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VOICE-LEADING AND CHROMATIC TECHNIQUES IN EXPOSITIONS OF SELECTED SYMPHONIES BY JOSEPH HAYDN, INTRODUCING A NEW THEORY OF CHROMATIC ANALYSIS

by

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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

1999

This manuscript has been read and accepted for the Graduate Faculty in Music in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

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ABSTRACT

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by

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The expositions of Haydn's Symphonies nos. 73 and 82 - 92, as well as the first movement of Mozart's Piano Sonata in B♭, K. 333, are analyzed based both upon the voice-leading principles of Heinrich Schenker and upon a new theory of chromaticism disseminated by Henry Burnett. In Burnett's theory, the chromatic aggregate is presented as linear arrays and eleven-note areas. Although the two theories can be viewed as widely divergent in many areas, there are significant components of Burnett's theory that strongly support some of the most basic precepts of Schenkerian methodology and

theory. An important conclusion resulting from the application of the above theories is that Haydn's unique approach to sonata form often contains the greatest portion of his expositions within a prolongation of tonic harmony. In addition, the prolongation of the tonic is accomplished through sophisticated voice-leading and chromatic means.

PREFACE AND ACKNOWLEDGEMENTS

The aims and methodologies of the project introduced below may be best understood within the context of a short summary of its development. This project started life as "Thematic and Formal Procedures in Sonata First Movements in Works of Joseph Haydn, 1781-1790, with a Special Emphasis on Monothematicism." Since this topic was first conceived, it has taken several turns that I believe have both maintained an allegiance to the original topic and navigated it through much analytical *terra incognita.*

After investigating some old and new research on the music of Haydn, I found that the whole notion of monothematic technique seemed not to have been explored in adequate detail.[1] Added to this, even the definitions of formal

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[1]*The New Harvard Dictionary of Music* (Don Randel, ed., Cambridge, MA: Harvard University Press, 1986, p. 507) defines "monothematic" as "[a] composition based on one ... theme. ... Some composers ... (e.g., Haydn) have composed monothematic sonata forms."

Although the concept of monothematicism is mentioned by many authors, there has never been any comprehensive discussion of the matter. Ratner, in his *Classic Music* (New York: MacMillan Publishing Co., Inc., 1980, p. 219)., mentions monothematicism in reference to Haydn's F major Quartet, Op. 77, No. 2 and Mozart's finales to his F major Quartet, K. 590, and to the E♭ major Quintet, K. 614, "following Haydn's lead." He then talks about "melodic contrast" as an "essential aspect

divisions within a sonata movement had never been standardized by modern musicology, making it sometimes difficult to interpret the conclusions of a given analysis. At the time, it was my intention to rectify that situation by examining monothematic procedures employed by the greatest of monothematicists, if I might coin a term, using a circumscribed body of some of Haydn's most sophisticated compositions. Although I do not present the various terms I apply here to the sonata as an attempt to standardize musicology's vocabulary, I offer them at least to better clarify my own investigation in a consistent manner. I have also introduced below two different archetypes of monothematic procedures which take into account the historical development of the sonata's exposition. As far as I know, this method of delineating monothematic designs has never before been undertaken.

Around the time I started this project, Professor Henry Burnett, of the Aaron Copland School of Music at Queens College, began to compile some interesting observations about

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of classical melodic rhetoric. Charles Rosen (*Sonata Forms*, New York: W. W. Norton & Co., 1988, p. 5) refers to the "myth of Haydn's so-called monothematicism — a myth because every one of these movements contains several themes, even if a new theme is not always used to confirm the new key in the exposition." Also, (p. 241) "[t]o articulate the movement to the dominant, instead of a new theme, the first theme may be played in the new key: or a variant of the theme — generally more complex, more swiftly moving, and unstable — may be played."

Comments made by other authors are similar in their lack of detailed argument on this subject.

Classical-era composition and chromaticism, and I thought that supplementing my own Schenkerian perspective and voice-leading graphs with some of his new ideas might provide some innovative material. At the time, Burnett had just developed his theory of chromatic arrays, and I set out to incorporate my own interpretation of these arrays into my voice-leading analysis of The "Oxford" Symphony no. 92. It was the most perplexing graph of anything I had ever created. Not only did it fail to elucidate the voice leading or the chromaticism, but it seemed to do a disservice to both Burnett and Schenker. I decided, and Carl Schachter agreed, that it might be more reasonable to discuss voice-leading considerations and chromatic considerations in two different areas for each symphony analysis, and to separate the graphs of chromatic arrays and voice leading so that they appeared one over the other, but not on the same staves; this is the form in which each of the symphonies are presented here. This also seemed prudent since the two theories seemed not to coexist comfortably, that is until recently, when Burnett realized that the application of one of the major tenets of his theory required a firm understanding of a composition's harmonic background, in the Schenkerian sense of the word.

As this project began to take shape, I decided that it should encompass symphonies primarily, and specifically those from the first and second Paris sets, i.e., nos. 82 through

87, and nos. 88 through 92. I also added Symphony no. 73 to the list since I believe it to be a historical prototype, with its non-traditional treatment of monothematicism and its non-tonic opening. By way of comparison, there is also a discussion of the first movement of Mozart's Piano Sonata in B♭, K. 333. The analyses of these works are approached by both voice-leading and chromatic means. However, the prominence of monothematicism has been deemphasized since that line of inquiry was dwarfed, I soon realized, by the far greater significance of Haydn's all-pervasive developmental techniques employed in the works examined.

I would like to thank Henry Burnett for allowing me to watch him explicate his theory of chromaticism. He has shown me that the developmental procedure can be simultaneously linear and back relating. I would like, also, to thank Carl Schachter for allowing me to pursue and entertain the analytical *terra incognita* that I have explored here. His many stylistic suggestions and alternative analytic readings have been enlightening and indispensable. This project never would have been completed without the encouragement I received from Profs. Burnett and Schachter, without their faith in my ability to see it through, and without the many hours of discussions they both invested in this undertaking.

I would also like to thank Poundie Burstein, Rufus Hallmark, Bruce MacIntyre, and Henry Weinberg for their time

and their many helpful suggestions during the course of this project.

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INTRODUCTION

This study focuses on voice-leading and chromatic analyses of first movement expositions of twelve Haydn symphonies and of a Mozart piano sonata. The voice-leading analyses are based on the theories and methods of Heinrich Schenker, while the chromatic analyses are based on those of Henry Burnett. I have offered, in the course of this investigation, two subcategories of monothematic expositions since the issue of monothematicism is important in discussions of Haydn's output. The first, which I call "type 1," is the conventional one where a single melodic entity is used to articulate opening statements of both the first and second harmonic areas.[2] The other type of monothematic procedure, however, has never been designated since its mere definition contradicts one of the most commonly held beliefs about sonata expositions, that an exposition contains, if nothing else, at least a first and second theme, even if that "theme" is the same melodic entity presented in two different keys.

After an examination of some Classical-era theorists and

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[2]This terminology is explained in Chapter 3: "Definitions of Sonata Form Categories" below.

some early Classical-era symphonies, I decided that this widely held belief needed to be superseded by another more general definition of monothematicism. I found that the expositions of many classical symphonies, among them the works of the influential early Viennese symphonist Georg Christoph Wagenseil (1715-1777), often proffered just an opening statement, bridge and codetta based, as they are, on binary dance models. Therefore, these expositions needed to be included within the monothematic category as well even though they refrained from introducing a melodically articulated and expanded second harmonic area. Yet, these expositions certainly seemed to reside somewhere within the broad definition of sonata form. The mid-eighteenth century symphonies also contained development sections and genuine recapitulations, distinguishing them from extended binary movements.

I have designated this symphonic procedure as having a monothematic exposition procedure that I call "type 2" to differentiate it from the better-known, above mentioned, "type 1"; this "type 2" monothematic procedure is one that would have a profound influence on Joseph Haydn. Through the utilization of this category, I was now able to place Haydn into a historical niche without having to classifiy his works as "idiosyncratic." Haydn would now be seen as having been strongly influenced by the Viennese and Wagenseil in particular.

This influence is not just a superficial stylistic one: many of Haydn's "tricks of the trade" seem to point directly back to Wagenseil, including not just the "type 2" monothematic exposition, but the use of a strategically placed augmented-sixth chord just before the arrival of the structural dominant. Georg Matthias Monn (1717-1750), too, experimented with the augmented-sixth, but often implied the chord through arpeggiation or linear unfolding of the augmented-sixth interval; this chord ultimately embellished II♯ on its way to the structural dominant. Henry Burnett has noticed similar attributes in the symphonies of Sammartini, as well as other early Viennese symphonists.[3] It is essential in a discussion of the stylistic influences on Haydn's chromatic palette to locate his predecessors in the placement and function of these chromatic entities.

Much of the recent literature in the analysis of sonata form has focused on Haydn's work, probably since it has been viewed, so to speak, as virgin territory. Many of these analyses are quite insightful, particularly those of James Webster and Elaine Sisman.[4] The work of Mark Evan Bonds, too,

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[3]Henry Burnett, "Eleven Pitch-Class Tonality: A New Approach to Modulation in the Music of the Eighteenth Century," unpublished manuscript, in progress, 1998.

[4]James Webster, *Haydn's "Farewell" Symphony and the Idea of Classical Style: Through-Composition and Cyclic Integration in his Instrumental Music*, part of the series *Cambridge Studies in Music Theory and Analysis*, ed. by Ian Bent (Cambridge: Cambridge University Press, 1991); Elaine Sisman,

has offered new and penetrating analytical approaches based on a thorough knowledge of Classical theory, aesthetics and philosophy.[5] Yet, with a seeming plethora of new studies, the "Haydn Issue" seems far from exhausted. Popular narrational analyses can range from tedious to fascinatingly creative, but they often do not rigorously address the theoretical relationships among the notes. Though linear analysis addresses the notes, it is sometimes unable to provide a means to speculate about how the composer made certain compositional choices, and may overlook important stylistic considerations. Unfortunately, however, many theorists have been led to throw out the Schenkerian "baby with the bathwater."[6] Schenkerian analysts are just beginning to scratch the surface of Haydn's output: voice-leading analyses of the Classical repertory have tended more, until fairly recently, toward a better understanding of the works of Mozart and Beethoven, a situation that has inadvertently skipped over many of Haydn's most

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Haydn and His World, Bard Music Festival Series (New Jersey: Princeton University Press, 1997); also, Elaine Sisman, *Haydn and the Classical Variation*, Studies in the History of Music, No. 5 (Cambridge: Harvard University Press, 1993).

[5]*Wordless Rhetoric: Musical Form and the Metaphor of the Oration* (Cambridge: Harvard University Press, 1991).

[6]One of the more recent studies that, I believe, has unfairly addressed Schenker and has also misrepresented much of his analytical method, is Laurence Dreyfus in *Bach and the Patterns of Invention* (Cambridge: Harvard University Press, 1997).

significant works.[7]

The finest minds constantly seem to be confused by Haydn — and for good reason: Haydn's phrasing is deliberately asymmetrical on a large scale and often his periodicity is obscure; event arrivals are deliberately attenuated. Composer and theorist George Perle has called Haydn "a composer's composer,"[8] suggesting that Haydn's level of expertise exists on such an overwhelmingly high plane that his most sophisticated compositional gambits might elude even the best-trained musicians. Suffice it to say that of the masters of Classical composition, Haydn remains the least understood.

In order to streamline the explanation of the chromatic theory and not to disrupt the flow of the analyses, I have decided that a description of that portion of Henry Burnett's theory that deals with a new definition of tonality as an eleven-note "system" should be placed into an Appendix. However, the reader should review this section before proceeding to the symphony analyses, since some of the chromatic investigations depend upon an understanding of the material in the Appendix.

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[7]Two recent works have helped to rectify this situation: Channan Willner "Chromaticism and the Mediant in Four Late Haydn Works," *Theory and Practice* 13 (1988), 79-114, and Mark Anson-Cartwright, "The Development Section in Haydn Late Instrumental Works," Ph.D. diss., City University of New York, 1998.

[8]From a classroom discussion.

CHAPTER 1

THE CURRENT STATE OF HAYDN RESEARCH AND SONATA-FORM ANALYSIS

In the eighteenth century the music of Haydn was the cornerstone of discussions about musical composition; however, by the nineteenth century, approaches to composition in sonata form relegated Haydn to secondary stature. Twentieth-century musicology has moved toward a more historically informed approach of sonata form by re-incorporating eighteenth-century perspectives into its analytic methodology. As a result, many of these exchanges seem unorthodox and novel compared to the more familiar formulaic approaches which have become commonplace over the last century and a half.

One early approach that is becoming popular again today is the "narrational" analysis that harks back at least to the beginning of the nineteenth century. Today, this idea is once again viewed as a legitimate response to the Classical sonata. Jérome-Joseph de Momigny's *Cours complète d'harmonie et de composition*, intended as a manual for composition students, discusses

> the art of subordinating ideas to one another, and of forming propositions or cadences ... . The oratorical art consists of arranging thoughts in a manner that will produce the greatest impression on the mind and on the

heart.[9]

The spirit of Momigny's ideas has been expanded upon recently by Mark Evan Bonds. Commenting upon eighteenth and nineteenth century theorists, Bonds writes in his *Wordless Rhetoric*:

> The instrumental work was seen as a wordless oration, and its form was viewed not so much as a harmonic or thematic plan but as an ordered succession of thoughts. In the interests of intelligibility, these musical ideas — an amalgam of melodic, harmonic, and rhythmic elements — tended to be arranged within a limited number of conventional patterns.[10]

Bonds postulates that eighteenth-century theorists (and composers) viewed the plan of an instrumental artwork as a succession of elaborations upon a single, principal subject (*Hauptsatz*), and the way in which this idea was expounded and elaborated determined the form of the piece. The form within which a composition resided was one of only a few abstract

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[9]Momigny, *Cours complet ...* , 3 vols. (Paris, 1803-6), I, 145. Cf., Ian Bent, "Momigny's *Type de la Musique* and a Treatise in the Making," in Christopher Hatch and David W. Bernstein, eds., *Music Theory and the Exploration of the Past* (Chicago, 1993), 309-340. Also, see Malcolm S. Cole, "Momigny's Analysis of Haydn's Symphony no. 103," *Music Review* 30 (1969), pp. 261-284. Momigny's "narrative" analysis from the early 19th century may be the historical forerunner of this mode of inquiry.

[10]*Wordless Rhetoric, op. cit*, p. 53. For Bonds' discussion on Momigny, with particular references to Momigny's analysis of Haydn's Symphony no. 103 ("The Drumroll"), see pp. 134-8. Also, with reference to this particular analysis, see Malcolm S. Cole, "Momigny's Analysis of Haydn's Symphony no. 103," *Music Review* 30 (1969):261-284. For more material on Momigny's analyses of Classical composition, see Albert Palm, "Mozart und Haydn in der Interpretation Momignys," *Kongress-Bericht* (Kassel, 1962), 187ff.

prototypes. According to Kirnberger, Mattheson had written that the *Hauptsatz* functions similarly to that of a biblical text and its relationship to the succeeding sermon.[11]

Bonds' work culminates in what he refers to as an orational analysis of Haydn's Symphony no. 46 in B major. While Bonds describes the contextual associations between the primary and secondary harmonic areas, this essay will address ways in which the composer moves between large structural gestures in terms of harmony and intraphrase structure, as well as addressing the frequency of cadence points within a period. Perhaps these issues were not discussed among Classical theorists and are not, therefore, part of Bonds' considerations. Even though it could be argued that Bonds overstates his principal thesis, as an compilation of "rhetorical" or "orational" analyses, his work shines in its almost complete fidelity to classical theoretical conceptions.

James Webster considers rhetorical issues in his *Haydn's Farewell Symphony and the Idea of Classical Style*[12] and also takes into account contemporary analytic attitudes towards eighteenth-century instrumental works. Webster's analyses are quite detailed and contain Schenkerian-style voice-leading graphs, hypermeasure depictions, characterizations of motivic

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[11]Quoted in Bonds, *Wordless Rhetoric, op cit.*, p. 93, note 137.

[12]*op cit.*

relationships, and a plethora of other twentieth-century tools to help ascertain Haydn's intentions and methodologies. His descriptions of the symphony vis-à-vis the programmatic associations of the "Farewell" to the music itself are quite convincing. Webster's book is one of the finest modern investigations of a historically significant Haydn symphony; by including a wide range of rhetorical and voice-leading/analytic issues, the result is a comprehensive survey of many important matters.

Joel Lester's *Compositional Theory in the Eighteenth Century* contains much that is relevant to this discussion, specifically in his handling of Heinrich Christoph Koch's writings on phrase construction and expansion, larger forms, and entire sonata movements.[13] Koch's description of a sonata exposition from 1782-93 is germane, as Koch is one of the few Classical-era theorists to analyze this section as a single period, or to discuss an entire movement as a succession of periods. Lester's work is particularly important since it discusses Koch's theoretical method without reproaching him for his lack of nineteenth-century sensitivity.[14] For example, Lester states during his discussion of the exposition:

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[13]Cambridge: 1992, particularly pp. 284-299.

[14]It will be argued in the next chapter that Rudolph Réti's criticisms of Haydn's style of exposition writing come from a nineteenth-century tradition that mandates certain aspects of sonata procedure that only become typical in that era.

> Nowhere in Koch's discussion of allegros does he make a strong statement about contrast of any type — theme or tonality — within the first period. For Koch, the first period of the movement is a single unit, not a dichotomous entity.[15]

Lester discusses Koch's description of how a large form is created from simple material. He accompanies the discussion with a replication of Koch's example of a sonata exposition created from the expansion of a simple melody. In the example, we find a single, unbroken period of music devoid of both intermediary cadences and, therefore, thematic contrast, unfolded in a manner very much characteristic of Haydn's sonata technique.

Lester's work is a significant contribution toward understanding the eighteenth-century approach to composition and theory and provides an excellent summary of Koch's methodology. Koch represents, in Lester's analysis, the culmination of a great historical process that can be traced through the analysis of musical works of the eighteenth century and by scrutinizing the writings of theorists from the same period.

Other modern writers who have made contributions to this discussion include Elaine Sisman,[16] who also examines Koch,

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[15]p. 296.

[16]Elaine Sisman, "Small and Expanded Forms: Koch's Model and Haydn's Music," *Musical Quarterly* 68 (1982):444-75.

Charles Rosen,[17] William Rothstein,[18] and Leonard Ratner.[19] Ratner, in particular, must be credited with having been among the first modern writers to have put a considerable dent in the nineteenth- and early twentieth-century analytical models of sonata form. This tradition may have started with Carl Czerny in the nineteenth century[20] and followed a path all the way to Rudolph Réti in the twentieth.[21] This school of thought treats sonata form as a predetermined formula whose organization is dependent primarily on contrasting themes in different keys.

In this school of thought, Haydn's approach to sonata form was often seen as eccentric. Chapter 2 will attempt to address these issues from the viewpoints of Haydn's contemporaries, both composers and theorists, to help understand issues regarding the development of sonata form.

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[17]*The Classical Style: Haydn, Mozart, Beethoven* (New York: W. W. Norton & Co., 1972) and *Sonata Forms* (New York: W. W. Norton & Co., 1988).

[18]*Phrase Rhythm in Tonal Music* (New York: Schirmer Books, 1989).

[19]*Classic Music: Expression, Form, and Style* (New York: Schirmer Books, 1980).

[20]*School of Practical Composition*, translated by John Bishop, 3 vols. (New York: Da Capo Press, 1979).

[21]*The Thematic Process in Music* (New York: Macmillan, 1951).

CHAPTER 2

HAYDN IN CONTEXT: EIGHTEENTH CENTURY THEORISTS AND COMPOSERS

Eighteenth-century theorists' conceptions

Haydn's music was of particular interest to eighteenth-century theorists. In this study, those theorists' evaluation of sonata form and their descriptions of the ways in which composers progressed from the first to the second harmonic areas and the proportions allotted to each of the two harmonic areas is particularly significant. In contrast to Koch, Francesco Galeazzi in 1796 described the whole sonata-form movement as a large two-part structure and, in contrast to Koch, the exposition as a subsidiary two-part structure: the first part of the exposition established and moved away from tonic harmony, while the second part occurred midway through the exposition to establish a second harmonic area with its cadence, the codetta. His formulation is different from Koch's single period and creates theoretical legitimacy for a procedure that bifurcates the first large period, the exposition[22]. (As we will see, Galeazzi's conception might help

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[22]Bathia Churgin, "Francesco Galeazzi's Description (1796) of Sonata Form," *JAMS* 21 (1968), p. 181-99. Contains a translation of Galeazzi's *Elementi*, Part IV, Section II.

clarify Mozart's and Beethoven's approaches to sonata better than Haydn's.) Yet, after a long discussion of thematic contrast (with sections about the special nature of the second theme — Characteristic Passage, or the Intermediate Passage) he ultimately states that the Principal Motive (opening statement), the Departure from the Key (the bridge), and the Cadential Period (codetta) are the *essential* parts of an exposition needed to determine the basic design of short pieces.[23] We will see that this determination is essentially true, especially when applied to such composers as Wagenseil.

In a manner which seems — at least on the surface — to anticipate Galeazzi, the German theorist, performer and composer Georg Joseph Vogler writes in his *Mannheimer Tonschule* in the last quarter of the eighteenth century[24]:

> In the symphony there are usually two main themes, the first being the stronger, which supplies the material for development ["Ausführung"], the second being the gentler, which relieves the heated commotion and bolsters the ear

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[23]Churgin, op cit., p. 186. The symphonies of Haydn's predecessors (discussed below) are "short pieces" compared to the more expansive works typical of later-period Classicism. These "short pieces" are, undoubtedly, heavily influenced by binary dance form. Yet, even in Haydn's lengthier movements, it seems that the three sections (opening statement, bridge and codetta) are the only *essential* parts of an exposition. (In many C. P. E. Bach symphonies, a short closing period -- longer than a codetta, but shorter than a "typical" closing period -- substitutes for a codetta, probably because of the absence of a repeated exposition.)

[24](Mannheim, 1778), II, 62, quoted in Churgin's "Galeazzi's Description ...", p.181. For material about Vogler's life and theories, see Margaret H. Grave, "Vogler, Georg Joseph [Abbé Vogler]" in the *New Grove*, vol. 20, pp. 59-63.

with a pleasing contrast.[25]

Churgin points out that one should be careful about comments of this sort since references to thematic material are few and far between in the writings of Classical theorists who were more inclined toward harmonic descriptions. Jane R. Stevens echoes this opinion in reference to Vogler and states:

> Investigations of earlier theorists' formulations of sonata structure have therefore focused on the developing perception of this bithematic form; and in practice, this has meant a preoccupation with the question of the "second theme." The pioneering work[s] of William Newman and Leonard Ratner in the middle of this century made it clear that this thematic structure was not commonly recognized by 18th-century writers, who based their analyses largely on harmonic plan rather than on melodic events. Yet the eventual dominance of the thematic "textbook" model has lent special prominence to 18th-century suggestions of bithematic form, since they do in fact represent a progressive tendency in analysis.[26]

Stevens also quotes Fred Ritzel's questions about whether Vogler's assertions about "two main themes" referred at all to the notion of a first and second theme in a later, nineteenth-century, manner.[27] Possibly, this statement involves the opening statement and some kind of spinning-out of this statement as the bridge unfolds or, perhaps, a contrast of

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[25]This passage is translated in Ernest Newman's *The Sonata in the Classical Era*, p. 34.

[26]Jane R. Stevens, "Georg Joseph Vogler and the 'Second Theme' in Sonata Form: Some 18th-century Perceptions of Musical Contrast," *Journal of Musicology* 2/3 (1983), pp. 278-304.

[27]Fred Ritzel, *Die Entwicklung der "Sonatenform im musiktheoretischen Schrittum des 18. und 19. Jahrhunderts* (Wiesbaden: Breitkopf und Härtel, 1968), pp. 28-29.

motive within the theme itself. Stevens adds the following:

> One can only conclude that Vogler is not concerned with melodic contrast as an element of large-scale sonata structure as it was understood in the 19th century."[28]

Koch's description of the exposition simply states that "the first period establishes the tonic and then shifts to the fifth, cadencing there," thus providing us with a harmonically construed analysis of form, one that makes no "rules" for the position of the second harmonic area.[29] Since Koch's models were Haydn's sonata-form movements (often the first-movement Allegros of symphonic works), this may have been why his descriptions of the process are so generalized: the compositional variety of Haydn's works necessitate an inclusive approach rather than a systematic model. Koch's descriptions of principal ideas and subsidiary ideas did not *necessitate* the use of contrasting or lyrical thematic entities, and it was not a integral facet of Haydn's style. Lester quotes Koch as having written that a successful movement needs to have:

> an adequate variety of parts, or a sufficient interchange and alternation between the principal ideas combined with the connecting phrases and dissection phrases or subsidiary ideas, and a precise and completely suitable connection of all these ideas.[30]

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[28]Stevens, ibid., p. 283.

[29]Lester, p. 294. Also, see Heinrich Christoph Koch, *Introductory Essay on Composition*, Nancy Baker, trans. (a partial translation of *Versuch einer Anleitung zur Composition* 1782-1793; New Haven, Yale University Press, 1983).

[30]From Koch's *Versuch*, vol. 2, p. 99, quoted in *Compositional Theory in the Eighteenth Century*, op. cit., p. 295.

Although thematic contrast is not necessary, some kind of "interchange" between different ideas will generally create a better composition.

Koch provides a model for the creation of a sonata exposition based on the expansion of a relatively short melody that cadences on the dominant.[31] Since Koch cites examples from Haydn, C. P. E. Bach and other contemporary composers in his treatise, it can be assumed that Koch's ideas about compositional structure and the enlargement of short forms into long ones is derived from his analyses of these composers' works. Even though Koch's expanded exposition is only thirty-two measures long, it provides an insight into the thought process of this Classical theorist and clarifies much of his written material.

A five-measure G major opening statement of the expanded versioni is augmented by a five-measure extension ending with a half-cadence in measure 10. The bridge begins with the upbeat to measure 11, immediately introducing C♯, the leading tone of D major.[32] Later, D major will be secured as the

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[31]This is reproduced by Joel Lester in his *Compositional Theory*, op. cit., p. 291. Lester makes this interesting comment about the example (p. 292): "The larger version [of Koch's model] has an air of authenticity to it. But the basic version, with its short subdivisions and their square endings, seems very much like a condensation of the longer version."

[32]The terminology I am using to describe the parts of an exposition will be discussed in detail in the following chapter.

structural dominant. The bridge is expanded over the course of most of the exposition and is not completed until the first note of measure 31. The material that is the remainder of measure 31 plus all of measure 32 comprises a codetta (i.e., a concluding cadential phrase in the new harmonic area). Two issues are important here: first, harmonically speaking[33], the structural dominant is not fully anchored until the arrival of the codetta. Second, thematic contrast is simply not an issue since the second harmonic area is not articulated thematically.

