique La dominant tonique et La soudominante.

[f. 22r]

Le plus sur moyen de ne se point tromper entre deux Tons douteux c est de remarquer dans Le sujet deux notes, entre Lesquelles puisse se rencontrer Le Dieze ou Le Bemol necessaire au ton que L'on croira preferable; puis apres avoir chante tous le Sujet jusqu'au repos qui suit ces deux notes, on Le chante une deuxieme fois, en essayant de parcourir Les degrés

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Diatonniques contenus entre ces deux memes notes, sans alterer Le mouvement: et Si L'on y retourne naturellement, sans La moindre reflexion, Le Dieze ou Le Bemol en question, on aura ~~jugé~~ auguré Juste, sinon il faudra s'en tenir a L'autre Ton.

au deffaut de ces deux notes, on en cherche une qui forme Le demiton avec Le Dieze ou Le Bemol dont il S'agit, puis chantant Le sujet de meme qu'auparavant on se propose de repeter cette note, et d'entonner entre deux celle qui doit avoir ce Dieze ou ce Bemol: de sorte que Si Le demiton s y forme naturellement on aura bien auguré. On peut chanter en soy meme au deffaut de La voix, ou executer Le tout sur un instrument. Ex.^{e}

Explication.

Les notes A ou Le sujet descend de tierce sur Le tems fort, sont des mediantes, ou Les notes B. sont des sensibles. quand on prendroit La note sensible B. pour une mediante, on ne pourroit se tromper; car outre que sa Basse fond.^{le} Seroit La meme c'est que ne voyant point a {C.} La Dieze necessaire au ton qu'indiqueroit cette mediante mal imaginée, on seroit forcé de rentrer dans Le Ton dont elle est note sensible.

qui prendroit Les notes D. pour des sensibles ou des mediantes, seroit bien de trompe par Le defaut des diezes, ou des Bemols necessaires en ce cas. Si Le premier D. etoit mediante, il faudroit un Bemol au mi qui Le precede immediatement. si Le deuxieme D. etoit mediante, il faudroit un Dieze au sol, qui paroit avant et apres sans ce signe. aucun de ces deux D. ne peut etre note sensible, puisqu'il n y a point de Dieze associé, et puisqu'il ne paroit avant n y apres, aucun Bemol, qui puisse Les faire soupconner pour tels. Si Le troisieme D. etoit mediante ou note sensible il faudroit un Bemol

[f. 22^{v}]

Au Si qui Le suit, et qu'on n'entonnera certainement pas en chantant Les degrés Diatoniques de La tierce par La quelle Le sujet descend au D. ainsy des autres D.

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s'il se trouve quelques mediantes dont Les repos soient insensibles Les notes D. qu on croiroit pouvoir prendre pour telles n'en donnent pas de plus sensibles. Des Deux notes F. G. a la quarte, G. est dominante tonique, et Les deux G.G. sont egalement fondamentales, La derniere y etant Tonique aucune des deux notes H.J. n'est fondamentalle, puisqu'elles font une fausse quinte entre elles, et non pas une quinte; et puisque H exigeroit un Bemol a J. et J. un Dieze a H., selon La V.e Leçon. Les Deux notes K. K. sont fond.Les, L'une dominante tonique, L'autre tonique: on ne pourroit Les imaginer pour autre chose, sans supposer des Diezes ou des Bemols, qui ne paroissent point a L'Egard du Si Bemol, qu'elles exigent dans Leur Ton; il suffit de chanter Le Sujet depuis K. K. jusqu'au tems fort, qui Les suit, en essayant d'ajouter une note Diatonique au dessus de ce tems fort , pour y revenir immediatement et L'on y entonnera certainement a si Bemol, qui fait pour Lors Le demi ton dont nous avons parlé.

Les deux notes L. L. sont des tierces L'une mediante, L'autre note sensible on ne peut imaginer L'une des deux pour fond. Le, sans en reconnoitre L'erreur, par Le deffaut de Diezes qu'elle exigeroit pour Lors. Des deux notes M. N., N. est dominante tonique Les deux notes P. Q. Ne sont point fond.Les; autrement L'une des deux exigeroit un Dieze qui ne paroit point.

c'est sur de pareilles remarques qu'on peut toujours s'assurer de son opinion.

article IV

Trouver naturellement La B.se fond.le

de tous Les repos, d'ou suit La connoissance du Ton

De meme que Le discours, La musique a Les phrases, et La fin de de chaque Phrase y est marquée à chaque repos. Moins Les repos sont sensibles, plus Les Phrases sont Liées, et forment un sens suivis; plus ils sont sensibles plus Les Phrases sont terminées. Les repos

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du sujet se sont plus ou moins {senter/sentir} de deux en deux mesures et Surtout de 4. en 4. La deuxieme mesure etant ordinairement en

[f. 23r]

En musique ce qu'est l'hemistiche en poesie ils se terminent ... generalement sur Le tems fort.

dans ce nombre de mesures il ne faut jamais comprendre Le tems foible non plus que celuy qui suit Le repos. Le secours de l'oreille est necessaire a present pour senter Les repos du sujet, et La B.se fond.le. Pour bien sentir ces repos il faut chanter Le sujet, du moins en soy meme, ou L'executer sur un instrument; en afffectant de s y arreter de deux en deux mesures, sans cependant y alterer Le mouvement; La seule volonté de S'arreter suffisant pour Lors.

des qu'a La faveur de cette volanté on sent effectivement qu'on pourroit s'arreter a La 2.e ou a la 4e mesure, c'est signe qu'il y a repos en cet endroit: et pour profiter du talent qu'on a d'en sentir La Basse fond.le il faut suivre exactement cequi va etre prescrit.

Assuré de La note du repos, on recommence par chanter tout Le sujet de suitte, en mesure, sans interruption; n'y Sans aucune preoccupation jusqu'a cette note du repos, puis on Laisse tomber promptement La voix au dessous de cette note comme si Le tout s'executoit en meme tems, et cela sans penser a ce qu on va faire. Si La voix se porte a une tierce ou a une quinte au dessous de La note du repos, c'est sera La Basse fondamentale; si au contraire elle se porte a une quarte, ou a une sixte au dessous, cette note du repos sera L'octave de La Basse fond.le.

Si par hazard La voix se portoit à la seconde au dessous de La note du repos on entonneroit ce qui doit La suivre, pour Lors, et non pas ce qui doit etre entendre avec elle: c'est pourquoy il faudroit recommencer L'operation, tout chanter jusque La, en oubliant a

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ce qu'on a fait, et qu'on pourroit encore avoir trop present pour Laisser tomber La voix plus Bas; et L'on ne manquera pas d'arriver a la tierce ou a La quinte au dessous.

Lorsque La voix s'est portee a la tierce au dessous, il faut recommencer L'operation, en essayant de La porter encore plus Bas; et si L'on entonnoit pour Lors La quinte au dessous avec La meme facilité qu'on avoit entonné cette tierce, il faudroit s'entenir a la quinte

[f.23^{v}]

Mais aussi pour peu qu'on trouva de difficulté a entonner cette quinte il faudroit L'abbandonner, et s'en tenir a la tierce supposons cependant qu'on s'en tient a la tierce Lorsque La quinte devroit Luy etre preferée; on ne pourroit pour Lors L'imaginer comme tonique ou dominant tonique sans qu'elle n exigeat des Diezes, ou des Bemols, qui ne se trouveroient point dans Le sujet depuis Le repos qui precede celuy dont il seroit question. on scait VIII.^{e} Lecon, que Les repos ou cadences ne se terminent jamais dans La Basse fond.^{Le} que sur La tonique ou sur La dominante tonique: de sorte qu'on est deja avancé de ce coté La, pour connoitre Le Ton des qu'on a Le talent de senter La Basse fond.^{Le} du repos; talent qui est général, surtout dans Les personnes qui aiment La musique: car Lors qu'il ne s'agit plus que de savoir distinguer La tonique de La dominante tonique il n y a qu'a s'en rapporter aux signes du sujet.

Si L'on prenoit, par exemple, La dominante tonique, pour une tonique, on trouveroit pour Lors dans La Phrase du sujet, un Dieze de moins, ou un Bemol de plus qu'il ne conviendroit. D'ailleurs La tierce de La dominante tonique, est toujours majeure elle est toujours note sensible; c'est elle qu'on entonne Le plus souvent au lieu de La quinte au dessous du repos; La voisine Diatonique au dessous de cette dominante tonique en est eloignée d'un ton, au Lieu qu'elle ne L'est de La tonique que d'un demi-ton enfin quand on s'y tromperoit L'erreur ne seroit que dans Le jugement car du coté de La succession fond.^{Le}

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elle est La meme depart et d'autre, mais Les raports reciproques des tons successifs a ... suivant, acheveront d'y jetter Les Lumieres necessaires.

souvent immediatement apres La note du repos, suit celle qu'on entonne naturellement au dessous et qui n'y est pour Lors que comme au reste; comme une suitte necessaire du repos; elle sert toujours a la sillabe muette qui suit La derniere sillabe ouverte d'un mot; comme meme, extreme: &c sur La quelle se termine Le repos: c'est a quoy il faut faire attention; par ce que cela peut servir

[f. 24r]

a faire connoitre Le ton douteux.

si cependant Le chant etoit tourné de façon que Les Phrases y commençassent generalement par Le tems ou doit tomber cette sillabe muette, conformement au debut; car ce tems pourroit bien ne plus appartenir au repos, et servir au contraire a recommencer une nouvelle phrase ce qui s'eclaircira dans La XVIIIe Lecon Ex.e

Explication

Le chiffre 1. marque La premiere de deux mesures qui composent La phrase, et Le chiffre 2. marque La deuxieme mesure ou se termine Le repos.

Le tems foible par {ou} début Le sujet est compté pour rien; ainsy des autres tems foibles contenus dans Le reste de La mesure ou Le repos Se termine. Les Guidons au dessous des notes du repos marquent Leur B.sse fond.Le ou La voix se porte d'elle meme.

premier Ex.e

Les notes sensibles jusqu'a A font assez distinguer Les toniques des dominantes toniques. Les Guidons A. et B. doivent etre reconnus pour toniques et par La Dieze d'ut qui precede A., et par La note si qui precede B. car cette note si qui doit avoir un Bemol dans Le ton d' A., ne L'ayant point a sa suitte, c'est comme si Le Dieze, ou Le Bequarre Luy etoit associe ainsy Les Guidons sous ce Dieze d'ut et sous cette note si, doivent etre

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reconnus pour des dominantes toniques.

Le Guidon C. est dominante tonique; puisque Le fa qui Le precede, et Le suit devroit avoir un Dieze, pour que ce guidon fut reconnu pour Tonique. si L'oreille manquoit La quinte au dessous de D.; du moins le raport reciproque des tons Successifs en feroit connoitre La necessité.

Deuxieme Ex.e

Les notes A. sont Les restes du repos, qu'on y entonnera naturellement

[f.24v]

au dessous, et Les notes B. {font des} commencement de phrases relatifs, au but, qui a commencé par Le 3.e tems.

Article V.e

Moyen de connoitre Les tons successifs par Leur raports reciproques

Puisque Le ton majeur d'ut, et Le ton mineur de La sont Les modeles de tous Les autres, nous ne nous servirons dans toutes Les Leçons que de L'un de ces deux tons etant facile d'y conformer Les autres: quand on veut s'en servir en mettant a coté La clef. Les Diezes, ou les Bemols qui ~~Les enviroment~~ Leur conviennent. il n y a plus pour Lors de difference que dans Le nom des notes, mais en Leur substituant ceux de toniques, de Dominante, de mediante, &c. ou est bientot au fait. si Le sujet commence par La quinte du ton majeur, ou par L'octave du mineur, on ne peut douter de L'un n y de L'autre: mais s'il commence par L'une des deux notes + + communes aux toniques de ces deux tons, il y a plusieurs choses a remarquer pour savoir a quoy s'en tenir.

Les signes connus dans Le sujet comme Le Dieze, et Le Bemol, un intervale de tierce en descendant sur Le tems fort, un intervale, de quinte, ou de quarte, Les degrés Diatoniques passez entre deux, ou ajoutés au pres de La note avec La quelle Le Dieze, ou Le Bemol

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necessaire au ton qu'on imagine, doit former Le demi-ton; enfin enfin [sic] La Basse fond.^{Le} qui se trouve naturellement au repos du sujet tout cela doit concourir a faire distinguer Le quel des deux Existe.

Cependant Le chant du sujet peut etre tourné de telle facon, ou aucun de ces signes ne s'y rencontre; et que meme La Basse fond.^{Le} y paroisse arbitraire: mais quant a cet arbitraire il est possible de Le determiner en chantant Le sujet de suitte, et sans interruption, jus qu'au Cinq, ou sixieme repos, et en recommencant sur Le champ La premiere Phrase; car L'impresssion reçue de tout Le reste sera senter Le ton de cette premiere Phrase, et {sera/fera} par consequent entonner La ~~premier~~ La veritable Basse fond.^{Le} de son repos. Mais tout Les moyens ne sont pas epuisés nous avons encore Les

[f. 25^{r}]

rapports reciproques des tons successifs, auxquels il faut avoir toujours egard, surtout au de faut des signes evident dans Le sujet.

Ces rapports reciproques consistent en ce que Les deux tons qui se succedent immediatement doivent etre a la quinte L'un de L'autre S'ils ne sont pas entre Eux comme Le majeur, et Le mineur relatifs a La tierce.

outre que Les tons qui se succedent dans Le courant du sujet doivent tous etre relatifs au Principal, ils doivent L'etre encore entre Eux suivant L'ordre qu'on vient de prescrire.

Cependant des que ces tons Se trouvent tous relatifs au principal, Ils peuvent se succeder a La seconde L'un de L'autre: mais remarquons pour Lors que La tonique descend toujours d'une tierce mineure, ou de quinte avant que de passer a celle qui en fait La seconde, soit au dessus, soit au dessous; de sorte que cette Tierce ou quinte, pouvant etre regardée comme une tonique passagere, XIII^{e} Leçon; elle entretient en ce cas Les rapports reciproques necessaires.

s'il est possible de faire succeder immediatement deux Toniques a La seconde L'une de L'autre; ce n'est que dans un cas ou L'on suppose Le sens absolument fini sur La premiere Tonique; de sorte que La deuxieme en recommence un tout nouveau, comme si

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c'etoit deux pieces de musique differentes, mais cela n'est pas encore de La competence des commençans.

Ce principe une fois bien conçu on en profite a L'Egard du premier ton douteux; on passe jusqu'au 5. ou 6.e repos; on y examine Les signes du sujet; et il est impossible qu'il ne L'entrouvée au moin un qui fasse connoitre Le ton qui suit Le douteux. Mettons La chose aupire, et passons jusqu'au troisieme Ton, il determinera Le doute du deuxieme, et celuy cy determinera Le doute du premier.

Si cependant L'on craint de se tromper avec tous ces moyens

[f.25ᵛ]

Il n y a qu'a s'en rapporter au dernier repos, dont La Basse fond.ᴸᵉ est toujours La Tonique du principal Ex.e dont on composera La Basse fond.ᴸᵉ

Explication.

Partout ou Les chiffres 1.2.3.4. se suivent Le repos a 2. est Le plus souvent insensible, il est pour L'oreille ce qu'est L'hemistiche en poésie: aussy Le repos a 4. est il beaucoup plus Sensible, Lorsqu'il n y a que Les chiffres 1.2. c'est qu'il n'y a point d'hemistiche c'est que Les tons se succedent a la seconde, de sorte que Le defaut de rapport entre eux exige des phrases plus courtes.

Si Le Ton est douteux dans Le debut, il ne l'est plus au deuxieme repos sensible a D. D'ailleurs La note B. est comme Le reste du repos A. donc c'est Le ton mineur de La. Si l'on examine bien encore La premiere phrase, L'on y trouvera deux notes a la quarte, Sous Le chiffre 3. qui ne peuvent etre fondamentales dans Le ton d'ut au Lieu que La derniere des deux est dominant tonique du ton de La, outre qu'on y descend de tierce sur Le tems fort qui vient apres.

Le ton de sol que paroit à {C.} est passager; Le dieze qui Le fait reconnoitre n'est La que comme L'un des deux accidentels du ton mineur de La, dont L'autre paroit ensuite; aussy

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Le repos n'est il pas bien sensible à C. et il s'en faut beaucoup qu'il Le fait autant qu'a A. et a B.

Le Ton de ré quinte de La est visible et sensible a E. il finit a F. ainsy du ton d'ut qui finit a J. et S'il est a la seconde de celuy de ré qui Le precede: pour Lors La Basse fondamentale ré sous F. descend de quinte a G. sur sol Lequel descend encore de quinte sur ut a H.: d'ou Le rapport necessaire est entretenu par des tons relatifs entre Eux, et au ~~relatif~~ principal. Le ton de sol quinte d'ut paroit a K. ensuitte celuy de mi a L. qui finit a M., et qui est Le ton majeur relatif au mineur de sol.

Le ton de ré N. precedé de celuy de mi, est suivi de celuy d'ut {P.} tous trois a La seconde L'un de L'autre, mais relatifs au Principal.

[f. 26r]

article. VI.e

Du moment precis ou Le ton change,

et de La succession fond.Le en pareil cas

Tout nouveau ton commence immediatement apres La note fond.le ou se termine un repos une cadence. Cette note fondamentale tient Lieu de point, de virgule, dans La Phrase harmonique, et c'est d'abord apres elle qu'on dispose La succession fondamentale, de maniere qu'elle puisse conduire a La tonique du nouveau ton par Les routes prescrites. si Le meme ton continue apres Le repos, il n y a rien a savoir de plus La dessus, que ce qui est deja specifié: mais s'il vaut a changer La note fond.Le du repos, doit etre regardée des Lors comme Tonique, et L'on choisit parmi ces differentes routes possibles, et connues celle qui convient pour conduire toujours par Les routes données a La tonique du nouveau ton.

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Les plus parfaites successions fond.^{Les} doivent etre preferées icy comme ailleurs, par exemple faire descendre de quinte La tonique d'ou L'on passe a un autre Ton pour marcher ensuitte des Dominante en dominante jusqu'a La nouvelle tonique. rien n'est plus parfait. sinon cette premiere Tonique descend de tierce, ou monte de seconde. Si c'est La dominant tonique qui termine Le repos apres Le quel on passe a un autre ton: cela n'empeche pas qu'elle ne puisse etre suivie de sa tonique avant que d'entrer dans cet autre ton des que Le sujet Le permet.

Il n y a rien de nouveau, comme on voit dans La succession fond.^{Le} soit pour conserver Le meme ton, soit pour en changer, si ce n'est que Le choix de La note fond.^{Le} qui doit suivre La Tonique, Lorsqu'on passe a un autre ton, demande beaucoup de precautions pour qu'on puisse marcher, depuis cette tonique par Les routes données jusqu'a celles du nouveau ton. Mais des que Le nouveau ton est bien connu, il n y a pas moyen de se tromper dans La succession fondamentale qui y conduit, sans s'en appercevoir.

[f. 26^{v}]

{Aussy/Ainsy} La difficulté ne Consiste qu'a recommencer L'operation jusqu'a ce qu'on se trouve dans La bonne route. et pour cet effet il faut bien se rappeller tout ce qui concerne La succession fondamentale. Ex.e

Explication

Si Le premier intervale de quarte dans Le sujet, fait pencher pour Le ton majeur d'ut, Le deuxieme fait pencher en meme temp pour Le mineur de La mais Le dieze qui suit a A. determine pour Le dernier. Le repos A. au tems fort de la 4.^{e} mesure, se termine sur La dominante tonique La quelle est suivie de La Tonique a B.

Cette Tonique B. Devient dominant tonique du ton mineur de ré, en consequence du Dieze B. ce ton mineur de ré exige un Bemol sur si, {or} ce si paroissant a C. sans Bemol, il faut qu'il soit note sensible, excepté qu'un nouveaur Dieze ne Luy dispute ce droit: mais

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il n y en a point jusqu'au repos D. donc La premiere consequence est juste: et Le ton d'ut existe apres Le repos en ré.

Ce ré descend de quinte sur Sol C. et ce sol passe de meme a la tonique ut, Selon La regle deja donnée pour Les tons qui se succedent a La seconde en descendant. Des deux Diezes qu'on voit ensuitte E. est note sensible; et pour arriver au ton indiqué par ce Dieze on voit une succession de dominantes depuis La tonique D. jusqu'a celle qui suit E. Le ton mineur de ré reconnu par Le Dieze F., suit celuy de mi, et La Basse fondamentale y marche par dominantes d'une tonique a L'autre attendu que La phrase du ton de mi est assez Longue, pour pouvoir donner a La tonique ré une Succession differente de celle qui a d'abord été annoncée en ce cas. d'ailleurs La succession des Dominantes qui paroit icy doit toujours etre {tatée}, avant toute autre, parce qu'elle est La plus parfaite. Le tems fort H. ou Le sujet descend de tierce annonce un repos; c'est donc Le ton de sol parce qu'il est a la quinte de celuy de ré, qui Le precede en consequence de quoi il ne convient pas du changer La note fond.[Le] ré à La Syncope G. du sujet parce que ré y change de nature, de Tonique il devient dominant tonique et cela suffit, selon ce qui paroit dans La VII[e] Leçon, pour eviter La Syncope de La Basse fondamentale.

Le ton d'ut paroit a J. et celuy de Fa a L. La Basse fondamentale

[f. 27r]

suit Le meme ordre d'un ton a L'autre depuis G. jusqu'a La tonique devient partout dominant tonique; et Les rapports s y observent regulierement.

Le tems fort L. ou L'on descend de tierce doit faire preferer Le ton majeur de fa a celuy d'ut, quoiqu'aucun signe jusque La n'indique Le changement du ton d'ut, mais trois raisons doivent determiner pour celuy de fa: 1.° parcequ'il y a repos a {L.}, et qu'un pareil repos ne pouvant etre formé que d'une mediante, ou note sensible, La note L. n'est n y L'une n y l'autre, dans Le ton d'ut 2.° parce que si L'on chante Le sujet jusqu'a N. et qu on Le reprenne tout de suite depuis H. jusqu'a L. on entonnera Le si Bemol entre Les deux notes qui descendent de tierce a L.; 3.° et finalement parce que Le ton mineur de ré reconnu

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par Le Dieze M. est Le relatif du majeur de fa, au Lieu qu'il est a La seconde de celuy d'ut: cette derniere raison etant plus que suffissante, Lorsqu'a L'occasion d'un ton douteux on a egard, comme on Le doit, à celuy qui suit.

Le ton de ré finissant a N. passe a celuy d'ut reconnu par Le repos, ou Le sujet descend de tierce sur Le tems fort P. La Basse fond.[Le] descend pour Lors de quinte pour passer d'une tonique a L'autre. La tonique P. passe a la nouvelle Tonique Q. en descendant de tierce {vont} Le ton continue jusqu'à La fin.

Leçon

Du Passage d'une tonique a une autre des notes sensées toniques, et Des toniques etrangeres ou passageres.

Une tonique peut passer a une autre par tous Les intervales consonans. d'ou il Suit que La dominante tonique, et la soudominante ou passe La tonique, aussy bien que La dominante ou elle descend de tierce peuvent etre sensées toniques; puisque Les marches en sont consonantes. il reste seulement a ajouter que La tonique peut encore monter de tierce sur une autre tonique. on exceptera de cette regle La soudominante d'un ton mineur, La

[f. 27ᵛ]

quelle ne peut jamais etre sensée tonique apres sa tonique.

si cependant il paroissoit necessaire de rendre tonique en ce cas, La soudominante D'un ton mineur, pour passer dans son ton ou dans un autre, il n n y auroit d'abord qu'a partager en deux valeurs La tonique qui precede cette soudominante, pour Luy supposer La tierce majeure dans La deuxieme valeur, bien entendu que n y L'une n y L autre tierce ne se presentera dans Le sujet; car on seroit forcé de l'y conformer pour Lors, sans que La supposition avancée put avoir Lieu.

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si Le ton de La soudominante se declare en meme tems qu'elle suit sa tonique, on doit dans ce moment supposer La tierce majeure a cette tonique; et Le sujet ne manque pas de La donner en ce cas, Lorsque La tierce si presente; comme a B. du dernier exemple, ou La tonique en finissant son ton mineur, recoit cependant La tierce majeure B. pour entrer dans Le ton de son soudominante. Par ce moyen une tonique devient commune a son ton, et a celuy qui La suit: question que nous agiterons bientot.

si apres avoir epuisés tous Les moyens de passer d'un ton a un autre par Les routes données, on ne peut en venir a Bout; c'est La Le cas ou il faut introduire une tonique etrangere et passagere, apres La tonique du ton que L'on quitte. on peut meme y en introduire jusqu'a trois Lorsqu'elles descendent de tierce; mais il faut absolument que La derniere employée se trouve commune a son ton, et a celuy dans Le quel on entre c'est a dire qu'elle en soit La soudominante ... ou qu'elle y serve de dominante, soit pour passer d'abord a la nouvelle tonique, soit pour y arriver par une succession de dominantes.

quoique Le meme ton continue on peut employer une du deux toniques etrangeres a ce ton apres sa tonique meme, celle cy peut y etre entrelacée, mais s'il s'y en trouvoit trois en descendant de tierce, La derniere y seroit necessairement Dominante-tonique.

Il ne faut point abuser de toutes ces possibilités, on ne doit au contraire en faire usage que dans La necessité petit a petit Le gout se forme, et

[f. 28r]

C'est dans Le cas de La Basse continue, qu'on s'appercevra mieux de La preference que merite une Basse fond.Le possible, sur celle qui est reconnue pour La plus Legitime Ex.e

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Explication

quoique Le meme ton continue jusqu'a C. au lieu de conserver La meme tonique principale sous Les 4 premieres mesures, on en change a chaque mesure, en descendant de Tierce a A. puis d'A. à B. ou B. devient sousdominante de La tonique principal qui Le suit.

Le chant du sujet paroitra insipide en conservant La tonique principale sous Les quatre premieres mesures, au Lieu qu'il sera tres agreable par La varieté des toniques A. et B. tant il est vray que L'harmonie concours a la Beauté du chant.

La Dominante tonique qui termine Le repos sous La note sensible C. est suivie de sa tonique a D. d'ou L'on passe au ton d'ut par une succession de dominantes: ton qui est declaré par Le Bequarre du sujet a sol Lequel descend de tierce sur La mediante dans Le tems fort.

Les notes fond.[Les] E. F. G. H. sont toutes Toniques de tons passagers. Le ton de G. y est etranger, car Le Dieze de fa dans Le sujet, n'est que Le premier des deux accidentels du ton mineur de La , mais ce ton entretient pour Lors Les rapports reciproques, qui sont tous a la quinte Les uns des autres. La dominante tonique J. termine encore Le repos sous La note sensible, et se trouve suivie de sa tonique L. quoique Le ton change.

Le dieze M. seroit pencher pour Le ton majeur de sol, si L'on ne voioit pas a sa suitte et avant Le repos un Dieze sur Ré, qui indique pour Lors Le ton mineur de mi relatif a ce majeur de sol : mais Le ton mineur de La d'ou L'on sort, ne doit il pas faire soupconner celuy de mi; en consequence de Leur rapport: et cela ne suffit il pas du moins pour examiner si La suitte du sujet ne s'y conforme pas. marche de dominantes depuis La tonique L. jus qu'a La tonique N. a la faveur de La quelle on n'a nul egard aux signes qui pourroit

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[f. 28v]

faire trouver une autre Basse fond.Le Le defaut des Diezes apres La tonique N. sur Les memes notes qui en avoient auparavant dans Le sujet, joint au Dieze qui vient apres, prouve suffisamment Le ton de ré, ou L'on arrive encore par une marche de dominantes

Du Ton mineur de Ré O. on voit Le sujet passer au majeur d'ut, car Le si R. n'a point de Bemol, et L'on ne voit d'ailleurs aucun Dieze dont ce si est note sensible. En suivant Le sujet depuis O jusqu'a R. on ne voit aucun moyen de donner a la Basse fond.Le Sa marche determinée {ou/or} c'est pour Lors que La tonique etrangere, et passagere est d une grande ressource: non seulement on observe par ce moyen La marche determinée, mais encore Les rapports reciproques entre Les tons successifs.
si Les tons d'ut et de ré sont a la seconde L'un de L'autre, celuy de fa que donne P. Les Lie, il est Le majeur relatif au mineur de ré, et il devient sousdominante de La Tonique q. du ton majeur d'ut: qui plus est La tonique O. n'est pas obligée par ce moyen de continuer dans Le tems fort de La mesure qui La suit.

La dominant tonique S. est sensée tonique et Le Cas de profiter de cette connaissance est pressant en cet endroit: car Le sujet n y donne aucun signe du changement de ton, et cependant La dominant tonique S. n y peut etre suivie de sa tonique: mais en L'imaginant tonique on se conduit insensiblement par Les rapports reciproques jusqu'au ton connu par Le Dieze X. on doit juger du Dieze U, comme du dieze M., d'auparavant: d'ailleurs L'impossibilité de faire succeder La tonique, a sa dominant tonique S. doit faire soupconner Le ton mineur de La relatif au majeur d'ut, qui ne peut continuer. car Le sujet ne Laisse— generalement de L'arbitraire qu'entre deux tons en pareil raport: et pour Lors ce ton mineur de La conclue en faveur de celuy de mi menacé par Le dieze U. et confirmé par Le dieze X.

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[f. 29r]

Ainsy L'on passe depuis Le ton d'ut q. a des tons successifs tous a la quinte Les uns des autres, jusques a celuy de mi. car depuis La Dominante tonique S. chaque note fond.Le est sensée tonique: ou voit {tot/ton} La tonique T. descendre de tierce sur une dominante qui conduit a la tonique mi.

Ce ton de mi finit a y par sa tierce majeure quoiqu'il soit mineur, et cela pour se soumettre a la tonique du nouveau ton qui Le suit c'est Le sujet de La Leçon suivante.

Leçon

De La liaison; ou L'on rappelle tout ce que L'harmonie
a de commun dans Les accords dans La succession fond.Le,
et Dans Les tons successifs.

La liaison est un des principaux objets qui doive occuper Le ~~Lecteur~~ compositeur, elle consiste non seulement dans Les note communes aux ~~differens~~ accords de differentes notes fond.Les, ~~en~~ communes entre elles, en ce que L'une des deux fait toujours partie de L'accord de L'autre, et dans Les notes fondamentales communes a deux tons a la quinte, mais encore dans une tonique, ou sensée telle, commune a son ton et a celuy qui La suit. on scait deja qu'elles sont Les notes communes aux accords, et quelles sont Les fond.Les communes a deux tons a la quinte L'un de L'autre; on peut encore juger sur Le champ que puisque Les accords sont composés de tierces, et de quintes il faut bien que L'une des deux notes fond.Les qui se succedent a la tierce et a La quinte soit comprise dans L'accord de L'autre, et il n y aura que Les deux notes fond.Les a la seconde L'une de L'autre qui ne seront pas soumises au principe. mais avant que de prononcer sur ce dernier article attendons que La dissonance nous soit connue

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Il ne reste donc de tout cecy, qu'a savoir de quelle maniere une tonique, ou sensée telle se rend commune a son ton et a celuy qui La suit.

[f. 29ᵛ]

Pour se mettre tout d'un coup au fait de cette derniere liaison, il faut bien se representer que Le moment du repos d'une phrase qui en marque par consequent La fin peut etre en meme tems Le commencement de La Phrase qui Succede a celle La.

ainsy La Tonique ou sensée telle, peut dans Le moment qu'elle termine son repos, prendre La qualité qui Luy convient dans Le ton qui La suit, et recevoir en consequence L'harmonie due a la qualité qu'elle prend dans ce dernier ton.

C'est pour cette raison qu'on a deja vu dans les deux precedent exemples, des toniques d'un ton mineur finir Leur ton par une tierce majeure, parcequ elles deviennent dans Le meme moment, Dominantes toniques du ton qui Les suit.

C'est a quoy il faut bien prendre garde desormais: un repos peut finir par une note sensible, appartenante au ton dans Le quelle on passe; et nullement a celuy d'auparavant: mais pour peut qu'on examine Le sujet dans toute La phrase qui precede cette note sensible, on pourra s'y tromper, et supposé qu'aucun signe evident n'en put faire juger, Le rapport necessaire entre Les tons successif suffiroit pour Lors. Le ton mineur existe jusqu'au moment du repos, ou La tierce majeure de La tonique qui auroit du etre mineure, marque ce moment pour etre aussy celuy du commencement d'un autre ton auquel cette tonique sert de dominant tonique.

Ce cas peut arriver sans que La tierce majeure paroisse dans Le sujet, et c'est a nous de La sousentendre pour Lors, quand nous voyons La tonique d'un ton mineur passer a sa soudominante qui devient tonique, ou qui meme pour n'etre que sensée telle dans Le moment qu'on L'employe selon La remarque de La Leçon precedente.

a L'Egard d'une tonique qui peut devenir soudominante; si c'est La tonique d'un ton majeur qui devienne soudominante d'un ton mineur, il faut Luy donner La tierce mineure, mais non pas sur Le champ; et Si La tonique en question ne pouvoit se repeter

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[f. 30r]

Il faudroit pour Lors La partager en deux valeurs, pour donner a sa premiere valeur La tierce majeure, et a la deuxieme La tierce mineure.

Il n'en est pas de meme du ton mineur comme du ton majeur, celuy cy qui est Le seul naturel veut finir comme il a commencé, L'autre au contraire peut se soumettre au majeur en finissant. telle en est La subordination. Si L'on se souvient de La regle qui dit que tous Les tons a la quinte doivent etre du meme genre, XIe Lecon on sentira d'abord pourquoy La tonique d'un ton majeur doit prendre La tierce mineure, Lorsqu'elle devient soudominante d'un ton mineur; puisque ces deux tons sont a La quinte L'un de L'autre, et que pour Les rendre conformes, il faut bien du moins que Le majeur s'assujettisse au mineur dont on ne peut changer Le genre en recevant La tierce mineure avant que d'y passer.

Jamais tonique d'un ton mineur ne devient soudominante d'un ton majeur. ce principe bien digeré doit faire remarquer que toute tonique qui passe a sa Dominante peut en etre regardée comme La soudominante; et que Lorsqu'elle passe a sa/la soudominante elle en peut etre regardée comme La dominante tonique, mais avec plus de Circonspection; car il faut pour Lors que Le ton de cette soudominante, soit annoncée dans Le sujet par un repos un peu sensible, ne fut ce qu'un repos passager sembable a l'hemistiche d'un vers.

tout cecy s'imagine sans donner atteinte au ton qui existe avant et apres La dominante, ou La soudominante rendue tonique, excepté que si Le ton de l'une de ces deux dernieres notes fond.Les continue apres Les avoir imaginées toniques L'idée en etoit juste et fondée. ces reflexions jettent de grandes semences pour tout ce qu'on a nommé jusqu'a present Licences faut d'en connoitre le Principe Ex.e.

[f. 30v]

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Explication

La tonique A. est commune a son ton et a celuy qui suit en y devenant dominante, pour passer de L'une a L'autre a la tonique B.

Cette tonique B. passe a la tonique C. du ton qui La suit selon La Leçon precedent: elles ont pour Lors deux notes communes dans Leurs accords.

La tonique D. devient ~~La~~ soudominante de La tonique E. Les toniques F et G d'un ton mineur finissant chacune Leur Ton par une tierce majeure en devenant dominantes toniques du ton qui Les suit.

La tonique H de meme que La tonique A.