We will see that this procedure is typical of sonata expositions up through the 1770's. Through the succeeding examination of some of Haydn's symphonies, we may find that many of Koch's notions about the "Allegro," as he calls it, are completely accurate when examining Haydn and his contemporaries. In Haydn's works we will find that the issue of thematic contrast plays much less of a role in his works than it does in the works of Mozart or Beethoven. Haydn was more inclined toward the use of innovative expansive procedures to prolong tonic harmony and often avoided thematic contrast altogether. Haydn's monothematic exposition design included intermediary cadences to set off sizable areas within the

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[33]See Lester, *Compositional Theory ...*, p. 292 for a interesting discussion concerning the implications of Koch's calculated relationships between harmony and melody in this example.

"first period" but contained little thematic contrast, at least by nineteenth-century standards. Haydn avoided periodic cadences to set off smaller sections. This precludes the prevalent use of "themes" as a viable compositional strategy since all new material is an extension of previous material.

In contrast to Haydn's procedure, J. C. Bach proceeds from cadence to cadence through the use of new melodic invention. Mozart's style is a product of this methodology, and aside from a few "Haydnesque" experiments, Mozart generally refrained from employing Haydn's approach. Later on, Beethoven, more influenced by the Mozartean tradition on this issue, would never write a monothematic exposition.

If we consider the opposition of the tonic and dominant as the endpoints in the tonal continuum of the exposition, a great deal about the stylistic tendencies of a composer can be discovered by noting how that opposition is articulated. Haydn is certainly not devoid of contrasting ideas, but his thematic interchange takes on more of a developmental cast — due to the nature of the composer's compositional style — compared to one that *necessitates* contrast between first and second themes within a sonata exposition. Koch's simple analysis of the succession of harmonic ideas in the exposition, that it "establishes the tonic and then shifts to the fifth, cadencing there" is quite appropriate for much of Haydn's output as well, particularly those movements that

still had a strong historical affinity to older Baroque binary models. As a result of his critical evaluations of this body of literature, Koch became one of the most important of Haydn's contemporaries to give the composer's sonata procedures theoretical validity. And, as a consequence of this historic meeting of minds, we, in the twentieth century, might find that fewer "rules" exist than we have been led to believe by theorists of the post-Koch eras.

A. F. C. Kollmann had a perspective similar to that of Koch, and probably derived, if not appropriated, much of his information from that of his senior contemporary. Kollmann, in his "Of the Plan for a Piece to be Composed,"[34] divided the entire movement into two major parts, and each of these parts were further divided into two smaller parts:

> [A] long movement is generally divided into two sections. The first ... ends in the fifth of the scale, and the second, in the key ... . The first subsection must contain the setting out from the key towards its fifth ... and it may end with the chord of the key note or its fifth, but the latter is better. The second subsection [the second harmonic area] comprehends a first sort of elaboration, consisting of a more natural modulation than that of the third subsection [the development section]; it may be confined to the fifth or third of the key only ... .

Kollmann, too, does not discuss the *necessity* of thematic contrast. In fact, his description of a long movement applies equally well to Haydn, to that of Haydn's immediate predeces-

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[34]from his *Essay on Practical Musical Composition*, 2nd ed., London: Author, 1812, p. 5.

sors, and to his contemporaries.[35] Bonds also calls into question the traditional interpretation of a thematically-articulated contrasting second harmonic area as a formal imperative and asserts that this may not be a typical characteristic of eighteenth-century theory or practice.[36] Particularly in a small-scale sonata movement, the issue of thematic contrast did not, by design, play a major role. It may have only become more of a concern in the works of J. C. Bach, whose Italianate conception of sonata form had a direct

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[35]Of course, by the time Carl Czerny had written his *School of Practical Composition*, op. 600 in 1839 (in 3 vols., trans. John Bishop, London: Robert Cocks & Co., ca. 1848; reprinted in facsimile, New York: Da Capo Press, 1979, vol. 1, p. 35), the picture had changed since most composers in the mid-19th century were no longer writing monothematic sonata movements anymore or delaying the arrival of the second harmonic area until almost the double bar of the exposition: "Now follows the middle subject, which must consist of a new idea. A good middle subject is much more difficult to invent than the commencement; for, *first*: it must possess a new and more beautiful and pleasing melody than all which precedes; and *secondly*, it must be very different from the foregoing, but yet, according to its character, so well suited thereto, that it may appear like the object or result of all the preceding ideas, modulations or passages." Therefore, a strong emphasis is placed on the second harmonic area. Czerny then directs the student of composition to Mozart, Beethoven and, curiously, Haydn to study their "good models." One would suppose that Czerny must have meant Haydn's late works, probably the London Symphonies, since most have contrasting second harmonic areas about half way through their movements. Even Haydn's late string quartets contain many examples of procedures that might be considered unusual by Czerny's standards.

[36]Bonds, *op. cit.*, 1991, p. 35n. Compare, also, the discussion by Jane R. Stevens in her "Georg Joseph Vogler and the 'Second Theme' in Sonata Form: Some 18th-Century Perceptions of Musical Contrast." *Journal of Musicology* 2 (1983), 278-304.

influence upon Mozart[37] and therefore Beethoven, even if indirectly.[38] Haydn, it will be seen, came from a very different tradition.

A feature, then, that will guide these discussions involves the unfolding and precise placement of the structural dominant and, therefore, the second harmonic area. Haydn's point of departure is a Baroque conception and, therefore, one where the second harmonic area is only clinched at the end of the first large section. Even Haydn's "extreme" examples, those where the second harmonic area of the exposition is reached concurrently with a codetta, fall out of this early notion. His symphonic archetype, which extends the area of the tonic and *gradually* moves into the second harmonic area toward the end of the exposition, might be considered the composer's "*Ur*"-form of sonata. One could best sum up Haydn's compositional bent by noting the point of articulation and placement of the exposition's structural dominant, and by then analyzing the way in which that entity is secured. In the succeeding analyses, we will see that Haydn becomes a master

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[37]Heinz Gärtner, *John Christian Bach: Mozart's Friend and Mentor*, trans. Reinhard G. Pauly (Oregon: Amadeus Press, 1994) 215-217. In 1764, Mozart probably took composition lessons with J. C. Bach in London. Gärtner indicates that Mozart's early symphonies were composed under Bach's supervision.

[38]This issue and its corollaries (particularly with respect to the nature of the exposition's bridge) will be discussed in the next chapter.

of delay by constantly provoking the listener to accept his major developmental work *within the area of tonic harmony.* By comparison, the preferences of both Beethoven and Mozart were to relinquish tonic harmony rather quickly in favor of the new harmonic area. Mozart and Beethoven erected a considerable amount of developmental material between the entrance of the second harmonic area and the end of the exposition, usually appending a closing period (often a multi-phrase closing period) to further expand the contrasting harmony. The use of a closing period as a formal device (i.e., the presence of a second structural period of the second harmonic area before the codetta), was not foreign to Haydn, but examples that do *not* contain closing periods, only two-period second harmonic areas with opening statements and codettas, are in abundance. Even more extreme cases exist in Haydn's works. There are more than a few examples of expositions that have no expanded secondary harmonic area, only the arrival at a *structural dominant* succeeded by a short codetta to secure the final cadence of the exposition. Symphony no. 73 and the String Quartet op. 33 no. 2 ("The Joke") are constructed in this manner and are, in fact, closely allied in formal conception to the Koch exposition discussed above. Of course, these kinds of extreme examples, that have no contrasting themes or even closing periods, are undoubtedly related to Baroque binary-form models with their two large, repeated periods.

Haydn's predecessors

Haydn's sonata procedures often appear to be idiosyncratic, a position often defended by contrasting his sonata movements to those of Mozart and Beethoven. As previously stated, both "younger" composers were inclined to arrive at a complete, fully articulated statement of the second harmonic area at least halfway into the exposition, and often earlier. This makes their point of arrival at structural dominant harmony in a major mode symphony (or at the mediant in a minor mode symphony) unequivocal and relatively early compared to Haydn and some of his contemporaries. However, if we examine Haydn's style in the light of his Viennese contemporaries, such as Wagenseil and Monn, it becomes more apparent that Haydn's formal inclinations were quite different from Mozart's or Beethoven's. Haydn may be seen as the one Classical symphonist to uphold the old tradition of Baroque binary form expanded into the larger proportions of a Classical symphonic movement. If this is the case, it is no coincidence that the strongest articulation of the secondary harmonic area occurs very often at the codetta; this would be the case in a dance movement in a Baroque suite where the structural dominant occurs just before the first double bar in the manner of a

large-scale half cadence.[39]

Generally, chromatics and harmonies consistent with the upcoming harmonic area introduced in the bridge create the first disruptions of the tonic. In retrospect, those necessary disruptions of tonic harmony within a typical Baroque dance movement (the first modulation), however, only become harmonically and rhythmically reinforced at the double bar. In the case of a Haydnesque symphonic movement, the new harmonic area often seems not to be fully anchored until the codetta, or near it. This compels the bridge to play a major role in the postponement of the structural arrival of the new harmonic area by incorporating a considerable amount of modulatory and delaying material into it.

Haydn's use of substantial auxiliary cadences or large-scale voice exchanges create huge rhythmic upbeats and preparations before securing a secondary harmonic area. The overall implication is to suspend the arrival of the new harmonic area until almost the last possible moment. Therefore, both these devices have the consequence of gradually undermining the tonic's stability, thereby creating a great deal of tension that calls for some resolution in a new

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[39]The Viennese court of the 1740's-1760's was notoriously conservative. Fux and Caldara had once been the significant court composers and Baroque elements, particularly fugues, were still very popular. This may account for Haydn's contemporaries' affinity for Baroque-derived material, but also reveals why the last movements of Haydn's op. 20 string quartets are fugues.

harmonic area.

I will address features typical of the early classical symphony in light of some representative works of the early Viennese classical symphonic tradition; many works of Wagenseil are relevant to the present study. Georg Christoph Wagenseil was born in Vienna in 1715 and died there in 1777.[40] He was active as the Viennese court composer from 1739 until his death; he studied with J. J. Fux who recommended him for the court position. According to Charles Burney, who met the composer in 1772, Wagenseil was a great admirer of Handel. Wagenseil's music was well-known by Haydn and, also, by the young Mozart, while Beethoven received lessons in Fuxian counterpoint from Wagenseil's student Schenk. Wagenseil's music well represents the early Classical *galant* style.

The relevance of Wagenseil's style to this discussion is in the manner by which the modulation from the first harmonic area to the structural dominant is accomplished. In Wagenseil's symphonies, the first hint of dominant harmony, introduced within the bridge, is succeeded only by a cadence in the second harmonic area at the point of the codetta; i.e., there is usually no extended area prolonging the new harmony. The bridge cadence and succeeding codetta are the only

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[40]Cf., "Wagenseil," in *The New Grove*, vol. 20, pp. 100-103.

confirmations of the new area. Here, one can easily see the historical connection between the first period of a binary form sonata and its transformation into a rudimentary sonata exposition.

The Sinfonia in E, WV 393, is typical of Wagenseil's approach to sonata form.[41] A 13-measure opening statement is followed by a thirty-two-measure bridge. The first half of the bridge introduces an A♯ (the leading tone of the dominant) and the second half moves to II^7. In measure 31 a B major chord (V) is presented which allows for the dominant area to gradually take shape during the remainder of the exposition. This is succeeded by an augmented-sixth chord in the next measure, thus anticipating Haydn's use of it, and resolves to II^7 and then to V. Measure 35 is the first decisive gesture

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[41]Wagenseil also writes symphonies in the style of Italian overtures (popular around 1730) that contain no repeat signs and have truncated, almost insignificant, or even absent, development sections. Wagenseil's Sinfonia in A, WV 421 (he called it an *Overtura a 8*) is representative of this genre. In a 179-measure first movement, only 26 measures are given over to a development section, i.e, about 14% of the movement. (By contrast, in the E major symphony, a 149-measure first movement contains a 42-measure development section, 28% of the movement.) There are no repeat signs. Cf. Eugene K. Wolf's discussions of the influence of the Neapolitan overture on the maturation of symphonic style in *The New Harvard Dictionary of Music*, *op. cit.*, "Sonata form," II, p. 766; and "Overture," I, p. 602.

Wagenseil's symphonies can be found in *Denkmäler der Tonkunst in Österreich* xxxi, Jg. xv/2 (1908); and a selection in Barry Brook, general editor, *The Symphony 1720-1840: A Comprehensive Collection of Full Scores in Sixty Volumes* (New York: Garland Publishers, 1981), Ser. B, vol. 3 (John Kucaba, ed.).

that anticipates the new harmonic area; it is still within the realm of the bridge and is not marked off by a cadence. This area, however, denotes the beginning of an auxiliary cadence that will not be fulfilled until measure 45, the beginning of a five-measure codetta and the first secure anchoring of the second harmonic area. Until the codetta, there has been no formal division within the exposition; however, we might hear measure 35 as a line of demarcation between "trying to leave the tonic" and "trying to arrive at the dominant." The unceasing rhythmic drive is almost consistently governed by 4-bar hypermeasures and associated extensions. The procedure is very similar to that outlined by Koch.

A notable exception to Wagenseil's general procedure occurs in his C major Symphony, WV 361.[42] In this work, Wagenseil creates a two-period second harmonic area, the first of which anchors the structural dominant in measure 34; the second is the five-measure codetta. The arrival of the second harmonic area is prepared (as in the E major symphony) by a division in the bridge (measure 22) where tonic harmony is increasingly exhausted and dominant harmony is beginning to come into its own. Measure 26, which is highlighted by a design change, is another bridge division that begins the process whereby dominant harmony will eventually be fully secured in measure 34. Wagenseil's employment of a two-period

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[42]*Denkmaler*, ibid., xxxi, Jg. xv/2.

second harmonic area, as opposed to a three-period second harmonic area that features a closing period, prepares the way for many of Haydn's symphonies, including the Paris symphonies which will be analyzed later. However, in both the E major and C major symphonies, the bridge demarcation anticipates a procedure favored by Mozart.[43]

The works of Georg Matthias Monn (1717-1750) are also relevant to this study; Monn, too, was born and died in Vienna.[44] It is alleged by Gerber that Monn gave Albrechtsberger his first lessons in thoroughbass, but this story has not been substantiated by the most recent scholarship. Just as Johann Stamitz was considered to be the leading musical figure in Mannheim, Wagenseil and Monn were deemed Stamitz's Viennese counterparts. Monn uses a sonata procedure that is, in some ways, more sophisticated than Wagenseil's, and yet still maintains some common features with his contemporary. Monn's D major Symphony, from 1740, is representative of his general stylistic traits.[45] In a small

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[43]Mozart's Symphonies nos. 29 (K. 201), 38 (K. 504) and 41 (K. 551), for example, have bridges that have definite points where the harmonic direction seems to change from that of prolonging tonic harmony to that of anticipating dominant harmony. This is Wagenseil's customary strategy.

[44]See Judith Leah Schwartz, "Monn, Georg Matthias" in *The New Grove*, vol. 12, pp. 493-4.

[45]Monn's symphonies can be found in *Denkmäler der Tonkunst in Österreich* xxxix, Jg., xix/2 (1912); also, a selection of Monn's symphonies are in Barry Brook, general editor, *The Symphony 1720-1840: A Comprehensive Collection of Full Scores*

19-measure exposition, Monn establishes D major with a three and a half measure opening statement. The bridge, beginning in the middle of measure 4, begins to modulate in measure 6 with the introduction of G♯ and cadences on II at the opening of measure 10. The arrival at the second harmonic area in Monn is different than in Wagenseil since Wagenseil does not really anchor the new harmonic area until the codetta. Monn, however, cadences at the end of the bridge (on II) and begins a contrasting area half-way through the exposition. It is a procedure he uses in most of his other symphonies as well. Yet, measure 10 does not firmly define the new harmonic area since it is in the *minor dominant*.[46] By abandoning tutti orchestration at the opening of the second harmonic area, the layout sounds very much like the first solo of a ritornello

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in Sixty Volumes (New York: Garland Publishers, 1981), Ser. B, vol. 1.

[46]Monn may have been familiar with Vivaldi's *pianoidée* technique that introduces a new idea in the parallel minor (with a piano dynamic) inserted either before or after the *Fortspinnung* segment of the opening ritornello theme. Therefore, Monn's use of this kind of contrast in the second harmonic area may have its origins in the not-quite-dead Baroque. Also similar to some of Vivaldi's other works (and much other Baroque music as well), these pieces never really seem to leave the tonic; in a sense, their I-V-I progressions seem to function more in the middleground than in the background.

See Pippa Drummond (*The German Concerto: Five Eighteenth-century Studies* (Oxford: Clarendon Press, 1980), for more information about *pianoidée*; in her footnote no. 98, she credits W. Krüger with coining the term. See Krüger's *Das Concerto Grosso in Deutschland* (Reinbek, 1932), p.26.

statement.[47] Of interest here, however, is Monn's effective deemphasis of the motion into A. The area of A major is not confirmed until the second half of measure 16 and not fully secured with a root position triad until measure 19, the end of the exposition. The structural dominant occurs only at the double bar.

It is interesting to note that both Monn and Wagenseil went through "stages" where they often experimented with motion into the minor dominant, usually just before the codetta. Some of Haydn's early symphonies also apply the minor dominant in this way.[48]

Monn's Symphony in B major is atypical in some respects, yet it is an excellent example of a piece that could have had a considerable influence on Haydn. In some respects, the procedure here is closer to Wagenseil than to Monn's own D major symphony. Aside from the tonic key being atypical, this symphony is also in 3/4 meter, somewhat unusual (but not unknown) for the early Viennese symphonists, although not so unusual for Haydn. Monn begins with a four-measure statement which is answered by a four-measure counterstatement followed by an eight-measure expansion of tonic harmony. A bridge

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[47]Aspects of ritornello design is found in the symphonies of many North German composers, most notably in the symphonies of C. P. E. Bach.; Bach generally avoids moving into a harmonic area that elaborates the minor dominant.

[48]See, for example, the expositions of Haydn's Symphonies no. 1, 2, 4 from Hoboken no. 51.

begins in measure 16 and continues for another twelve measures. The point at which F♯ major is structurally secured, measure 28, is also the beginning of a four-measure codetta.

Both Wagenseil and Monn delay strong emphasis of the second harmonic area until the codetta of the exposition. In Wagenseil's symphonic works, such a scheme is accomplished by delaying the arrival in the new harmonic area through the expansion of the bridge; there is hardly a break in the texture of the exposition. That seamless quality allows us to hear the arrival of the second harmonic area structurally delayed through an auxiliary cadence. Often, in Monn's works, the dominant is presented in the minor mode initially with a concurrent thinning of the orchestration, usually, to a trio texture. However, in Monn's works, the initiation of the auxiliary cadence is announced by a bridge cadence and a rest before the harmonic change. Both composers' works are still very much reminiscent of a slightly-expanded version of binary form.

It is often conjectured that much in Haydn's compositional style can be attributed to influences from works of C. P. E. Bach. According to Eugene Helm:

> Haydn had discovered one or two sets of his [C. P. E. Bach's] keyboard music (probably the Prussian and Württemberg sonatas) years earlier [than 1773], and testified that he was unable to leave the keyboard until

he had played through all of them.[49]

Early in his career, Haydn was familiar with C. P. E. Bach's *Versuch über die wahre Art das Clavier zu spielen*, whose first part was published in 1753 (the second part was published in 1762). Yet, says Jens Peter Larsen:

> This work, ... like Mattheson's [*Der vollkommene Kapellmeister*], is mainly a textbook of musical practice, not composition, and it was certainly Fux's famous counterpoint treatise that paved the way for Haydn learning "the real foundations of composition" from Porpora.[50]

He goes on to write that Haydn's "more mature and expressive" piano sonatas were said to have been influenced by C. P. E. Bach, according to Griesinger, and refers to the same story cited above by Eugene Helm."[51]

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[49]"Carl Philipp Emanuel Bach," in *The New Grove Bach Family*," (New York: W. W. Norton and Co., 1983), p. 268.

[50]From *The New Grove Haydn* (with Georg Feder) (New York: W. W. Norton), p. 9-10. The quote is from A. C. Dies, *Biographische Nachrichten von Joseph Haydn: nach mündlichen Erzählungen desselben entworfen und herausgegeben von Albert Christoph Dies, Landschaftmahler* (Vienna, 1810; Eng. trans. in Gotwals, 1963); ed. H. Seeger (Berlin, 1959, 4/1976). A. Peter Brown, in his *Joseph Haydn's Keyboard Music: Sources and Styles* (Bloomington: Indiana University Press, 1986), argues that the popular notion that Haydn was strongly influenced by C. P. E. Bach has been very much overstated. See, particularly, "Joseph Haydn and C. P. E. Bach: A Question of Influence," pp. 203-229. In Haydn's autobiographical sketch of 1776, he says that he "had the good fortune to learn the true fundamentals of composition from the celebrated Herr Porpora." See H. C. Robbins Landon and David Wyn Jones, *Haydn: His Life and Music* (Bloomington: Indiana University Press, 1988), pp. 26-7, for material about Haydn's early years and the influence of Nicola Antonio Porpora (1686-1778) and Haydn's participation in the choir that sang at Vivaldi's funeral.

[51]ibid., p. 12.

H. C. Robbins Landon, in *Haydn: His Life and Work*, states:

> Haydn writes music from the 1760's onwards which acquires, to borrow Bach's word, "soul." His music in the 1760's affords many striking similarities of gesture and technique ... and these occur with greater frequency in later years, but C. P. E. Bach's influence was more general than specific and Haydn paid him the artistic compliments of emulation rather than mere imitation. ... Before Haydn became widely acquainted with the music of Mozart in the 1780's, Bach afforded the only instance of an artistic talent he could unfailingly respect and revere.[52]

I believe that it can be successfully argued that Haydn's primary influences, at least at the outset of his compositional career well into the time of the Paris symphonies (written in 1785-6), were from the older Viennese classicists (Monn, Wagenseil, et al.). When Haydn first was hired by the Esterházy court in 1761, it was due to his already having internalized the "Italian" style, i.e., the *style galant*.[53]

Later, around 1771 — the time of the "Bachian" C minor piano sonata (Hob. XVII:20) — Haydn seems to be superimposing Northern German *empfindsamer Stil* mannerisms upon a post-*style galant* binary-derived sonata framework. In essence, the abrupt starts and stops, the use of dotted rhythms and frantic metrical irregularities are foreground stylistic features

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[52]Landon, *op. cit.*, p. 94

[53]*ibid.*, p. 41ff. Haydn also wrote a series of Italian operas in the mid- to late-1760's for Prince Esterházy. Cf. Larsen, *op. cit.*, p. 30-31.

which may be indicative of a C. P. E. Bach influence.[54]

If we consider the notion that the ever-present auxiliary cadence or chromatic voice exchanges of late Haydn symphonies may be an influence from C. P. E. Bach's keyboard sonatas, we should not fail to notice as well that Haydn's early pre-compositional ideas are still very much in line with Baroque binary-form models. There are many strands in the formation of early Classical techniques that can be seen as a direct outgrowth of Baroque dance forms; therefore, both Haydn and C. P. E. Bach styles could be motivated by the same or a similar source.

Even though Haydn may not have known C. P. E. Bach's symphonies (since they were not published until the 1780's — except for the Symphony in E minor, Wq. 177-8, published in 1756), it is quite likely that Haydn knew Bach's piano sonatas, particularly those in the *Versuch*. Haydn could very well have known Bach's later symphonies since Bach wrote them for van Swieten, who had them performed in Vienna. It is difficult, however, to fully assess whether or not piano sonatas had a substantial influence on Haydn's symphonic style: so much of the stylistic considerations in the creation of a symphony involves its great expanse — witness the discussions of Koch on *Fortspinnung*-derived methodology.

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[54]*Versuch* published 1753-62, *Sonaten für Kenner und Liebhaber* were published in 1779, etc.

The composition of piano sonatas may have been considered a stylistic exercise in the creation of a compact form, one that influenced some aspects of the compositional process, but probably not the formal layout of a genre such as a symphony.

A cursory list of stylistic traits from the symphonies of Wagenseil and Monn includes the following attributes: movements are autonomous (not elided), both large periods (exposition and development/recapitulation) are always repeated in the symphonies (but not in overtures), the structural dominant is usually anchored just before the end of the exposition — this is often accomplished with an augmented-sixth chord that is created from a chromatic voice exchange with tonic harmony. If we construct a similar list for C. P. E. Bach symphonies, we find these most notable features: movements are always elided, there are no repeat signs in the movements (neither at the end of the exposition nor the recapitulation), and the structural dominant is never preceded by an augmented-sixth chord.

Another issue that may point to a Wagenseil/Monn influence on Haydn involves the above-mentioned use of a short area within the minor dominant before its parallel major is reached at the new harmonic area. This is a procedure with which the young Haydn experimented. I have not been able to locate any C. P. E. Bach symphonies from either the Hamburg or Berlin sets that employ this technique. Haydn never elided symphonic

movements and always used repeat signs at the end of the exposition and recapitulations. Still, this is not conclusive evidence against a Bach influence, and since Haydn never seemed to have written about these issues, it may ultimately be impossible to ascertain Haydn's most important influences, except on the basis of some of the stylistic similarities presented in the above discussion.

C H A P T E R 3

DEFINITIONS OF SONATA EXPOSITION SECTIONS

Labels to identify sections of sonata-movement expositions have never been established or uniformly standardized in a satisfactory manner.[55] Not only are the terms we use fairly recent inventions, but even the term "sonata form" itself was probably not widely used until the mid-nineteenth century. It has been suggested that the term may have been invented in mid-nineteenth century by A. B. Marx.[56] In order

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[55]The best known works in English on this question are: Mark Evan Bonds, *Wordless Rhetoric: Musical Form and the Metaphor of the Oration* (Cambridge: Harvard University Press, 1991); Leonard Ratner, *Classic Music: Expression, Form, and Style* (New York: Schirmer Books, 1980); Charles Rosen, *Sonata Forms*, revised edition (New York: W. W. Norton and Co., 1988); James Webster, "Sonata Form" in *The New Grove Dictionary of Music and Musicians*, edited by Stanley Sadie (London: MacMillan, 1980). Also, see James Hepokoski and Warren Darcy, "The Medial Caesura and Its Role in the Eighteenth-Century Sonata Exposition, *Music Theory Spectrum* 19/2 (Fall 1997), pp. 115-54; and William E. Caplin, *Classical Form: A Theory of Formal Functions for the Instrumental Music of Haydn, Mozart and Beethoven* (New York and Oxford: Oxford University Press, 1998). For a comprehensive survey of contemporary 18th-century theory that includes material on the sonata, cf., Joel Lester, *Compositional Theory in the Eighteenth Century* (Cambridge: Harvard University Press, 1992).