La tonique J. traitée comme dominante tonique de Sa soudominante L. a la faveur d'un repos un peu sensible dans Le sujet au dessous d'L. quoique Le ton d'J. continue jusqu'a {M.} ainsy La soudominante L. imaginée pour Lors tonique en prend Les droits, et descend de la tierce sur une dominante qui rentre dans Le ton d'J. La Tonique M. devient soudominante de La tonique N. Leur ton est egalement majeur; mais celuy de La tonique P. etant mineur. La tonique N. qui en devient soudominante doit recevoir La tierce mineure dans sa deuxieme valeur.

Puisque toute note sensée Tonique jouit des droits de La tonique, il s'ensuit que des qu'une tonique monte de quinte sur une autre celle cy peut en faire autant ainsy de L'une a L'autre tant que Le sujet s'y prete, et surtout Lorsque Le ton est indecis, jusqua ce qu'il soit parfaitement reconnu comme à la note sensible S. de sorte que La derniere tonique a la quelle La precedente a servi de soudominante, devient de son coté Dominante. Le reste regarde Les premieres regles.

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XV.^e Lecon.

Des imitations du chant, et de La Basse fond.^Le

en consequence

Le chant s'imite volontiers de mesure en mesure, de 2. en 2. de 4. en 4. au gré du compositeur, et de pareilles imitations facilitent beaucoup L'operation de La Basse fond.^Le. Il y a differentes sortes d'imitations; Les unes dans Le meme ton, Les autres en changeant de Ton a chaque imitation.

[f. 31^r]

Article 1.

des imitations dans Le meme Ton

Les imitations de chant dans Le meme ton se reconnoissent Lors que Le sujet marche toujours au montant ou toujours en descendant par des intervales pareils d'une mesure a l'autre, de 2. en 2. ou de 4. en 4. sans qu'il y paroisse de nouveaux signes qui marquent un changement de ton.

Lorsque d'une mesure a L'autre de 2. en 2. ou de 4. en 4. on voit un chant pareil toujours a la seconde au dessus ou au dessous de celuy qui Le precede, comme seroient ut, fa, ré, sol, mi, La en montant ou La, ré, sol, ut, fa, si.en descendant La B.^se fond.^Le marche generalement par quintes. elle monte de quintes Lorsque L'imitation se fait en montant, et descend de meme Lorsque L'imitation se fait en descendant.

quelquefois Lorsque L'imitation se fait de 2. en 2. mesures, ou de 4. en 4. en montant, La Basse fondamentale doit descendre de tierce pour monter ensuitte de quinte et toujours de meme dans chaque imitation. pour Lors une note sensible, une syncope dans Le sujet ou quelque autre signe evident y sert d'avertissement.

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Les imitations de chant se terminent generalement sur Le tems forts, et Lorsque Le contraire arrive il faut y suivre Les premieres regles sans s'obstiner a vouloir y faire monter ou descendre continuellement La Basse fondamentale par quintes.

quand meme il paroitroit quelques imitations, d'une mesure a L'autre sous Lesquelles La Basse fond.^{Le} put etre observée, selon Les premieres regles, il faudroit s'en tenir La: non qu'il n y eut quelquefois occasion de La faire descendre de tierce pour monter ensuite de quinte, Lorsque L'imitation marche en montant mais dans ce cas, comme en tout autre, souvenons nous bien que Lorsqu'on arrive a la derniere de ces imitations, il faut avoir grande attention au ton dans Lequel elle finit pour y soumettre La Basse fond.^{Le}, ou chaque note pouvant etre sensée tonique Lorsqu'elle marche par quintes, on donne a celle que L'on veut La route qui Luy convient pour conduire a La tonique de ce ton, selon L'ordre prescrit.

Lorsque Les imitations comprennent plus d'une mesure tous Les

[f. 31^{v}]

Intervales peuvent n y etre pas egaux mais generalement La premiere et La derniere note de chaque imitation y sont toujours a la seconde. au reste quelque difference qui s y trouve elle est toujours tres petite, et consiste tout au plus dans un intervale.

L'inconveniant qui peut se rencontrer dans Le sujet n'aura jamais Lieu dans La Basse fond.^{le}, et il suffit qu'on soupconne une imitation de chant pour Savoir tout d'un coup a la faveur de La Basse fond.le si ce Soupcon est fondé, car si cette Basse fond.^{Le} peut marcher de La meme façon dans chaque initation on doit {peut/peu} se mettre en peine de La difference d'un intervale que Le hazard, ou quelquefois Le gout, aura introduit d'une imitation a L'autre.

L'imitation est toujours reguliere dans La B.^{se} fond.^{Le} par consequent elle doit servir partout de preuve, et sa regularite ne peut cesser que Lorsqu'on est forcé d'y changer La route d'une Tonique pour se soumettre au ton dans Le quel La derniere imitation va finir.

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Toutes Les imitations qui se terminent sur Le tems forts y introduisent toujours une espece de repos plus ou moins sensible. autant de notes du sujet qu'aura porté une seule note fond.[Le] autant, en doit porter une seule autre note fond.[Le] a La seconde au dessus, ou au dessous de La premiere dans chaque imitation on scait que Lorsque La Basse fond.[Le] descend de quinte elle passe d'une dominante a une autre depuis La tonique d'ou L'on part jusqu'a celle du ton declaré, et que pour Lors La tonique d'ou L'on part peut dans sa deuxieme valeur prendre La qualite de dominante selon La Leçon precedente.
Mais Lorsque La Basse fond.[Le] monte de quinte toutes ses notes sont toniques, et chacune d'elles doit etre sensée dans sa deuxieme valeur, soudominante de celle qui La suit.
remarquons bien que Les imitations en montant donnent presque toujours des chants indecis, soit pour Les repos, soit pour Les tons qu'on y parcoure. de sorte que c'est justement L'incertitude ou ils tiennent qui doit y faire soupconner La succession fond.[Le] par quintes en montant.

[f. 32r]

Lorsque cette Basse fond.[Le] descend de tierce pour monter ensuite de quintes toutes ses notes peuvent encore etre sensées toniques; non que celles ou L'on descend de tierce ne puissent etre traitées commes Dominantes, du moins on peut Les supposer telles dans Leur deuxieme valeur.
excepté La tonique du ton connu, toutes Les autres sont passageres et etrangeres. Lorsque l'imitation du chant en montant se fait a la tierce au lieu de La seconde on est pour Lors forcé de faire descendre une tonique de tierce pour monter ensuitte de quinte. Ex.[e]

Explication

Les chiffres 1.2.3. &c. marquent La premiere note de chaque imitation. Les imitations Jusqu'a A exigent necessairement une basse fond.[Le] conforme aux premieres regles: et quand une autre y seroit arbitraire elle y conviendroit encore moins dans Le debut

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qu'ailleurs par ce qu'il faut toujours assurer Le ton, dans Le debut au lieu que Les marches continuelles par quintes Surtout en montant menacent au moins changement de ton.
Les imitations en montant depuis A exigent une Basse fond.Le en montant de quinte cependant L'on est forcé de La faire descendre de tierce a La 3e par ce que L'imitation s'y fait pour Lors a la tierce au lieu de La seconde.
quoique L'intervale B. de La troisieme imitation ne soit point pareil a celuy de La ~~se~~ premiere, et de La seconde, La Basse fond.Le y est cependant La meme parceque Les notes de La mesure B. sont dans Le meme accord aussy bien que celles des mesures auxquelles celle La Se compare.
Les repos et Les tons paroissent indecis depuis A jusqu'a L'intervale de quarte a B. d'ou La succession fond.Le par quintes en montant doit y etre au moins soupconnée.
Si La Basse fond.le marche d'abord par quinte dans La premiere imitation C. La Note sensible exigeant La dominante tonique pour Basse fond.Le force a descendre de tierce apres D. pour pouvoir y arriver selon Les regles. on auroit pu suivre Les premieres regles a D. en y faisant descendre

[f. 32v]

La tonique de tierce, comme Le marque Le guidon, mais Le repos qui s'y forme dans Le sujet, et qui va S'imiter dans chaque imitation demande La succession fond.Le d'une cadence, et en ce cas La soudominante, sous D. est sensée tonique.
voila donc La Basse fond.Le {contrainte/constrainte} a descendre de tierce apres D. pour monter ensuitte de quinte dans chaque imitation, en consequence de La note sensible F.
La 4.e imitation change dans La deuxieme intervale de façon que La Basse fond.Le n'y peut plus descendre de tierce, mais quand elle Le pourroit meme; ne suffit il pas de La note sensible G. pour que sa Basse fond.Le connue oblige de conserver avant elle, La seule note fondamentale qui puisse La preceder regulierement?

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Le Bequarre H et La note sensible J. declarent assez {I.} clairement Le ton, et La succession fond.^{Le} en consequence depuis Le ton d'auparavant; puisqu'en ce cas Le Bequarre H qui est mediante demande La tonique pour Basse fond.le.

Les imitations 1.2.a L. sont a la quinte et trouvent pour Lors Leurs Basse fond.^{Le} dans Les premieres regles: mais Le repos sensible de La derniere ~~de L'une~~ de ces deux imitations a M. exige La soudominante pour tonique; tant pour se conformer a la premiere imitation, que par ce qu'il y a un repos un peu sensible.

Les imitations en descendant 1.2.3.4.5. permettront sans difficulté une succession fond.^{Le} de quinte en descendant, mais pour y arriver apres La soudominante sensée tonique sous M. on voit La necessité de La faire descendre de tierce en consequence de La note sensible N. qui demande La dominante tonique, pour Basse fond.^{Le}.

on ne doit pas se mettre en peine du premier intervale fond.^{Le} par Le quel commence une imitation parce qu'il est egalement consequent a ce qui Le precede et a ce qui Le suit, mais quand on voudroit meme y avoir egard, Le sujet seroit bientot connoitre de quoi il seroit question. ne voit on pas en effet que La Basse fond.^{Le} d'U. ne peut descendre de tierce, et quand y elle ne peut imiter celle d'M., a N.?

Les syncopes des imitations entre P. et S. obligent de changer La Basse fond.^{Le} a chaque tems fort ce qui ne peut s'executer q. a R. sans descendre de tierce a q. et ce qu'on ne doit pas manquer d'imiter pour se conformer aux imitations du sujet.

[f. 33^{r}]

La quatrieme de ces imitations commence comme Les autres, mais ne continue pas de meme qui plus est La note sensible S. fait voir tout d'un coup ce qui doit devenir La tonique qui est sous 4.; ne pouvant arriver de La a la Dominante tonique qu'exige S. que par une marche de Dominantes.

Les Deux imitations qui suivent S. sont en montant et par consequent La Basse fond.^{Le} y monte de quinte. Les dernieres imitations sont a la tierce. on s'y sert depuis T. du

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toniques passageres a la tierce en descendant pour arriver au ton connu; Le sujet meme ne permettant pas d'en user autrement.

article II

Des imitations de chant dans differens tons.

des que Le ton change d'une imitation a L'autre La Basse fond.Le n'en est que plus facile a trouver meme route dans chaque imitation et memes notes fond.Les dans chaque tems des memes mesures relativement a la tonique de chaque ton.

Il y a des imitations dont Le chant est tellement fini, qu'on ne peut y observer aucune Liaison d'une imitation a L'autre parceque La Basse fondamentale y commence et finit pour Lors chaque imitation par La tonique. Ex.e

Explication

La premiere imitation A commence par La dominante de La dominante tonique dans Le ton de ré La 2.e B. commence de meme dans Le ton d'ut. pour Lier La premiere imitation C. a la note f.Le qui La precede, on peut La faire commencer par une tonique etrangere quoiqu'il ce soit Libre de La faire commencer aussy par La dominante de La dominante tonique marquée d'un guidon.

Ce qui a ete pratiqué a C. doit se pratiquer de meme a D. 2.e imitation: quoiqu'il soit Libre pour observer plus de Liaison de chaque coté d'employer seulement a C. La tonique etrangere sans en suivre L'imitation a D. ou pour Lors on preferera Le guidon a la Note.

La premiere imitation E. commence et finit par La tonique il en doit etre de meme de La 2.e F. de sorte que Les tons de ces

[f. 33v]

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deux imitations etant a La seconde L'un de L'autre il ne peut se trouver aucune Liaison entre Leur deux toniques qui se succedent immediatement.
entre Les quatre dernieres imitations de L'Exemple, Les deux 1.^eres^ sont dans Le meme ton, de sorte qu'il ne faut pas s'obstiner a rendre Leur Basse fond.^Le^ conforme. on y suit pour Lors ce qu'exige Le sujet; ou il est Libre de faire commencer La premiere par La tonique marquée d'un guidon.
c'est souvent sur La 2.^e^ imitation plutot que sur La premiere qu'on doit regler La Basse fond.^Le^ des autres; Lorsqu'elles se trouvent dans des tons differens.

XVI^e^ Lecon

de La possibilité de partager une note du sujet en deux valeurs pour faciliter La succession fond.^Le^ prescrite

Lorsqu'il n'est pas possible d'observer La succession fond.^Le^ sous Le sujet, il est Libre de partager pour Lors une note de ce sujet en deux valeurs, pour donner a chacune de ces deux valeurs une note fond.^Le^ differente.
Le choix de cette note ainsy partagée doit regarder celle qui repond a la tonique ou du moins a sa suivante. Cette note ainsy partagée fournit quelquefois Le moyen de passer d'une tonique a une autre qui pourra devenir commune a son ton et a celuy qui La suivra ce qui s'accorde pour Lors avec ce qui a eté dit dans La XIII^e^ Leçon, d'une note du sujet qui peut recevoir deux autres toniques ... differentes dans sa repetition.

Cependant L'orsqu'immediatement avant La note du sujet qu'on est forcé de partager en deux valeurs, il se forme un repos sensible, on peut n'y observer aucune Liaison; de meme que dans Les imitations, dont Les toniques se succedent a la seconde L'une de L'autre. c'est a dire que sans partager cette note; on Luy donne d'abord apres La tonique du ton que L'on quitte, La fond.^le^ qui Luy convient dans Le ton ou L'on passe. car

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un repos sensible est en musique ce que Le point est dans Le discours; il marque La fin d'une Phrase qui peut n'avoir aucun rapport {au ce} celle qui La suit. Ex.[c]

[f. 34r]

Explication

D'abord apres Le ton de La celuy d'ut commence a A, La mediante qui suit A exige La tonique au dessous d'elle, cette tonique exige sa dominante avant elle, consequemment a la note A du sujet; cette dominante ne peut suivre La tonique La qui La precede: donc il faut partager cette note A en deux valeurs pour que La Basse fond.[Le] puisse y observer sa succession determinée, en fournissant deux notes fond.[Les] differentes sous A.

{B.} et {C.} ne sont qu'une meme mesure; ou d'un coté La note B. se partage pour recevoir successivement La tonique sol du ton que L'on quitte et La tonique mi du ton ou L'on passe; et de L'autre La note C. Se partage pour avoir une succession de dominantes qui conduise depuis La tonique sol jusqu'a celle du nouveau ton ce qui est egalement Bon. La note D. se partage, pour procurer de meme que La note C. une succession de dominantes d'une tonique a L'autre. Le chant de D. a E. est imité depuis E. jusqu'a La fin dans deux tons differens; de sorte que La Basse fondamentale est La meme dans chacune de ces tons, en n'y comprenant que La deuxieme blanche sous D.

Retranchons La premiere Blanche sous A. C. et d. et La deuxieme sous B.; il n'y aura plus La de Liaison: ce qui est possible a la faveur du repos sensible immediatement avant ce defaut de Liaison,: mais on ne doit point en abusir.

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Lecon

De La Breve

Nous appellons Breve toute note qui en suit une pointée. Le point qui suit une note n'en vaut que La moitié, et La breve qui suit ce point ne vaut pas d'avantage; de sorte que La valeur du point et de La Breve egale celle de La note qui Les precede.

S'il y a plusieurs breves dont La valeur soit egale a celle d'une seule Breve, on ne Les considere pour Lors que comme une seule.

Il y a des cas ou La Breve doit etre comptée pour rien; de sorte que La note pointée qui La precede, est sensée occuper

[f. 34v]

pour Lors Le double de sa valeur, c'est a dire La sienne, celle du point et celle de La Breve.

Ces cas sont Lorsque La breve oblige de faire syncoper La Basse fond.le, Lorsque cette Basse fond.le peut suivre sa route determinée sans avoir egard a la Breve; ou Lorsque celle cy est suivie d'une note sur Le meme degré.

Cependant s'il se formoit un repos sur La quinte precedée d'une Breve en meme degré et qu'il n y eut pas moyen de donner a la Basse sa Succession de cadence Sans avoir egard a cette Breve. on ne pourroit se dispenser pour Lors de Luy donner sa Basse fond.Le particuliere.

Lorsqu'il y a repos sur une note qui suit Diatoniquement La Breve celle cy doit avoir sa Basse fond.Le particuliere. Ex.e

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Explication

Il est Libre de compter pour rien La breve A; tant parce qu'il n y a point de repos sur La note qui La suit Diatoniquement, que parce que La sucession fond.^{Le} n'est est [sic] pas moins reguliere. sans La Basse fond.^{Le} donnée a la Breve B. La succession de cadence, necessaire au repos qui suit cette Breve B. ne pourroit avoir Lieu.

Toutes Les Breves C. et D. n'en valent qu'une, et on Les compte pour rien, des qu'il n y a pas repos sur La note qui Les suit et surtout des que La succession fond.^{Le} peut s'en passer.

si L'on avoit Besoin de L'une de ces Breves pour conserver La succession fond.^{Le} obligée: on auroit La Liberté de choisir celle qui y conviendront Le mieux; comme a D. ou La premiere, La troisieme et La derniere Breves appartiennent egalement a L'accord de Leur Basse fond.^{Le}, et ou L'une d'elles suffit pour Guider Le compositeur.

La Breve {J.} suivie sur Le meme degré, ou se termine un repos sensible, doit toujours etre comptée pour rien. Il en est des deux breves L. comme a C. et a D. Breve a N. suivie sur Le meme degré a P. et dont cependant La Basse f.^{Le} est obligée; en consequence de La cadence fond.^{Le} necessaire au repos qui se fait sentir sur La quinte P.

Il en est a Q. comme a A, et a R. comme a J. repos sensible a {M?} en consequence de quoi La soudominante est sensée tonique

[f. 35^{r}]

Leçon

Du rapport necessaire entre La Basse fond.^{Le}

et Le sujet

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Il faut s'attacher des a present a saisir L'esprit du sujet, du moins dans Les cas visibles, et sensibles.

on remarque d'abord par quel tems de la mesure debute Le sujet, pour en conclure que s'il est un peu dessiné toutes Les phrases du chant doivent generalement commencer par Le meme tems

Des que Le repos n'est pas bien sensible on ne doit pas toujours regarder ce qui Le suit comme un commencement de Phrase, et souvent meme Le gout de varieté demande qu on s'ecarte de La regle generale, apres Les repos un peu sensibles.

Sachant ou doit naturellement commencer chaque Phrase, en consequence du tems de La mesure par Lequel Le sujet a Debuté, on tache d'y conformer La Basse fond.^{le} On fait commencer La Basse fond.^{Le} par une nouvelle note, autant que Le sujet Le permet avec Le commencement de la Phrase: si cette note est La tonique du nouveau ton La quelle succede immediatement a la tonique du ton que L'on quitte et celuy qui Le suit, et qu'il se trouve pour Lors de L'arbitraire entre La succession immediate des toniques de ces deux tons et une succession de dominantes, qui conduisit plus Loin a la tonique du Nouveau ton; celle cy doit etre preferée en consequence de L'esprit du sujet.

Il ne faut pas se refuser non plus a conserver une tonique qui finit sa phrase, Lorsqu'elle en peut commencer une autre, ou La succession fondamentale se trouve observée d'ailleurs D'un autre coté, Lorsqu'il y a de L'arbitraire entre Les tems de La mesure ou L'on peut employer La tonique il faut des qu'on Le peut Luy reserver Le tems fort; excepté qu'elle ne servit a commencer La Phrase avec Le sujet. On fera La meme atention a L'egard de La dominante tonique, des que La tonique ne La Luy disputera pas. S'il se trouve de L'arbitraire entre Les deux tems foibles de La mesure a 3 tems, Le 3.^{e} est Le preferable, excepte que L'esprit du sujet ne s'y oppose.

Il faut s'attacher au reste de repos dont il est question dans L'art. IV. de La XII.^{e} Lecon en examinant si effectivement on Le doit prendre pour un reste, ou s'il n'est pas un commencement de Phrase conforme au debut.

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[f. 35v]

on ne doit pas avoir moins, d'Egard encore a la note du sujet qui annonce Le repos.
Si de deux notes en le meme degré La derniere porte une tremblement, dit cadence, c'est a celle La seule que s'annonce Le repos; et par consequent c'est sous celle La seule qu'il faut employe La dominante, qui annonce La cadence fond.le; en donnant, a la 1.ere de ces deux notes en meme ~~un~~ degré La dominante de cette dominante pour La Basse fond.le.
Le terme impropre de Cadence au lieu de tremblement semble avoir eté imaginé sur ce que presque toutes Les notes qui annoncent des repos, surtout Les plus sensibles, souffrent voluntiers un pareil tremblement, d'ou L'on doit conclure du moins que La cadence fond.Le peut etre annoncée avec La note cadencée du sujet. Ex.e

Explication

Les deux exemples regardent La meme Leçon. quoique Les notes A du sujet repondent a La tonique deja employée dans Le tems fort, et qu'en consequence on eut pu La continuer; L'esprit du sujet ou L'on debute par Le deuxieme tems demande qu'on Le suivre dans tous Les deuxiemes tems ou il est possible de s'y soumettre: c'est pour quoy L'on donne a ces notes A. Les nouvelles Basses fond.Les auxquelles elles repondent egalement.

Quoique L'esprit du sujet puisse exiger La meme chose a B. des que Le commencement de La Phrase s'y trouve arbitraire, comme il L'est effectivement entre Le B. et Le C. il vaut mieux attendre Le tems C. pour Luy donner La tonique.
Dans Les deux exemples Le tremblement n'est marqué que sur La derniere des deux notes D. E. en meme degré donc c'est La seulement que La cadence f.le doit etre annoncée par La dominante precedee de La Sienne sous La premiere de ces deux notes.D.
quoique Le deuxieme exemple debute par Le tems foible, on ne peut en suivre L'esprit autant qu'on Le voudroit; parceque Le sujet force d'employer presque partout La meme note fondamentale dans chaque mesure. mais cela se corrige dans la Basse continue C'est neanmoins en faveur de cet esprit qu'on a saisi d'abord La tonique du nouveau ton au tems

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foible F. au lieu que dans tout autre cas il auroit fallu attendre Le tems fort, pour L'employer que Le sujet peut s'y preter.

[f. 36r]

Imitations en descendant aux chiffres 1. 2. 3. ou La Basse fond.Le Descend Successivement de quintes.

on ne peut se dispenser de faire syncoper La Basse fond.Le G. ce qui doit etre toleré en faveur du repos sensible qui precede G. Cependant cette syncope est evitée parce que La nature de La meme note fond.Le y change: si cette note est d'abord tonique consequemment a son rapport necessaire avec Le ton qui La precede, elle devient ensuitte dominante tonique d'autant que Le repos a H. quoique

sensible suffit pour y faire agréer Le ton de ré La Lecon suiv. eclaircira d avantage ce fait.

remarquons toujours en attendant que Les deux sons fondLe communs aux tons de La et de ré a La quinte L'un de L'autre; peuvent être indifferement appliqué a L'un de ces deux tons; jusqu'a ce qu'on ne puisse plus se refuser a celuy de La immediatement avant sa note sensible J.

Leçon

De l'entrelacement des tons.

des qu'on voit une phrase s'allonger dans un ton, ce qui arrive Le plus souvent au debut et a la fin. il faut toujours examiner s'il ne se trouveroit pas dans Le sujet quelques repos si peu sensibles qu'ils fussent, a la faveur des quels on put changer ce ton, pour un moment de pareilles attentions ajoutent infiniment a la beaute de l'harmonie et meme a L'agrement

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du chant: on evite par ce moyen La monotonie, et La varieté qu on y eprouve satisfait pleinement.

Pour peu qu on soit sur ses gardes en pareil cas, il est presque impossible de manquer L'occasion d'en profiter, on en a deja vu des Exemples, comme a {M.} de La XVII^{e} Lecon, et a H de la XVIII^{e}, ou L'on saisit Le ton de La soudominante au milieu du principal a la faveur du repos plus ou moins sensibles a {M.} et a H.

ce ton de La soudominante produira toujours un effet agreable, Lorsqu'avant Le principal au milieu duquel on L'insere, il en {a paru} un autre qui contient un Dieze de plus, ou un Bemol de moins que ce Principal; comme on Le voit encore dans Les exemples ou nous venons de renvoyer.

On en peut user de meme a L'Egard de tout autre ton que Le principal; et La regle qu'on doit s'y prescrire pour Lors, c'est que

[f. 36^{v}]

si Le ton contient plus de Diezes que Le prinicpal, celuy de sa soudominante peut y etre agreablement entrelacé aulieu que s'il en contient moins, c'est celuy de sa dominante qui y conviendra pour Lors, bien entendu que Le sujet y donnera Lieu. Des qu'il est possible de varie un ton quelconque par celuy qui s'y rapporte a la tierce mineure, L'effet en est toujours agreable.

A l'Egard de tous Les tons successifs dans une piece de musique, Le principal y est d'abord Le plus frequent; il n'y est generalement suivi dans Le debut + +que du ton de sa dominante, ou de celuy de son rapport a la tierce mineure. quelquefois encore mais plus rarement du ton de sa soudominante, meme de celuy de sa seconde au dessus, s'il est majeur, ou de celuy de sa seconde au dessous, s'il est mineur. il revient ensuitte, du moins pour un moment puis on entrelace tout Les relatifs a son gré, avec ce meme principal, quand il se presente, et L'on y remarque surtout que, moins ils sont relatifs au principal,

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plus Les phrases en doivent etre courtes, encore bien plus Lorsqu'ils se succedent a la seconde ajoutons a cela qu'ayant passé dans des tons qui contiennent plus de Diezes que Le Principal, il faut insensiblement sans rien precipiter, revenir a d autres qui en contiennent moins ainsy a ~~La~~ L'inverse, de sorte qu'on puisse toujours conserver L'idée de ce Principal, en attendant alternativement des tons tantot a La quinte au dessus tantot a la quinte au dessous, et tantot relatifs a la tierce mineure de ces quintes aussy bien que du Principal.

Les repos qui tiennent de L'hemistiche, Se font sur La dominante tonique: quelquefois meme sur La soudominante pour Lors sensée tonique Lorsque Les plus sensibles Se font sur La tonique: a lieu que si ces derniers se terminent sur La dominante tonique, Les premiers appartient pour Lors a La tonique.

En proposant ce qu'on doit executer, c'est proposer ce qui doit se trouver executé dans Les Lecons qu'on suit a present: c'est pourquoy L'avis est toujours bon: pour vu qu'on sache en faire usage relativement au point ou L'on en est. savoir La maniere dont Les tons doivent se succeder, c'est un moyen de se relever de bien des doutes qui pourroient se presenter; joignons a cela Les signes du sujet, Le sentiment de La Basse fond.^{Le} dans Les repos Le moment ou ces repos L'annoncent, Le moment ou Le ton change, La

[f. 37r]

Connoissance des notes Sensées toniques La possibilité des toniques passageres, Les imitations, du chant, La division possible d'une note du sujet en deux valeurs, et surtout La succession fond.^{Le} determinée qui est La meme dans chaque ton, et ou Le sujet ne decide que pour La note qui doit suivre La tonique ou sensée telle, comment se peut il faire qu'avec de tels Secours, soutenus d'un peu de patience, et d'attention, on ne vienne pas a bout de son entreprise? Ex.^{e}

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Explication

La Breve au dessus d'A. peut etre compte pour rien, puisque sans y avoir egard La succession fond^{Le} est parfaite d'A. a B: non qu on ne puisse Luy donner sa Basse fond^{Le} particuliere selon ses Guidons. La Breve au dessus doit etre comptee pour rien, tant parce qu'il n y a point de repos sur La note qui La suit Diatoniquement que parce que La succession fondamentale prescrite en exige absolument L'exclusion.

Il n'en est pas de meme aux breves C. H. K. parce que ou elles annoncent un repos, ou sans elles La succession fond^{Le} ne pourroit etre executee.

Le ton majeur d'ut relatif a la tierce du principal Le suit et commence immediatement a D. celuy de sol quinte d'ut vient apres E. puis celuy de ré quinte de sol a F.; pour rentrer dans Le principal a G. dont il est encore quinte. Les phrases de tous ces tons sont tres courtes.

La Phrase du ton de La dominante tonique du principal, est plus Longue a J. elle va jusqu'a M.: mais Le repos sensible a L. paroissant possible dans Le ton de son rapport a la tierce aussy bien que dans Le sien on en profite pour ce ton relatif depuis K ou L'on marche de dominante en dominante d'une tonique a L'autre de K. a L. apres quoy L'on rentre dans Le premier ton, dont La monotonie est detruite par ce melange.

La Basse fond^{Le} qui paroit syncoper sous K ne syncopera plus si des deux msesures on n'en fait qu'une. Imitations de chant dans des tons differens 1. 2. Le ton 1. est a la

[f. 37v]

quinte au dessous du principal apres avoir fini a M. dans Le ton de sa quinte au dessus. apres etre entré dans Le ton relatif a la tierce du principal a N on prend pour un moment celuy de sa soudominante a P. pour y rentrer a L'instant.

autres imitations en montant 1. 2. ou La Basse fond^{Le} monte successivement de quintes sur des toniques, dont La derniere Q. recoit dans son ton plus de diezes qu'il n y en a Eu depuis P. apres quoy vient Le ton Principal a R. Le repos sensible a T. pouvant etre admit dans Le ton relatif a la tierce du principal on ne manque pas d'en profiter par une marche de

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dominantes qui y conduit d'une tonique a L'autre d'S. a T. puis on rentre dans {ce}principal. nouvelles imitations en descendant ~~en~~ 1. 2. 3. ou La Basse fond^{Le} descend sucessivement de quintes.

repos d'hemistiche a {B. a J.} et a U. sur La dominante tonique Lors que La tonique en termine ensuitte un plus sensible repos d'hemistiche sur La tonique G. Lorsque La dominante tonique en termine ensuitte un plus sensible. de pareilles remarques Seront d'un grand secours, Lorsqu'on sera {aportee} de Composer Soy meme Le sujet.

Leçon

De La Basse fond^{Le} en retrogradant

La plus grande difficulté pour Les commençans consiste a trouver La veritable note fond^{Le} qui convient apres La tonique, surtout quand Le ton change; pour pouvoir ensuitte marcher dans L'ordre fond^{Le}, dicté jusqu'a une nouvelle tonique

quoique nous ayons donné des règles suffisantes pour ne pas se tromper dans Le cas dont il s'agit: il y a encore un moyen de composer La Basse fond^{Le} en retrogradant qui peut en faciliter beaucoup L'operation, et qui meme sera tres utile, quand il ne serviroit qu'a faire connoitre La chose dans toutes ses forces.

si Le meme ton continue apres une tonique, La succession fond^{Le} en est bientot trouvée; mais s'il est douteux, et surtout s'il vient a changer, c'est La que se presentent Les difficultés, et c'est a quoy il faut tacher de remedier s'il est possible.

Des qu'on est arreté par quelques doutes il faut aussy s'arreter

[f. 38r]

a La derniere tonique connue; puis on tache de L'assurer du ton qui vient ensuite soit par Les signes du sujet, soit par Les repos, soit par Le rapport des tons successifs entre Eux, et avec Le principal.

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Etant une fois assuré du nouveau ton on y cherche une note connue, soit La mediante, soit La note sensible et L'on en Ecrit La Basse fond[Le] savoir La tonique pour La mediante, et La dominante tonique pour La note sensible.

Au deffaut de La note connue, on choisit La note ou termine Le repos du nouveau ton, pour Luy donner la/sa? Basse fond[Le] cela etant fait, on dit, La tonique veut etre precedé de sa ~~d'une~~ dominante, ou de sa soudominante: si non d'une autre tonique toute dominante veut etre precedée de La sienne si non
d une tonique et toute soudominante veut etre precedée et suivie de sa tonique, excepte qu'on ne L'employe pour tonique, ou pour Dominante comme cela se peut.

On marche ainsy d'une note a L'autre en retrogradant, conformement a ceque Le sujet en ordonne. on examine d'abord si Le sujet permet de Conserver La meme note fond[Le] dans toute La mesure. S'il
n exige pas de meme La conserver dans plusieurs mesures consecutives, on evite de La faire syncoper, meme de La repeter dans un tems fort, Lors qu'elle ne peut continuer dans toute La mesure. on La fait preceder selon La regle donnée, et ainsy de L'une a l'autre, jusqu'a une tonique, et par quelque intervale qu'on arrive a cette tonique en retrogradant de La sorte tout sera bon a peu de chose pres.
on ne peut monter de seconde sur La tonique en retrogradant, parce que cette tonique descendroit pour Lors de seconde, dans L'ordre directe contre La Loy generale: on ne peut non plus y descendre de tierce, excepté que Les deux notes fond[Les] ne fussent egalement toniques, ou sensées telles, en se rappellant pour Lors Les marches, ou Les notes sont sensées toniques.
Lorsqu'il se trouve une tonique au milieu de La route; on en use a son egard, comme si elle etoit Basse fond[Le] de La note connue si cette tonique du milieu de La route est celle du nouveau ton. Il n y a rien a dire: mais si c est celle du ton qui existoit auparavant; il faut examiner dans Le sujet, si depuis La

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[f. 38v]

Note fondamentale ou L'on L'etoit arreté jusques a celle-La,

Il n y a point de signes qui excluent ce premier ton, et s il ne L'en trouve point tout sera Bon.

sans doute que pour Lors on s'etoit arret trop tot; et que L'on pouvoit encore continuer Le premier ton jusqu'a La tonique qui se presente ainsy au milieu de La route.

Comme Les tons relatifs ont plusieurs notes communes dans Le sujet on peut bien quelquefois s'y tromper; mais au defaut des signes Les plus evidens, un repos pour peu sensible qu'il soit, rapport que doit avoir Le ton imaginé avec celuy qui La precede, et celuy qui Le suit, La succession fondamentale meme, tout cela concours a rectifier Les idées, et a faire preferer Le veritable ton qui existe dans ce Sujet.

Des qu'on ne peut faire preferer une note fond^{Le} dans L'ordre prescrit c'est La qu'il faut examiner s'il ne seroit pas possible d'inserer une ou deux toniques etrangeres

si La note fond^{Le} en question est dominante elle peut etre precedée d'une tonique par ~~tous Les~~ quelques intervales ~~consonans~~ que ce soit. excepté de seconde en montant, et de tierce en descendant.

si cette note fond^{Le} est tonique elle peut etre precedée d'une autre tonique par tout Les intervales consonans: si elle etoit soudominante Il faudroit la regarder pour Lors comme sensée tonique. On a encore Le partage d'une note du sujet en deux valeurs, mais ce n'est qu'a La derniere extremité.