[56]William Rothstein, *Phrase Rhythm in Tonal Music* (New York: Schirmer Books (MacMillan), 1989), p. 111. Leonard Ratner, *Classic Music, op. cit.*, p. 221, made very much the same statement a few years earlier and cited Adolph. B. Marx's *Die Lehre von der musikalischen Komposition* (2nd ed.), 4 vols. (Leipzig, 1841-51). See particularly volume III, p. 282.

to focus upon the details inherent in a first movement, I shall avoid the controversy about a sonata movement as a two-part or a three-part form and will treat the form as a two-part conception.[57]

Sonata analyses based on design (i.e., analyses based solely upon discussion of formal areas) and sonata analyses based on harmonic areas often conflict and create ambiguities and disagreements. An example of this problem occurs in Mozart's Piano Sonata in C major, K. 545. In the short, or shall we say condensed, first movement of only seventy-three measures, a recapitulation of thematic material of the opening statement occurs in measure 42, but in the subdominant. Yet, a recapitulation of tonic harmony does not arrive until

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Ratner writes (p. 221) that "[Marx's] views were decisive in establishing the thematic view of sonata form." Other significant works by 19th-century theorists on the sonata include Carl Czerny's *School of Practical Composition*, in three volumes, trans. by John Bishop (New York: Da Capo Press, 1979). Rosen, in *The Classical Style*, op cit., p. 40, credits Czerny with the first definition of sonata form: "Czerny claimed with pride around 1840 that he was the first to describe it ... ." Cf., Ian Bent's offset, *Analysis*, part of the Grove Norton Handbooks in Musicology, edited by Stanley Sadie (London: MacMillan, 1986) that originally appeared in *The New Grove Dictionary, op. cit.*, "Analysis."

[57]Another interesting analytic perspective, one which also will not play a role in this essay, involves "viewing musical form as a plot, principally in connection with the repertoire of the nineteenth century. This concept is equally valid for music of the Classical era" (Bonds, *Wordless Rhetoric*, p. 188). The idea has a long and distinguished history going back, at least, to the writings of Jérôme Joseph de Momigny. See his *Cours complet d'harmonie et de composition, d'après une théorie neuve et générale de la musique* (Paris 1803-6).

measure 58, coincident with a reprise of the melodic material of the exposition's second harmonic area. On thematic grounds, it might be argued that the recapitulation begins in measure 42. On structural and on rhythmic grounds, however, it might be more tempting to take measure 42 as a false recapitulation (and, therefore, a continuation of the development section), measure 54 as a retransition, and measure 58 as the recapitulation. In such a short movement, Mozart may not have been inclined to recapitulate thematic material that had already occurred within such close proximity.[58]

The recapitulation of opening statement material in the tonic is not an essential or universal feature of a sonata movement, the point being, for eighteenth-century composers, to regain and expand tonic *harmony*, not tonic-transposed *thematic material*. Often, entire thematic areas may be missing, as in any number of recapitulation areas in monothematic pieces by Haydn. Mozart, too, sometimes so "confuses" the placement of his thematic material in his development and recapitulations that harmonic-area examination is the only effective means to navigate through these areas. The piano

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[58]See Heinrich Schenker, *Free Composition (Der freie Satz*, trans. and edited by Ernst Oster, New York: Longman Press, 1979), figure 47/1. Schenker's diagram indicates his belief that the recapitulation begins when the background harmony returns to C major. Further, he views the bridge passage in F major providing consonant support for a passing tone, f^2, in the soprano which becomes, in turn, the seventh of the structural dominant.

sonata in D major, K. 311, provides one of his most convoluted examples of thematic material in a sonata context.[59]

A similar situation concerning the placement of a recapitulation occurs in the first movement of Beethoven's Piano Sonata in F major, op. 10 no. 2, where a recapitulation of the opening thematic material occurs at the upbeat to measure 118, but in the "wrong" key, D major. Beethoven even changes the key signature to two sharps. Structurally, however, this excursion into the major submediant might be interpreted as a false recapitulation, measure 130 as the beginning of the retransition, and the "real" recapitulation occurring at the upbeat to measure 137 with the return of a one-flat key signature — even though there is no formal tonic recapitulation of the first four measures of the exposition's

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[59]The permutation of thematic events may be a result of an influence of Mannheim composers who were famous for their "reverse" recapitulations. Mozart was in Mannheim in 1778 and had an intimate relationship with those composers through the Weber family; he knew the major composers and wrote about them to his father. See Hans Mersmann, ed., *Letters of Wolfgang Amadeus Mozart*, M. M. Bozman, trans. (London: J. M. Dent & Sons, Ltd., 1928; reprinted, New York: Dover Publications, 1972), pp. 64-68. The procedure is also common in J. C. Bach. See his Sinfonia, op. 9 no. 2, for an example of a first-movement recapitulation that eliminates entire thematic sections of that movement's exposition; the influence of J. C. Bach on Mozart has already been discussed. See, also, Charles Rosen's discussion of early Classical sonata procedures in *The Classical Style, op. cit.*, pp. 43-53. Eugene Wolf, *The Symphonies of Johann Stamitz: A Study in the Formation of the Classical Style* (Utrecht/Antwerp: Bohn, Scheltema and Holkema; the Hague/Boston: Nijhoff, 1981), has detailed discussions of the early Classical style, the reverse recapitulation, and other relevant issues.

opening statement.

Of course, it is not required that design *vs.* structural perplexity occur only with respect to the recapitulation. For example, an exposition's second harmonic area need not be initiated by the tonic of the new harmonic area as long as it cadences in that new area. One often finds a second harmonic area beginning on the dominant of that new area; such is the case in Beethoven's Piano Sonata in F minor, op. 2 no. 1. Also, Beethoven's "Pathétique" Sonata in C minor, op. 13, has a second harmonic area that begins in E♭ *minor*, and on a $\frac{6}{4}$ chord to boot. The major mediant (the expected harmony of the secondary area) is not firmly secured until the closing period is reached. C. P. E. Bach starts the second harmonic area of his Symphony no. 1 on the subdominant of the dominant! One of the consequences of a procedure such as this is that the rhythmic strength of the opening of the second harmonic area is considerably weakened and the rhythmic downbeat of the secondary area will occur later in the exposition.

A significant recomposition of the recapitulation, typical of Haydn's style, often poses problems in precisely locating the beginning of the coda. In some cases, there may be a discrepancy between the arrival of the *Urlinie*'s $\hat{1}$ in the recapitulation and the point of arrival where material no longer parallels the exposition.

In many situations, design analysis and structural

analysis may differ as to the exact location of major compositional events, perhaps even more so in Haydn's expositions than in anyone else's. Composers probably enjoyed the compositional consequences of that sort of ambiguity as, hopefully, did their audiences. Generally, terminology that is related to harmonic areas, i.e., "first harmonic area" and "second harmonic area," as opposed to nomenclature that labels "groups" or "themes" will be employed in this project. It should be kept in mind that the term "harmonic area," unfortunately, provides no panacea for the classification of sonata-movement components either.[60] Rothstein, for example, uses the term "group" which, although it avoids many problems, lacks precision. Curiously, this may be both the term's downfall and strength.[61]

Many of the symphonies by Haydn under discussion have slow introductions of various lengths and degrees of complexity. Here, Haydn's sonata animation in a symphonic framework focuses on the immediate contrast between the slow introduction and the succeeding Allegro.[62] By contrast, most of

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[60]However, see below for an analysis of Mozart's String Quintet, K. 516, where the term "bridge theme" seems the most appropriate description of the way the structural dominant is reached.

[61]Rothstein, *Phrase Rhythm in Tonal Music, op. cit.*, particularly pp. 113-120.

[62]Although Haydn was undoubtedly familiar with the slow introductions from Baroque-era French overtures and with Gluck's and other composers' overtures from the 1760's and

Mozart's symphonies have no slow introductions: the later-period ones that do, namely with the *Linz* in C major (no. 36), the *Prague* in D minor (no. 38), and Symphony no. 39 in E♭, were most probably influenced by Haydn.

The slow introduction embodies elements that the composer launches on a developmental and evolutionary course during the movement. Often, the issues created from these special

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70's that began with slow introductions, it is difficult to determine what induced Haydn to write symphonies that exploited this device. Haydn wrote slow introductions before 1767: Symphonies no. 6 ("Le Matin") and no. 7 ("Le Midi") have slow introductions and were written in 1761. It must be reemphasized that Prince Paul Anton Esterházy hired Haydn in 1761 on the basis of Haydn's having absorbed the *Italian* style. The symphonies just mentioned, nos. 6 and 7, plus no. 8 "Le Soir," were the commissioned by the Prince who had been enamored of Vivaldi's *Four Seasons*. In fact, Vivaldi wrote several concertos with slow introductions with which Haydn might well have been familiar. Vivaldi's slow introductions often end on the tonic before the Allegro, e.g., op. 3 no. 2, as opposed to the slow introductions of Haydn's later period that generally end on the dominant. Also, overtures to Italian operas and oratorios were often slow-fast.

If Haydn had been influenced by the French overture, why do none of his slow introductions have any of the basic characteristics of this device, such as stately, dotted rhythms with scalar runs of faster notes? Even when he wrote his Paris symphonies, none of those first movements with slow introductions have any of the basic French-overture attributes.

Often, the *sonata da chiesa* is held up as a possible influence, however the *sonata da chiesa* contains an autonomous movement that cadences on the tonic before proceeding to the Allegro, whereas the symphonic slow introduction cadences on the dominant and is elided to the succeeding Allegro. The argument would perhaps have more validity in a discussion of Haydn's Symphony no. 5 which opens with a slow *movement*, or Symphony no. 49 ("La Passione") which H. C. Robbins Landon describes as "the solitary example of the sonata da chiesa format that had often been encountered in the early 1760s" (with David Wyn Jones, *Haydn: His Life and Music* (Bloomington: Indiana University Press, 1988), p. 147.

features figure in other movements as well; in fact, the most notable gestures usually find no satisfactory resolution until the last movement. Slow introductions, more often than not, will end on the dominant; in some cases, the slow introduction may end on a sonority directed toward the dominant, such as an augmented-sixth or diminished seventh chord. The slow introduction of Symphony no. 92, "The Oxford," ends on an augmented-sixth chord that resolves, in an untraditional manner, to a dominant seventh chord at the opening of the G-major Allegro.

A slow introduction permits a piano beginning to the exposition because the introduction often has either a forte climax or enough dissonant tension to make a piano start feasible. The "Oxford" Symphony, for example, has both. The slow introduction replaces the forte fanfare that usually initiates the Allegro in a symphony without a slow introduction. Beethoven's *Eroica* compresses both events, i.e., introduction and fanfare, into a single two-chord gesture.

Following a sonata's slow introduction, the exposition proper begins. The opening statement takes different forms; but, no matter how it is arranged, it establishes and stabilizes the tonic.[63] The first harmonic area, contains all the

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[63]After enumerating various possibilities, Rothstein, *Phrase Rhythm, op. cit.*, p. 115, states, "There are many ways in which the first group may be constructed. As long as the tonic is somehow established, virtually any kind of phrase structure is possible."

material in the tonic up to the beginning of the bridge (bridge elements are defined below). Two major categories of Classical-period exposition types determine the nature of the opening statement; one is derived from the symmetrical and periodic phrase structure typical of the *style galant*, while the other is based on a Baroque model.

The first kind of opening statement, with its antecedent/consequent construction is derived from a *style galant* dance movement; these types are characterized by one or more four-measure (or eight-measure) phrases that may or may not have rhythmic extensions. This type of opening statement is conceived as rhythmically stable. The Allegro of Haydn's Symphony no. 73 opens with such a statement: a four-measure phrase is succeeded by another four-measure phrase whose motivic content is totally dependent upon the first phrase. The ninth measure of the Allegro initiates a new subsection. Mozart's Symphony no. 29 in A major is also of this type, but the use of phrase extensions and insertions creates idiosyncratic measure groupings. However, they, too, are ultimately derived from fundamental eight-measure regularity. Beethoven's Symphony no. 1 in C is similar to the Mozart example: a six-measure phrase, derived from a basic four-measure unit, is succeeded by another six-measure phrase, also an extension from four-measure regularity.

The second kind of opening statement tends toward

asymmetrical phrase grouping and is derived from the typical tripartite structure of the ritornello statement of a Baroque concerto (*Vordersatz, Fortspinnung, Epilog*).[64] The three parts contrast motivically and are rhythmically irregular, i.e., they each have different numbers of measures. Very often, the Classical opening phrase (a historical product of the *Vordersatz*) has a short, fanfare-like quality. This phrase is generally succeeded by a lengthier phrase (one which tends to contain a crescendo in Mannheim-derived movements) that connects the opening motivic material to the cadential *Epilog*; it uses different motivic material. In this way, the second phrase is different from the Baroque-era ritornello *Fortspinnung* which is harmonically active and sequential. The last phrase, like the ritornello's *Epilog*, is relatively short and secures the cadence, either full or half. The first movement exposition of Haydn's Symphony no. 87 is of this type: an opening fanfare-like five-measure phrase is followed by four measures that connect directly to a three-measure close on the tonic. The last measure of the third group elides with a four-measure phrase and another three-measure phrase afterwards; together, they repeat the second two phrases of the opening statement. The first movements of Mozart's Symphonies no. 39 and no. 41 ("The Jupiter"), and

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[64]These terms originated with Wilhelm Fischer in his "Zur Entwicklungsgeschichte des Wiener klassischen Stil," in *Studien zur Musikwissenschaft* 3 (Vienna, 1915), pp. 24-84.

Beethoven's Symphony no. 5, are also of this type.

Table 1 below, "Dance Types and Ritornello Types of Expositions in Haydn's Symphonies (First Movements)" gives a list of first movements in either of two categories. The chart uses the following abbreviations:

no.	Haydn symphony number
sl intro	slow introduction
st or a/c	statement or ant./conseq. phrase
ext	extension
cs	(autonomous) counterstatement
ct/br	counterstatement/bridge
br	bridge
N	movement does not use this category
"Fort."	*"Fortspinnung"*
#ff.	measure # and following
[ ]	orchestral tutti

All the symphonies listed either have a counterstatement/bridge or a bridge not initiated by a counterstatement. A counterstatement may begin as partial restatements of the opening theme and, if open-ended, becomes the bridge. An "N" in the bridge category simply means that the movement's bridge begins with counterstatement material; there is no autonomous counterstatement that cadences and is then followed by a bridge. If a symphony has an antecedent/consequent construction for it opening statement, it is notated "a/c"; by design, no counterstatement is involved and a bridge will begin after its cadence. Of the symphonies discussed in this essay, only Symphony no. 91 in E♭ has a true antecedent/consequent construction. With other varieties of opening statement

organizations, those labeled "st" and (usually) "cs" are of the more common "statement" or "counterstatement" type.

Table 1 also shows that it is impossible for the opening statements of the ritornello-type symphonies (B) to have antecedent/consequent arrangements because of the irregular construction of their opening material.

The placement of orchestral tuttis varies from piece to piece, and makes it impossible to fashion a general statement about the relationship between orchestral texture and form. Orchestral tuttis are often used to cap opening piano statements in ritornello designs (such as in Symphony no. 92). It is interesting, nonetheless, that both Symphonies no. 83 and no. 87 maintain orchestral tuttis from their openings at least until their respective bridges. Symphony no. 83 maintains an orchestral tutti until the dominant of the new harmonic area is reached in measure 41. Here, only the strings continue, creating a strong contrasting element between the two large periods of the exposition and parallel the contrasting element of key. Symphony no. 87 maintains the orchestral tutti until measure 25, which is already within the bridge.

A. Dance types: [ ] denotes beginning and end of orchestral tutti.

no.	sl intro	st or a/c	ext	cs	ct/br	br
73	1-26	26-34 st	N	N	[35ff.	N
84	1-20	21-28 st	[28-32]	33-40 cs	N	[40ff.
85	1-11	12-23 st	[23-30]	31-42 cs	N	[42ff.
86	1-21	22-25 st	[26-37]	N	N	[37ff.
88	1-16	17-24 st	N	[24-32 cs	N	32ff.
90	1-16	17-20 st	21-28	N	29-31, [32ff.	N
91	1-20	21-36 a/c	N	N	N	[36ff.
92	1-20	21-24 st	[25-39]	N	39ff.	N

B. Ritornello types: [ ] denotes beginning and end of orchestral tutti.

no.	Fanfare	*"Fort."*	*Epilog*	ext	cs	ct/br	br
82	[1-4], 5-8	[8-15	16-20]	N	N	21ff.	N
83	[1-8	9-12	12-16	N	N	17ff.	N
87	[1-6	6-10	10-12	12-18	N	N	19ff.
89	[1-2]	3-6	7-10	N	[11-12], 13-18	N	[19ff

TABLE 1: Dance Types and Ritornello Types of Expositions in Haydn's Symphonies, First Movements, Nos. 73 and 82-89

Because fast ritornello opening statements generally begin with forte fanfares, it can be seen that most of Haydn's late symphonies would be of the dance-type. The late symphonies' frequent use of a slow introduction, however, virtually mandates a piano opening for the Allegro and therefore obviates the use of the ritornello opening statement as a feasible option. Of the dozen symphonies investigated in this project, only four are of the ritornello-type (see Table 1), and none of these symphonies begins with a slow introduction. The presence or absence of a slow introduction, then, determines the way phrase rhythm operates for the entire movement.

If the security of even phrasing at the opening of a dance-type Allegro is necessary to balance the often erratic rhythmic organization of the slow introduction, then the succeeding portions of the exposition will move away from regularity in order to maintain a high level of rhythmic interest. Rothstein states:

> The first group may contain one or more symmetrically constructed phrases at or near its beginning, but ultimately it must break away from stability and thrust forward toward an open-ended goal.[65]

This brings us once more to the counterstatement. As mentioned before, this formal element, if it exists in the movement, repeats the material of the opening statement. This

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[65]*Phrase Rhythm in Tonal Music*, *op. cit.*, p. 114-15.

time, the material is presented not to anchor the tonic, but to provide a springboard away from it. The counterstatement may be an autonomous restatement, as it is in Symphony no. 85, or it may appear *to start* as a restatement of the opening material, functionally becoming the bridge. In that case, it soon destabilizes tonic harmony (usually with chromatics) and introduces developmental material that no longer parallels the opening statement. If the latter occurs, as it does in Symphony no. 92, then the counterstatement is transformed into the next formal area of the exposition, i.e., the bridge. In the graphs that accompany the analyses of the symphonies, and in Table 1, I have labeled this arrangement "counterstatement/bridge." It should be noted, too, that a counterstatement is a frequent though not indispensable part of an exposition: of the dozen works here, Symphonies no. 86 and no. 87 have expositions without counterstatements. In a recapitulation, where the preceding exposition contains both a statement and counterstatement, one often finds that the counterstatement is deleted in favor of a tightening of the phrase rhythm.

Either the bridge is initiated by the counterstatement (as was discussed above) or it begins with an orchestral tutti. The purpose of the bridge is to connect the material of the opening tonic to that of the next significant exposition event: the second harmonic area. There are no

rules governing the organization of a bridge other than that its departure is typically within the realm of tonic harmony.[66] Many bridges conclude with back-relating dominants as is typical in J. C. Bach symphonies. These have been referred to as "bifocal close" bridges and act as simple extension devices; they are quite common in both Mozart and Haydn piano sonatas.[67] Historically, as bridges became more elaborate and extensive, their function was to destabilize tonic harmony rather than to extend it. Although a destabilizing bridge might also cadence on the dominant, that kind of dominant, preceded by its own dominant (II♯ - V), is a preparation for the second harmonic area. The cadential goal of a destabilizing bridge points forward toward the new area, not backwards. Therefore, a destabilizing bridge might cadence on V or II♯ (in major mode); in the first case, it will be preceded by its own dominant, differentiating it from the bifocal close. Even elaborate expositions, however, will occasion back-relating bridges; this happens in Haydn's

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[66]In Haydn's String Quartet, op. 76 no. 2, the bridge is preceded by a cadence in the tonic and begins immediately in the major mediant without any transitional material.

[67]A back-relating dominant is one whose structural allegiance is to the preceding harmonic material, not to that which follows. For example, in Mozart's Symphony no. 25 in G minor, the second harmonic area is in B♭ major. This is preceded by a D major triad at the end of the bridge, a sonority that is back-relating to the opening tonic.

See Robert Winter on "The Bifocal Close and the Evolution of the Viennese Classical Style," in *Journal of the American Musicological Society*, 42 (1989), 275-337.

atypical Symphony no. 91 in E♭.

As bridges become more complex, they often take on distinctive formal characteristics. Within its role as "connective tissue," a bridge may have its own voice-leading configuration: often, this takes the form of an extensive auxiliary cadence, for example, beginning at the initiation of the counterstatement/bridge. In these cases, the bridge takes on more of an individual "shape," although it still lacks stability. During the course of the bridge, the *Urlinie*'s $\hat{2}$ may be anticipated before the formal entrance of the second harmonic area. In some cases, this anticipated $\hat{2}$ might initiate a melodic fifth progression (where $\hat{2}$ of the tonic becomes $\hat{5}$ of the dominant) cadencing on the dominant's $\hat{1}$ at the commencement of the second harmonic area. This is the case in Symphony no. 88 in G major.

A bridge may be framed by a substantial auxiliary cadence. Since an auxiliary cadence is often initiated by rhythmically weak and harmonically unstable material, the process of its unfolding and eventual resolution creates increasing tonal stability over its course as it moves, little by little, toward the harmonic security of the second harmonic area. As a result, bridges tend to be "dominant-heavy." At the point where the exposition reaches II♯, the preparation for the second harmonic area has already been accomplished; this cadence will signal the end of the bridge. Therefore, in

bridges that seek to gradually undermine the stability of the tonic, they must concurrently rationalize motion toward a secondary tonal area. During this process, the tonic appears to exist in a state of flux while the center of tonal gravity gradually shifts away from the tonic and toward a new tonal center, an area of stabilized dissonance.

Through irregular phrase rhythm and expansive/developmental thematic devices, Haydn is unique among his contemporaries for frequently creating expectations about reaching the new harmonic area while very often undermining those expectations through the continuation of bridge material. In this way, the attempt to create a stable environment for the new harmonic area is, itself, continually destabilized, and even temporarily derailed. Therefore, extensive tonic-destabilizing bridges are a cornerstone of Haydn's style.

All bridges are not created equal: whereas an exposition bridge generally destabilizes tonic harmony, a recapitulation bridge is calculated initially to destabilize, but ultimately to secure tonic harmony. A recapitulation bridge will generally cadence on the dominant and the succeeding music that parallels the opening statement of the second harmonic area in the exposition will be restated in the tonic. The material before this bridge cadence often moves toward the subdominant to avoid motion into a new harmonic area and, of

course, to allow the possibility for the bridge to use the same melodic material as it did for the earlier bridge in the exposition. Therefore, the cadence on V is clearly understood within the context of the reiterated tonic.

Although it is possible for an exposition bridge to fuse with the structural dominant (as discussed below), it is more common for the bridge to cadence on the dominant of the dominant, or the dominant of the mediant in a minor-key first movement, as in Mozart's Symphony no. 40 in G minor.[68]

If one considers the first harmonic area and its opening statement to be the first stable period of the exposition, the second harmonic area begins with the next stable period, though less harmonically stable than the first. The second harmonic area marks the structural dominant with the definitive anchoring of the *Urlinie*'s $\hat{2}$ (in a major mode symphony). As indicated above, the second harmonic area is generally preceded by a bridge cadence. The opening statement of the second harmonic area may or may not have an *obvious* thematic relationship to material within the opening statement, but some kind of relationship generally exists.

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[68]As mentioned above, in Mozart's other G minor symphony, no. 25 from 1773, the exposition's bridge relates back to the opening tonic, cadencing on the dominant. This is typical of *"Sturm und Drang"* works where the mediant enters immediately and almost unceremoniously after the bridge cadence. Haydn's 1770 Symphony no. 39 in G minor uses the same chordal organization. Both symphonies in G minor are scored for oboes, bassoons, four horns, and strings.

That relationship may be rhythmic, intervalic/melodic or harmonic, even when thematic contrast is prominent. By the end of the Classical era, the material of the second harmonic area was often characterized by conspicuous thematic contrast to the material of the first harmonic area, even though strong thematic differentiation was never an obligatory aspect of sonata construction, as has been discussed in the previous chapter. Haydn's monothematic expositions contribute more than anyone else's to this very legitimate strategy, while Mozart's thematic multiplicity undoubtedly influenced the trend toward more contrast between structural harmonic areas. It was not until the nineteenth century that thematic contrast became a formulaic imperative in treatises on composition and theory.[69] Since Haydn often assigns the strongest rhythmic underpinning to the closing period or to the codetta, one may not hear the initial statement of the second harmonic area as a strongly articulated event.[70] The variety of symphonic second harmonic areas is at least as abundant as bridge types. It is common for Mozart and Beethoven to have three periods

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[69]Rudolph Réti, in his *The Thematic Process in Music* (New York: MacMillan, 1951). p., criticized Haydn for his old-fashioned use of monothematicism, exalting thematic contrast as a necessary element of the sonata exposition. Although this element of nineteenth-century sonata philosophy continued into the twentieth century it was set aside by many influential theorists, including Schenker and Tovey.

[70]See the discussion below of Symphony no. 86 (Part II, Chapter 9) for an example of how far Haydn could go in the harmonic and rhythmic deactivation of a second harmonic area.

subsumed under the region of a prolonged dominant period (or mediant, in a minor-mode symphony). The first period initiates the new harmonic area with its own statement. The second period is the closing period. Very often, the new harmony is stabilized and rhythmically anchored at this point. The third period, the codetta, is usually quite a bit shorter than the first two. Like the *Epilog* of a ritornello, its purpose is to furnish a stable area for the articulation of the final cadence of the exposition. If no closing period exists, then the codetta will assume the function of anchoring, instead of confirming, the second harmonic area. Each of these three periods must contain a complete harmonic progression (i.e., an autonomous phrase with a full cadence) in order to validate its autonomy.

Haydn, however, often creates a two-period second harmonic area by deleting the closing period, the most expendable of the three. For example, when Symphony no. 82 in C major finally reaches the second harmonic area (after at least one delay in the entry of the structural dominant), there is a twelve-measure statement in G major. The twelfth measure is elided to a thirteen-measure extension after which the codetta enters nine measures before the end of the exposition. There is a very short closing period. Symphony no. 83 is similar: after the arrival in B♭ major (the relative major of the tonic, G minor) there is a statement

followed by an autonomous counterstatement elided to a seven-measure extension before a three-measure codetta ends the exposition. Here, there is no closing period. There are other examples of expositions without closing periods in the symphonies under examination.[71]

Sonata procedure does not require a specific amount of thematic material or a specific number of periods to elaborate a second harmonic area: as long as the structural dominant is articulated by a codetta, that is sufficient to secure the new harmonic area. We will see in the following chapter that Haydn's Symphony no. 73 goes directly into a codetta, a three-measure *Epilog*, at the end of the bridge, which is the only elaboration of the secured structural dominant. As discussed previously, this creates a heretofore unrecognized category of monothematicism, not previously discussed in the literature, where only one strand of thematic material is employed in the continuous unfolding of the exposition up to the codetta. We have seen an analogous but far more rudimentary procedure used by Wagenseil (see previous chapter), whose approach to sonata was still very much within the tradition of Baroque binary form. When the structural dominant is reached — after a relatively extensive bridge designed to continually raise the specter of dominant harmony — it is elaborated only by a

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[71]See discussions below for more detailed analyses of Symphony nos. 82 (in Part II, Chapter 5) and 83 (in Part II, Chapter 6).

short *Epilog*, i.e., the codetta, and the exposition ends.