On doit bien prendre garde a ne point se Laisser tromper par La note sensible d'un ton majeur qui peut etre egalement La seconde du ton mineur qui s'y rapporte, et pour cet effet il ne faut pas s'entenir au premier Signe du sujet quelqu'evident qu'il paroisse, il faut examiner toute La Phrase, jusqu'a un repos un peu sensible Le ~~repos~~ raport necessaire Entre Les tons successifs ne doit pas non plus etre oublié. et si cet premier signe indique juste, toute La suitte Luy sera sans doute favorable. Ex.^{e}

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Explication

A peine Le ton principal de La reconnu par La quinte du debut est il etabli, qu'on Le voit changer a B. non seulement La note B. sans dieze prouve qu'on n'est plus dans Le ton de La, mais encore sa succession en descendant de tierce sur Le tems fort a C. prouve Le ton d'ut.

[f. 39r]

Ce dernier ton connu, sa note sensible L'est par consequent a A. ainsy donnant, a cette note sensible La dominante tonique pour Basse fond[Le], on scait que cette dominante veut etre precedée de La sienne, on voit Le sujet s'y preter, on L'ecrit; et comme elle se trouve dans Le tems foible, on examine si elle peut encore se conformer dans Le tems fort sans que cela empeche que de La faire aussy de sa dominante sinon d'une tonique, comme La premiere: et Le sujet s'y {pretant} egalement on arrive ainsy d'une dominante a l'autre en retrogradant jusqu'a La tonique du debut

de meme que Le ton de La a eté reconnu par La quinte du debut de meme encore doit on Le reconnoitre par La quarte D. ou il recommence avec sa tonique precedée de celle d'ut etant impossible d'y trouver une autre Basse fond[Le] sans continuer La tonique ut dans Le tems fort; et cela ne vaudroit rien: P.° parce que Le ton d'ut finit a C. dont Le tems foible n'est qu un reste de repos 2.° parceque La tonique ut ne peut remplir toute La mesure D. apres avoir deja existé dans La mesure C. 3.° parceque Le nouveau ton commence toujours apres La tonique, ou sensée telle, du ton qui Le precede 4.° et finalement parceque L'esprit du chant donne Le commencement de La Phrase a D.

Cette facon de passer ainsy d'une tonique a l'autre fait toujours un bon effet, Lorsqu'elle s'accorde avec L'esprit du sujet ce qu'il faut bien remarquer conformement a ce que en a ete dit dans La Lecon precedente.

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Il est inutile d'aller chercher La note sensible, de ce nouveau ton pour composer en retrogradant des que La tonique, est une fois employée; Si ce n'est pour verifier L'ordre de La Basse fond.Le de quelque coté qu'on La prenne.

apres Le repos sur La dominante tonique E. celle cy passe dans L'ordre direct a La tonique F. qui devient commune a son ton, et a celuy qui La suit, par La tierce majeure qu'elle recoit sur Le change. La note sensible F fait assez connoitre Le ton mineur de ré, et, par consequent Le si qui doit y etre Bemol ne l'etant point a G. doit y etre pris pour note sensible d'un nouveau ton

[f. 39v]

Des qu'aucun autre signe ne Luy dispute ce droit ainsy La Basse fond.Le en retrogradant y est inutile.

Mais voyant Le ton de mi declare par La note sensible {J.}; on peut en ecrire La Basse fond.le et marcher en retrogradant jusqu'a La tonique ut, ou L'on aura pu S'arreter a H Le tout selon L'ordre dicté.

Le ton de mi finit on voit une syncope a {K.} on examine pour Lors La suite du sujet on y trouve une quarte qui declare Le ton d'ut Le reste S'y conforme jusqu'au fa Diezé à q. qui ne l'etoit pas auparavant. de sorte qu'on est dans Le cas de prendre La tonique ut immediatement apres celle de mi sur La deu.e [deuzieme] valeur de sa syncope K.

La tonique ut pourroit bien se Conserver jusqu'a {M.} meme jusqu'a N. ou elle montera pour Lors de seconde. elle pourroit encore descendre de tierce entre deux sur une dominante , au lieu qu'elle ne Le pourroit a N. parce que La Basse fondamentale seroit forcee de Syncoper ensuitte sous La Syncope {P.} du sujet: mais cette simplicité qui d'ailleurs ne S'accorde pas assez avec L'esprit du chant est insipide en comparaison des toniques successives a la tierce qui s'y rencontrent.

si L'on examine bien L'esprit du sujet ou du chant, on y sentira une petite repos a L. que S'imite a N. on est forcé de changer La Basse fond.Le a N. donc L'imitation connue

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doit engager a la changer aussy a L. sans egard pour La syncope M. puis qu'elle s'opposeroit a L'imitation: ainsy La premiere marche en descendant de tierce sous La syncope K. pouvant S'imiter successivement sous Les syncopes L. N. et {P.} il se trouve La cinq toniques de suitte dont Les deux premieres sont inevitables, mais dont Les trois dernieres sont simplement passageres; et en remarquant bien que La derniere de ces trois à P. est commune a son ton, et au veritable en y devenant dominante de La Dominante tonique.

Par La note sensible R. Le ton mineur de ré est declaré par consequent apres Luy avoir donne La Dominante tonique pour Basse fond[Le] on fait preceder celle cy de sa dominante, ou d'une tonique et c'est justement sa tonique qu'indique Le sujet: cette tonique trouve place dans La meme sujet pour etre precedée de sa dominante et celle cy comparée a la tonique connue par sa note sensible q.

[f. 40r]

ou L'on se sera sans doute arrete, se trouve a La seconde au dessus Selon La marche possible d'une tonique

Le Dieze R. n'existant plus a S. La Bemol qui est entre deux, decide pour Lors du ton; c'est donc Le majeur de fa, donc c'est sa mediante sur La quelle La note s. descend de tierce ~~sur~~ dans Le tems fort et pour Lors ecrivant La tonique au dessous de cette mediante Le sujet fournit Les moyens de La faire preceder des dominantes, jusqu'a La tonique d'auparavant.

Le Si qui n'a plus de Bemol a T. doit faire soupconner Le ton d'ut mais bientot celuy de La se declare au Dieze U.: n'importe: car en consequence du rapport entre Les tons successifs on doit promptement saisir celuy d'ut, qui se presente entre Le ton majeur de fa et Le ton mineur de La puisqu'il Les Lie de maniere a rendre Leurs raports agreables.

si cependant on s'en tenoit a la note sensible U en Luy donnant La dominant tonique pour Basse fond[Le] La succession prescrite en retrogradant rameneroit toujours celle qu'exige T. jusqu'a La tonique fa d'auparavant mais n'appercevons nous pas une imitation de chant

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dans trois mesures en descendant depuis T. et n'est ce pas La Le cas de faire descendre La Basse fond^Le par quintes ?

Le Bemol {x} joint a ce qu'on descend ensuitte de tierce sur Le tems fort declare de nouveau Le ton de fa, et ce Bemol disparoissant a Y., joint encore au repos sensible qui suit y prouve Le ton de {fa} quitté pour un moment.

Malgre tous ces changemens de ton depuis T. La Basse fd.^le marche toujours par des dominantes jusqu'a pres y.

Les imitations 1.2. qui suivent y engagent a preferer Les notes aux Guidons sous L'imitation 1. et Si L'on ne s'appercoit pas d abord La necessité d'une pareille Basse fond^Le sous L'imitation 2. doit en faire naitre L'idée par un retour sur Soy meme, en consequence de L'imitation reciproque entre Le sujet et Sa Basse fond^Le

qui plus est on vient de quitter Le ton de La celuy de sol qui est

[f. 40v]

a sa seconde, se presente apres Le chiffre 1. il seroit a souhaiter qu'entre ces deux tons {on est put} trouver un qui Les Lier et c'est justement ce que procurent Les deux notes du sujet depuis Le chiffre; on y voit La possibilité de faire descendre de tierce La tonique La sur une tonique qui devient en meme tems soudominante d'ut de sorte que par ce moyen La Liaison se trouve parfaite entre ces trois tons.

Cet ut monte de seconde pour passer au ton de sol; et L'imitation se trouve reguliere ensuitte un ton plus haut Le premier des deux Diezes accidentels d'un ton mineur, rend souvent majeur un tems passager, qui devroit etre naturellement mineure comme on Le voit au dieze qui suit immediatement Le chiffre 2. et au dessous du quel se trouve La tonique ré.: mais outre que cette tonique n est La que pour Lier Les tons successifs, c'est que La necessité des deux diezes accidentels qui montent a la tonique d un ton mineur, doit l'emporter sur toute auttre consideration apres Le ton mineur de La vient un dieze a Z. qui fait soupconner Le ton majeur de sol mais ne suffit il pas de ce ton mineur de La pour faire plutot soupconner a suitte Le ton mineure de mi? tous Les intervales de quinte ou de quarte

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dans Le sujet; Se declarent deja pour ce ton mineur de mi; et bientot Le repos annoncé par Sa note sensible ne permet plus d'en douter.

cependant La succession des dominantes depuis La tonique La avant Z. jusqu'a La tonique mi a A., peut y faire regarder Le ton de sol comme passager. Si L'on n'aime mieux y traiter Sol de dominantes comme Les autres dans toutes Les successions de dominantes, qui conduisent a un ton mineur, se trouve toujours La tonique du ton majeur relatif a ce mineur; des qu'elles sont un peu allongées; et pour Lors on est Libre de traiter {par ce/un moment} Le ton majeur de cette tonique, parce qu'elle y est precedée de sa dominante tonique

Le ton de mi une fois reconnu, soit a R. soit par son raport avec celuy de la qui Le precede, et Le suit, sa mediante a A. sera en meme tems connue {or} Si apres s'etre arreté a la tonique La

[f. 41r]

avant Z. on prend La tonique mi pour Basse fond^Le de sa mediante a {A.} et que de La on marche en retrogradant; on aura naturellement Les memes dominantes jusqu'a Lá que La succession directe auroit egalement donnée depuis ce meme La.

On peut Cependant faire monter de seconde La tonique La sous Z. pour arriver d abord apres sous La tonique mi des que ce dernier ton est connu, mais si L'on se souvient d'une remarque faite sur La preference que merite sa succession Sur Les dominantes XVIII^e Lecon, Lorsque Le sujet peut s y preter, on en sentira bien plus La force en cet endroit ou il s'agit de preferer cette succession a celle de seconde que Lors qu'il S'agissoit, La, de La preferer meme a deux toniques successives: outre qu on evite par ce moyen de trop frequent repos sur La meme tonique.

Apres que La Basse fond^Le a eté composée en retrogradant il faut La verifier dans son ordre direct L'on sert de preuve a L'autre cette maniere de composer La Basse fond^Le n'est du tout point favorable a L'oreille. c'est pourquoy il ne faut ~~qu~~ en user qu'a La derniere rigeur.

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on voit combien Les premieres Leçons doivent etre presents avant que de passer aux autres, et L'on doit toujours craindre {d'echouer} pour vouloir arriver trop {tot}.
on peut compter sur un succés assuré; si L'on Se sent en pleine possession de tout ce qui a éte dit jusqu'a present, mais de maniere a pouvoir L'enseigner sans etre obligé de le/La relire.

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[f. 47r]

L'art De la Basse fondamentale d'ou se tirent La connoissance et La pratique de La composition et de l'accompagnement

Premiere partie

Developpement de La Basse fond.Le sous tous Les chants possibles par des consonances

Premiere Leçon

gammes
Des degrés ou intervales diatoniques
et harmoniques

Il faut avoir tres presentes a L'esprit Les trois Gammes qui suivent, tant en montant qu'en descendant; il faut meme avant toutes choses pouvoir Les suivre de memoire en Les faisant commencer et finir par quelques notes que ce soit.

L'ordre de ces gammes est ecrit en montant et pour Les avoir en descendant, il n y a qu'a Le suivre a rebours, depuis La derniere note appellée octave jus qu'a La premiere.

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Premiere Gamme

des intervals diatoniques

premiere note	ut	re	mi	fa	sol	La	si	ut
.		seconde	tierce	quarte	quinte	sixte	septieme	octave.

Cette premiere gamme est celle des moindres degrés, ou intervales naturels a la voix; on Les appelle diatoniques.

Le Nom des notes occupe La ligne du milieu; on trouve au dessus Le nom de L'intervale qu'elles forment de L'une a l'autre, et au dessous Le nom de L'intervale que chacune d'aller forme relativement a la premiere.

[f. 47v]

La difference des tons et demi-tons entrelacés dans cette gamme ne doit pas beaucoup occuper a present. L'ordre naturel La fait observer sans qu'on y pense: mais il faut du moins pouvoir se La representer par Le secours de L'oreille, en se disant cecy est un ton, cecy est un demy ton. Sinon il faudroit attendre que cela {tout} fut developpé car ce n'est qu une affaire d habitude avant que de vouloir se livrer a la pratique de La composition et pour Lors L'accompagnement seroit un faux moyen d y reussir.

On peut remarquer au reste qu'il n y a jamais trois tons de suitte, excepté qu on ne suppose un repos au premier comme on Le doit supposer a La note qui, fait La quinte dans La Gamme precedente.

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Deuxieme Gamme

par tierces

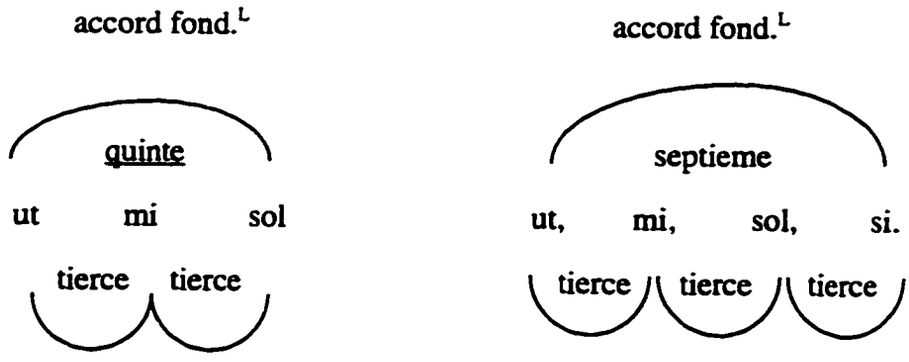
ut, mi, sol, si, re, fa, La, ut.
octave

troisieme Gamme

par quintes.

ut, sol, re, mi, si, fa, ut
octave.

ces deux dernieres Gammes exposent Les degrés ou intervales harmoniques.
Les tierces sont Les moindres degrés harmoniques dont se composent tous Les accords dans L'etendue d'une octave. deux tierces font une quinte, et trois tierces font une septieme.



La plus parfaite succession de La Basse fondLe se forme des quintes. et ces quintes fournissent de plus L'ordre des diezes et des Bemols.

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II[e] Lecon

Des Consonances, de Leur renversement et de Leur situation relativement a La note qu'on exprime.

Les consonances sont La tierce La quarte La quinte, La sixte, et.

[f. 48[r]]

L'octave mais La tierce et La quinte Les renferment toute a L'octave pres.
L'octave est toujours La note qu on exprime pour Basse, excepté qu on La porte a une ou plusieurs octaves au dessus. et qui est indifferent dans La pratique.
Le renversement de La tierce donne La sixte, et celuy de La quinte donne La quarte ce renversement consiste a transposer L'ordre de deux notes que L'on compare entre elles en portant au dessus celle qui l'est au dessous. Cette transposition est occasionnée par L'octave, comme on peut s'en instruire dans La premiere Gamme, en comparant une des notes du milieu a la premiere et a son octave Ré, par exemple, qui fait La seconde d'un coté, fait La sixte de L'autre, et fa qui fait La quarte d'un coté fait La quinte de L'autre, ainsy du reste, ou L'on trouve encore Le meme renversement entre Les memes intervales.
Par La connoissance de ce renversement, La sixte au dessous peut toujours etre prise pour La tierce au dessus, et La quarte au dessous pour La quinte au dessus. on a L'inverse: surtout Lorsqu [on] ne S'agit que de La succession d'une note a une autre.
par exemple, si L'on veut passer a la quinte d'ut, qui est sol il est egal de prendre ce sol a la quinte au dessus d'ut ou a la quinte au dessous.
Lorsqu'on parle d'un intervale, on le suppose toujours au dessus de La note qu on exprime, par exemple La quinte d'ut est sol et non pas fa qui en est La quinte au dessous ainsy du reste.

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cette supposition vient de ce que La note exprimée est toujours Sensee La plus Basse; d'ou La Partie de musique qu'elle occupe S'appelle Basse

Lorsqu on parle d'un intervale au dessous de La note exprimée, il faut Le specifier en disant La quinte au dessous, La tierce au dessous &c.

si cependant on disoit en general, Les quintes Les tierces d'une telle note, on entendroit pour Lors celles d'au dessous, aussy bien que celles d'au dessus.

[f. 48ᵛ]

III^e Lecon

De La Basse fond^Le, et de son harmonie ou de son accord.

La Basse fond^Le consiste dans une note quelqonque avec La quelle on sousentend toujours Sa tierce, Sa quinte, et son octave, par exemple en imaginant ut pour Basse fond.^Le il faut se representer en meme tems ut, mi, sol, Sans S'y occuper {&c}.

Par La meme raison La quarte est renversée de La quinte et La septieme de La seconde.

Il faut avoir ce renversement tres present a L'esprit dans La succession fond.^Le dont nous parlerons bientot: et pour qu'il n y occupe pas beaucoup, il suffit de se representer Le nom de La note qui fait L'intervale dont on a besoin en La plaçant pour Lors ~~en~~ L'indifferement au dessus ou au dessous de celle a la quelle on La compare des qu on scait par exemple que sol fait La quinte d'ut en quelqu'endroit qu'on Le place, soit au dessus, soit au dessous d'ut c'est toujours sol et cela suffit.

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cinquieme Lecon

De La maniere de trouver La Basse fond.Le sous un chant donné

tout chant donné peut etre un dessus, une basse, une haute contre cela n y fait rien; et c est Le maitre qui Le donne, ~~jus~~ jusqu'a ce que L'ecolier soit non seulement en etat de L'imaginer de Luy-meme, mais encore jusqu'a ce qu'il possede parfaitement toutes Les regles.

on a deux portées chacune de Cinq Lignes, L'une au dessus de L'autre; Le chant est dans celle d'au dessus, et celle d'au dessous est pour y placer La Basse fond.Le. Chaque note du chant

doit avoir perpendiculairement au dessous d'elle une note dans La Basse fond.Le.