The first movement of Mozart's String Quintet in G minor, K. 516, is also of this type, but the abundance of "pseudo"-cadence points in the bridge and the bridge's great melodic expansiveness and harmonic breadth give the movement its individual character. In this exposition, a bridge theme in the tonic is constantly prevented from firmly cadencing in the new harmonic area even though we understand the intent of the phrase to eventually cadence in B♭ major. The more traditional formula — that of cadencing on the dominant of the new area before an articulated period in that new area — is averted. Eventually, one understands the foregoing process that culminates in B♭ as an unfolding of an unusually vast auxiliary cadence (VI-V-I, in this instance) in the mediant. The exposition reaches an anchored secondary harmonic area only a phrase (or perhaps two) before the end of the exposition, and recasts most of the exposition as bridge material, very much in the style of Haydn, even though Haydn's textures tend to be far more seamless than Mozart's.[72] Again, the issue of approaching the new harmony without

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[72]Another work that has some similarities to the Mozart quintet in respect to bridge themes is Haydn's "Quinten" String Quartet, op. 76 no. 2. An opening four-measure antecedent phrase is answered by an eight-measure consequent phrase (actually a four-measure phrase extended into eight measures) that cadences on the tonic, D minor. A bridge theme that begins in F major continually avoids cadencing (even wandering into F minor for a short time) until the codetta is reached.

being in an extended state of harmonic transition, plays a significant role in the life of the movement.

By contrast, if we examine Mozart's Piano Sonata in B♭ major, K. 333 (whose chromaticism will be analyzed in the next chapter), we find a rather extensive second harmonic area articulated by four periods. Here, the opening statement of the dominant is succeeded by a full counterstatement and cadence. The second full period of the second harmonic area is the closing period. In K. 333, the closing period enters in measure 38 and is itself two subperiods long; the first cadences in measure 50 and is succeeded by another with "new" thematic material that cadences in measure 59.[73] Therefore, this sonata has a two-part closing period; in larger pieces, there may be multiple closing periods. For example, Mozart's Paris Symphony in D major, no. 31, K. 297, doubles each structural event of the exposition.

The beginning of the last complete phrase of the exposition (within the area of the second harmonic area) initiates the codetta. In the aforementioned Mozart piano sonata, this is a five-bar period that begins in measure 59. If the second harmonic area is governed by its own *Urlinie* descent, the beginning of the codetta will express the second

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[73]For an alternative formal analysis and a discussion of registral issues, cf. David Gagné, "Compositional Use of Register in Three Piano Sonatas by Mozart," in *Trends in Schenkerian Research*, ed. by Alan Cadwallader (New York: Schirmer Books, MacMillan, 1990), pp. 30-35.

harmonic area's *Urlinie* 1 This procedure is used by Haydn in Symphony no. 86 ("La Reine").

If a recapitulation closely emulates the exposition, those areas which parallel the formal demarcations of the exposition are called by the same name; thus, a recapitulation may also have a closing period (or periods) and even a codetta. It is not essential to the form that a sonata movement include a coda.

Perhaps the most important issue to keep in mind when addressing these design concepts, as stated earlier, is this: Classical-era composers did not follow any rule books nor did they have any formalized procedural guidelines to follow. Whatever procedures were adopted were reported later by Classical-era theorists, such as Koch and Kollmann, who utilized Haydn's symphonies as paradigms for discussions about composition in their treatises. These discussions were based on very general descriptions of large periods and the harmonic rational of cadence points. The ontological problem with finely detailed labels is that composers were probably not thinking about these forms with these minute categories. Today, however, we usually consider analysis that involves extensive descriptions of formal divisions and subdivisions essential for a complete understanding of a musical work and of its stylistic context.

CHAPTER 4

A NEW THEORY OF CHROMATIC ARRAYS AND ITS APPLICATION TO A MOZART PIANO SONATA AND TO A HAYDN SYMPHONY IN CONJUNCTION WITH VOICE-LEADING ANALYSES

An introduction to the theory

Since this essay is the first time that analyses of musical works will unite ideas recently explicated by Henry Burnett with more common voice leading by Heinrich Schenker, it is necessary to summarize these new ideas. In the chapter, I will briefly describe the development of these concepts and how they led to the theory of the chromatic arrays and its corollaries.[74]

The Primary Chromatic Array (PCA) is Burnett's term for the principal element in his theory which offers the following observation: in a musical composition, chromatic notes may be unfolded on various ordered levels. On the deepest, most fundamental level, the notes of a Primary Chromatic Array are created by a chromatically filled-in ascending octave within a diatonic framework. In its *Ur*-form, this underlying

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[74]The theory of chromatic arrays is introduced in two articles: Henry Burnett and Shaugn O'Donnell, "Linear Ordering of the Chromatic Aggregate in Classical Symphonic Music," *Music Theory Spectrum* 18/1 (1996); and Henry Burnett, "Levels of Chromatic Ordering in the First Movements of Haydn's London Symphonies: A New Hypothesis," *International Journal of Musicology* 7 (Fall 1999).

chromatic structure unfolds in a precise order, by rising half steps, during a single-movement composition, or during a movement within a larger composition. In a less chromatically intense composition, it is not unusual to find that certain notes may be skipped during the PCA's initial unfolding. The chromatically ascending PCA, which eventually concludes in the upper voice, is supported by a descending diatonic line in the tenor, creating a series of contrapuntal 6-8 progressions at significant points of harmonic articulation during the course of a piece. Figure 1 demonstrates the alignment of the PCA and voice-leading background in the exposition and development sections of a typical sonata movement. Neither graph is absolute; there are many variations within each possibility: the diatonic *Urlinie* might descend from $\hat{5}$ instead of from $\hat{3}$; the opening of the development section might emphasize G♯ instead of A♭; PCA note no. 5 may not be present in the exposition (even if pc 5 is present somewhere else in the exposition), etc.

Burnett's theory states that a composition presents levels of chromatic ordering that yield chromatic issues or conflicts on lower structural levels. The PCA forms the slowest moving level of ordered chromatic aggregates initially generated by the tonic and its upper chromatic neighbor. The PCA then ascends half step by half step until the entire octave is achieved; this process temporally parallels the

long-range harmonic unfolding of the piece. Depending upon the form of the composition, this PCA may unfold once, as in a through-composed piece, or twice, as in a movement in sonata form.[75] In a middle- to late-classical sonata exposition, PCA pitch classes 0 - 7 are generally presented within the first harmonic area and bridge. A second, less structurally stable statement of pc's 0 - 7, is often presented again in the first period of the second harmonic area. The same series of pc's may even occur again in the second harmonic area's second period (the closing period), if the section is extensive enough. The PCA rise during the second harmonic area reinforces the periodic structure; i.e., each structural arrival within the area is supported by a PCA ascent to the leading tone of that area.

Any chromatic ordering is not necessarily part of the Primary Chromatic Array, for the PCA represents the most fundamental layer of chromatic ordering in the musical work. Since any number of chromatic diversions are possible in a

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[75]The theory does not exclude the possibility of a background line unfolding more than twice in a single movement, but these cases may be few and far between in the eighteenth-century repertory. Such examples, however, become increasingly frequent during the nineteenth century. This is especially true of works that open the development with a restatement of tonic harmony and that do not repeat the exposition. Two examples by Brahms are the first movements of the Piano Quartet in G minor, op. 25, and the Violin Sonata in G major, op. 78. On the other hand, an analysis of the second movement of Beethoven's Piano Sonata in G major, op. 49, no. 2, "Tempo di Menuetto" (in rondo form), yields a simple example of a PCA that unfolds only once.

diatonic framework, individual or groups of chromatic pitch classes may not necessarily be part of the PCA unfolding. Even so, one understands that these lower level events are in some manner related to the deepest chromatic layer, the PCA, since both are ultimately part of the same chromatically inflected octave.

The most structurally significant loci of the PCA coincide with the *Ursatz* of a composition as described by Heinrich Schenker, and both structures may therefore be identified simultaneously within a single analysis (as seen in Figure 1). During this essay, I will maintain that these integral structures create different, but not necessarily conflicting, interpretations of the most essential aspects of compositional design. This is the first time an attempt has been made to coordinate Burnett's theory of chromaticism with the basic tenets of Schenkerian analysis.

Burnett's findings were developed by observing many kinds of apparently disparate features of a composition, all of which, in reality, were intricately connected. The first finding was that the chromatic notes were not randomly placed in a classical symphony simply to add color and spice or simply to provide the necessary voice-leading material to accomplish a modulation or to fill out a motivic event.[76] He

[76]Burnett first made this discovery while analyzing classical era symphonies and string quartets. He applied these findings to the music of Haydn, Mozart and Beethoven.

referred to the entry of the first chromatic notes of a composition as creating "issues" that provide significant motivic features to be "resolved" during a movement or composition. As Burnett noted, very often these same "issues" reappear in all movements (often irrespective of the prevailing harmony), thus enhancing unity and, eventually, large-scale resolution in the tonic at the end of the composition. That is, in the first chromatic features of a classical symphony, the composer launches an "argument" that he articulates, clarifies and expounds over the course of an entire work.[77]

Burnett's second observation was that the entry of chromatic notes motivated the appearance of others in

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Also, see James M. Baker, "Chromaticism in Classical Music," *Music Theory and the Exploration of the Past*, eds. Christopher Hatch and David W. Bernstein (Chicago, 1993): 233-307. Baker discovers so many instances of twelve-note completions of the chromatic gamut in so many pieces that he indicates that it seems to be the rule rather than an exception. However, his analyses are limited for the purpose of this discussion as he does not hypothesize about specific orderings of those chromatics. Burnett has also reviewed material by Classical theorists about chromaticism that is relevant to his argument in "Levels of Chromatic Ordering ...", op. cit. Carl Schachter has discovered an ordered arrangement of chromatic notes in a Bach suite in "The Prelude from Bach's Suite No. 4 for Violoncello Solo: The Submerged *Urlinie*," *Current Musicology*, 56 (1994).

[77]This makes it different from Schoenberg's *Grundgestalt*, which is not necessarily a chromatic entity and, when chromatic, does not usually complete a twelve-note chromatic aggregate. For more on the *Grundgestalt*, see Patricia Carpenter, "*Grundgestalt* as Tonal Function," *MTS* 5 (1983), 15-38.

specific, "serialized" procedures; i.e., they entered in definite, predictable ways.[78] Many compositions contain serialized segments that descend or ascend. Some do both: Haydn's Symphony no. 103 is an example of a work that has concurrent ascending and descending chromatic lines.[79] Many compositions' first chromatic departures are ordered by fifths (a probable by-product of serial ordering, and not a by-product of modulation), such as the first movement of Brahms' Sonata for Violin and Piano in G major, op. 78.[80] All such works order their chromatics in such a way as to create a succession of rising half steps over large portions of a movement. The ordering by half steps is of particular interest here, since that ordering ultimately leads to a

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[78]See Burnett and O'Donnell, op. cit. "Linear Ordering of the Chromatic Aggregate ..."

[79]ibid., p.16-18.

[80]An interesting analogy to the kind of chromatic ordering in the Brahms sonata, and one that is undoubtedly related, occurs in movements of Stravinsky's *Sérénade en la*. George Perle has suggested (in class discussions) that Stravinsky accomplished harmonic progression by establishing a consonant diatonic collection of seven tones arranged in fifths that "shifted" systematically by discrete transpositions. For example, a collection spelled C-G-D-A-E-B-F♯ might move to a secondary collection F-C-G-D-A-E-B and later to a tertiary collection B♭-F-C-G-D-A-E. These three successive diatonic groupings would be labeled "+1", "0" and "-1". Burnett's recognition of the ordering of chromatic notes by fifths is similar. For example, a piece of music in C major may introduce G♯ as a chromatic, but not without allowing F♯ and C♯ to circulate prominently in that local area. Burnett asserts that such a process would very often lead to the orderly presentation of the entire chromatic aggregate.

recognition of the chromatic array.

A third observation, and one ultimately of extreme importance, concerned the "bunching up" of diatonic notes and chromatics. In pieces that Burnett examined, a chromatic note was immediately associated with its diatonic counterpart creating a dyadic pair that was often maintained throughout an entire composition, even in movements or sections of a piece that tonicized harmonic areas other than the tonic. Burnett and O'Donnell write, in reference to a 1776 Symphony in E♭ by Dittersdorf:

> Chromatic notes are frequently introduced in proximity to their diatonic counterparts, thereby creating a clash between the diatonic tone and its chromatic alteration ... we label such motivic pairings — i.e., diatonic tones and their inflections — chromatic dyads. Owing to the voice-leading properties of the tonal system, chromatic dyads frequently expand into chromatic trichords ... [81]

The authors point out that this kind of treatment is essential in understanding the classical developmental process. Successive dyadic pairings ultimately become responsible for the generation of large-scale chromatic issues and the eventual generation of entire twelve-note cycles over large spans of a composition.

However, it was not until much later that Burnett made a fourth observation, namely that these twelve-note cycles were not exceptions to the rule or "special cases" within larger

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[81]"Linear Ordering of the Chromatic Aggregate in Classical Symphonic Music," 1996, p. 6.

diatonic frameworks, but that in sizable compositions the entire developmental process was intricately linked to these large-scale chromatic unfoldings and their various segmentations. Yet, the question still remained: were composers playing an elaborate "game" during the composition of large pieces of music, or was a chromatic unfolding a fundamental attribute of a composition? It has been suggested that Mozart and other classical composers were very likely *sensitive* to aggregate completion.[82] Burnett's theory indicates, however, that composers were not simply sensitive to aggregate completion, nor did they merely treat foreground chromatic events in a manner consistent with the canon of diatonic tonality. The theory postulates chromaticism as an absolutely essential part of the organization of a large-scale work: a piece of music is structured around a chromatic principle as well as a diatonic one, and both diatonic and chromatic elements are

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[82]See James M. Baker, "Chromaticism in Classical Music," *op. cit.*, pp. 233-307. Although Baker, on p. 270, in analyzing Mozart's Piano Sonata in G major, K. 283, writes, "It is therefore difficult to make a case for aggregate completion as a formal principle in the overall form of the [first] movement [of this particular sonata]," he also believes that (p. 263), " ... an essential factor in reinforcement is completion of the chromatic aggregate. Mozart's music is filled with passages in which the various chromatic elements are added in strategic ways until the entire chromatic aggregate has been attained, and generally the introduction of the final chromatic element coincides with an important moment in the musical form. Indeed, his music is so full of such passages that one may deduce that this process is fundamental to his style. ..." He then continues with other instances of what he calls "strategic aggregate completion."

linked.

In this century, Heinrich Schenker provided musicology with an understanding of musical creations that unfolded discrete levels of structure. Of particular interest here is Schenker's recognition of a background level from which middleground and foreground diminutions are derived to create a whole composition.[83] Although Burnett's Primary Chromatic Array and Schenker's background structure differ considerably, it is interesting to note that both theories include this kind of conceptualization. Nonetheless, Burnett's fifth finding suggests that the Primary Chromatic Array and Schenker's diatonic *Urlinie* coexist in diatonically tonal compositions. He writes:

> The basic premise underlying this hypothesis concerns two scalar systems operating concurrently: one diatonic, the other, chromatic. Both systems fill in the perfect tonic octave, and both interact with, and at times, oppose each other. Degree inflections within the diatonic octave ... give rise to the chromatic octave. Both tonic octave systems operate on the deepest levels of structure; therefore all chromatic pitch classes ultimately relate to their diatonic pitch class equivalents within the tonic octave. Consequently all chromatic pitch classes, whether treated as passing or as vehicles for tonicization, will be understood as neighbor inflections of diatonic pitch classes belonging to the background tonic octave.[84]

Accordingly, the correlation of the diatonic background and

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[83]For a closer examination of the ways in which Schenker's views on chromaticism evolved, see Matthew Brown, "The Diatonic and the Chromatic in Schenker's Theory of Harmonic Relations," *Journal of Music Theory*, 30/1 (1986), pp. 1-33.

[84]"Levels of Chromatic Ordering ... ", op. cit., p.2

the chromatic array is an essential aspect of Burnett's theory. The first hint of this came from a very simple observation: that tonicization is accomplished by the linear motion from $\hat{7}$ to $\hat{8}$ in the new harmonic area. This rising chromatic line, derived from the diatonic half step and supported by V-I of that harmony, eventually becomes a significant part of a larger rising chromatic line coinciding, at major points of its articulation, with Schenker's background.

Let us take, for example, our hypothetical C major sonata movement, Figure 1, that descends from $\hat{3}$.[85] At the point where the structural dominant enters at the beginning of the second harmonic area (assuming that the second harmonic area tonicizes G major), the PCA shifts from F♯ to G as the diatonic *Urlinie* descends from $\hat{3}$ to $\hat{2}$. At the point of recapitulation, the PCA moves from B to C as the diatonic *Urlinie* is interrupted and reestablishes $\hat{3}$. Lower levels prolonging the diatonic *Ursatz* provide the harmonic support for the successive entries of the other notes of the PCA. For example, Burnett has noticed that a significant number of development sections (e.g., in this *ersatz* C major sonata movement) precede B with a prominent B♭, and that, generally

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[85]The figure in the middle staff of the page is taken from Burnett's "Levels of Chromatic Ordering ...", *op. cit.*; I have combined that diagram with a generalized background voice-leading graph of a sonata consistent with Schenkerian theory.

speaking, B♭ is preceded by A♮ and A♭ (or G♯). Therefore, the entire development section includes an ordered and prominently articulated A♭, A♮, B♭ and B♮ supported harmonically on various levels of diatonic structure. As we shall see, Haydn's symphonies operate in this manner.

In the exposition, the rise of F♯ to G coincides with the arrival of the *Urlinie*'s $\hat{2}$. However, lower structural levels of harmonic progressions support the linear chromatic motion from C - C♯ - D - D♯ (sometimes written as E♭) - E - F and F♯. This succession of chromatics in the exposition generally occur in the bridge, after tonic harmony has already been firmly established. Therefore, according to Burnett, the bridge serves not only to provide a link from tonic to dominant harmonic areas, but also to create a vehicle for a segment of the ascending chromatic array that leads, ultimately, to the arrival of stabilized dominant harmony and the descent of the diatonic *Urlinie*.[86] One or more unfoldings of the Primary Chromatic Array are always present in the recapitulation, coinciding with structural cadential

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[86]In the works examined in this essay, Symphony no. 91 in E♭ is an exception to this statement; its bridge is, in fact, non-modulatory and the Primary Chromatic Array does not move from pc 0 to pc 1 until the second harmonic area. Many piano sonatas by Mozart (not to mention quite a few of Haydn's), probably influenced by J. C. Bach, employ non-modulatory bridges that create a static PCA until after the second harmonic area begins. See Mozart's Piano Sonata in C, K. 330, for an excellent example of this procedure in a different genre.

points that articulate the tonic. Sometimes, only one PCA unfolding occurs in the recapitulation, often not achieving complete internal completion.

Burnett eventually ties both diatonic and chromatic lines into an entity comprising two essential components. The first is the primary array (as in Figure 1, lower staves), with its rising chromatic line eventually reaching the soprano; the other is the diatonic line that descends in the tenor voice. The cadence point at the recapitulation, thus, operates in the manner of the 6-8 cadence of late Medieval and Renaissance theory. While a soprano line in C major cadences B-C (a diatonic half step), the tenor descends a whole step from D to C; the bass line harmonically supports this contrapuntal goal. As a piece progresses, the descending line traverses a diatonic octave and the ascending chromatic line traverses an octave as well. Although this concept of the descending diatonic line ultimately differs from Schenker's (whose diatonic descent occurs in the soprano), there may be more than a coincidental connection between these two theoretical formulations.

A few important concerns should be kept in mind. Even though the Primary Chromatic Array always ascends, secondary or tertiary arrays and their segments may descend as well as ascend. We will see soon that a PCA may "skip over" certain notes that may only appear in subsidiary levels; this will be

explained below.

How to determine notes of the Primary Chromatic Array

At one time, Schenkerian analysts found it necessary to explain how and why certain notes were chosen to represent and fill out the structure of a composition in accordance with the theory. This is still necessary today during the instruction of Schenkerian analytical techniques to students of music theory. Likewise, one of the most difficult aspects of the theory of the Primary Chromatic Array is the mechanics of how to choose its notes. The purpose of this short but necessary digression is to give a brief description of this matter so that one can determine which chromatic notes are part of the PCA and which notes and associated chromatic events are of secondary, or even tertiary, significance according to the theory.[87]

In Figure 1, there are certain notes of the Primary Chromatic Array that are "fixed" and correspond exactly to the position of principal harmonic areas of a sonata movement.

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[87]See Burnett's "Levels of Chromatic Ordering ...", *op. cit.* for a more involved description of this issue as it is applied to various Haydn symphonies of the "London" group. The following is a concise, but general, presentation. The use, below, of the terms "fixed" and "variable" do not appear in Burnett's presentation. I believe that this description is necessary at this point since Burnett's article is not yet readily available.

The most obvious choice of pc 0, the first note of the tonic scale, at the opening of the composition (or in the case of an Allegro following a slow introduction) is generally provided by the first appearance of structural tonic harmony.[88] (The registration of pc 0 may often be confirmed by the registral position of pc 1 later in the movement.) The point where the second harmonic area enters will always correspond to pc's 6 and 7 alignment with the local V-I progression into dominant harmony. When the recapitulation is reached, there is also an exact association with the harmonic background; pc's 11 and 0 arrive with the recapitulation. Any tonicized goal of harmonic motion is determined by its leading tone. These three events in a sonata movement, the beginning of the exposition and the entries of the second harmonic area and recapitulation, determine those notes of the PCA that are "fixed."

Notes of the PCA that are "variable" are somewhat more difficult to determine; I have noticed, however, that those who are conversant with this analytical technique usually pick the same variable PCA notes or, at least, almost the same

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[88]It should be mentioned that although the terminology used by Burnett, particularly "pitch class," is borrowed from twentieth-century theory, the theories of the Primary Chromatic Array and systems analyses have nothing in common with discussions of the structure atonal music, nor has Burnett's theories been inspired by these discussions.

variable notes.[89] As mentioned before, all PCA notes may not yet be present initially; it is not unusual that variable pitches may be skipped from the first PCA unfolding and will then be present in later PCA statements or, sometimes, on other chromatic levels. For example, in the Mozart piano sonata analyzed later (K. 333), pc's 3, 4 and 5 are not present in the first PCA ascent to pc 7 (see Figure 2.1); therefore, the line goes directly from pc 2 to pc 6. The remainder of the line will be filled in during subsequent PCA unfoldings. In movements from some genres (such as a piano sonata) it is often the case that elements of the PCA are not present in its first unfolding; in longer compositions and compositions from later style periods, the entire chromatic line will generally be present earlier in the composition. In Haydn's Symphony no. 73, pc 5 is not present in the initial PCA ascent. Of all the variable notes that may be skipped in this manner, pc 5 is the one most likely not to appear (this be will discussed in more detail below). Historically, as symphonies became longer and more involved in the nineteenth century, fewer notes were bypassed during the formation of the PCA. In these longer and more complex compositions, the rate of background unfolding was slower, providing more opportu-

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[89]Similarly, it often happens during the creation of a Schenkerian graph that legitimate and necessary discussions may take place to determine which note is the best choice even for a background structural event, such as the exact location of an *Urlinie*'s $\hat{2}$.

nities for *en route* chromatic diversions.

One proceeds, then, from the tonic, pc 0, to the first chromatic note a half step above it, *whenever it occurs*, irrespective of rhythmic weight, voicing, registration or other contextual considerations. This note becomes pc 1. While other chromatic notes may precede pc 1, or pc 0 for that matter, they cannot be considered part of the unfolding PCA. In the cases of most of the pieces analyzed in this essay, pc 1 enters either as a passing chromatic within the opening statement, or is delayed until the bridge. Once pc 1 is established, it leads directly to the next diatonic pitch, pc 2, usually by melodic or harmonic resolution. The next note of the PCA, pc 3, is the most difficult of the twelve to unfold in a diatonic setting, even as a passing chromatic; this particular problem and its theoretical ramifications are discussed in the Appendix. Burnett argues that the introduction of pc 3 begins the process of tonic destabilization which is the *raison d'être* for most bridge types. Therefore, it is unlikely that pc 3 will become part of the PCA in any section of a Classical-era sonata other than the bridge. However, one can readily find examples of the appearances of pc's 1 and 2 within stable areas such as an opening statement firmly grounded in tonic harmony. The arrival of pc 3 may engender a compositional climax in that area of the sonata because of the unique disposition of that

pitch class.

The local resolution of pc 3 will determine the next diatonic constituent of the PCA, which is pc 4. As mentioned above, because pc 5 will often be expunged from the first unfolding PCA, pc 4 will often go directly to pc 6. This is very often the case since, by the arrival of pc 4, one is already in that part of the bridge that resides more within the realm of the dominant than the tonic. The use of pc 5 (i.e., F♮ in a hypothetical C major sonata exposition) during the attempt to move toward a dominant prolongation — particularly in a relatively short work — may be unnecessarily disruptive if the immediate harmonic goal is to propel the music quickly into the secondary harmonic area.

Often, a composer withholds or delays the next pitch class of the PCA while a previous segment is reiterated, such as in a bridge or within a transitional passage. This extension device may confirm earlier material and provide a springboard to the next PCA event; this is the case, particlarly in the second harmonic area of a sonata, where pc's 0 - 7 may be repeated (and often more than once if an extensive closing period is present) before pc 8 is found in the development section.

The unfolding of variable PCA notes is emphasized by certain harmonic or motivic attributes which, in turn, have compositional or stylistic significance. For example, in the

case of a Mozart or Haydn sonata exposition, pc 1 is customarily treated as a very local passing chromatic dissonance within the larger periphery of tonic harmony. However, by Beethoven's later compositions, the entry of pc 1 often coincides with the entry of a sustained harmonic progression that has moved, even if for a very short expanse, away from the tonic. The late string quartets in F minor (op. 95), C♯ minor (op. 131), and in A minor (op. 132) have significant diversions into Neapolitan areas. The arrival at ♭II is the point where pc 0 is displaced by pc 1. The "Appassionata" piano sonata, op. 57, employs a similar scheme: the tonic, F minor, is momentarily supplanted by a short excursion into G♭ major that functions contrapuntally as a harmonically supported expansion of a chromatic neighboring note.

Compared to that of his two older contemporaries, Beethoven's compositional style may also be considered historically innovative in those cases where pc 3 is given harmonic support. This occurs in the C major "Waldstein" piano sonata, op. 53, when pc 3 becomes part of an extensive V♯/III passage. Pc 4 is stabilized as well at the arrival of the major mediant second harmonic area. Thus, the harmonic stabilization of previously passing or variable portions of the PCA becomes a guidepost that reflects the complexity of a composer's style, or even that of an entire historical period!

The most difficult aspect of the theory's application often entails having to choose a note for the Primary Chromatic Array that may only be a simple foreground passing entity measured by the criteria of voice leading. It has always to be kept in mind that the notes of the PCA coincide with the harmonic background at only a few fixed points. Very often one will find it necessary to choose a particular note in determining the PCA simply since it is the next one in the series, not because of its relative tonal or rhythmic or dynamic magnitude. As far as the array is concerned with *harmonic* correlations, only those fixed points that are absolutely essential coincide with the tonal background. In the major mode, the background I-V-I progression absolutely necessitates pc's 0, 6, 7, 11 and the recurrence of pc 0 coinciding with the reassertion of tonic harmony. In the minor mode, the mediant harmonic area fixes pc's 2 and 3 of the PCA (instead of 6 and 7 in the major mode). At the development's retransition (the structural dominant) and the beginning of the recapitulation (with the return of tonic harmony), pc's 11 and 0 become part of the PCA in minor mode. Consequently, the music theorist who has been disciplined in the absolute preeminence of harmony and voice leading will need to reconsider his or her paradigm-based assumptions in order to perform a PCA analysis.

An analysis of a sonata by Mozart applying the theory of Primary Chromatic Arrays

A complete chromatic analysis of the first movement exposition of Mozart's Piano Sonata in B♭, K. 333 (with some discussion of certain elements of the development and recapitulation) will serve as an example of the application of Burnett's theories to a piece of music in sonata form. The piano sonata as a genre is more concise than a symphonic movement, and this particular sonata has a variety of striking chromatic issues.

There are two graphs of K. 333. Figure 2.1 is a background graph of the PCA with measure numbers indicated for each PCA note. Figure 2.2-4 is a more detailed graph which combines the primary array with secondary and tertiary levels of structure.

If a comparison is made between the generic form of a sonata movement presented in Figure 1 and the chromatic graph for the Mozart sonata, one finds that they do not immediately look alike; we shall see, however, that the chromatic graph is a more detailed version of a generic sonata as presented in Figure 1. In Figures 1, 2.1 and 2.2, the notes of the primary chromatic array (PCA) are in beamed half notes; in the detailed graph of K. 333 (Figure 2.2.1 through 2.2.3) the pc numbers of the PCA are in diamonds so that they are more

obvious. Chromatic lines which are of secondary (and sometimes tertiary) levels of significance are in beamed quarter notes. In the Figure 2.2 graph of K. 333, all sixteenth-note values come directly from the music; most have analytic beams associated with them. (See, for example measure 4 where the music in sixteenths have F-E♮-E♭-D beamed together.)

The titles of the formal areas are labeled in the detailed chromatic graph, Figures 2.2.1-3. A four-measure statement of the opening material is succeeded by a six-measure extension between measures 4 and 10. A counterstatement/bridge begins in measure 10 and uses E♮ harmonically for the first time in measure 12, whereas E♮ had only been used as a chromatic neighbor or chromatic passing tone in the opening statement. The second harmonic area begins in measure 23; its opening eight-measure statement is succeeded by a consequent phrase and extension between measures 31 and 38. The closing area begins in measure 38; its first paragraph ends in measure 50 and its second paragraph ends in measure 59. A five-measure codetta ends the exposition.

While viewing the detailed chromatic graph, notice that the PCA is not immediately presented in its complete form. In the first line of the graph the diamond-enclosed pc numbers are 0, 1, 2, 6, 7. As indicated above, although it is very common for pc 5 to be absent in the exposition of a Classical

symphonic movement, it is more unusual for pc's 3, 4 *and* 5 to be absent.[90] In a smaller-scale work such as a piano sonata, however, this is not unusual. Similar examples can be found in a number of piano sonatas by Haydn and others by Mozart. (The broken, "open circuit" line between pc's 2 and 6 in the graph indicates that there are notes not yet present in the PCA which will, however, usually be filled in later.[91]) Therefore, only the PCA notes B♭, B♮, C, ... E♮ and F, occur with the descending diatonic line, B♭, A, G and F.

As previously noted, a restatement of the PCA's 0 - 7 often occurs in the second harmonic area. Much of what occurs here in the second harmonic area involves a more complete version of the chromatic line that was left incomplete in the first harmonic area. Notice that the B♭ in measure 24 (IV of F) initiates a second PCA statement which continues until the closing area in measure 38 (this is given in beamed quarter notes to signify that this line does not exist on the highest structural level). This time *almost* all of the PCA notes are present; E♭ (pc 5) still waits to be unfolded in an ordered

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[90]The chromatic ascent in the recapitulation is the first complete PCA statement.

[91]In early Classical symphonies from Vienna and Mannheim, it is not uncommon in the almost-strict diatonicism of the *style galant* for each movement of an entire symphony to skip over one or two notes of the PCA. This is true even in early symphonic movements of Haydn: for example, the first movement of Symphony no. 3 in G major remains in a one-sharp system throughout, unfold only eleven notes without ever introducing A♯ or B♭.

chromatic manner. Much of what occurs in the closing area entails a "search for pc 5" and it is attained first in measure 46, and afterwards in the soprano of measure 51, significantly, in an ascending direction. Since E♮ is the first chromatic note in the exposition, we might speculate that Mozart may have accorded this pitch some kind of special distinction beyond its expected use as preparation for the dominant area.[92]

The chromatic graph indicates a motivic bracket over the first four notes. The next bracket in measure 4 indicates an interpretation of F-E♮-E♭-D as a chromatic and also contracted form of the opening *appoggiatura* figure, G-F-E♭-D.[93] Measure 6 inverts this motivic tetrachord. During the counterstatement/bridge (measure 15), it is reinterpreted by transposition, C-B♮-B♭-A. The same motive, also in its dominant transposition, appears in the second harmonic area (measure 34) and is responsible for the melodic content of the first measure of the closing area in measure 38. Other interesting uses of this tetrachord *at its original tonal*

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[92]The note E♮ also figures significantly in the second movement. The E♭/E♮ issue is not resolved until the last movement.

[93]This motive, and its extension into a sixth (from G to B♭), is responsible for the melodic content of the second harmonic area (see measure 23) as it unfolds from D to F. (Also note, of course, the opening of the development.) In the recapitulation, it is transposed back into the tonic and unfolds the same space as the movement's opening.

level (F-E♮-E♭-D) arise in the second harmonic area, and is particularly prevalent in the closing area. See measure 46 (soprano) and measure 51 (tenor), followed by the motive's extension to include D♭ and C in the tenor of measure 60. Another interesting use of this motive occurs in measure 51: the motive, this time in the soprano, appears inverted and is the only time in the exposition that E♭ *ascends* to E♮ other than measure 6.

An instance of a transformation of the motive by structural level involves the first three notes of the PCA, B♭-B♮-C, which occur prominently in measures 17-18. This trichord (a trichord being a group of three notes), transferred into the soprano in measures 19-20, reinforces the opening of the PCA before it continues to E♮ and F in measures 22 and 23.

The most recent aspect of Burnett's theory can be considered a corollary to the theory of chromatic arrays. It involves an observation about the unusual treatment often accorded the third pitch class of the PCA, e.g., D♯ or E♭ in C major.[94]

Burnett views diatonic tonality as an historical product

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[94]Much of this material is a product of theories conceived by Henry Burnett and John Ondich in "A New Theory of Hexachord Modulation in the Late 16th and Early 17th Centuries," *International Journal of Musicology* 8 (forthcoming). I would strongly suggest that the reader peruse the information in the Appendix, as its understanding is necessary for a full understanding of the present material.

of an eleven-note three-hexachordal system employed by sixteenth- and seventeenth-century composers to circumscribe the note content of harmonic areas. The application of this organizational strategy continued far into the common practice era; the remnants of the system are expressed within the context of the triadic tonal system. Only eleven pitches are needed to maintain a stable tonal center. The use of the twelfth note, pc 3 in the major mode, is a destabilizing factor in a diatonic tonality. In C major, for example, pc 3, written as E♭, places inordinate emphasis on the subdominant by introducing a local three-flat gamut of notes three fifths down from the tonic. At the point F major finally arrives, one could interpret what was previously understood as the structural tonic as V/IV. This destabilizes the entire period. Pc 3 spelled as D♯ creates different problems which, ultimately, will also destabilize the key. Therefore, the use of pc 3 signals some kind of disruption of the prevailing tonal fabric and indicates an attempt to raise a dissonant issue. Often, this tonal disturbance will lead the way to a foreground transposition or even a background modulation. As noted above, at the point that pc 3 appears, a sonata movement has often begun to progress into the bridge.[95]

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[95]Mozart's notable use pc 3 early in a piece, often before the entrance of the bridge, is characteristic of his individual style and creates a more heavily chromaticized and more musically tense space.

In the eleven-note theory of tonality, the major mode is used as a reference point in dealing with the minor keys. Since C major and A minor share the same pitch content, D♯ or E♭ creates a disturbance within either tonality. A piece of music in D major or B minor is in a two-sharp system whose missing pitch is F♮ or E♯; F major indicates the use of a one-flat system whose dissonant element is A♭ or G♯, etc. The word "system" is used in its eleven-note tonal context; the key signature determines the eleven-note content of that musical expanse.

It must be emphasized that within any tonal framework, no matter now complex, the tonic eleven-note system is always present and operational and subsumes all systemic modulations within a tonic rubric, just as in Schenker's characterization of diatonic tonality, the tonic is always present in the deepest background structural level.

Even though Burnett originally developed this aspect of the theory to analyze music of Lassus and Monteverdi, he has supported on historical and theoretical grounds that compositions of later centuries still exhibited this kind of sytemic/organizational sensitivity. The leap, then, from Lassus to Haydn seemed not to be so great if the significant intermediary steps were considered.

Speaking systemically, with all its chromatic motives and inflections, the first movement from K. 333 is quite stable,

presenting pc 3 in both enharmonic variants — thus provoking systemic modulations — but always rapidly returning to the tonic two-flat system. In an eleven-note system whose tonic is two flats, the use of the missing pitch C♯ will move the gamut up to another eleven-note system governed by one sharp; the employment of B♭ is necessary, then, to return us to the tonic gamut. Likewise, in a two flat system, pc 3 spelled as D♭ will move us down to five flats, and requiring an E♮, the missing pitch of a five-flat system, to return the gamut to the tonic two-flat system.

By avoiding pc 3 in the PCA unfolding of the first harmonic area, Mozart emphasizes the stability of his tonic. Pc 3, written as C♯, is first presented in the second harmonic area, in measure 27. For a split second, the possibility of a modulation to one sharp is raised; yet, with B♭ presented almost concurrently, the modulation is evaded. In measure 35, the same thing happens, except that the introduction of the B♭ happens just a little bit later. Again, in measure 44, in the closing period, the presence of C♯ and B♭ together also prevents any systemic modulation from occurring. Within this period, C♯ motivates the entrance of both G♯ and F♯, chromatic fifths on either side of pc 3. Finally, in the codetta (measure 60) pc 3 is present in its enharmonic variant; written as D♭, however, the E♭ two beats later prevents any extensive modulation to a five-flat system.

The exposition ends in the tonic two-flat system, while the more foreground local harmonies secure a cadence on the dominant, F major. It can be seen using this analytical method, that on the deepest structural level, the music never really leaves the tonic. In the development section, a somewhat lengthier system modulation occurs: in measure 89, already a few measures into the retransition, D♭ sends the eleven-note gamut down into a five-flat expanse. The E♮, necessary to reestablish the tonic system, is not regained until just before the recapitulation in measure 93. Thus, when the recapitulation begins, the reestablishment of local tonic harmony coincides with the return to the two-flat system. Consequently, the tonic system is as well secured at the recapitulation's opening as it had been at the beginning of the movement.

Toward the end of the movement, Mozart reasserts pc 3 in the recapitulation's codetta (measure 162), spelled as D♭. Since that D♭ is not followed by any E♮ before the end of the codetta, the movement ends in a five-flat system.[96] In the Appendix, the reason why a movement, or entire composition, may end either in the system of the tonic or in that system which is three systems below the tonic (i.e., three systems in the flat direction) is discussed.

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[96]Curiously, in the second movement, the first chromatic notes are D♭ and E♮, offered simultaneously in measure 3.

It is interesting to note that although the preceding is quite common in tonal music, it is a virtual impossibility for a movement or composition to end three systems *above* the tonic. For this to happen, pc 3 would have to be introduced without the tonic note succeeding it; this would be next to impossible in common practice tonality. Therefore, in our B♭ major Mozart sonata, C♯ would have had to have been introduced in the codetta (moving the eleven-note gamut from two flats to one sharp) but not followed by a B♭, a highly unlikely possibility!

The following discussion of Haydn's Symphony no. 73 serves as a "sample analysis" of the way in which Symphonies no. 82 to 92 will be presented. In it, I hope to show how the chromatic considerations discussed above can be integrated into a more comprehensive examination that includes discussions of form, voice leading, and other analytic considerations. The graphic representation used here, two staves for two levels of voice leading and one staff for the PCA, will be used consistently in the analyses of the other symphonies. Measure numbers appear below the middle staff so as to avoid clutter in the higher and lower staves. The division of the analyses into discrete sections will also be used consistently during these later analyses.

The analysis of Symphony no. 73 ("La Chasse") in D major begins with a short opening paragraph followed by *General*

considerations, a section concerned with the most broad-based analytical issues. This is succeeded by a section dealing with *Voice-leading considerations*. *Chromatic considerations*, those aspects of the analysis involved with chromatic arrays and eleven-note systems, will comprise the next and final part.

An analysis of Haydn's Symphony no. 73

This symphony will be examined in light of Haydn's preference for dramatizing sonata form by delaying the arrival of the second harmonic area of the exposition. Symphony no. 73 was published in 1782, the same year as publication of the String Quartet in E♭, op. 33 no. 2 ("The Joke"), which exploits the same kind of exposition type: in these pieces, the second harmonic area is not firmly anchored until the codetta, just a few measures before the end of the exposition. The subtitle of the symphony, "La Chasse," refers to the use of two "hunting" horns in D that execute an extended horn call-type melody and accompaniment in 6/8 time in the symphony's last movement. An optional orchestration of the fourth movement, with added trumpets and tympani, is extant, although it is not definitely known whether Haydn approved of

these additions.[97] This orchestration, published by J. G. Sieber, a Parisian who began to market Haydn's works in 1770[98], gives the finale an even "brassier" tone quality. Like the first movement, the last is also in sonata form; both movements delay the arrival of their second harmonic areas until the arrival of their respective codettas.

General considerations

The first movement of the symphony begins with a slow introduction in triple meter. In a traditional manner, the slow introduction cadences on the dominant after a substantial tonic prolongation. A diminished seventh chord in measure 10 initiates a succession of chromatic events that will be discussed in more detail below.

The Allegro exposition (C meter) is organized around a lengthy prolongation of tonic harmony that culminates in a very late arrival at the structural dominant just at the end

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[97]H. C. Robbins Landon and David Wyn Jones, in *Haydn: His Life and Music* (Bloomington: Indiana University Press, 1988) p. 215, refer to this symphony as "a work with trumpets and drums." They add, p. 216, "[t]he finale consists of the overture to *La fedeltà premiata*, now given the title 'La Chasse', an instance of reusing instrumental music from his operas that may have prompted the revision and publication of the six overtures by Artaria in 1786 ... ."

[98]See the *Revisionsbericht* in Ernst Praetorius, ed., *Joseph Haydn: Symphony No. 73*, Edition Eulenburg, no. 511 (London: Ernst Eulenburg, Ltd., n.d.).

of the exposition. (Notice in the voice-leading graph that the *Allegro,* beginning in measure 26, secures tonic harmony as I^5_3- in measure 30. The tonic is extended through a chromatic 5-6 exchange culminating on $-I^{6\flat}_4$ in measure 60 at the arrival on a Neapolitan sixth within local dominant harmony.) During this expanse, there are different "attempts" to secure the structural dominant, A major, but none will be successful until after the arrival of an augmented-sixth chord in measure 63 (see graph). A high-level contrapuntal structure, the augmented-sixth chord in measure 63, moves to II♯ in measure 64 and finally to the structural dominant in measure 68 (the codetta). Therefore, all other voice-leading material during this prolongation is subsumed under a large-scale stretch of background tonic harmony. The augmented-sixth chord is the culmination of a large-scale chromatic voice exchange with the opening tonic.[99]

Haydn's organization of the form of this exposition, although characteristic of his individual compositional style, is quite extreme even for his stylistic preferences. In measure 47, the listener is teased with the expectation of

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[99]Cf., Roger Kamien and Naphtali Wagner, "Bridge Themes within a Chromaticized Voice Exchange in Mozart Expositions," *Music Theory Spectrum*, 19/1 (Spring 1997). The authors argue that during similar situations in Mozart expositions, they have found, too, that one must subsume all material between the tonic of the opening statement and the augmented-sixth chord at the end of the bridge under the background tonic. Particularly, see p. 3 of that article and the accompanying graphs.

motion into the second harmonic area; yet, this possibility is derailed by Haydn's extension of the bridge which is, harmonically, still within a tonic prolongation. We will draw, therefore, a distinction between a "feeling" about moving into a new harmonic area, which begins around measure 45, and the structural arrival at a new harmonic area, which does not occur until measure 68.

In addition, the premonition of the second harmonic area is raised as a potential structural entity as early as measure 54. This appearance is more convincing than the first maneuver in measure 47, but still is treated as a broken promise as the music moves suddenly and unexpectedly away from dominant harmony in measure 59 and into a five-measure flat-area expanse. Therefore, a complete harmonic progression that could have secured a structural dominant is again undermined as the listener realizes that the music must still be within the area of a tonic prolongation, i.e., the bridge. In essence, the A major triad in measure 54 is not yet the structural dominant that will define the second harmonic area, even though it momentarily plays the role of a dominant within D major. The significant issue for Haydn at this moment is not to secure the structural dominant, but to avoid securing it so as to focus on the arrival at the ♭VI chord in measure 60 (see graph). A local chromatic voice exchange between that chord and the augmented-sixth is needed to attain the

structural dominant. Eventually, on the highest structural level, the ♭VI chord is also subsumed under the larger-scale exchange between tonic harmony and the augmented-sixth chord. As a result, the augmented-sixth has a dual function and, in both instances, is the culmination of a chromatic voice exchange.[100]

How Haydn accomplishes the delay of the second harmonic area until the codetta is the most distinctive feature of this exposition. *There is no thematically articulated support for the arrival at the second harmonic area*, making the whole exposition of Symphony no. 73 — like the analogous first movement exposition of the String Quartet in E♭, op. 33 no. 2 — devoid of any other structural cadences other than the one at the codetta. Therefore, the movement is genuinely monothematic and is an excellent example of the "type 2 monothematicism" previously discussed. Although this may appear to be an extreme example, even for Haydn, this symphonic archetype might be considered the composer's sonata "*Ur*"-form, a type very reminiscent of that used by Wagenseil. More than any of his contemporaries, Haydn is the master of postponement, constantly provoking the listener to accept his

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[100]The A major triad in measure 54 has neither the rhythmic stability, in terms of phrase articulation, nor the distinctive thematic character, in terms of design, to play the completely persuasive role of a structural dominant. There may be other reasons why this A major triad cannot be the structural dominant that may be unravelled within the realm of chromaticism.

major developmental work *within the area of tonic harmony.*

One should keep in mind that Haydn's formal peculiarities may only appear that way by comparing his symphonic style to Mozart and Beethoven. Both younger composers are inclined to get into a complete, fully articulated statement of secondary harmony at least halfway into the exposition.[101] The placement of the arrival at structurally dominant harmony (in a major mode symphony) is unequivocal. However, if we examine Haydn in the light of his contemporaries, such as Wagenseil, Dittersdorf, Vanhal, *et al.*, it would appear that the formal proclivities of Beethoven, and even Mozart, might appear to be novel or, at least, come from another tradition, such as that

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[101]Beethoven, particularly, prefers to relinquish tonic harmony as quickly as possible in favor of the new harmonic area. Therefore, a considerable amount of developmental material between the entrance of the second harmonic area and the end of the exposition exists, and the work employs a closing area to further expand the new contrasting harmony. (This formal device is not foreign to Haydn, but examples that do *not* contain a closing area, only an articulated second harmonic area and codetta, are in abundance. As mentioned above, the absence of a formally articulated second harmonic area will prevent the utilization of a closing area).

Although there are many examples of symphonies and chamber works by Mozart that also move into the second harmonic area rather quickly, Mozart apparently began to experiment with expositions having more "Haydnesque" proportions later in his compositional career through the expansion of the exposition bridge. The first movement of the "Prague" Symphony no. 38 in D has a rather formidable two-part first movement bridge as does the "Jupiter" Symphony no. 41 in C. Also, the first movement of his String Quintet in C, K. 515, has an extensive and highly chromaticized bridge passage with more than one Haydn-like deceptive entrance into what appears to be a second harmonic area. The composer then includes an extensive closing area within the second harmonic area.

of Johann Christian Bach. In this light, Haydn may have his "roots" in the old tradition of Baroque binary form, now expanded into the larger proportions typical of a Classical symphonic movement. It is no coincidence, then, that the strongest articulation of the secondary harmonic area occurs just before the first double bar as would be the case of any dance movement in a Baroque suite.[102] Chromatics and harmonies consistent with the upcoming harmonic area introduced early on create the first disruptions within the tonic. Those necessary disruptions within a typical Baroque dance movement (the first modulation), however, only become *structurally significant* at the double bar. In the case of a large-scale symphony, the new harmonic area appears not to be fully "activated" until the codetta, allowing the bridge to

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[102]Felix Salzer raises the issue of C. P. E. Bach's use of form in his analysis of Ravel's *Sonatina* in *Structural Hearing: Tonal Coherence in Music*, vol. 1 (New York: Dover Publications, 1962), p. 244: "In the formal organization of the Sonatina, Ravel interestingly combines trends of former periods with those of his own times. The treatment of the exposition for instance is reminiscent of the rudimentary early sonata forms by C. P. E. Bach; we think here of the first movement of the Third Prussian Sonata by this composer in which no real second theme occurs but only an expanded cadence on the dominant."

Of course, this would be true for any early Classical era composer still under the influence of his Baroque predecessors' use of binary form. Haydn is no exception, and it is imperative to remember how close this composer was to his Baroque-era roots. Robbins Landon and Jones, in *Haydn: His Life and Music* (*op. cit.* p. 27), mention accounts of Haydn's early life (by Griesinger and Dies) which discuss Haydn's probable participation as a chorister at Vivaldi's funeral in 1741!

gradually introduce the approaching harmonic area.[103]

Voice-leading considerations

This movement contains a slow introduction that prominently emphasizes neighbor-note motion, $\hat{5}$-$\hat{6}$-$\hat{5}$, in measures 3 to 8. This becomes an important motivic issue in the symphony. In the first movement, this motive is present as the slow introduction ends on $\hat{5}$, supported by dominant harmony. The Allegro then begins on $\hat{6}$, supported by subdominant harmony in measure 26 (an excellent example of a non-tonic opening[104]), and then resolves to $\hat{5}$ and tonic harmony in measure 28. (In the last movement, this neighbor note figure is particularly prominent as a foreground melodic feature.) Chromatic neighbor-note motion around $\hat{5}$ further emphasizes this motivic issue in the slow introduction by introducing G♯ in measures 15, 22 and 23, and B♭ in measures

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[103]It may be argued that the "three-key expositions" of Schubert and Brahms, that also delay the arrival of the structural dominant, are a direct legacy of Haydn's inclination to abundantly stretch tonic harmony in a sonata exposition. Cf., Carl Schachter, "The First Movement of Brahms's Second Symphony: the Opening Theme and Its Consequences," *Music Analysis* 2/1 (1983), pp. 55-68.

[104]Symphony no. 73 is the first symphony of Haydn's where the exposition of the first movement begins with a non-tonic opening. Nos. 86, 90, 92 and 94 follow this practice. See Poundie Burstein, "The Non-tonic Opening in Classical and Romantic Music" (Ph.D. diss., CUNY, 1988) for an in-depth discussion of this phenomenon.

16, 22, 23 and 24.

Another conceivable harmonic analysis of the opening of the Allegro in measure 26 is to understand B and G as the ninth and seventh above the bass note A of *dominant* harmony which, it could be argued, has not yet been displaced by another prominent bass note. In this interpretation, V^{9}_{7} in measures 26 and 27 moves to $\frac{8}{6}$ in measure 28 and to $\frac{7}{5}$ in measure 29 before resolving to the tonic in measure 30. I have opted for the subdominant reading since Haydn actually harmonizes the repetition of this section (the counterstatement, beginning in measure 35) with subdominant harmony. The beginning of the recapitulation as well, in measure 107, is also within the realm of the subdominant.

A pivotal problem involves Haydn's tactics in the postponement of secondary structural harmony and his use of a substantial auxiliary cadence to accomplish it. In measure 47, a II♯ chord is positioned in such a way that the listener assumes that the second harmonic area is just about to be established. In fact, in most classical symphonies, this is a safe assumption. But not in a Haydn symphony.[105] This

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[105]Mozart's "Prague" Symphony was mentioned before in light of its extensive bridge. However, the way in which Mozart extends his bridge is quite different from the "delaying" and "evasive" procedures used by Haydn. In the "Prague," the bridge is bifurcated: it begins in measure 51 and cadences on V in measure 71, not having modulated (similar to a J. C. Bach bridge); between measures 71 and 96, Mozart begins to escape from D major, ending the bridge on II♯. Haydn's procedure is more seamlessly developmental, constantly

harmonic area is extended by more bridge material which again leads to II♯ in measure 53 and an apparent attempt to resolve it in measure 54. However, just as this phrase reaches a point of closure, the harmonic rug is pulled out from the attempt to stabilize V by the events in measure 59. A prominent B♭ supported by ♭VI$^{6}_{3}$ in measure 60, with D in the bass, is involved in a localized chromatic voice exchange with an augmented-sixth chord in measure 63 (as B♭ resolves to A) creating the first *structurally significant* motion to II♯ in measure 64. In the background, the augmented-sixth chord is part of a chromatic voice exchange with *the opening tonic*. This finally leads to the codetta in measure 68 which is the structural dominant as well.

Several significant issues are involved in Haydn's deception. In terms of pure voice leading, the root position V in measure 54 is reinterpreted as a simple dominant chord within a larger area of tonic harmony. The D is reestablished in the bass of measure 60 as the bass of the ♭VI chord, tonic harmony having been altered through a voice-leading procedure, specifically a chromatic 5-6 exchange (see graph). The bass

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coaxing one to believe that the second harmonic area is about to enter; yet, it doesn't until the end of the exposition, avoiding an articulated second harmonic area and a close altogether. In the "Prague," a prominent and extensive three-paragraph closing area begins in measure 112 followed by a seven-measure codetta; the subsidiary cadence points within the exposition are quite obvious, while the virtual entirety of Haydn's expositions may often be open to interpretation.

note, D, is later exchanged for D♯ in the augmented-sixth chord.

Also, because of the double-neighbor note figures presented in the introduction, one's anticipations about the arrival on V and how it is accomplished have already been aroused. The diatonic neighbor-note figure, which could have been used to help establish $\hat{5}$ as the first note of the *Urlinie* descent, actually has a very different function, since $\hat{3}$ eventually turns out to be the first note of that descent. The $\hat{5}$ turns out to be a cover tone, its emphasis and embellishment (i.e., $\hat{5}$ moving to $\hat{6}\flat$) is intricately bound to the delay of the structural dominant. It frustrates one's expectations about the nature of the second harmonic area.