Le premier ton dans Le quel on doit commencer a S'instruire est celuy d'ut et comme Le chant ne peut d'abord commencer que

[f. 49r]

soit ut Luy meme soit mi soit sol, on doit etre assure que La Basse fond.Le ne peut commencer non plus que par Le meme ut.

si Le chant continue sur des notes appartenant toujours a la meme harmonie; on repete a proportion Le meme ut dans La Basse fond.Le et des que Le chant passe a une autre note, cette Basse fond.Le doit passer egalement d'ut a une autre note.

La Basse fond.Le ne peut marcher pour Lors que de quinte, en quinte en se souvenant du renversement a la faveur du quel La quinte suppose La quarte

n'y ayant dans Le ton d'ut que Les trois notes fond.Les fa, ut, sol, cet ut ne peut donc y passer qu'a fa ou a Sol {et ce fa} aussy bien que ce sol ne pouvant se succeder, puisqu'ils

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ne sont pas a la quinte L'un de L'autre ne peuvent par consequent que retourner {a ut}, voila en quoi consiste a present tout Le mistere de La successsion fond.Le ut passe a fa ou a Sol, et Sol ou fa retourne a ut.

Des qu on est obligé d'abbandonner ut dans La Basse fond.Le on doit s y representer sol ou fa et pour Lors on examine dans Le chant si La note appartient a L'harmonie de ce sol ou de ce fa en placant pour Lors dans La Basse fond.Le celuy des deux dans L'harmonie duquel cette note se rencontre.

Quand on scait bien La Gamme par tierces on n'a pas plutot imaginé ut que son harmonie ut mi sol doit se presenter en meme tems a L'esprit avec sol, sol si, ré se presenterent de meme, et avec fa fa La ut.

Si donc on trouve un ré par exemple dans Le chant, et qu on ait imaginé fa pour Le Placer au dessous de ce ré apres L'ut de La Basse fond.Le on voit d'abord que ce ré n'est pas dans L'harmonie de fa; c'etoit donc sol qu'il falloit imaginer apres ut il n y a point La demi Lieu; puis qu'il n y a que sol ou fa qui puisse succeder a ut, outre qu'en se representant L'harmonie de sol on y trouve sol si ré. ~~il~~

**[*the following passage is crossed out at the foot of the folio*]:

Il n'y a qu'a mettre un point a L'endroit de La note qu'on imagine pour Basse fond.Le, afin qu'ayant toujours L'oeil sur ce point on ne s'occupe que de L' harmonie de cette note, pour voir si celle du chant en fait partie .

[f. 49v]

Apres avoir employé sol sous Le ré du chant, Si ce chant ne continue par par des notes appartenant a la meme harmonie de ce sol, notes qui ne peuvent etre que sol si ou ré, il faut necessairement que Ce sol de La Basse fond.Le retourne a ut et Le chant ne peut que l y conforme.

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ce que nous disons de sol doit egalement s'appliquer a fa car sol et fa doivent egalement retourner a ut. Il n y a qu'a mettre un point a L'endroit de La note qu'on imagine pour Basse fond.[Le] afin qu'ayant toujours L'oeil sur ce point. on ne s'occupe que de l'harmonie de cette note pour voir Si celle du chant en fait partie.

Insensiblement on se fait de petites regles Locales; comme par exemple on peut se dire icy, Les moindres degrés voisins d'ut dans Le chant appartiennent toujours a La note fond.[Le] sol et Les moindres degrés voisins de sol appartiennent toujours a fa qui est note fond.[Le].

Toutes Les notes en degrés conjoins demandent chacune une nouvelle note pour Basse fond.[Le] au lieu que toutes celles qui sont en degrés disjoint peuvent appartenir a la meme note fond.[Le] D'un autre cote ut fait egalement L'octave d'ut, et La quinte de fa de meme que sol fait egalement L'octave de sol et La quinte d'ut mais cela ne peut causer a present aucune difficulté. parce que La succession determinée de La Basse fond.[Le] fait d'abord reconnoitre La note fond.[Le] qu'on y doit preferer. Lorsque par exemple on a employe fa dans la Basse fond.[Le] si Le chant donne sol ensuitte on y voit bien que ce sol ne peut appartenir qu'a L'harmonie d'ut puisque necessairement fa doit passer a ut dans La Basse fond.[Le] ayant toutes Les Lecons precedentes bien presentes a L'esprit, on peut eprouver dans Les premiers exemples Le fruit qu'on en aura tiré

on trouve dans tous ces exemples La Basse fond.[Le] avec Le chant mais il faut bien se garder d'y jetter Les yeux qu'apres en avoir composé soy meme La Basse fond.[Le] pour y confronter ensuite si Le tout est conforme.

on copie ou L'on fait copier separement Le chant de tous Les[2]

[2] The text of this lesson, interrupted by the insertion of folio 49[bis], continues on folio 50[r].

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[f. 49bis]

II^{e} Lecon

Des Consonances de Leur renversement, et de Leur situation relativement a la note qu'on exprime.

La tierce et la quinte donnent toutes Les consonances, il est vray que La tierce produit La sixte par son renversement de meme que La quinte produit La quarte par Le sien. Ce qui Se conçoit clairement en changeant d'ordre des deux notes qu'on compare pour Lors c'est a dire en mettant au dessus celle qui etoit au dessous.
par exemple si L'on prend La tierce La ut dans La deuxieme gamme ou ut est au dessus de La on voit dans La premiere qu'il y a au contraire, une sixte, d'ut a La parce que ut y est au dessous.

[f. 50^{r}]

Exemples pour en composer soymeme La B. f. [Basse fondamentale] sur Les regles données, et si L'on y trouve quelques differences, avec celle des exemples, il faut, sans examiner Le modele, repasse son ouvrage, en se rappellant Les regles precedentes pour essayer de se corrige par Les propres Lumieres.

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VI[e] Lecon

De La distinction des tems de La mesure, de La syncope de La valeur des notes fond[Les] dans chaque mesure, et de La Breve

La mesure se distingue en ~~d~~ 2. 3. et 4 tems; Le premier tems s'appelle fort et Les autres foibles, en marquant neamoins que La 3[e] tems d'une mesure a 4. est un tems fort. et pour ne s y pas tromper il n y a qu'a diviser cette mesure en deux ..mesures a deux tems.
La syncope consiste dans une note dont La valeur commence par un tems foible, et continue dans Le tems fort; soit que cette note se repete, soit qu'elle soit partagée par La Barre qui separe Les mesures, soit qu'elle s y trouve Liée par un demi cercle Ex[e]
Pour bien juger de L'a syncope d' une mesure a quatre tems, il n y a quà La diviser en deux mesures a 2. tems dans une mesure a 3. tems, La syncope peut commencer par tous Les tems quoi qu'il soit tres rare qu'elle y commence par Le premier ou le fort.
toutes ces reflexions sur La syncope ne doivent occuper que Lorsqu'on en avertira dans La suitte. Il suffit de savoir a present que La Basse fond.[Le] ne doit jamais syncoper, excepté dans Le debut ou cela est indifferent Lorsque Le chant ne commence pas par Le tems fort de La mesure. C'est sur tout Lorsque Le chant syncope, qu'il faut eviter d'y faire syncoper La Basse fond.[Le], celle cy doit au contraire y occuper toute La mesure, avec La meme note autant qu'il est possible.
C'est en employant toujours dans Le tems fort de chaque mesure

[f. 50[v]]

De La Basse fond.[Le] une note differente de celle qui La precede immediatement, que cette Basse fond.[Le] ne syncopera jamais Ex.[e]
Il faut, en consequence de cette regle remplir chaque mesure de La meme note fond.[Le] autant que Le chant peut Le permettre d'ailleurs; il vaut toujours mieux que La meme note y soit repetee quatre fois que trois Lorsqu on voit La possibilité de L'employer dans deux

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mesures de suitte a deux tems au lieu que dans La mesure a trois tems La repetition de trois, et de six est La meilleure, parce que ce nombre y remplit une mesure ou deux.

Une meme note peut etre continuée dans ~~une meme~~ plusieurs mesures de La Basse fond.^{Le}, et cela tant que Le chant n'y parcours que des notes de son accord ou harmonie: en observant autant, que Ce chant peut Le permettre de ne quitter cette note qu'en meme tems qu'une nouvelle mesure commence. Ex.^{e}

La Breve est une note de moindre valeur que celles qui La precede, et presque toujours aussy que celle qui La suit, des que cette note Breve est precedée d'un point, et suivie d'une autre note sur Le meme degré comme qui diroit ut, ut, ré, ré &c. en imaginant La p.^{ere} ut ou Le premier ré pour Breve, cette note Breve, dis je, est comptée pour rien et on La {confond} pour Lors avec La note qui La precede avec un point comme si celle cy en occupoit encore La valeur; de sorte que La Basse fond.^{Le}, ne se compose que sur La note pointée sans avoir egard a cette breve. Ex.^{e}

[f. 50^{v}]

VII^{e} Lecon

Du nom que doit porter chaque note de La Basse fond.^{Le}

on scait deja que La note sur La quelle roule Le ton et qui est a present ut S'appelle tonique. La quinte de cette tonique qui est sol S'appelle dominante tonique, et sa quarte qui est fa S'appelle soudominante. Il faut deformais ne plus distinguer Les notes de La Basse fond.

[f. 51^{r}]

que par ces epithets et pourvu qu on sache quelle est La tonique. Les deux autres Doivent toujours se presenter a L'esprit pour ce qu'elles sont relativement a cette tonique.

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La troisieme Gamme donne de suitte L'ordre des dominantes, et des soudominantes; par exemple, en disant, ut, sol, ré, La &c. on y reconnoit sol pour dominante d'ut, et ré pour dominante de sol, et en renversant cet ordre on y reconnoit sol pour soudominante de ré et ut pour soudominante de sol, fa pour soudominante d'ut et cetera. on peut arranger ainsy.

fa	ut	sol	ut	sol	ré
soud.te	tonique	Dom.te	soud.te	tonique	Dom.te

toutes Les notes de La 3e Gamme pour en tirer Le fruit a force de L'examiner de pouvoir se represent[er] sur Le champ La dominante et La soudominante de quelque tonique que ce Soit; en y remarquant que L'orsque si est tonique fa doit etre diezé et que Lorsque fa est tonique si doit etre Bemolisé.

on voit par La que Les deux memes notes a la quinte, ou a la quarte L'une de L'autre se pretent mutuellement du secours; si L'on est dans Le ton d'ut sol est pour Lors La dominante tonique de cet ut et si au contraire on est dans Le ton de sol ut est pour Lors La soudominante de ce sol

Il ne faut pas passer Legerment sur de pareilles remarques, et Il faut avoir tellement presentes a L'esprit aussy bien que tout ce qui a precedé qu'on ne soit point obligé de reflechir un moment pour se Les rappeller, Lorsqu'il S'agit de S'occuper d'un nom d'objet un objet distrait de L'autre, et jette presque toujours de La confusion dans Les idées.

On ne doit pas trop se fier a sa memoire, et L'on ne sauroit trop y repasser tout ce qu'on doit savoir avant que d'aller plus Loin; L'esprit de Combinaison de rapports doit bien plus nous guider a present que Les talens sur Les quels ceux qui en sont donés se fondent souvent trop. oublions Les absolument jusqu'au tems ou Il sera prescrit de Les mettre en oeuvre. Il ne faut jammais donner aux notes du chant Les noms propres a

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[f. 51v]

celles de La Basse fond.Le, et L'on ne doit Les considerer que comme tierces quintes, ou octaves de cette Basse fond.Le autrement cela jette quelquefois de L'Equivoque; on prend sans y penser, La note du chant pour La fond.Le on se represente en consequence L'harmonie de cette note du chant; et L'on est tout etonnée de ne savoir ou L'on en est par une equivoque dont on ne S'appercoit pas quelquefois.

VIII.e Leçon

De La succession fondLe par Seconde et par tierce

Outre La succession de quintes La Basse fond.Le peut aussy monter de seconde ou descendre de tierce, mais seulement apres La tonique, et cette note meme ou La tonique monte de seconde aussy bien que celle ou elle descend de tierce est a L'instant Dominante. La nouvelle dominante en question n est pas dominante tonique elle est simplement dominante d'une autre Dominante. Il n'y a dans chaque ton qu'une seule dominante tonique qui est La quinte de La tonique toutes Les autres dominantes n'y sont plus que des dominantes de dominantes. on Scait que toute dominante est La quinte de La note qu'elle Domine; on ne peut donc S'y tromper en suivant L'ordre de La troisieme Gamme specifié dans La Lecon precedente. Des qu'il paroit une dominant dans La Basse fond.Le elle doit marcher de dominante en dominante jusqu'a la tonique: ainsy Le ton d'ut supposé il faut que La par Ex.e ou cet ut aura descendu de tierce, passe ensuite a ré puis ré a sol, et sol a ut; S'il monte au contraire de seconde a re ce ré passera a sol et sol a ut.

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Si Le ton venoit a changer, et que {ce fut} celuy de ré ou de sol ou S'y arreteroit a ce ré ou au sol et Si c'etoit celuy de fa on passeroit encore de sol a ut et d'ut a fa mais cecy ne Sera necessaire que Lors qu'il S'agira du changement de ton.

[f. 52r]

on S'appercevra de La necessité de faire monter La tonique d'une seconde, ou de La faire descendre de tierce Lorsqu'on verra qu'en suivant La route fond.Le par quinte il seroit impossible d'arriver ensuite a cette tonique Selon Les regles données, soit pour ce qui y regarde La marche par quintes, Soit pour ce qui y regarde La syncope.

Ce sera presque partout ou L'on sera tente d'employer La soudominante que ce presentera La necessité de faire monter La tonique de seconde, ou de La faire descendre de tierce. il n y aura que Le cas ou La seconde de La tonique se trouvera dans Le chant, qu'etant {tenté /tanté} de Luy donné La dominantetonique pour Basse fond.Le il faudra au contraire faire monter cette tonique d'une seconde pour eviter La syncope dans La Basse fond.Le

Lorsque Le chant permet egalement de faire monter La tonique de seconde ou de La faire descendre de tierce; cette derniere marche doit etre preferé, pourvu que La suitte du chant procure Le moyen de passer d'une dominante a L'autre jusqu'a La tonique selon La regle donnée. si non il falloit d abord faire monter La tonique de seconde. Ex.°

Les premieres ex.le ne donnent d abord que des marches fond.Les en montant de seconde, Les moyens n'en donneront qu'en descendant de tierce et Les derniers rassembleront Le tout, mais souvenons nous bien surtout que ces nouvelles marches ne regardent que La tonique.

Lorsque Le chant syncope cela n'en donne que plus de facilite pour La regle prescrite, puisque La Basse fond.Le doit toujours recevoir une nouvelle note dans Le premier tems de La mesure ou se forme cette syncope un peu d'exercice sur cette Leçon mettra bientot au fait.

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IX^e Leçon

de La mediante et de La note sensible

La tierce de La tonique se destingue/distingue? des autres par l'Epithete de mediante, et La tierce de La dominante tonique s'en distingue

[f. 52^v]

par l'Epithete de note sensible, non seulement pour Les faire mieux remarquer, mais encore parce qu'elles sont Les plus sensibles surtout La derniere.

ces deux notes doivent avoir Le plus generalement pour Basse fond.^Le celles dont elles font La tierce surtout La note sensible, car quelquefois La mediante peut servir de quinte a la note fond.^Le ou La tonique descend de tierce, mais cela ne peut arriver que pour eviter La syncope dans La Basse fond.^Le ou pour suivre une nouvelle route de dominantes dont il n'est pas encore question.

Remarquons donc bien dorenavant cette mediante et cette note sensible pour donner a chacune sa Basse fond.^Le savoir La tonique a La mediante, et La dominant tonique a la note sensible; des qu'on parcoure un chant dont on connoit Le ton il faut y chercher avec soin chacune de ces deux notes que nous appellerons dans La suitte. Les notes connues du chants; ou simplement Les notes connues outre que La note sensible est tierce de La dominante tonique. elle est toujours aussy Le demiton au dessous de La tonique, ou de son octave.

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X^e Leçon

Des Different tons, soit naturels soit transposés

Les tons se distinguent d abord en deux genre L'un majeur, L'autre mineur. cette difference ne consiste que dans La tierce de La tonique si cette tierce est majeure Le ton est dit majeur Si elle est mineure Le ton est dit mineur.

La difference de La tierce majeure a la mineure, est d'un demiton dont La mineure est moindre que La majeure. Le ton d'ut que nous avons seul connu jusqu'a present est un ton majeur puisque La tierce de cet ut y est majeure. mais si L'on diminuoit cette tierce d'un demi-ton, tierce qui seroit pour Lors un Bemol, au lieu de mi Le ton seroit mineur.

Il y a des tons qui sont naturelement majeurs, ou mineurs, dans L'ordre Diatonique, sans qu'il soit Besoin d'ajouter n y dieze n y bemol a Leurs tierces par exemple Les tons d'ut, de sol, et de fa sont naturellement majeurs dans L'ordre Diatonique, et ceux de re, de La, de mi, de si y sont naturellement mineurs comme on peut Le remarquer dans La 1.^ere, et 2.^me Gammes de La 1.^ere Leçon.

En ajoutant un Bemol au Tierce des 3 p^ers tons majeurs ils seront mineurs; et en ajoutant au contraire un Dieze aux tierces des 4 {premiers/dernieres} tons mineurs ils seront majeurs.