Chromatic considerations

The way in which Haydn unfolds the Primary Chromatic Array (PCA) in the Allegro of Symphony no. 73, by segmenting the array into two smaller fragments at the beginning and end of the exposition, is compatible with his overall approach to formal considerations in this symphony. The PCA begins to emerge only in the counterstatement/bridge, and in "bunches." The D♯ and E, pc's 1 and 2, enter in measure 41 as part of a

simple D-D♯-E trichord initiated a measure before.[106] The PCA note F♮, pc 3, first arrives in measure 50; and here, the continuation of the PCA is delayed for a short time. The D-D♯-E trichord returns in measures 51 through 53 in the bass register, now provided with the harmonic support consistent with a contrapuntal progression locally tonicizing the dominant. (Compare the graph of the chromatic arrays with the voice-leading graph on the top staff). The repetition of the PCA segment, this time on a level of harmonic structure higher than simple passing motion, helps to stall its further unfolding until the end of the exposition.

A similar segmentation has already occurred in the slow introduction, and we shall continue to observe that Haydn's slow introductions presage significant events in their succeeding Allegros. Notice in the graph of the chromatic arrays (on the middle staff) that the D-D♯-E trichord is isolated from the remainder of the lower-level chromatic array that rises in two "bunches," one from pc 0 to pc 2, and the other from pc 2 to pc 7. In this case, in contrast to the exposition, the pivotal sonority — that note that is extended over space and connects the two segments — is E, the diatonic pc 2. In the exposition, however, the pivotal sonority is the chromatic F♮, which eventually becomes the bass of the

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[106]This trichord appears again, without any structurally significant harmonic support, in measures 44 and 45.

augmented-sixth chord in measure 63. The augmented-sixth chord functions as a prominent form-determining feature in this symphony. In the slow introduction as well, F♮ is, to some degree, underscored since it is the only chromatic that appears with its enharmonic equivalent.[107] When the D-D♯-E trichord and the F♮ first enter, they do so as part of the unfolding PCA; yet, they later take on more significant voice-leading roles as they are used within a harmonic context.

Haydn's use of a prominent A♯ in measure 31 highlights an interesting chromatic detail. The A♯ has already been prepared in the slow introduction as B♭, an upper neighbor note to A that helps solidify the half-cadence that ends the slow introduction. In the exposition, the A♯ in measure 31 is part of V^6_3/VI in the opening statement as an A-A♯-B trichord (see graph) and returns in the counterstatement/bridge in measure 39. The A♯ reappears in measure 48 in an upper register; however, since F♮ enters in measure 50, the A♯ will again need to be recomposed as B♭. This happens when the ♭VI^6_3 chord enters in measure 60. This is another instance of Haydn's use of enharmonic respellings to emphasize significant

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[107]After E♯ is respelled as F♮ in the slow introduction, E♯ never reappears in the exposition. The development initiates motion into the flat area where F♮ is particularly prominent. By measure 85, however, the "flavor" of the development has changed and turns mostly to sharps; in this area, just before the retransition in measure 103, F♮'s are again recomposed as E♯'s. Similar to the exposition, the recapitulation never spells pc 3 as E♯, but only as F♮.

motivic and compositional events.

If we catalog chromatics up to the commencement of the PCA in measure 30, we observe a rising chromatic line in the slow introduction — enriched by a lower-level ascending fragment (see graph) — that culminates on A in measure 24; this, too, is enriched by a line operating on a still lower level. The arrival on A signals the end of the introduction. In this mode of analysis, the next chromatic note ought to be A♯, and is the one in measure 31 that we have already discussed. This subsidiary array that begins in the introduction and continues into the Allegro, proceeds almost to the end of the exposition, continually lying at a lower level of chromaticism than the fundamental chromatic entity, the PCA. It is interesting to note that the first principal chromatic note in the development ought, also, to be A♯ (pc 8), and it appears almost immediately in measure 72 before the gamut of notes changes to flats. In this way, whether the exposition is being heard the first or second time, the next chromatic note is consistently A♯, whether it appears after the slow introduction or after measure 70. After A♯ resolves to B in measure 31, we are set up for the counterstatement/bridge in measure 35. The A♯/B♭ enharmonic issue is settled toward the end of the recapitulation in measure 140 when B♭ is again presented, resolving locally to A♮. (This prominent enharmonicism occurs at the interval of the perfect fifth from

the previously discussed enharmonic E♯/F♮.) Therefore, we can speculate that Haydn's inclusion of both F♮ and E♯ in the slow introduction may help emphasize an issue that eventually culminates in the voice exchange and modulation that utilizes an augmented-sixth chord based on pc 3.

In a two-sharp system (i.e., an eleven-note spectrum guided by a two-sharp key signature), all chromatics except E♯/F♮ are present. This is consistent with a period in D major. Yet, the slow introduction in D major contains not only the anticipated eleven pc's, but a twelfth, E♯ (pc 3), and shortly afterwards, its enharmonic, F♮, which implies a system change and a momentary range of thirteen notated circulating pitches.[108]

Haydn's distinctive manipulation of pc 3, which assists in the destabilization of the opening tonic, is more the rule than the exception in the majority of cases that will be examined. In the Allegro of Symphony no. 73, F♮ (pc 3) first

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[108]These thirteen pitches are E♯-(A♯)-D♯-G♯ / C♯-F♯-B-E-A-D-G / C♮-F♮-B♭ (the notes between the two /'s are diatonic in D major). The A♯, not yet present, is the first chromatic note in the Allegro, giving us fourteen notes up to measure 31. An E♭, not yet presented until the development, measure 77, would give us a third enharmonic and, thus, a fifteenth note. E♭ would be consistent with the above series of notes and the next one expected on the flat side.

A discussion of fifteen pitches should not be confused with the twelve numbered pitch classes of the PCA; it is always understood that any or all of the pc's from 0-11 may have enharmonic equivalents. The use of pitch-class terminology, borrowed from twentieth-century theory, is not meant to suggest that enharmonicism does not play a vital role in chromatic analysis.

occurs in the bridge in measure 50 and creates a dissonance within the prevailing two-sharp system.[109] The special attention given to pc 3 does not mean that the way in which this issue is articulated must necessarily create a large-scale harmonic modulation at that moment. It does mean, however, that this particular note (and possibly its enharmonic variant) will play an important role in the way in which the movement unfolds.[110]

Notice, too, that pc 5 (that ubiquitous subdominant G so prominent in the opening Allegro) is skipped in the ascending PCA; yet, this is entirely consistent with Haydn's rapid drive toward the structural dominant once fundamental chromatic notes are introduced at an increasingly faster rate. As mentioned above, pc 5 is often skipped in the first PCA ascent, more so than any other pitch. This omission of a prominent *diatonic* tone from the chromatic ascent, however,

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[109]There are, in fact, several *en route* system transpositions that support the chromatic series and the unfolding PCA in the exposition. The F♮ in measure 50 – and its local D minor triad – moves the system down to one flat (D minor is a one-flat system calculated from its relative major, F). However, this is immediately canceled by the G♯ in the next measure that restores the two-sharp system. This "tug-o'-war" between the one-flat and two-sharp systems becomes the chromatic paradigm for the rest of the exposition.

[110]Cf., Mozart's Piano Sonata in C major, K. 330, where a particularly dissonant D♯ becomes responsible for the distinctive quality of that piece. Upon its enharmonic respelling as E♭, this note takes on more of a singular role in terms of system transpositions; as D♯, the prevailing C system moves up to three sharps, but as E♭, the system moves in the opposite direction to three flats.

does not affect the overall integrity of the PCA.[111] If one keeps in the back of one's mind that the theory of the Primary Chromatic Array is based on the filling in of the octave with a rising chromatic scale as a slowly unfolding background structure, and not that chromatic elements are present simply to add "spice" to the diatonic key), then this seemingly peculiar assertion can more readily be grasped.

We have seen that in the first movement of Symphony no. 73, both voice-leading and chromatic analyses can shape a musical investigation. The *General considerations* section presented an overview of material to be covered in more detail in the *Voice-leading* and *Chromatic considerations* sections. The procedure utilized above — one that separates the analytical substance into three discrete sections — has been devised to create better overall readability. Part II of this essay includes analyses of Symphonies nos. 82 - 92 using the procedure outlined here.

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[111]We found earlier, in the Mozart piano sonata, in this more compact *genre*, Mozart went directly from pc 2 to pc 6 in the exposition. Composers will often omit pc 5 from the progression into the dominant harmonic area even within larger symphonic contexts.

P A R T I I

C H A P T E R 5

SYMPHONY NO. 82

Symphony no. 82 in C major, written in 1786, is an excellent example of Haydn's individual approach to sonata form, particularly in terms of harmonic strategy and its interaction with the formal proportions of an exposition. The subtitle, *L'Ours*, was given to the piece because of the peculiar "dancing bear"-like character of the last movement.

General considerations

The first movement opens with an eight-measure statement in C major that emphasizes a high e^3 and then, in quick succession, e^2 and e^1. This three octave register transfer is mirrored by the bass motion of the second harmonic area, which involves the notes g^1-G^1-G^2. A thirteen measure extension of the opening statement begins in measure 8 and reaches up again to e^3 and cadences on the dominant. Beginning in measure 21, a counterstatement/bridge begins and, as we would expect, the tonal center seems to begin moving away from the tonic and toward dominant harmony; this becomes more apparent in measure 33. Although, this is where one might expect dominant harmony

to begin, these expectations are not met. First, a complete harmonic progression in the dominant does not occur at this point; instead, G is used as a pedal point, with the melodic note d^3 in measure 34 expanded by an upper neighbor note and descending melodic motion (see graph). A rising chromatic line appears in the bass of measure 46 that again suspends the likelihood of secured dominant harmony, with a requisite definite beginning and end. Measures 59 through 69 create a transitional phrase on a II♯ pedal which then leads to a firmly anchored dominant in measure 70.

At this point, one realizes that the music from measure 33-58 must, therefore, be a continuation of the bridge passage that began in measure 21. Therefore, the dominant, which first appears as a non-structural entity in measure 33, does not come into its own as a representative of a new harmonic area until measure 70. Measure 70 is the beginning of the second harmonic area, measure 84 begins a very abbreviated closing period with forte dynamics, and the codetta in measure 94 rounds out the exposition. The development and growth of the bridge and the concurrent delay of the second harmonic area skews the balance of the exposition in such a way so that considerable amount of time is spent in the expansion of the tonic. We have previously discussed typical first-movement symphonic expositions by Beethoven and Mozart where the second harmonic area very often arrives approximately half way

through the exposition and often sooner than that half-way point. In any case, the structural dominant is stabilized closer to the *opening* of the exposition than to its end. Haydn's approach however, typified in this symphony, is rather the antithesis of that employed by Beethoven and Mozart.

A $b\flat^3$ in measure 93, just before the cadence into the codetta, creates some startling mode mixture. Notice that the graph indicates that Haydn may have intended that this note help prepare F major harmony at the opening of the development section.[112] The B♭ will be discussed below at greater length.

Voice-leading considerations

The most unusual aspect of this symphony, separating its plan from all the others examined in this essay, involves the role of the voice exchange that occurs between measures 1 and 47. Generally, in the other symphonies that employ a chromatic voice exchange, it is placed immediately before II♯ and generally culminates in an augmented-sixth chord. Thus, the entire bridge is intimately tied into tonic harmony with

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[112]It is interesting to speculate how this B♭ connects to the opening of the exposition during its repeat. Perhaps the rising G-G♯-A trichord in measures 24 and 25 is also emphasized by this particular B♭. Thus, the foreground chromatic motion to A is emphasized from above (by the B♭) and below (by the rising G-G♯-A trichord).

this single gesture. In this work, however, the voice exchange transforms C into C♯, but then C♯ is used in two very distinct ways.

When the bass note C in measure 1 is exchanged for the C♯ in the soprano of measure 47, that C♯ ultimately functions as an *appoggiatura* to the *Urlinie's* D, i.e., $\hat{2}$ in measure 78, nine measures into the second harmonic area. Therefore, the exchanged C♯ motivates the arrival of an *Urlinie* tone. That C♯, also, emphasizes motion into the second harmonic area since it is transferred back into the bass register in measure 58. (See graph, particularly between measures 47 and 69.) Ultimately, the long-range bass motion between measures 1 and 58 structurally overrides the weight of the voice exchange, i.e., the bass motion from the tonic C to the passing tone C♯ exists on a higher structural level than voice exchange. Perhaps the motion from C♯ to D in both soprano and bass voices might be considered a kind of misaligned parallel octaves.

This example is unusual for two reason: first, the voice exchange does not lead directly to an augmented-sixth chord (or to a diminished seventh chord) which is applied to II♯ and, second, the voice exchange is not on the highest structural level of tonic unfolding. One could speculate that as Haydn developed his bridge procedure over the course of the Paris symphonies that his music reflected the use of a

prolongational device that was totally dependent upon the chromatic voice exchange operating on a high structural level. This is certainly the case with the later symphonies that employ this technique; and those works seem to be both more convincing and "neater." Also — and this might have provided even more motivation for Haydn's later bridge procedure — the "more highly developed" style of voice exchange creates more of a seamless texture within the extensive prolongation of tonic harmony.

The scheme of the second harmonic area is fairly straightforward. There is a middleground descent from D, the dominant's *Urlinie* $\hat{5}$. The atypical B♭ in measure 93, placed between scale degrees 2 and 1, creates a very dissonant melodic diminished fourth with F♯.

An unusual, but not unknown, aspect of voice leading in the exposition involves the D in the bass of measure 48 which appears, in this interpretation, as a passing tone between E and C♯ (see graph). This D also functions on a more local level to unfold a G major triad in $^{6}_{4}$ position. Within the boundaries of this auxiliary cadence, E supports $VII^{o6\sharp}_{5\flat}/II\sharp$, and the C♯ in the bass of measure 58 supports a diminished seventh chord as well, $VII^{o7\flat}/II\sharp$, which is missing its E. With the E intact, there would have been a second voice exchange between measures 47 and 58.

Chromatic considerations

The preparation for the primary bass motion in this exposition occurs in the PCA, somewhat earlier, beginning in measure 46 (see graph). The use of a prominent E♭ in measure 47 signals Haydn's intention to leave C major since E♭ is the only chromatic note in C major that is "out of system."[113] Pc 3, this E♭, is prepared during an arpeggiation of a D dominant minor 9th chord in measure 30 and occurs as the PCA note in measure 47. The E♭ later appears repeatedly between measures 51 and 57, just before the dominant pedal that leads into the second harmonic area.

Aspects of Burnett's theory (those dealing with diatonicism portrayed as an eleven-pitch class gamut) may also be invoked to help illustrate why the diminished seventh sonorities between measures 47 and 58 may not be sufficient *in themselves* to create a completely persuasive modulation to the dominant. As mentioned before, in most of Haydn's other symphonies that use a chromatic voice exchange to modulate to the dominant, that exchange culminates in an augmented-sixth chord. In a C major symphony that has a second harmonic area in the dominant, for example, the augmented-sixth chord upon II♯ would be spelled E♭-G-B♭-C♯ and contains the one note (E♭)

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[113]See the Appendix for Henry Burnett's theoretical justification of the following argument and for a more detailed system analysis of this movement.

which is "out of system" in C major. Perhaps when a large-scale piece such as a sonata movement finally attains pc 3, it may be the composer's intent to begin preparing the way for the structural dominant by destabilizing the system of the tonic. The prominent use of E♭ before the dominant pedal in measure 59 may be there to point the way toward the structural dominant by first implying the system of the minor tonic, a vestige of the process already seen in classical symphonies.[114] Even though E♭ is not part of the diminished seventh chord in measure 59, the E♭ becomes a necessary component in the local tonicization of the dominant, even though the eleven-note system is prevented from truly modulating because of the consistent associating of E♭ with F♯: E♭ would move the system to a three-flat gamut, while F♯ would move it up again to the C system. Thus, we can see how the tonic system never really disappears from the background, just as the tonic key is never displaced on the background level in a Schenkerian graph.

In the second statement of the PCA, in the second harmonic area, E♭ is respelled as D♯, indicating a momentary system modulation into three sharps before it is canceled by C♮. (See measure 81 of the graph of chromatic arrays.) In fact, whereas in the first harmonic area pc 3 is only notated

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[114]See footnote no. 47 above concerning the concept of *pianoidée*.

as E♭, pc 3 in the second harmonic area is only notated as D♯, a far more difficult chromatic to unfold in a C system. (As noted above, pc 3 is respelled as E♭ again in the development section.) It is interesting to notice that in the first harmonic area, system motion tends toward the flat side (three flats) of the circle of fifths, whereas in the second harmonic area, system motion brushes against the sharp side (three sharps). In any case, however, any system modulations are fairly quickly canceled, and the tonic system is almost immediately reestablished.

The reanimation of the PCA in measure 46 is prepared a few different times before its entrance. The first chromatics in the movement appear in measure 24 and 25 as a G-G♯-A trichord. Yet, this trichord has a limited life in this specific transposition; as C-C♯-D, however, it occurs in the violins in measures 33 to 34 (the beginning of the PCA), and then afterwards in the flute and oboes and second violins in measure 47 and 48. It is followed by its inversion in the flute in measures 48 to 50. Later, it occurs at the opening of the recapitulation, in the basses of measures 184 to 188 and then in the flute and oboes in inversion in measure 191, continuing chromatically down to A in measure 194.

All the remaining chromatic issues, i.e., those not specifically related to C-C♯-D, are restated in measure 239 and successively resolve in the coda beginning in measure 248.

The problematic E♭ is presented in three registers. The E♭ in measure 240 resolves in 242 (and, again, the one in 245 resolves in 247). The E♭ in measure 241 resolves in 243. The E♭ in 246, however, resolve in the coda, in measure 253.

One matter which is not quite resolved between measure 239 and the coda is the C-C♯-D issue. This is picked up in the second movement in F major and presented in trichordal form (see, for example, measures 20 - 22 in the basses). As this movement goes into the parallel minor, the issue is rewritten enharmonically and inverted, D♮- (which stands out prominently in the melody in F major) -D♭-C (given in F minor as a neighbor note figure).

The whole matter is reproduce in the last movement: the B-C bass ostinato (associated with the bear) is picked up in measure 33, transposed up a whole step. Therefore, we get (B)-C-C♯-D. This matter is not laid to rest until measure 214 where C♯ (bassoons, violas, basses) resolves decisively to C in measure 224. The last time that E♭ appears in the finale, it resolves just before the coda. Notice, beginning in measure 252, that the second oboe and viola present a descending chromatic hexachord beginning on G and continuing to F♯, F♮, E, E♭, and D. The E♭ is "corrected" to E♮, its diatonic equivalent, in measure 256 and is no longer a concern in the remainder of the movement.

CHAPTER 6

SYMPHONY NO. 83

Symphony no. 83 in G minor ("La poule") was written in 1785. The subtitle refers to the melodic character of the first movement's second harmonic area with its distinctive grace notes. The piece has some unusual features compared to the other symphonies. It, like no. 82, has no slow introduction, which means that the chief issues and motivic intricacies will first be heard in the context of the exposition instead of a slow introduction. Perhaps minor mode symphonies have no slow introductions because of the inherently unstable nature of the mode itself.[115] With its intense drive, quick dynamic contrasts and dotted rhythms, the work has a definite aesthetic affinity to Haydn's *Sturm und Drang* symphonies of the 1770's. Chronologically, both Symphonies nos. 83 and 87 (in A major) were the first works of the Paris set.

General considerations

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[115]The only minor mode symphony in the "London" set, no. 95 in C minor, also has no slow introduction.

A characteristic feature of the sixteen-measure opening statement is a prominent C♯ within the first two measures, arpeggiating a diminished sonority that resolves into the tonic triad. That one note and its ramifications will be discussed below. The opening statement is divided into an eight-measure group of two four-measure antecedent/consequent phrases plus a four-measure phrase beginning in measure 9 that augments the chromaticism of the opening bars and cadences on the dominant in measure 12. A five-measure extension between measures 12 and 16 prolongs dominant harmony, reemphasizing the characteristic dotted rhythm of a *Sturm und Drang* symphony in conjunction with an antiphonal exchange between winds and strings. There may be reason to believe that Mozart's 1788 Symphony in G minor, K. 550, might have been influenced in part by Haydn's "La poule." This matter will be elaborated below.

The bridge of no. 83 contains a typically Haydnesque gesture through the insertion of a phrase in the new harmonic area between measures 33 and 44 before B♭ enters as a structural entity in measure 45.

The opening statement of the second harmonic area begins in measure 45 and is repeated in measure 52. The "La poule" music is articulated in two ways in this area. First the *La poule*-like melodic disposition of the second harmonic area is presented in the first violins of measure 45 with its grace-

note ornamented eighth notes and its eighth rests. Second, the oboe in measure 52 ("*solo stacc.*") reintroduces a distinctive rhythmic motive acquired from the opening tonic statement that had first appeared in measure 2. The second harmonic area includes a seven-measure transition beginning in measure 59, with the violins and the *bassi* appropriating the dotted notes from the oboe. A five-measure codetta appears in measure 64 and includes the dotted rhythmic figure in the winds and strings. There is no closing period as the transition is too rhythmically weak and harmonically unstable to merit its autonomy.

Voice-leading considerations

The opening statement is fairly straightforward in terms of voice leading. The phrase cadences on V♯ and supports a melodic descent from $\hat{5}$ to $\hat{2}$ (see graph). The foreground chromatic descent between measures 10 and 11 appears to have "wanted" to continue to F♯; however, that F♯ is reserved for the five-bar extension between measures 12 and 16 and is propelled into a higher register.

A counterstatement/bridge begins in measure 17 and very soon generates modulatory activity when A♭ (pc 1) enters in measure 22. A II^{6}_{3}/III chord in measure 25 signals the beginning of a motion to secure B♭, the local tonic of the

second harmonic area. However, that arrival is delayed through the addition of an interpolated phrase between measures 33 and 44 that *prolongs dominant harmony* (i.e., the dominant of the second harmonic area), even though it is initiated by a B♭ is in the bass. This B♭ is not yet the tonic of the new harmonic area, however; it is a note that creates consonant support for B♭ in the soprano, an accented passing tone between A and C.

As the structural mediant is attained in measure 45, the *Urlinie* has concurrently descended to $\hat{3}$. The second harmonic area contains its own descent from the mediant's $\hat{5}$; this is accomplished over the course of the second harmonic area's statement and its repetition. Measure 59 through the first beat of measure 66 are the boundaries of a transitional phrase before a short three-measure codetta begins in measure 66. The transitional phrase is not substantial enough to be called a closing period, as it simply links the counterstatement to the codetta.

All other symphonies discussed in this essay are in the major mode. In them we will find that an augmented-sixth chord (or another vertical chromatic entity such as a diminished seventh chord) precedes the structural dominant, and that the structural dominant is placed somewhere between the middle and the end of the exposition. The minor mode of Symphony no. 83, however, conditions the placement of the

structural dominant at the development section's retransition in measure 120. It is preceded by an augmented-sixth chord that creates an enormous voice exchange with tonic harmony at the opening of the exposition (see page 4 of the graph). *As a result, all the material up to the point of the augmented-sixth chord must be understood to be subsumed under a larger tonic context.*[116] In the background, then, the tonic is not displaced by another high-level structural entity until a few measures before the recapitulation. At this moment, the *Urlinie* moves to $\hat{2}$ in measure 119, supported harmonically by II♯. The retransition is totally controlled by a ten-measure dominant pedal on D, the structural dominant of the first movement.

The chromatic voice exchange operates in the following manner: the *Urlinie*'s $\hat{5}$ descends to $\hat{3}$ (B♭) at the arrival of the second harmonic area. This soprano B♭ in measure 45 is exchanged for the bass register B♭ in measure 118. The G♯ of the augmented-sixth chord in measure 118 is chromatically exchanged for the G in the bass of measure 1. This is the most substantial voice exchange in any of the symphonies discussed in this essay.

The use of a three-key exposition, one that *could* have

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[116]This might also help support the contention (see Appendix) that no system modulation, *on any level*, is possible in the minor mode since both tonic and relative share the same eleven-note system.

placed the structural dominant *before* the development section, had not yet been strongly rooted historically.[117] Such a device would more likely be found in a longer symphonic movement written at a somewhat later period.[118] In a three-key exposition, other structural chords displace the tonic in the background far earlier in the movement than the retransition, and large-scale harmonic events take place over longer stretches of time. In a shorter symphonic work such as the present Haydn symphony, this may not have been as much of a concern. And, it is still consistent in Haydn's sonata strategy that a substantial apportionment of developmental work transpires within the area of a prolonged tonic. In this symphony, compared to the other eleven, this technique is brought to its ultimate limit, as the majority of harmonic motion in the development section, as well as the exposition, must be viewed within the parameters of a prolonged tonic.

Chromatic considerations

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[117]Even so, Haydn's *Sturm und Drang* "Farewell" Symphony no. 45 in F♯ minor from 1772 is a singular case since it uses a three-key exposition, anticipating its more prominent use in the next century.

[118]Beethoven's 1807 Overture to *Coriolanus*, op. 62, also unique in Beethoven's output, is an example of a minor mode three-key exposition. The overture is in C minor and has a second harmonic area in the relative major, but cadences in the dominant *before* the development section.

Although I have graphed the details of the chromatic array in the middle staff, the PCA cannot be particularly extensive in the exposition since the only chromatic entity without an explicit harmonic function is A♭, pc 1. Pc 2 (A♮) of course functions as the leading tone to the mediant, while pc 3 (B♭) is the mediant itself. (The PCA notes G, A♭, A♮, B♭ are duplicated in the second harmonic area's transitional phrase between the end of its counterstatement and the codetta.)

An interesting line of inquiry involves the application of system analysis to the exposition since it confirms many aspects of the voice-leading analysis. Specifically, how does Haydn, or any composer maintain interest in a movement where both the first and second harmonic areas are governed by the same eleven-note system? Or to put it another way: is Haydn able to successfully manipulate his gamut of available notes to achieve contrast and compositional diversity in a comparatively stagnant background tonal area?[119] The matter of both the exposition and development section being subsumed under a background G minor tonic, during the course of a long-range voice exchange, creates an interesting but not insurmountable problem.

In the major mode, the introduction of pc 3, written as

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[119]See Appendix for a discussion of how system analysis is applied to the minor mode.

a minor third above the tonic, very often invokes the system of the parallel minor (we will see this more clearly later in the analysis of Symphony no. 91). Here, in the minor mode, we have an example of the use of the missing pitch, pc 6, written as an augmented fourth above the tonic, that invokes the parallel major. Therefore, in our tonic of G minor, C♯ would move us upward into a one-sharp system (G major), while any succeeding statement of the minor tonic chord afterwards, and therefore its B♭, would return us to a two-flat G minor system.

This is just the case in the opening of Symphony no. 83: the first C♯ in measure 2 (implying a one sharp system) is immediately voided by the B♭ under it; the C♯ in measure 10 also creates no systemic modulation due to the B♭ as part of the descending chromatic line in measure 11. The C♯'s that first occur in measure 11, and then help to initiate the half cadence at the end of the opening statement (measure 15), are contradicted by B♭'s at the end of the opening statement and those that open the counterstatement/bridge in measure 17. The ensuing C♯'s are concurrently deactivated by the B♭'s in the tonic triad.

At this point, Haydn introduces an enharmonic spelling of C♯. The D♭ in measure 22, which I understand as occurring just after the establishment of local B♭-major harmony, would have typically moved the systems into the flat direction. In

this case, however, since the D♭ invokes the parallel minor (B♭ minor), the E♮ under it — part of a diminished seventh chord that is applied to the F major triad in measure 22 — negates the modulatory potential of the D♭. Overall, we remain in a two-flat system even though the local harmony has changed to the relative major. From the point just after the diminished seventh chord until the end of the exposition, all eleven notes that make up a two-flat system are present while the absence of D♭ and C♯ confirm this analysis.

If the system modulations are followed throughout the development section, it will be seen that over the course of the expansion of the two-flat gamut a number of local system alterations occur. However, they are presented by Haydn in an orderly and logical fashion. From measures 69 through 97, systems are consistently pushed toward the flat side through the use of D♭ which momentarily leads us from a three-flat to a five-flat environment. Of course, that system change is always soon canceled by E♮. From measures 97 through 130 (the beginning of the recapitulation), Haydn consistently employs C♯ (instead of D♭) to provoke temporary fluctuations within the two-flat tonic system. While C♯ brings us up into the system of the parallel major (one sharp), any succeeding employment of B♭ will return us to our two-flat tonic environment. The interplay of B♭ and C♯ in the second half of the development section prevents any motion out of the two-flat

tonic system. In a sense, the "flavor" of the development is considerably altered after measure 97 because of the abandonment of D♭ and the activation of C♯.

Of course, it can be plainly seen, using this analytical technique, that Haydn's use of C♯ and B♭ to create fluctuations within the two-flat system create a high-level expansion of the opening motive of the symphony which begins G-B♭-C♯-D.

It is interesting to observe that both voice-leading and chromatic analyses confirm the function of the augmented-sixth chord in measure 118 operating within the context of tonic harmony: in the voice-leading analysis, this chord signals the imminent arrival of the structural dominant at the retransition, setting us up for G minor at the recapitulation, while with system analysis, the B♭ of the augmented-sixth chord is seen to return us to a two-flat system after an expanse of eight measures (from measures 109 to 116) in a one-sharp system.

It was previously mentioned that there may be some justification in speculating about whether Mozart's Symphony no. 40 in G minor may have had its roots in the Haydn symphony under consideration.[120] Although the two development

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[120]H. C. Robbins Landon writes in *Haydn: His Life and Work*, *op. cit.*, p. 225 - 6, "When Mozart was composing his last three symphonies in the summer of 1788, the most recent symphonies by Haydn he could have known would have been nos. 82 - 87, published in Vienna by Artaria as opp. 51 and 52 in

sections differ in many ways, there is a considerable overlap of procedures used by both composers in their expositions. In the Haydn symphony, pc 6, C♯, is immediately introduced as a significant compositional element: the C♯ invokes the system of the parallel major which is immediately opposed by the next B♭ as part of tonic harmony. However, in both the Mozart and Haydn symphonies, the half cadences at the end of the opening statements are anchored by C♯'s: in the Haydn, C♯ enters as part of a dominant pedal while in the Mozart, the C♯ enters as part of a diminished seventh chord applied to the dominant. At this point, the antiphonal play between string the wind choirs is the same in both symphonies and, in both cases, the C♯ brings us up to one-sharp systems.

Both symphonies' next periods are counterstatement/bridges, and both symphonies reintroduce pc 6, this time enharmonically respelled as D♭. In Haydn, the D♭

December 1787 ... For his three works Mozart chose the same keys as the Artaria op. 51 publication (nos. 82 - 84)—E♭, G minor, and C major—and there are further correspondences that suggest that the older composer's symphonies spurred Mozart to new levels of inspiration ... Mozart's slow movement [in his Symphony no. 40] shows a certain initial resemblance to that of no. 83 by Haydn: E flat major, andante, *piano* dynamic, string scoring, ... repeated tonic notes to open the theme and gently emphasized discords (including supertonic seventh in bar 3 in Haydn, bar 2 in Mozart)."

Landon adds (p. 226), "Mozart's music absorbed some of the argumentative feature of Haydn's style, obviously evident in Mozart's increasing interest in monothematic sonata form in the second half of the decade, while Haydn's harmonic language was to broaden, the more familiar he became with Mozart's compositions."

occurs as part of an E♮ diminished seventh chord applied to F, the dominant of the relative major. In Mozart, pc 6 is part of a linearized E♮ diminished seventh chord over a C pedal, creating a dominant ninth chord which is also applied to the dominant of the relative major.

At the end of Haydn's bridge, a descending chromatic line, F- E♮-E♭-D (followed by C), adorns the cadence on V/III in measure 44. In the Mozart, the F-E♮-E♭ (followed by D, C and B♭) becomes the subject of the second harmonic area. While Haydn remains in a two-flat system (B♭ major) after the diminished seventh chord in the bridge, Mozart employs the same diminished seventh interval (E♮-D♭), this time linearized between measures 58 and 63. However, the same thing is accomplished: the E♮ cancels the potential modulation into a five-flat system invoked by the D♭, and we remain in a two-flat (B♭ major) system until the end of the exposition.

As was his stylistic preference, particularly in his late symphonies, Mozart's additional chromatic diversions increase the length of his second harmonic areas and help to create a more substantial closing period. As mentioned above, this Haydn symphony has no closing period.

C H A P T E R 7

SYMPHONY NO. 84

Symphony no. 84 in E♭ was written in 1786. It is a type 1 monothematic exposition with an articulated second harmonic area; therefore, the second theme employs the same material as the Allegro's opening statement transposed into the dominant. As we will see, analysis of some of the formal aspects of the movement is complicated by an apparent contradiction between harmonic and formal elements of the exposition.

General considerations

In many of the symphonies analyzed in this essay, an augmented-sixth chord becomes a significant center of attention in the exposition, as it is used to achieve a voice exchange between the opening tonic and the harmonic progression into the second harmonic area.[121] The most unusual aspect of the analysis of this symphony involves the

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[121]This discussion concentrates upon unusual elements of sonata design and strategy, particularly with respect to the bridge and second harmonic area. For an interesting analysis of the opening statement, particularly with reference to phrase structure and harmonic extension, see William Rothstein, *Phrase Rhythm in Tonal Music*, pp. 157-60.

placement of a "misspelled" augmented-sixth chord — and, therefore, the voice exchange — that contradicts our assumptions about the formal location of the movement's second harmonic area. Although the second harmonic area appears to begin in measure 74, the voice exchange that typically initiates that area does not occur until measure 88. Therefore, the second harmonic area is not fully secured until the codetta in measure 104, and we are left with the inevitable conclusion that the arrival of what had appeared as the second harmonic area in measure 74 still must be ultimately subsumed under tonic harmony! There appears, then, to be a conflict between the harmonic structure and the formal design of the movement's exposition, particularly concerning the extent of the bridge and the precise placement of the second harmonic area.

Another potential reading, one that was considered and abandoned, downplays the high level structural significance of the "misspelled" augmented 6th chord so that it operates only within the framework of the second harmonic area in measure 74ff. The advantage of this interpretation is immediately obvious since the confrontation between design and structural elements is eliminated as a pivotal issue. After all, the analysis of the PCA could support this alternative: the rising PCA reaches A♮ and B♭ (pc's 6 and 7) just at the end of the bridge before the oboes and bassoons begin their

articulation of the opening thematic material, now in the dominant, to begin the second harmonic area in measure 74.

Although this reading is neater, it fails to explain why Haydn placed so much rhythmic weight on the resolution of G♭ to F (actually allowing G♭ to rise to G♮ first), using an unusually protracted passage three measures before the augmented-sixth that is extended until the codetta. The G♭ and the F fill sixteen measures which are then further extended just before the codetta by more chromaticism and a V^4_2 - I^6_3 - II^6_3 - $V^{6-5}_{4-\sharp}$ - I progression into the final cadence.

Although both readings appear to have validity, the more idiosyncratic of the two also explains an unusual pedal point which will be discussed later. Perhaps the more unusual of the two analyses may actually be more in keeping with the spirit of Haydn's predilection for the unanticipated. This approach is also not foreign to Haydn; a similar question has been addressed in Symphony no. 73. However, Symphony no. 73 avoids the introduction of second harmonic area material in the middle of the exposition, giving it a sense of through-composition as the bridge is constantly elaborated and expanded over the course of the exposition. Symphony no. 84, however, introduces second harmonic area material where we expect to find it, and then contradicts our previous expectations by shifting the exposition's center of gravity toward the double bar by placing the augmented-sixth chord in

a position that appears half way through the second harmonic area. Therefore, a conflict between melodic and harmonic elements, not to mention a conflict of purely harmonic elements, creates a strong rhythmic shift toward the double bar.

Another important focal point in this symphony involves the role of D♭, first presented in the second violins in measure 3, and its explicit conflict with the diatonic D. A parallel issue is the G♭ introduced at the end of the slow introduction in measures 16 in the viola part. These chromatic gestures will ultimately motivate the unusually placed chromatic voice exchange.

The last movement, which is also in sonata form, reinstitutes many of the unusual features of the first movement by also using an augmented-sixth chord (now "correctly" spelled with an E♮!) in measure 47 which is placed more conventionally where we *first* understand the second harmonic area to be located. The notes E♭ and E♮, the first two notes of the PCA, also oppose each other in the first movement.

Voice-leading considerations

The principal voice-leading issue in the exposition, the function of the "misspelled" augmented-sixth chord, is

directly related to the D♭-D♮ chromatic element referred to above and involves a middleground *Urlinie* descent in dominant harmony that begins with the bridge in measure 40 and continues to the codetta in measure 104 (see graph). This harmonic support for this mini-descent involves G♭ and the transformation of D♮ into D♭.

The character of the (tonic) *Urlinie*, which descends from $\hat{5}$, is also noteworthy. First established toward the end of the slow introduction in measure 13 and anchored at the opening of the *Allegro*, $\hat{5}$ hovers over the entire exposition and development. The structural interruption (and, therefore, the descent to $\hat{2}$) does not take place until the end of the development section; *Urlinie* $\hat{2}$ is not formally attained until the retransition in measure 192 and in an inner voice.[122] As a result of the stationary nature of $\hat{5}$ during the exposition and most of the development, the mini-descent occurs in the middleground, framing the bridge and second harmonic area.

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[122] *Urlinie* $\hat{4}$ appears in measure 179; *Urlinie* $\hat{3}$ appears in measure 185. Another feasible reading takes the $\hat{5}$ - $\hat{6}$ - $\hat{5}$ neighbor note motion that appears over the first phrase of the Allegro's opening statement and expands it over the exposition, development and opening of the recapitulation. Therefore, *Urlinie* $\hat{5}$ is maintained from the opening of the exposition until the false recapitulation in measure 148 displaces it to $\hat{6}$. *Urlinie* $\hat{5}$ is regained at the retransition in measure 192. In this alternative reading, there is no *Urlinie* descent to $\hat{1}$ until just before the coda in measure 244.

The note D, as $\hat{3}$ in dominant harmony, is realized early in the bridge in measure 46 (prepared in measures 44 and 45). The D descends to C ($\hat{2}$) supported by V (of the dominant) in measure 53. The descent is interrupted at this point and V is regained in measure 58. The $\hat{3}$ of the dominant is recovered in measure 65 and descends to $\hat{2}$ and $\hat{1}$ in measures 72 and 73. Measure 73 is the beginning of the (formal) second harmonic area and is also the beginning of a second "mini-descent." This time, however, D has been transformed to D♭ in measure 85, consistent with the analysis of the chief chromatic issue of the slow introduction. D♭ is supported by G♭.[123] This sonority becomes the "misspelled" augmented-sixth chord in measure 88 (E♮ is spelled F♭) and becomes the basis for an expansive chromatic voice exchange with tonic (E♭) harmony.[124] The D♭ then continues to descend to C♭ and B♭. The D♭ is "corrected" to D♮ in measure 94 and again descends

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[123]In the development (see measure 127), during an extensive pedal point on A, D♭ again is attained as a significant melodic note (measure 136). However, this time it is presented as a dissonance over a $\frac{6}{4}$ chord. The D♭ locally resolves to C in measure 148 at the point of a false recapitulation in F major. However, during this phrase D♮, not D♭, is now seen as the "legitimate" resolution to C (cf., measures 151 - 153).

[124]There is also a chromatic conflict between F♮ and F♭ present in the exposition. The use of F♭ in the "augmented-sixth chord" maintains a pretense, as it were, and a false expectation of a G♭ dominant seventh eventually resolving to C♭! The absolute necessity of that spelling, i.e., as F♭, will be discussed below.

to B♭ at the beginning of the codetta in measure 104.

Chromatic considerations

The extensive chromaticism of the slow introduction, which, in fact, contains all chromatics except for E♮, has already been mentioned. When E♮ first arrives in measure 25 it becomes pc 1. It is significant that the slow introduction is framed by the most important chromatic elements: D♮-D♭ in measures 3 and 4, and G♮-G♭ in measures 16 and 17 (repeated in 19 and 20). At the opening of the exposition, pc 1 of the PCA is echoed in the counterstatement, measure 37. The notes of the chromatic array, E♭, E♮, F are reiterated in augmentation in the second violin in measures 53 - 55, and again in 55 - 57. As expected, the bridge unfolds more chromatics: F♯, G, A♮ — the diatonic pc 5, A♭, is skipped as it often is at the point where local dominant harmony displaces the tonic — in measures 62 and 63. The PCA notes A♮ (repeated) and B♭ (pc's 6 and 7) are given in measures 72 and 73. At this point, on first hearing, one assumes that the second harmonic area has begun. A second statement of the PCA also begins at this point: E♭ in measure 74, E♮ and F in measure 78, G♭ in 81 and reiterated at the point of preparation for the augmented-sixth chord in measure 85, G♮ in measure 93 (A♭ is again skipped), and then A♮ and B♭ in measures 103 and 104. Measure 104

begins a seven-measure codetta. An interesting detail involves a respelling of pc 3 (G♭) as F♯ in measure 100; this is presented in this way again in the development section, in measure 114.

In accounting for the unfolding of the chromatic array, I have coordinated the PCA half notes with my analysis of the form and therefore do not emphasize the first rise to dominant harmony at measure 73. Pc's 6 and 7 of the PCA occur after the voice exchange and therefore at the codetta, with the arrival of the structural dominant.

Pc 3, which is the most difficult of the chromatics to unfold persuasively in the major mode, is given a great deal of prominence not only within the augmented-sixth chord, but also during its resolution. In measure 93, G♭ is first transformed into G♮ before it resolves to F in measure 94. (The resolution of G♭ to G♮ is more *chromatically* significant as it occurs on a higher level of structure than the more local resolution of G♭ to F.) The note F now has to pull the tonal center strongly back to B♭. This is accomplished by balancing the augmented-sixth chord with a lengthy pedal point on F, beginning in measure 94 and continuing until measure 100. Pc 3 is again present, this time written as F♯, a chromatic passing tone that resolves to G in measure 101. A conventional cadence occurs at the opening of the codetta to restore tonal stability.

It is the second statement of the PCA, with all its chromatic peculiarities, that is much stronger and dramatic than the first statement, as it is now secured harmonically with the structural dominant at the codetta. As in Symphony no. 73, the coordination of the PCA and the structural dominant helps to shift the rhythmic weight of the exposition further toward the double bar. In a sense, the first PCA statement is a "dry run" for the more heavily emphasized second PCA statement.

The D♭ and G♭ chromatics return in the recapitulation. At the beginning of the bridge, measure 209, D♭ is presented as a chromatic passing tone, thereby giving special emphasis to C, an *Urlinie* neighbor note. In measure 223, D♭ returns, resolving to C. When C arrives, however, the harmonic support for it has been altered, becoming a diminished seventh chord in measure 225. This chord reintroduces G♭ and resolves in the next measure to G♮. This happens again in measure 230, but the ultimate resolution of G♭ to G♮ doesn't happen convincingly until the opening of the second harmonic area (now in E♭) in measure 237.

Any remaining chromatic questions about G♭ are answered in the coda, measure 244, in E♭ minor. (As Haydn uses the harmonic form exclusively, D♭ is — almost! — no longer a concern.) The G♭ ultimately and most conclusively resolves to G♮ at the $\frac{6}{4}$ chord in measure 250, an area parallel to the

dominant pedal just before the codetta in the exposition.

The returning D♭ in measures 260 and 262, the codetta of the recapitulation, discloses that Haydn will probably retain this issue for developmental use in later movements.[125]

One other observation: the order in which the chromatic inflections appear in the slow introduction of the first movement, D♭, B♮, A♮ and G♭, is the reverse of their appearance in the PCA over the course of the exposition and development. (Remember that the PCA unfolds an entire octave between the beginning of the exposition and the opening of the recapitulation). The only chromatic that isn't introduced, E♮, becomes pc 1 of the PCA in the Allegro in measure 25 and appears as a pivotal entity: as the PCA octave unfolds over the next 178 measures in its rising order, it appears as a chromatic mirror image of the slow introduction.

In the slow introduction, the only potential contradiction of the tonic, three-flat system occurs with the use of G♭ in measures 16 and 18. However, whereas G♭ would have moved the gamut down into the parallel minor, and into six flats, the A♮'s that occur almost concurrently prevent such a modulation. Three flats are maintained, then, into the Allegro. The system is almost changed again with the PCA

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[125]In the final movement D♭ becomes significant again during a false recapitulation in A♭ major. This issue is not fully resolved until the retransition in measure 189. The G♭ is finally resolved in measure 269, just before the coda in measure 271.

arrival of pc 3, F♯, in measure 62, and would have accomplished a system modulation had E♭ not almost simultaneously been present with the F♯. However, one way or the other, by introducing pc 3 at this point, Haydn is introducing an element of instability. In measure 81, Haydn again plays G♭'s and A♮'s against one another and continues to do so until measure 94. This chromatic manipulation seems strongest when the "misspelled" augmented-sixth enters in measure 88 and continues to the end of measure 93.

The final disruption of the tonic system in the exposition occurs in measure 100 because of F♯ in the violas and basses. The first E♭ after that, in measure 101, quickly regains the background three-flat tonic gamut. This spelling of pc 3 is picked up and exploited in the development section, first in measure 114.[126] As we have seen before (in Symphony no. 82), the augmented-sixth chord functions as a "line of demarcation" between the alternate spellings of pc 3 in the exposition; we will see this happening again in later symphonies. If this is indeed the case, it would help corroborate the supposition, previously only defended on

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[126]The issue of the augmented-sixth chord is avoided in the recapitulation. That chord, presented in the coda in measure 249, is now built on C♭ and supports an A♮ instead of a B♭♭, thus defusing the issue. Of course, the resulting clash between C♮ and C♭ becomes cannon fodder for the last movement: C♭ finally resolves to C♮ — just before the retransition — in measure 186. (Cf., also, measures 220 - 223 that present B♮ - C in the first violins and then in the basses.)

voice-leading grounds, that the second harmonic area is not activated until the entrance of the augmented-sixth chord, formal considerations notwithstanding.[127]

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[127]We will see later, in reference to Symphony no. 88, that this formulation seems to work best in the first Paris set, not the second.

CHAPTER 8

SYMPHONY NO. 85

Symphony no. 85 in B♭ major, subtitled "La Reine" since it is said to have been a favorite of Marie Antoinette, was probably composed in 1785 and first performed in 1787.[128] The first movement is typical of a type 1 monothematic sonata form where the second harmonic area is articulated by the same thematic material as the opening of the *Vivace* but in dominant harmony.

General considerations

The work opens with a slow introduction that immediately introduces chromatic notes which will play major roles in the unfolding of the whole movement. The notes C♯ and F♯ are part of a rising line in measure 1; both the chromatics and the rising figure itself play significant motivic roles. Although F♯ (and its G♭ enharmonic counterpart) does not become particularly prominent until the development section, C♯/D♭ already becomes a concern even in the slow introduction. The

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[128]H. C. Robbins Landon, *Haydn: His Life and Music*, *op. cit.*, p. 217.

note d^2, which will initiate the *Urlinie* descent in the *Vivace*, is first introduced in the flute of measure 5 and is at once transformed into $d\flat^3$, supported by diminished seventh harmony in measure 6. The resolution of $d\flat^3$ to c^2 in the second violin in measure 7 creates a D-D♭-C motivic trichord which will become the voice leading and harmonic basis for the way in which the entire exposition unfolds. As a scalar element of a D-major prevailing harmony, C♯ also becomes somewhat more significant again toward the end of the development section as the retransition prolongs III♯, never arriving at V before the recapitulation. Haydn does, however, transform C♯ to C♮ in measure 211, one measure before the recapitulation. The only instruments present at this point are the first violins, in which part the D-C♯-C♮ trichord descends into the B♭ of the recapitulation and, at the same time, elides with B♭ at the start of the recapitulation. As a result, the conflict between C♯ and C♮ is prominently displayed.

A mainstay of the classical style involves the fulfillment of certain expectations created by previous gestures. In the case of the F♯-G, initially presented between the first two measures of the introduction, we have an excellent example of Haydn's purposeful lack of a gesture's fulfillment. The rising unison line suggests a very local tonicization of G minor. Because of its position in the slow

introduction, we would anticipate a prominent display in G minor, perhaps in the bridge, perhaps in the development, perhaps in the coda. Since the development section prolongs D major, III♯, that would have been the most likely area for Haydn to have drawn out that issue, locally applying III♯ as $V^5_♯$/VI. Yet, it happens only very briefly in that area, and seems not to be particularly significant in the remainder of the symphony as well.[129]

The bridge, launched in measure 42, begins to hint at a tonicization of V in measures 49 and 50. This is not yet successful because the prospective location for structurally

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[129]In the first movement, G minor never occurs in any serious manner consistent with the attempt to compose out the opening gesture of the slow introduction into an integral part of the movement. In fact, since the only occurrence of G minor in the first movement is one short excursion in an exposition orchestral tutti (measures 25 - 26) and a short passage in the development, between measures 168 and 181, one might expect that a more prominently displayed utilization of this gesture would appear in a later movement. Yet, again, it never happens anywhere in the entire symphony. Sometimes one wonders about issues that may not have definite answers. Be that as it may, Antony Hodgson in his *The Music of Joseph Haydn: The Symphonies* (London: Tantivy Press, 1976) p.110, writes about an interesting letter "brought to light by Jens Peter Larsen . . . . Haydn clarified the order in which he wanted the symphonies printed, *viz.* 87, 85, 83, 84, 86, 82." If this is the case, then Symphony no. 85, which implies motion to G minor (but never makes it), should be followed by the G minor Symphony no. 83! Perhaps just a meaningful coincidence. However, Hodgson continues by stating that Haydn later suggested to Forster the order 82, 87, 85, 84, 83, 86. Whichever of Haydn's orderings are used, neither list is in the order that the symphonies were written. In Jens Peter Larsen's *The New Grove: Haydn* (New York: Norton, 1982), p. 149, Georg Feder, who was responsible for the work list, suggests that both Symphonies no. 83 and no. 85 may have been written in 1785, but their exact order remains a mystery.

dominant harmony, measure 62, turns toward the parallel minor, requiring A♭.[130] However, the minor mode provides Haydn with an opportunity to introduce chromatics consistent with this new palette, including D♭ (supporting an augmented 6th chord) in measure 69. A chromatic voice exchange is accomplished at this moment and resolves to II♮ in measure 70; the second harmonic area begins in measure 78. This movement includes a full closing area in measure 96 and a codetta in measure 105.

Voice-leading considerations

The preliminary groundwork laid for the chromatic voice exchange is one of the most unusual features of this movement since its preparation, earlier in the bridge, is not presented as a *totally* chromatic event. In measure 51 (see graph) a gesture occurs that will eventually return as a full-fledged chromatic voice exchange in measure 69. At this point, however, D♮ has not yet been recast as D♭; however, B♮, pc 1 of the PCA (discussed later), does occur at this point. Instead of the augmented 6th that occurs in measure 69, this gesture in measure 51 is supported by $V^{\flat}_{3}$/C, leading to the small area, momentarily seeming to tonicize F minor, and

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[130]Cf. Symphonies no. 84 in E♭ and no. 92 in G major ("The Oxford") whose exposition also turns toward the minor dominant before a true structural dominant is attained one period later.

ultimately leading to the second harmonic area in F major. A potentially confusing aspect of this phrase involves the prominent C in the bass before it. Since it has not yet been successfully displaced by strong harmonic motion, there is a sense that C still lingers under the F minor area, creating an apparently unstable $\frac{6}{4}$ sonority throughout.

Since the area in F minor is never stabilized, the C first presented in the bass of measure 52 and continued through measure 61 must ultimately be interpreted an accented passing tone between the tonic, B♭, and the bass of the augmented-sixth chord, D♭. At the point of the augmented-sixth, the PCA finally begins to move as well (see below).

One might anthropomorphically describe the preparation (rehearsal?) for the chromatic voice exchange in measure 52 as a *"déjà vu"* experience: when the actual (and, therefore, structural) voice exchange occurs conclusively in measure 69, one might reminisce about the previous bridge material and think, "Haven't I heard this before?" This is why the graph on the lower staves has B♮-C (soprano) and D♮-C (bass) in parentheses.

An unusual characteristic in the second harmonic area concerns the precise placement of *Urlinie* $\hat{2}$ which is not firmly anchored until measure 96, where the closing period begins. Although the delay of major structural events is one vital attribute of the Haydn style, one might speculate that

the postponement of the *Urlinie*'s C may have something to do with its association with D and D♭ in this case. By constantly anticipating the structural arrival of the *Urlinie* (see graph), a more profound motion to $\hat{2}$ is devised. Further emphasis is placed on C during its structural arrival as it is decorated with neighbor note motion, $\hat{5}$ - $\hat{6}$ - $\hat{5}$, in the dominant. Perhaps the special weight and care allotted to $\hat{2}$ is also necessary as the development section, which essentially prolongs III♯, cannot (in a structural sense) resurrect this *Urlinie* note just before the recapitulation.

Chromatic considerations

A number of chromatic considerations have already been touched upon. Haydn's placement of particular non-diatonic notes is indicative of the correlation between his sense of color and his sense of form. The slow introduction introduces three out of five of the non-diatonic pitches. The use of C♯ has already been discussed; its ultimate resolution to C♮ occurs before the coda in the last movement. The use of F♯ and its resolution to F♮ is first played out in the transition between the development, which prolongs III♯, and the recapitulation.

However, A♭ and B♮ are not introduced until the *Vivace*. Although A♭ occurs as part of the descending figure in the

accompaniment in measure 20, it does not have a particularly prominent role until the section in measure 62 that attempts to tonicize F minor. The B♮ is totally tied into the D♭ and the augmented 6th chord in measure 69 and, therefore, closely associated with the A♭. If we take B♭ opening the *Vivace* as the first note of the PCA, B♮ (pc 1) does not occur until the bridge in measure 51. The C (pc 2) may be taken in measure 52. The note D♭, as pc 3, arrives in measure 64, but is not made prominent until the augmented-sixth chord in measure 69. At this point B♮ strongly returns as part of that pivotal sonority. The PCA tones D and E♮, pc's 4 and 6 — deleting E♭ (pc 5) — lead directly into the second harmonic area in measure 78 and the prominent F in the oboe completes the unfolding of the PCA between the background tonic and dominant.[131]

Although most chromatics are resolved in a traditional fashion, such as F♯ resolving locally to G, Haydn's usual long-term strategy is to resolve these chromatics back to their original diatonic "surnames." Specifically C♯ will ultimately and finally resolve to C♮ instead of D; F♯ will ultimately resolve to F♮, not to G. Therefore, Haydn

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[131]A second statement of the first segment of the Primary Chromatic Array (pitches 0 - 7) begins with the opening of the second harmonic area and ends at the first note of the closing area: B♭ in m. 81, B♮ in m. 88, C in m. 89, C♯ and D in m. 91, E♮ in m. 95, and F in m. 96. Again, the diatonic pc 5 (E♭) is presently deleted, but is incorporated during the next PCA unfolding later in the movement.

eventually allows these chromatic alterations to untangle themselves, so to speak, returning them to their "natural," diatonic states.