[f. 53^r]

Ou bien en ajoutant un Dieze aux toniques des trois premiers tons majeurs, Ils seront mineurs, et en ajoutant un Bemol aux toniques des quatre derniers tons mineurs, ils seront majeurs. on y remarquent pour Lors que ces tons prendront Leur denomination de celle de La tonique qui d'un coté ne sera plus ut n y sol, n y fa, mais ut diezé sol diezé fa diezé, et qui de L'autre ne sera plus ré n'y La n'y mi mais ré Bemol La Bemol &c.

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au reste La difference de La tierce majeure a La mineure se conçoit aisement, en ce que L'une est composée de deux tons diatoniques, et L'autre d'un ton et demi, mais c'est pour eviter L'Equivoque du mot de ton pris pour celuy de mode qu'on propose icy un autre moyen de reconnoitre cette difference.

Le ton d'ut est Le modele de tous Les tons majeurs, et celuy de La est Le modele de tous Les tons mineurs tous Les autres tons qui ne peuvent etre non plus que majeurs ou mineurs, S'appellent transposes, et pour Les proportionner a L'un de ces premiers modeles on y ajoute des Diezes ou des Bemols, autant qu'il en est Besoin. Le premier Dieze S'associe a la note fa et Le premier Bemol a La note si.

En prenant a present La 3^{e} Gamme par quintes qu on sera commencer a fa et continuer jusqu'a si on aura L'ordre de notes qui peuvent recevoir un Dieze a La suitte L'une de L'autre, et en suivant cette meme Gamme en retrogradant depuis si on aura La meme chose a L'egard des Bemols.

Ces deux ordres s'accordent avec celuy des dominantes; et soudominantes, specifié dans La VII^{eme} Leçon. en suivant Le premier ordre depuis fa pour Les diezes et depuis sol pour Les toniques des tons majeurs seulement, est en imaginant comme tonique chaque note de cet ordre. autant de toniques qu il S'y presentera depuis sol, autant de diezes, il faudra ~~dans~~ depuis fa dans des tons reconnus par ces toniques. La meme chose se trouvera pour Les Bemols en retrogradant depuis si, et pour Les toniques en retrogradant depuis fa

Denombrement des tons transposés

avec Leurs Diezes ou Bemols

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[f. 53v]

tons majeures	tons mineurs	notes Diezées
sol	mi	fa
ré	si	fa, ut.
La	fa dieze	fa, ut, sol
mi	ut Dieze	fa. ut, sol, ré
si	sol dieze	fa.ut.sol.re.La
fa Dieze	re Dieze	fa,ut,sol,ré, ~~mi~~ la,mi
ut Dieze	La dieze	fa.ut.sol.re.La.mi.si

Bemols.

fa	re	si
si Bemol	sol	si. mi.
mi Bemol	ut	si. mi. La.
La Bemol	fa	si.mi.La.ré.
ré Bemol	si Bemol	si.mi.La.ré.sol.

on trouve partout dans ce denombrement un ton mineur, ou, un majeur a la tierce L'un de L'autre qui ont Le meme nombre de Diezes, ou de Bemols, ce que nous avons exposé {expres de La sorte pour} qu on y fasse.

Le ton mineur monte Diatoniquement de La quinte a L'octave de meme que S'il etais majeur de sorte qu'il

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s y trouve toujours deux diezes ou Bequarres accidentels, au lieu qu'en descendant il se compose de memes notes que recoit Le majeur qui Luy repond avec Le meme nombre de diezes ou de Bemols. Ex.^{e}

Il y a des tons avec des Diezes et d'autres avec des Bemols, qui ne sont qu un meme ton parce que Leurs toniques ne peuvent Le prendre que sur La meme touche, comme par exemple Le mineur de La dieze avec Le mineur de si Bemol {or} quand on veut composer dans ces tons La, on y prefere ordinairement celuy qui a Le moindre nombre de L'une de ces deux especes excepté qu'ils ne se trouvent en passant dans le ~~dieze~~ Milieu d'une piece de Musique, ou il faudra se soumettre pour Lors au Diezes ou aux Bemols dont La clef se trouvera deja Garnie, mais passons Legerement sur cet article, il n'est encore d'aucune utilité.

[f. 54^{r}]

XI.^{e} Leçon

Du rapport des tons

Chaque ton en a cinq autres qui s y rapportent plus ou moins selon L explication qui en sera donnée. Les deux tons L'un majeur, et L'autre mineur. X^{e} Lecon, dont Les toniques sont a une tierce mineure L'une de L'autre, et qui ont chacun Le meme nombre de Diezes ou de Bemols, ont un tres grand rapport entre Eux. L'un se reconnoit aisement, pour L'autre. La tonique du majeur est toujours La tierce mineure de La tonique du mineur. et La note sensible du majeur qui y occupe toujours Le milieu Diatonique Des deux toniques fait en meme tems La seconde du mineur. Ex.^{e}

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Le rapport de ces deux tons est si grand que des que dans Le chant ou n'employe n y La note sensible du mineur, n y La quinte du majeur, qui sont toutes deux La meme note excepte qu'elle est Dieze d'un coté et qu'elle ne L'est pas de L'autre. La Basse fond.[Le] y est arbitraire dans L'un de ces deux tons; pourvu cependant que Le chant ne commence n y ne finnisse par La tonique du mineur parce qu'en ce cas il n y auroit plus de doute. on expliquera dans La suitte ce qu'il convient de faire en pareil cas pour n y pas prendre Le change. Ex.[e]

ces deux tons relatifs exposent dans Leurs sons fondmentaux tous Les tons Relatifs a L'une et a L'autre. autre preuve de Leur grand rapport. dont il faut bien se mettre au fait avant que de passer outre. Ex.[e]

Le ton majeur d'ut et Le mineur de La sont ces deux tons relatifs qui servent de modeles a tous Les autres dont on peut S'intruire dans Le denombrement des tons transposés dans La Leçon precedente. Les tons a la quinte sont de meme genre et ceux a la tierce sont d'un genre different. ainsy ce sont toujours Les deux premiers tons relatifs qui en ordonnent. chacun d'eux determine Le genre du ton de sa dominante, et de La soudominante quand celles cy deviennent toniques.

si Le ton de La dominante tonique du ton majeur peut etre rendu mineur il ne faut du tout point S'en occuper a present . Ces tons relatifs peuvent encore se reonnoitre en plaçant a la sixte

[f. 54ᵛ]

L'une de L'autre, Leurs deux toniques dont L'espace etant rempli des notes Diatoniques que cette sixte renferme fournira toutes Les toniques des cinq tons egalement relatifs a L'un et a L'autre.

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dans cet ordre diatonique par exemple ut. re. mi. fa. Sol. La; ou Les deux tons relatifs ut et La ~~sont~~ a une sixte L'un de L'autre se trouvent Les cinq toniques des cinq tons relatifs a celuy des deux qui aura eté choisi.

Mais dans ce dernier ordre Les plus parfaits rapports ne se decouvrent pas de meme que dans Le premier. celuy cy nous donne d abord Les deux tons relatifs a une tierce mineur L'un de L'autre, comme Les plus parfaits rapports, ou se comprend encore Le ton de La dominante tonique du ton qui existe. tous Les autres etant beaucoup moins relatifs. connoissance qui sera d un grand secours, en tems et Lieu.

au reste Les tons relatifs au premier donné ne doivent jamais en differer que d'un Dieze, ou d'un Bemol. Il faut se rendre extremment familier tout ce qui a eté dit jusqu'a present. avant que de se Livrer a autre chose.

XII[e] Lecon

Moyens de reconnoitre Le ton dans Le chant

Le chant est une espece de discours ou Le sens de chaque phrase se termine par des repos plus ou moins sensibles.

article 1[er]

des repos ou cadences.

Les repos en termes de musique s'appellent cadences, ils se terminent generalement sur La premiere note d'une mesure et La Basse fond.[Le] y arrive toujours par un intervale de quinte c'est icy de nous permettons d'employer Le secours de L'oreille pour sentir Les repos du chant.

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pour bien sentir ces repos il faut chanter, du moins en soy meme Le chant de La Leçon en essayant de s y arreter de 2. en 2. mesures sur La premiere note de chaque mesure, si Le repos n'est pas sensible a 2.^{e} mesure, il Le fera infailliblement du moins un peu, a la quatrieme, et si par hazard il passoit ce nombre ce qui est tres rare, on Le {sentiroit} suffisamment, par une suitte forcée du chant qui conduiroit plus Loin

[f. 55^{r}]

Des qu on chante de suitte et sans aucune preoccupation, tout ce qui precede Le repos jusqu'a La note qui Le termine, on sent en soi meme La Basse fond.Le de ce repos sur Le champ, et sans y penser. Pour se mettre au fait du sentiment il faut comme il a deja éte dit chanter de suitte en mesure, et sans aucune preoccupation tout ce qui precede Le repos, et dans Le meme moment qu'on entonne La note qui termine Le repos, on Laisse tomber sa voix au dessous de cette note, comme si Le tout s'executoit en meme tems, et cela sans penser a ce qu'on, va faire, sinon qu'a Laisser aller Le son de La voix, et certainement on entonnera La Basse fond.^{Le} de ce repos, ou du moins une note qui L'indiquera.

si La voix se porte a une tierce ou a une quinte au dessous de La note du repos, c'est Sera La Basse fond.^{Le}, si au contraire elle se porte a une quinte ou a une sixte au dessous La note du chant sera elle meme fond.^{Le}.

si par hazard on n'entonnoit que La seconde au dessous de La note du chant, celle cy Seroit pour Lors La quinte de La dominante tonique mais outre que cela n arriver a guerer, qu'a des oreilles encore peu formées qui sentent pour Lors La note qui devroit suivre au lieu de celle qu on doit entendre en meme tems, il ne faut pas s'en tenir La et il faut recommencer L'operation en essayant de porter La voix plus Bas, {Sans} cependant que La volunté La conduise, c'est a dire, et La Laissant aller comme une machine.

Il y a des cas ou La voix ne se porte qu'a La tierce au dessous L'orsqu'elle auroit pu se porter egalement a la quinte au dessous. mais supposé qu'on en veuille pas venir a une

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seconde preuve cette tierce au dessous qui sera pour Lors, ou La mediante ou La note sensible Se reconnoitra aisement pour ce qu'elle sera a La faveur des connoissances que nous allons joindre a ce premier fruit de nos talens.

article II[e]

De La note sensible, et des accidens que produisent
les Diezes, Les Bemols, et Bequares.

La note sensible qui est toujours Le demi ton au dessous de La tonique est un des plus sur moyens de reconnoitre Le ton.

[f. 55[v]]

quand on a soin de placer a coté de la clef Le juste nombre des diezes ou des Bemols necessaires aux tons transposés, La regle suivante se trouve generale pour tous Les tons. Des qu'il se trouve dans Le chant une note diezée ou Bemolisée, c'est un Signe assuré que Le ton change, ou est deja changé. si La note est Diezee, elle est note sensible du nouveau ton. Si elle est Bemolisée, celle qui pourroit avoir un Bemol apres elle selon L'ordre du denombrement de La 1.[re] Lecon est note sensible s'il arrive une note Diezée ou Bequarrée parmi Les Bemolisées elle est des ce moment note sensible, et L'on ne s'y occupe plus de Bemol, que pour Savoir Si Le ton reconnu par cette note sensible est majeur ou mineur qui plus est Le Dieze L'emporte sur Le Bequarre. Par La connoissance qu on a du raport des tons on doit savoir de quel genre seront. Les tons accidentels mais relatifs au premier Donné, qui arriveront dans Le cours de La piece de musique. Le Bequarre qui arrive parmi Les diezes tient Lieu de Bemol. ceux qui en usent autrement ne sont pas exactes.
S'il y a plusieurs Diezes, ou Bemols de suitte entre deux repos {c'est] toujours au dernier dans L'ordre du denombrement de La X[e] Lecon qu'il faut appliquer La regle etablie Ex.[e].

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Si La note sensible reconnue est celle d'un ton majeur elle pourroit bien n etre aussy que La seconde d'un ton mineur relatif a ce majeur, car on doit savoir a present que cette note sensible du majeur fait en meme tems La seconde du mineur qui S'y rapporte, mais il y a plusieurs moyens de ne S'y pas tromper.

P.° il faut examine d'abord S'il ne se trouve pas un nouveau dieze dans Le chant entre Les deux repos ou La note sensible aura eté reconnue, et Si ce nouveau dieze est justement celuy de La note sensible du ton mineur relatif au majeur designé par La premiere, sans doute que celle cy n'etoit {effectivement} que La seconde de ce ton mineur, au qu elle il faudra S'entenir uniquement.

2.° si La quinte du ton majeur reconnue par La premiere note sensible, paroit dans Le chant sans etre diezée, et cela entre Les deux repos, ou cette note sensible aura eté apperçue, il n y a plus de doute sur ce ton majeure car c'est justement cette quinte

[f. 56r]

La quelle etant diezée devient note sensible du mineur relatif en question. Ex.°e

3.° si La quinte du ton majeur reconnu ne paroit point dans Le chant entre Les deux repos, soit naturelle soit diezée, il faut pour Les avoir recours au repos du chant qui suit La note sensible, par La quel ce ton majeur a eté reconnu, en chantant de suitte sans interruption n y saisir aucune preoccupation tout ce qui a precedé jusqu'a ce repos et en Laissant tomber La voix comme il a eté dit pour en trouver La Basse fond.[Le] au reste si Le repos du chant se termine sur La tonique du ton mineur relatif il n y a plus a douter qu'on ne soit dans ce ton. La Exemple

4.° si L'on se mefie de ses talens en pareil cas, c'est pour Lors sur Le rapport des tons successifs qu'il faut se fonder, en remarquant Le quel du deux tons qui tiennent en Balance a plus de rapport a celuy qui a precedé et Surtout a celuy qui soit Le suivre, pour Le preferer en ce cas a L'autre.

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Si nous mettons de La partie Le ton qui doit suivre celuy qui est douteux, c est qu'il est presqu impossible que deux tons Se succedent sans que La note sensible paroisse dans Le chant ou que du moins Le repos n y soit bien decidé mais tous Les moyens ne sont pas encore epuisez.

Lorsque des deux tons douteux on en trouve un qui se rapporte presqu egalement a celuy qui Le precede et a celuy qui Le suit c'est sans doute Le veritable.

Les plus parfaits rapports doivent se prendre icy a la quinte ou a la quarte et surtout entre Le ton majeur, et Le mineur dont Les toniques Sont a une tierce mineure L'une de L'autre.

Ex.^{e}

apres ces observations faites on revient a l'epreuve de L'oreille pour y comparer Le sentiment avec La raison, et bientot Le sentiment acheve de persuader.

5.° il se forme quelquefois des imitations de chant dans plusieurs phrases de suitte qui doivent engager ... preferer Les tons Les moins relatifs. ce sera Le Sujet VII^{e} Lecon.

6.° et finalement des que La note sensible reconnue est celle d'un ton mineur il est certain qu'on est dans ce ton La.

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[f. 56v]

article IIIe

Des intervales propres a faire reconnoitre Le ton dans Le chant.

De deux notes a la quinte ou a la quarte L'une de L'autre dont Le chant, une au moins est fond.Le dans Le ton qui existe. Ex.e

quelquefois ces deux notes a la quinte, ou a la quarte ne sont que Les tierces des fond.Les mais Le ton est pour {si} bien reconnu d'ailleurs qu'on ne peut S y tromper. Ex.e

De deux notes separées par La mesure en descendant de tierce La derniere c est a dire celle qui commence La mesure est {generalemt} mediante, ou note sensible et Le contraire ne peut jamais arriver sans qu'il ne soit visible, et sensible d'autant qu'on verroit et qu'on sentiroit par Les diezes, ou Bemols repondus dans La meme phrase ou par ceux qu'exigeroit dans Le ton une pareille mediante, ou note sensible L'impossibilité du ton exigé de La sorte Ex.e

qui plus est cette difficulté n arrive ordinairement que dans un suitte de chant ou plusieurs notes descendant ainsy de suite par imitation et ou celles qui doivent y etre reconnues pour mediante ou pour notes sensibles se distinguent aisement outre que L'une des deux c est a dire La mediante ou La note sensible y termine toujours La phrase.

tous ces moyens rassemblés doivent bientot mettre au fait a ceux qui en Sauront faire usage et cette usage ne demande qu un peu d'attention sans trop se presser.

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XIII[e] Lecon

Des repos ou des cadences dans La Basse fondamentale.

Les repos ou cadences ne Se terminent jamais dans La Basse fond.[Le] que sur La tonique, ou par La dominante tonique, et L'on y arrive jamais que par un intervale de quinte ou de quarte: d'ou L'on voit que Les premieres Leçons n'ont roulé que sur ces cadences. Il y a deux cadences, La parfaite et L'irreguliere, ou imparfaite.

Dans La parfaite La tonique est precedée de sa dominante, dans L'imparfaite cette tonique est precedée de sa soudominante. Les memes cadences se terminent aussy sur La dominante tonique

[f. 57r]

avec cette difference que ~~La~~ dans Le parfaite La dominante de cette Dominante-tonique ne porte jamais de tierce majeure, de sorte que La note sensible en est exclue d'ou une pareille cadence ne peut etre regardée que comme une imitation de La parfaite, au lieu que dans L'imparfaite La tonique La qui precede sa dominante peut etre reconnue pour La Soudominante Ex.e

toute dominante tonique qui termine une cadence imparfaite, peut y etre regardée comme tonique, quoique son ton puisse cesser d'exister immediatement apres.

Dans L'imitation de La cadence parfaite sur La dominante tonique d'un ton majeur, il est souvent Libre de donner La tierce majeure ou La dominante qui La precede et en ce cas cette dominante-tonique est effectivement tonique. Ex.[e]

Des que La note qui peut etre sensible dans Le ton ou L'on termine une imitation de cadence parfaite, ne paroit pas dans Le chant, il depend de gout du compositeur de L'imaginer comme tierce mineure ou comme tierce majeure de La dominante qui precede

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cela ou Se termine cette cadence, de sorte que S'il L'imagine comme tierce majeure elle est des ce moment note sensible, La cadence est pour Lors parfaite, et La note fond.Le qui La termine est tonique sans qu'on soit obligé pour cela d'en continuer Le ton. Ex.e

Les tons a la quinte L'un de L'autre ont deux notes fond.Les communes; de sorte que La succession fond.Le peut etre souvent La meme dans L'un et L'autre ton Lors qu'il ne S y agit que de juger si La note fond.Le qui est termine Le repos est tonique ou dominante tonique Ex.e

si Le ton peut paroitre arbitraire dans ce dernier cas ce n'est plus qu une affaire de gout dont nous parlerons dans La Lecon suivante.

XIVe Leçon

recapitulation de La succession fond.Le avec quelques augmentations, ou L'on rappelle Les droits de La tonique

Des qu on connoit Le ton La succession fond.Le est toujours La meme dans L'un comme dans L'autre; La tonique peut y etre suivie, comme il a deja eté dit, de La quinte ou de {la/sa} quarte de sa tierce au

[f. 57v]

Dessous, ou de sa seconde au dessus, parmy ces notes qui peuvent suivre La tonique, une seule est soudominante, toutes Les autres sont Dominantes et celles cy doivent toujours etre suivies d'une autre Dominante jusqu'a ce qu on arrive a la tonique precedée pour Lors de sa dominante tonique.

Il faut donc bien Se souvenir qu'il n'est du qu a la seule tonique de passer ou L'on veut, selon que Le chant en ordonne et qu a L'egard des autres notes fond.Les La soudominante

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ne peut etre employée qu'apres et avant La tonique c est a dire que celle cy La precede toujours et La suit et que tout Le reste etant dominantes doit marcher Selon L'ordre de determiné a la dominante, c'est a dire en descendant de quinte, ou en montant de quarte. La Loy de La syncope evitée dans La succession fond.Le doit etre observée en rigeur: c'est Le plus sur moyen d'en tirer de bonnes Basses continues et La meilleure succession d'harmonie. Les tons peuvent se varier d'une mesure a L'autre d'une note a L'autre d'ou il est Libre de passer d'une tonique a L'autre, {tant qu on Le veut} c'est a dire a present tant que Le chant Le permet, et cela par toutes Les marches de Consonances c'est a dire par tierces, quartes, quintes, ou sixtes, de {tous/tons} cotés.

ainsy quoi qu'il paroisse evidement qu on est dans un certain ton cela ne peut empecher d'en faire passer La tonqiue a une autre tonique pourvu qu'en ce cas, celle cy ramene au premier ton connu par Les marches qui Luy sous permises comme tonique. Ex.e

toute note ou La Basse fond.Le arrive en montant de quinte ou en descendant de quarte, est Sensée tonique d'ou L'on doit se rappeller Les droits de La dominante tonique en pareil cas. Ex.e toute note ou La Basse fond.Le arrive en descendant de quinte ou en montant de quarte peut devenir tonique, pourvu que son ton soit relatif au premier donné et qu on puisse sousentendre sa note sensible dans La tierce majeure de La dominante qui La precede immediatement Ex.e

ces dernieres reflexions servent a pouvoir anticiper a propos Le ton d'une dominante tonique, ou d'une soudominante Lorsque ce ton paroit immediatement apres; car, et nous Le repetons encore, Les tons a la quinte l'un de l'autre ont tant de rapport entre Eux dans leur sucession fond.Le a cause des deux notes communes qu'ils y ont, qu'il est

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[f. 58r]

souvent indifferent de traiter L'un de ces deux tons dans une marche de quinte, ou L'une des deux notes fond.Les peut etre+ prise pour tonique du ton qui existe ou bien {encore/~~encore~~} pour sa dominante tonique ou bien encore pour soudominante du ton dans Le quel on va passer incontinent. bien entendu qu'il n y aura pas de repos Sensible dans Le ton qui existoit jusque Là: Sinon il n y auroit plus—d'arbitraire exemple.
C'est pour Lors Le gout qui decide de cet arbitrarie, mais un gout determiné par La principe meme car Si ce n'est Le Sens des paroles qui guide en ce cas, ou L'esprit, du chant, du dessein, c'est du moins La Longeur des phrases harmoniques qui se determine sur Le plus ou moins de raport entre Les tons, Selon ce que nous en dirons en Tems et Lieu. toute note sensée tonique a Les memes droits que La tonique meme.

XVe Leçon

Du moment precis ou Le ton change

Le moment precis ou Le ton change arrive toujours immediatement apres La tonique ou apres La note sensée tonique de La Basse fond.Le; de sorte que c'est toujours a cette tonique ou sensée telle qu'il faut S'arreter jamais ailleurs, pour voir si Le ton ne change pas ensuite: Si ce meme ton continue on y marche Selon L'ordinaire mais s'il change c est d abord apres cette tonique ou Sensée telle qu'il faut chercher ou La tonique du nouveau ton, ou sa soudominante ou une dominante quelconque, qui conduise ensuitte de dominante en dominante jusqu'a La tonique de ce nouveau ton, Le tout par Les marches ordonnées relativement a la tonique. Ex.e
S'il n y a pas moyen de trouver ce qu on cherche en pareil cas il est pour Lors permi de prendre, a la suitte de La premiere tonique une autre tonique etrangere qui puisse cependant

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etre reconnue pour La soudominante du nouveau ton. ou pour une Dominante d'ou L'on puisse marcher de dominante en dominante jusqu'a La tonique de ce nouveau ton. Ex.[c][3]

[f. 58v]

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C'est dans une teme du chant qu'on peut passer d'une tonique a L'autre, aussi bien que dans tout autre cas.

XVI[e] Lecon

Moyen de composer La Basse en retrogradant d'ou L'on peut aisement obvier a plusieurs difficultés

Il y a une maniere de Composer La Basse en retrogradant qui peut etre tres utiles Lorsqu on se trouve embarasses surtout quand Le ton change.

Lorsqu'on est en peine de trouver La note fond.[Le] qui doit suivre une tonique ou L'on se sera arreté soit que Le meme ton continue soit qu'il change il faut d'abord s'assurer du ton qui existe apres cette tonique {au/ou} L'on s'est arreté puis chercher dans Le chant une note connue de ce ton dont on est assuré, c est a dire sa mediante ou sa note sensible. quand on a trouvé La note connue on met au dessous sa Basse fond.[Le] puis on continue cette Basse fond.[Le] en retrogradant de La maniere qui suit.

Comme La Basse fond.[Le] de La note connue dans Le champ ne peut etre apres La tonique ou La dominante tonique, on se dit La tonique doit etre precedée de sa dominante, sinon de La soudominante; et La dominante tonique doit etre precedée de La dominante, sinon de sa tonique.

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[3] There is a marginal annotation on the lower left of the folio: *Blanc pr expliquer Les Ex.[es]*.

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si La note fond.^{Le} ecrite sous La note connu du chant se trouve dans un tems foible, il faut examiner si Le chant ne permet pas de La continuer dans La mesure entiere parce que cela est toujours mieux, comme on doit Le savoir, il faut meme encore examiner apres qu'elle aura eté employée dans toute La mesure, si elle ne peut pas encore avoir Lieu dans toute La mesure qui suit en retrogradant, et ainsy d'une mesure a L'autre, Le tout relativement au chant. car si elle ne pouvoit avoir

[f. 59^{r}]

Lieu que dans Les tems foibles apres avoir ete employée dans Le tems fort de La mesure qui precede en retrogradant elle syncoperoit pour Lors, et il seroit signe, qu'il faudroit en prendre une autre dans ce tems foible, etant a remarquer que L'arbitraire qui pourroit se presenter en pareil cas, viendroit de ce que La quinte de La note fond.^{Le} ecrit est en meme tems L'octave de la dominante qui peut la preceder et que l'octave de cette meme note fond.^{Le} supposée tonique est aussy La quinte de la soudominante, ou Si elle est dominante tonique son octave est aussy La quinte de La tonique.

Toutes ces considerations doivent engager Les commençans a ne marcher qu'avec poids, et mesure; on met pour Lors des points au Lieu des notes fond.^{Les} pour ne rien brouiller et L'on en fait des notes que Lors qu'on Les a reconnues pour bonnes. Ex.^{e}

Ce que nous venons de dire de La note fond.^{Le} mise au dessous de La note Connue du chant doit S'entendre de toutes Les autres notes fondamentale qui La precederont on Les {consone/conservé} dans toute La mesure autant que Le chant Le permet, ou bien on Les fait preceder selon La regle car encore une fois quoique Le chant permette de Conserver La meme note fond.^{Le} ce n'est qu'autant que La succession fond.^{Le} prescrite n'en soufrira pas Le chant et cette succession fond.^{le} Sont Les deux Guides qu'il faut toujours avoir en vue si Le chant permet de faire preceder La tonique de sa Soudominante on ne doir adopter cette soudominante qu'autant qu'elle pourra etre precedée a son tour, de La meme tonique Excepte que si elle se trouvoit entre cette derniere tonique, et celle ou L'on s'est arreté, et que pour Lors elle forme avec ces deux toniques une succession possible entre plusieurs

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toniques on ne pourroit mieux faire que de L'adopter. Il n'y a plus: et quand meme cette soudominante pourroit etre precedee, non pas de La tonique ou L'on s'etoit arreté, mais d'une pareille tonique, dans L'ordre qui vient d'etre specifié il faut examiner si de cette derniere tonique jusqu'a celle ou L'on etoit arreté, le meme ton ne pouvoit pas encore subsister. et en ce cas c'est qu'on se Seroit arreté trop tot. et qu'il falloit continuer Le meme ton jusqu a La meme tonique qui se presente La pour La seconde fois. Ex.^{e}

Les tons relatifs ont plusieurs degres diatoniques communs de sorte qu on peut quelquefois attribuer a L'un ce qui peut egalement convenir a L'autre

[f. 59^{v}]

Mais La succession fond.^{Le} determinée ne permet pas de S'y tromper, et voila justement ce qui occasionne aussy bien que L'exclusion de La syncope Les meilleures Basses continues, et La meilleure suite d'harmonie.

Si Le chant permet de faire preceder La tonique de sa dominante on n'adoptera cette dominante qu'aux memes conditions et dans Les circonstances que La soudominante dont nous venons de parler excepté qu'elle ne puisse pour Lors etre precedée de sa dominante, celle cy de La Sienne, et toujours ainsy jusqu'a la tonique du nouveau ton, ou jusqu'a celle ou L'on s'etoit arreté. Ex.^{e}

Si La tonique connue du chant demande La Dominante-tonique pour Basse fond.^{Le} on La fait preceder comme il a deja ete dit; car qu'elle soit La premiere Ecrite, ou qu'elle Le soit apres La tonique cela ne change rien a la succession retrograve Ex.^{e}

Il faut bien remarquer que La derniere note fond.^{Le} par La quelle on arrive en retrogradant a la tonique, ou L'on s'etoit arreté, soit avec elle dans L'ordre prescrit, c'est a dire qu'elle en soit ou La quinte, ou La quarte ou La seconde, ou La tierce au dessous il est vray qu'elle {en/ne} peut etre aussy La tierce au dessus y ayant Lieu pour Lors comme une tonique etrangere, qui aura cependant ete employée comme dominante de celle qui La suit, ou qui dans L'ordre retrogratif La precede.

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Il ne faut S'attacher d abord qu a trouver La dominante de La note fond.Le ecrite sous La note connue du chant; par ce que ce n'est Le plus souvent, que dans une succession fond.Le de dominantes que L'on est incertain de celle qu'on voit choisir apres La ~~tonique~~ ou L'on S'est arreté, et ce n'est que Lorsque Le chant refuse cette dominante qu on a recours a une autre moyen.

Souvenons nous bien que La meme regle qui dit qu apres une dominante, il faut marcher de dominante, en dominante, jusqu'a La tonique, S'observe de cote et d'autre, soit en suivant L'ordre direct, soit retrogradant.

Ces differens moyens de Composer La Basse fond.Le {joins} a la pratique qu on doit en avoir fait jusqu'a present. jettent insensiblement de grandes Lumieres dans L'esprit du commençant: bientot ce qui Luy coutoit un peu ne Luy coute rien; il fait des remarques a proportion et ce qui Luy coute encore beaucoup Luy devient a la fin un jeu.

[f. 60r]

Surtout Lors qu'il Luy Sera permit d'appeller tout a fait L'oreille a Son secours: et il doit bien reconnoitre que ce n'est que pour mieux L'eclairer, qu on Luy en interdit L'usage pour quelque tems; non qu il ne puisse cependant manque de doeilité a cet egard, mais que ce ne soit du moins qu'apres avoir employé tous Les ressorts de L'art, et cela seulement, pour se donner La satisfaction {de voir/d'avoir} L'art, et La nature d'accord ensemble.

XVIIe Leçon

Des imitations de chant ou Le ton peut changer et de La succession fond.Le en consequence.

L'imitation du chant se suit d'une mesure a l'autre quelquefois de 2. en 2. mesures quelquefois de 4. en 4. Cette imitation, consiste dans un chant qui est Le meme, mais a un ou a plusieurs degrés de distance. Ex.°

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La Basse fond.^{Le} d'un chant imité est presque toujours La meme dans chaque imitation surtout des qu'il y a des repos; ces repos etant une marque assurée que ce qui vient de Se faire dans un ton va se faire dans un autre ainsy La Basse fond.^{Le} trouvee dans Le premier ton, sera La meme dans chaque imitation Ex.^{e}

on est quelquefois forcé de transgresser Les regles de La succession fond.^{Le} dans ces sortes d'imitations, mais seulement apres La tonique ou sensée telle,

La tonique terminant generalement toutes Les phrases, ou tous Les repos elle peut y etre regardée comme un point apres Lequel recommence une chose toute Nouvelle, et en ce cas, L'on n est forcé par aucune observation entre elle et La note fond.^{Le} qui La suit. Car La regle de succession ne peut regarder que ce qui doit etre Lié par un enchainement necessaire de mots, qui {composent} un sens. or dans de pareilles imitations Le sens peut etre sensé fini a chaque phrase, a chaque repos et des Lors, de quelque note fond.^{Le} que soit suivie La tonique qui termine ce repos, on ne doit pas S'en embarasser. pourvu que cette note soit a L'Egard du nouveau ton ce qu'etoit La premiere note dans La phrase d'auparavant a L'egard de son ton. Ex.^{e}

Les imitations de chant, ~~qui~~ en descendant qui ne sont pas coupées par des repos bien sensibles demandent une succession fond.^{Le} en descendant de quinte jusqu'a La tonique ou sensée telle, et Les imitations de chant, qui ne sont pas coupées non plus, par des repos bien sensibles demandent une

[f. 60^{v}]

succession fond.^{Le} en montant de quinte.

La succession fond.^{Le} en descendant de quinte est celle des dominantes qui doivent, marcher jusqu'a La tonique du ton connu. mais dont on peut former aussy quelquefois des toniques en passant pourvu que Le chant Le permette, Selon ce qui en a eté dit dans La {14^{e}} Leçon. Ex.^{e}

La succession fond.^{Le} en montant de quinte donne autant de tonique[s] que de notes qu'on peut regarder comme autant de soudominantes des toniques qui Les suivent, sans y perdre

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de vue neanmoins Le ton qu'indique Le ton qu'indique Le chant sur La fin de L'imitation pour n'en plus considerer La tonique que comme telle Ex.^e

quelquefois ces imitations varient par La difference d'un intervale ou deux; mais L'uniformité qui S'y trouve d'ailleurs soit dans Les autres endroits, du chant, soit dans Le nombre et La valeur des notes soit dans Le nombre des mesures, soit dans Le repos, et surtout dans La meme Basse fond.^Le dont chaque imitation est susceptible, relativement a son ton, doit ~~empeche~~ doit empecher qu'on ne Les perde de vue. Ex.^e

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XVIII^e Leçon

De La possibilité de partager une note
du chant en deux valeurs egales.

Il peut se trouver tel cas ou La succession fond.^Le ne pouvant etre observée, cela ne depend que d'y partager en deux valeurs egales, ~~La~~ une note du chant, a chacune des quelles on donne pour Lors une Basse fond.^Le differente.
si L'on vouloit par example faire descendre La tonique de tierce dans un cas ou Le chant ne permettroit que de La faire monter de seconde; Il n y auroit pour Lors qu'a partager en deux valeurs egales, La

[f. 61^r]

La note qui repond a la tonique ou a la note sur Laquelle il resemble que cette tonique ne puisse monter que de seconde. si La note du chant qui repond, a la tonique peut entrer

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dans l'harmonie de celle qui est a la tierce au dessous de cette tonique, Il est libre pour Lors de partager en deux valeurs egales, cette note du chant pour Luy donner d abord La tonique et ensuitte La tierce au dessus de cette tonique Sinon L'on partagera en deux valeurs egales, La note du chant qui repond a celle ou La tonique auroit du monter de seconde pour Luy donner D abord La note ou cette tonique descend de tierce et ensuitte celle qui doit suivre selon L'ordre prescrit, et qui est justement La meme ou cette tonique auroit du monter de seconde. Ex.^{e}

si Les deux notes du chant qui repondent a la tonique et a sa seconde au dessus se trouvent egalement dans L'harmonie de La tierce au dessous de cette tonique, Le partagé de L'une, et de L'autre {est} pour Lors arbitraire ce n'est plus que Le gout du chant que L'on veut donner a la Basse continue, ou a d'autre parties, qui en decide, cela peut fournir en meme tems Les moyens de mieux suivre un dessein, une fugue, non seulement en ce cas, mais dans d'autres qui dependront de La fantaisie, pourvu que La succession fond.^{Le} prescrite n'en souffre point, que cela soit dit va passant, pour n y plus faire attention que Lors qu'il sera permit de composer soy meme.

Il y a des {Cass} ou {a/ce} partage est ablsolument necessaire, comme

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