What Haydn does in place of resolving the F♯ *harmonically* is to allow the note to resolve *contrapuntally* at the opening of the recapitulation. This resolution is confirmed in measures 246 - 255 where Haydn presents all twelve chromatic notes (except for A♭, which has been accounted for between in 226 and 227). This culminates in the resolution of F♯ to F♮ (not to G) between measures 254 and 255.

Another prominent presentation of the D-D♭-C motive, now retrograded, occurs in the last movement beginning in measure 39. A nine-measure pedal point on C in the flute finally moves to C♯ in measure 47 and D in measure 48. Curiously, just after, in measure 53, the instruments play the opening notes of the slow introduction. This phrase culminates in an alteration of D and C♯ that finally allows C♯ to resolve to C♮ in measure 60. This, very locally, becomes a dominant seventh of F.

The final resolution of F♯ occurs in the last movement as well Notice, too, measures 157 - 162 of the fourth movement) just before the fermata where F♯ is reinterpreted as G♭ for a moment in order to spell the resolution more conventionally. In measure 139, F♯ resolves to F♮ as part of a descending chromatic line between G and D; after measure 139, there are

no more F♯ in the movement. The final resolution of F♯ to F♮, also, is emphasized with a pedal point on F♮ between measures 146 and 161. The eight-measure pedal point on F in the oboe that begins in measure 190 reconfirms the resolution of this drawn-out issue. The resolution of A♭ can also be mentioned at this point: see measures 198ff. of the last movement, where the chromatic, A♭, finally and unequivocally is "corrected" to A♮. This is the next to the last chromatic introduced in the first movement and the last chromatic resolved in the symphony.

Thus, not only the first movement, but the entire work is uniquely animated and unified by these chromatic gestures and their conclusive resolutions at the end of the symphony. Although these matters are not entirely within the realm of voice leading, they do create yet another aspect of the compositional process at which Haydn, naturally, excels.

CHAPTER 9

SYMPHONY NO. 86

Symphony no. 86 in D major was written in 1786 and is one of three Paris symphonies that opens with a slow introduction. The contrasting harmonic areas are intimately tied by a type 1 monothematic procedure. The use of monothematicism coupled with a non-tonic opening creates some innovative events in this movement.

General considerations

Many exposition bridges we will examine are governed by a chromatic voice exchange between tonic harmony, usually supporting an *Urlinie* that descends from $\hat{3}$, and an applied sonority, usually an augmented-sixth, to II♯ presented immediately before the entrance of the second harmonic area. The procedure used by Haydn in this symphony is similar, but certainly not identical. In Symphony no. 86, a partial chromatic voice exchange is employed instead of the full version which is more common in the Paris set. In this case, F♯ — $\hat{3}$ — exchanges for F♮, but D♮ is not exchanged for D♯. Thus, a chromaticized tonic I^6_3 (with F♮ in the bass of measure

43) to $II^{7}_{\sharp}$ in measure 44 leads to the second harmonic area in measure 54. In this case, Haydn perhaps avoids the usual augmented-sixth chord since the chromaticized tonic goes to an E *dominant seventh chord* and not to an E *dominant triad*. Haydn thus averts a potentially uncomfortable local conflict of D♮ and D♯ at this point, since he intends to link the D♮ cover tone that has hovered over the entire first harmonic area and bridge to a prominent C♯ in the second harmonic area. To further entangle the proceedings, the cadence onto II♯ in measure 53 no longer has the D♮ present, even though there is no indication that it has been displaced or resolved. In essence, the dominant triad that exists at this point still represents a dominant seventh chord.

Therefore, Haydn is not able to exploit an augmented-sixth chord at the point he normally would have since a 10-measure extension of $II^{7}_{\sharp}$ precedes the second harmonic area. During this brief passage, he is able to persistently underscore the prominence of F♮, pc 3. This issue is related to some unusual procedures within the PCA and Haydn's use of a non-tonic opening for the *Allegro spiritoso*.

Voice-leading considerations

The slow introduction anticipates the typical interruption form of a sonata by employing an interruption

itself. Tonic harmony is prolonged from measures 1 to 13, but is displaced by a progression of VII°7/V to V in measures 16 and 17. Because of the use of this important diminished seventh sonority, $\sharp\hat{3}$ becomes $\flat\hat{3}$. By placing F♭ in a very high register — f♭³ — the note is given special emphasis and becomes one of the most significant gestures in Haydn's design for the exposition. This note is carefully prepared as a simple chromatic passing tone, written as E♯, in measure 13.

As with other symphonies from this period, Haydn chose not to begin the *Allegro spiritoso* on tonic harmony.[132] A progression within the supertonic (V^6_5 to I within II) proceeds to V^6_5 on the tonic and finally to I in measure 25. Tonic harmony continues unhindered until the bridge, in measure 37, launches a series of events that eventually leads to a (partial) chromatic voice exchange in measure 43. Here, the *Urlinie* F♯ is transformed to F♭ and transferred into the bass register. The F♭ resolves locally to E which becomes the bass note of $II^7_\sharp$, and resolves to V in measure 54 as the second harmonic area is initiated. Therefore, Haydn uses the F♯ - F♭

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[132]In the works under consideration, Symphony no. 73 in D major begins its Allegro with a subdominant chord. The Allegro from Symphony no. 88 begins with dominant harmony, as does Symphony no. 90. The "Oxford" Symphony no. 92 in G major begins its Allegro on a dominant seventh chord. Most of the symphonies listed here, of course, have slow introductions and the majority of these slow introductions end on dominant triads; however, no. 90's slow introduction ends on VII°7/V while no. 92's ends on an augmented-sixth chord applied to the succeeding dominant seventh chord that begins the Allegro.

exchange to give function and purpose to the entire bridge section; also, the presence of F♮ in the introduction creates an issue that links it intrinsically to the exposition.

Haydn also links the introduction to the exposition by using e^3 (picking up the $f♮^3$) in the second harmonic area; see measures 59 - 61, and measure 76 and 83.

The closing area that begins in measure 65 is extended by unfolding three phrases. Measures 65 - 74 are elided to measures 74 - 82. The codetta, that begins in measure 82, and is also elided to the previous phrase.

Chromatic considerations

The second note of the PCA, pc 1, very often first appears in the bridge in the pieces under consideration. However, by using D♯ and E in the first two measures of the *Allegro* and reserving F♯, G, G♯ and A (in measures 54 - 57) for the opening of the second harmonic area, Haydn has isolated F♮, the missing pitch of the two-sharp system, creating a special *raison d'être* for the bridge. The voice-leading graph clearly indicates that the transformation of F♯ into F♮ is one of the bridge's primary functions. It is unusual, generally speaking, for pc's 4, 5, 6 and 7 of the PCA to appear anywhere except before the entrance of the second harmonic area. In this instance, however, the Allegro's non-

tonic opening and its transposition to V in this monothematic exposition creates a necessary delay of these pc's until after the second harmonic area has already gotten under way.

Another curiosity about Haydn's use of F♮ as a fundamental constituent of the symphony: it is interesting, but certainly not without precedent, that Haydn reserves the ultimate resolution (and correction) of F♮ to F♯ for the end of the entire symphony: in measures 122 - 3 of the last movement, F♮ is "fixed" just before the entry of the recapitulation second harmonic area in tonic harmony. Certainly, F♮ resolves to E, and E♯ resolves to F♯ on any number of occasions in the exposition of the first movement, but one of Haydn's missions is to eventually recast F♮ again as *F♯*. In this way, one of the most significant dissonant issues presented in the first movement is "amended," and an aural association is created between the first and last movements.

The close relationship of E and F is further explored in the closing section of the first movement's exposition, beginning on a $\frac{6}{4}$ chord in measure 65. Haydn does this by providing a second statement of the PCA in this area of the exposition (often altered enharmonically), chromatically bonding it to the codetta in measure 82 (see graph): D in measure 65, D♯ in measure 66, E in measure 69, E♯ and F♯ in measure 71 (and reemphasized in measures 74 and 75), Fx and G♯

in measure 75 and 76, G♯ (again) in measure 81 and A in measure 82 (the first measure of the codetta). The inverted trichord E-D♯-D♮ in measure 66[133] gives extra prominence to E; when it moves to E♯ in measure 71, this chromatic relationship creates an association with the previously introduced F♮ and its local resolution to E (still not its ultimate resolution).

It has been observed in other symphonies that an unusual placement or emphasis on pc 3, the missing pitch of an eleven-note system, often indicates an attempt to create a potent dissonance that initiates a system modulation. Here, the initial presentation of the dyadic conflict between F♯ and F♮ in the slow introduction (measures 13 - 16) is preceded by a less significant conflict between chromatics a fifth away, C♯ and C♮ (in measures 10 and 11). (It has been discussed earlier, in Chapter 3, that significant chromatic issues very often occur with their fifth transpositions as "counterparts" in proximity to one another, not a particularly surprising event considering the structure of diatonic music and its association with the circle of fifths.) C♮ also becomes a note that "sticks out" of the texture in the opening of the *Allegro* as a neighbor note, 6♮ of II, in measure 22 and is "corrected" by the grace note in measure 24.

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[133]The dyad D♯ - E, a segment of this trichord, may relate to the opening of the Allegro, V♯/II - II, in measures 22 - 23.

Yet, this issue — what to do with pc 3 — continues into the development section which unfolds much material in III, F♯ minor. In this case, the dyadic conflict takes the form of a simple association of a local tonic and its leading tone, F♯ and E♯. Toward the end of the development, F♯ initiates a circle of fifths: F♯ in measure 136, B in measure 138, E in measure 140, and A in measure 142 leads to the retransition. This culminates on the tonic, D, in the recapitulation which is, of course, delayed by the non-tonic opening; D in the recapitulation does not appear in the bass until measure 155.

The resolution of C♮ to C♯ takes place in the coda, which begins in measure 200. It occurs almost immediately in measures 200 and 201 and is repeated in measures 204 and 205. This issue continues into the next movement in G major: notice the cellos in measure 2 of the second movement.

Although the final resolution of F♮ to F♯ in the symphony occurs in the last movement (see above), it should be noted as well that the final resolution of the C♮ to C♯ occurs just before the end of the last movement in measures 162 - 5 and is expressed trichordally as C♮-C♯-D.

It adds some additional fuel to the argument — that the use of the missing twelfth pitch destabilizes an eleven-note gamut — by observing that the first movement recapitulation is an example of a considerable stretch of music where only eleven notes are unfolded; there is not one F♮ or E♯ in the

entire section, yet, every other chromatic note is used. It is unusual for Haydn to completely avoid any systemic modulations in an extended musical period such as this.

C H A P T E R 1 0

SYMPHONY NO. 87

Symphony no. 87 in A major, was numbered the last of the Paris group by Eusebius von Mandyczewski, who assembled the first complete works edition early in this century. However, no. 87 was actually one of the first Paris symphonies chronologically, having been written in 1785 along with no. 83. Both no. 83 and no. 87, therefore, precede no. 82.[134] This may be significant here as the present work presents far fewer analytical difficulties and seems to be less intricately detailed than most of the other symphonies discussed in this essay.

The most immediate similarity among Symphonies no. 82, 83 and 87 is that none employs a slow introduction. Although this is not unusual for a *Sturm und Drang*-type minor mode symphony such as no. 83 or even no. 95 (in C minor, from the London set), the slow introduction in major mode symphonies

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[134]See footnote no. 128 in the chapter above on Symphony no. 85 which discusses Haydn's note to Artaria in Vienna concerning the order of symphonies in the Paris set. This important document, dated August 2, 1787, was not known during the early years of this century when Haydn's symphonies were officially numbered for the complete works. Cf. Franz Artaria and Hugo Botstiber, *Joseph Haydn und das Verlagshaus Artaria* (Vienna, 1909), p. 50.

almost becomes the rule in the composer's later symphonic output. Aside from the one London symphony in minor mode, the other eleven are in major mode and each has a slow introduction.

General considerations

Although his scheme for approaching the second harmonic area in this work is similar to many others (an extended chromatic voice exchange culminating in an augmented-sixth chord), Haydn's use of more intense chromatic preferences permeating many levels of structure is not imposed as rigorously on this work as many of the later ones. In Symphony no. 87, the crucial chromatic gesture, involving the notes A♯ and C♮ in the voice exchange, functions on many levels, but the working out of the voice leading of the entire movement seems not to be as saturated with chromatic references and cross references as is the situation in the later symphonies.

One might speculate, then, that Haydn's success with the chromatic procedure in this symphony may have inspired him to utilize a more organically-unified chromatic spectrum in his later output, conceivably permitting the chromaticized voice exchange to be involved with a panoply of associated gestures that infiltrate every level of the work. Later, it would be

seen that the set of the twelve London symphonies represented an extremely high level of motivically-organized chromaticism that was not to be surpassed, or even easily matched, by any other tonal composer.[135] It seems, also, that Haydn ultimately believed that this multi-level organizational strategy was most successfully wielded in conjunction with a slow introduction that gave voice to the most significant motivic issues before the shape of the sonata began to unfold.

Earlier symphonists of the *style galant* tradition, such as Sammartini and, later, Wagenseil and Monn, would have avoided such blatant displays of overt chromaticism and other complicated organizational techniques. Perhaps Haydn may be credited with imbuing that heritage with new lifeblood as his considerable expansion of the diatonic palate became both more conspicuous and superbly controlled. Another aspect of the present symphony which harkens back to the roots of the classical symphony is the seamless quality of the movement accomplished, for the most part, by the persistent eighth-note motion established at the outset of the *Vivace*. This rhythmic unifier is not relinquished until the end of the movement. In the exposition, the constant eighth-note energy does not even let up at the point that the second harmonic area enters in

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[135]A significant number works by Brahms late in the nineteenth century may be seen as the natural successors to the sophisticated and elaborately delineated organizational precepts established by Haydn a century earlier.

measure 38. This technique is reminiscent of Wagenseil's and J. C. Bach's symphonies and overtures.

Voice-leading considerations

It was previously stated that the chromatic elements that will be allied with the chromatic voice exchange, the notes A♯ and C♮ and those notes intricately linked to them, will become part of the chief motivic concerns in this movement. The note C♮, the bass support for the augmented-sixth chord, is also the "problematic" pc 3, the missing pitch of the eleven-note chromatic array.

As this movement has no slow introduction, the usual arrangement in which a large-scale rhythmic upbeat precedes the *Allegro* is absent. As a consequence, so too is Haydn's usual rhythmic and motivic preparations which generally provide the stimulus for the unfolding of the rest of the movement. Proportionally, it is necessary, then, to have a substantial amount of purely diatonic material before the entry of chromatic elements. In Haydn's later works, the use of the slow introduction allowed him to bring in chromatic gestures early in the *Allegro* without waiting until the bridge, since they had been prepared earlier, often during the initial statement of the exposition. In Symphony no. 87, not one non-diatonic element is introduced in the initial

statement; these components are saved for the bridge that begins in measure 18.

The role of the initial statement, therefore, is to support e^3, which will be seen as the *Urlinie's* $\hat{5}$, and to let it descend in the upper middleground to d^3 in measure 11. The bridge begins in measure 18 and d^3 is picked up by $c\sharp^3$ in measure 19. Therefore, during the movement's opening statement, extensions, and the first chords of the bridge, the *Urlinie* has already descended from $\hat{5}$ to $\hat{3}$ — perhaps Haydn's way of imposing a dynamic structure on an area not defined by its chromaticism.

The F♯ in the bass of measure 19, toward the opening of the bridge, becomes part of a larger prolongation of tonic harmony (see background graph). Over the course of the bridge, there is a descent from the $c\sharp^3$ in the soprano of measure 19 into an inner voice through the notes b^2 (measure 21) and $a\sharp^2$ (measure 30). In measure 30, the A♯, supported by C♮ in the bass, creates an augmented-sixth chord which becomes the basis for a voice exchange with tonic harmony. This resolves to II♯ in measure 31 and leads to the opening of structural dominant harmony in measure 37. The second harmonic area contains its own descent from b^2 which arrives at e^2 at the codetta. The $c\sharp^3$ attained in measure 54 creates an ornamented b^2. This neighbor note motion and its subsequent dominant-area descent is mirrored in the codetta in

measures 66 and 67.

There is an unusual omission of contrabasses in the orchestra at the end of the exposition, perhaps an analogue to the constricted orchestration of the beginning of the closing area which explodes into the unison *tutti* of measure 58. Perhaps Haydn's intent was to dramatize the return of the forte dynamic at both the repeat of the exposition and the beginning of the development. This procedure is paralleled later, as the retransition, beginning in measure 125, also lacks this instrument and that particular bass register. The opening of the recapitulation and its *tutti* strongly contrast with the previous orchestration.

Chromatic considerations

The intense chromaticism of the bridge diverges considerably with the exclusively diatonic unfolding of the opening statement. The A♯ and the C♮ introduced in measures 20 and 21 prepare the augmented-sixth chord in measure 30. The non-diatonic notes introduced in the bridge passage quickly unfold the remainder of the twelve notes; i.e, G♮ - C♮ - F♮ (first presented as E♯ in measure 19) and A♯ - D♯ are added to the gamut of diatonic pitches before progressing into the second harmonic area. The C♮ and A♯ vertically align in measure 30 to create the augmented-sixth chord, having been

exchanged for diatonic notes within tonic harmony.

The second harmonic area, like the beginning of the movement, also opens diatonically — in E major — without the use of chromatics, until the closing section is reached in measure 47. At this point, one expects the non-diatonic pitches D♮ - G♮ - B♯ - E♯ (or F♮) - A♯. However, both D♮ and F♮, which are absent, are reserved for the opening of the development section. Perhaps Haydn wanted to reserve F for the bass of the (transposed) augmented-sixth chord in the recapitulation (cf. measure 164).

The primary chromatic array unfolds quickly in the bridge and all chromatic pitches from A - D♯ are present in this part of the exposition. The second harmonic area does not have a full restatement of the PCA pitches 0 - 7, which is not necessary but, as has been demonstrated in other symphonies, is very often present nonetheless. Another oddity, one that would be eliminated in Haydn's later works, concerns the method used here that situates chromatic notes in "bunches." Notice that the area between measures 53 through 55 creates another intense area of chromaticism just before the codetta.

It is necessary briefly to explore the recapitulation to adequately illustrate how Haydn's use of the note C♮ (pc 3) demands special consideration in the remainder of the movement. It was stated above that pc 3 was first given prominence as the bass of the augmented-sixth chord in the

exposition. In the recapitulation, the bridge in measure 142 initiates a similar area of chromaticism as it had in the exposition. In the exposition, the A♮ is part of the augmented-sixth chord and, simultaneously, part of an A-A♯-B trichord that appears in the flute in measure 29 through 31. The trichord's terminus, B, is then isolated and becomes the *Urlinie*'s $\hat{2}$ a few measures later at the opening of the second harmonic area. In the recapitulation, the analogous detail is a D - D♯ - E trichord in measure 163 through 165 assigned to the second oboe and viola. Again, the trichord's terminus, E, is promoted to a position where it is transferred registrally to e^3 in measure 171 and becomes linked to the *Urlinie*'s $\hat{5}$- in measure 132. (Notice how E becomes a pedal point for the six successive measures.) The -$\hat{5}$, now in measure 171, initiates the final *Urlinie* descent, completed in measures 179 - 181 before the recapitulation's closing area in measure 182. (The recapitulation's *Urlinie* descent is analogous to the first descent in the dominant area. See the graph at measure 44.)

As mentioned above, one of the most prominent uses of C♮ in the recapitulation is in measure 164 as part of the augmented-sixth chord, just before the period where the *Urlinie* descent occurs. At the point where the D - D♯ - E trichord appears in measures 163 through 165, C♮ is prominently displayed in the flute and doubled an octave lower in the first violin. (The flute, two measures earlier,

articulated a whole note B♭ — a rewritten A♯.) Therefore, C♮ is now promoted to the highest voice part, whereas in the exposition it had been present in the lowest voice as the bass of the augmented-sixth chord. As the viola begins to hold e^1, $c\sharp^2$ is now present, but given special attention as $c\sharp^3$ in measure 171, at the point that $\hat{5}$- is linked to -$\hat{5}$ for the *Urlinie* descent. C♮ is now resolved to C♯. This is confirmed in the first violins in measure 189.

A consistent aspect of Haydn's later style involves the reappearance of important motivic attributes in other movements, particularly the last. In this work, A♯, which often appears in the first movement within the A - A♯ - B trichord and becomes significant in the chromatic voice exchange, does play a role in the second movement. It appears as part of an F♯ major triad (cf. measures 45 - 53) and toward the end of the movement as a part of an A - A♯ - B trichord in measures 87 and 88, and as a 5 - 6♭ - 5 neighboring motion within D major tonic harmony in measure 102. In the second movement there is a considerable amount of developmental material around A♯, often presented trichordally, between measures 43 and 54; in measures 47 and 48, the trichord is retrograded as B-B♭-A. This retrograded, descending form of the trichord also appears in the last few measures of the movement (in measure 101 - 102) and is preceded by C♮. In fact, in this form, the trichord becomes extended to include

the C♮. Perhaps its form could be classified as two interlocking trichords with its symmetrical axis around B♮: notice C♯-C♮-B-B♭-A in measures 99 - 102, starting with the basses and continuing into the soprano.

In the Menuet movement, the "prime form" of the A♯ trichord appears as the first chromatic gesture in the movement in measures 2 and 3. In the fourth movement, A♯ enters trichordally almost simultaneously with D♯, as it does in the first movement; yet, the A♯ is nearly dropped as a significant issue (cf. measures 35 - 39, just before the entrance of the second harmonic area). The D♯ becomes a far more prominent concern, eventually resolving just before the coda, at the fermatas, in measures 192 - 193. If A♯ is resolved at all — and very often these issues appear to be hanging, even at the end of the last movement — one might cite measures 146 - 149, but, as I have said, the D♯ is given a far more conspicuous role and, therefore, a far more conspicuous resolution.

The role of the note C♮ has also been discussed in the analysis of the exposition of the first movement. In the third movement, C♮'s enharmonic equivalent, B♯, appears within the context of its own trichord B-B♯-C♯ (the continuation of A-A♯-B, prepared in the second movement, in retrograde form just before the movement's end) in measures 17 and 18. This prepares for a short excursion into the parallel minor between

measures 20 and 24 where the B♯ is respelled as C♮. The A major tonic is regained just after that. In the last movement, which is also in sonata form, there isn't a single C♮ in that exposition. Haydn's intention may be to stabilize the tonic throughout by not changing system, a ploy that Henry Burnett has found typical of Haydn's early, single-digit symphonies and other symphonies of his contemporaries.[136]

In fact, system analysis works so neatly in the exposition of Symphony no. 87, that it is instructive to show how it operates in detail. As the symphony opens in A major, we are in a three-sharp system in which the first systemic modulation occurs in the bridge. The first C♮ that enters in measure 21 (see graph), however, does not cause a modulation due to the D♯ above it; i.e., the C♮ would naturally invoke a move into the parallel minor, A minor, a C system. However, D♯ immediately contradicts that modulation. The time is almost ripe for that modulation anyway. In measure 26, C♮ enters again, bringing us back to a C-system. By measure 29, C♮ has become part of the augmented-sixth chord, the last vestige of the diatonic expanse of tonic harmony. Yet, in terms of system analysis, the resolution of the augmented-sixth chord to II♯ in measure 31 returns us to the background tonic system of three sharps.

While C♮ played an important role for system modulation

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[136]From Henry Burnett in private communication.

in the first harmonic area, B♯ assumes that role — but just for a moment — in the second harmonic area. In measure 53, B♯ in the violins would have moved us up three notches into a six-sharp system; however, the presence of A♮ in the next measure prevents this from happening.

We have seen Haydn use this enharmonic procedure before: in the first harmonic area, pc 3 is more often than not spelled as a minor third above the tonic, while in the second harmonic area, pc 3 is more often spelled as an augmented second above the tonic. Very often, the augmented-sixth chord appears to function as a kind of division point, a "line of demarcation," so to speak, around which the enharmonic spelling of pc 3 alters.[137]

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[137]See the discussion of Symphony no. 84, where the placement of the augmented-sixth chord appears in a peculiar location. Yet, here, too, that dissonant structural sonority determines the spelling of pc 3, the enharmonic F♯/G♭.

C H A P T E R 1 1

SYMPHONY NO. 88

Haydn's output from 1787 to 1789 comprises a second set of works for Paris. This group of five symphonic works links the first Paris set to the London set. These are the symphonies from no. 88 to no. 92. Of the set of five, the two best known are the ones in G major, no. 88 and no. 92 ("The Oxford"), both of which are scored for one flute, oboes, bassoons, horns, trumpets, tympani and strings.

Symphony no. 88 was written in 1787. It has four movements, the second of which, a sweetly melodic but an intensely chromatic *Largo*, is in D major, instead of the more traditional C major for a slow movement in a G major symphony.

General considerations

A sixteen-measure slow introduction precedes the *Allegro*. It utilizes a C-C♯-D trichord in measures 3 and 4 that follows the *Urlinie*'s B momentary descent to A (see graph). This motivates a D-C♯-D neighbor note figure in measure 4 and a chromatic run from C♯ to G in measures 7 and 8. The neighbor note figure is transposed up a whole step to E-D♯-E in the

bass of measures 10 and 11. Even though the slow introduction presents ten of the twelve chromatics (G♯ and B♭ are not yet present[138]), there is a special emphasis placed on B-C-C♯-D-D♯-E. We will watch for further extensions of this chromatic series, particularly for A♯ (or B♭) on one end, and F♮ (or E♯) on the other.

Although the slow introduction has many chromatic elements in it (each of which ultimately prepares a motivic event later in the movement), it is nonetheless firmly stabilized by its own *Urlinie*-like melodic structure. This structural support is accomplished in three parts (see graph): the first from measures 1 through 4 that cadences on the dominant, the second from measures 5 through 8 that cadences on the tonic, and the remainder of the slow introduction that uses the arrival at $\hat{2}$ to link that phrase to the Allegro. The Allegro picks up $\hat{2}$, which is then responsible for the non-tonic opening of the exposition. The $\hat{2}$ - $\hat{1}$ gesture in the first two measures of the Allegro complete the final *Urlinie* descent begun in the slow introduction.

The prominent D♯ in the bass of measure 11 of the slow introduction becomes a significant gesture in this movement, particularly so in the development section, respelled early on

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[138]The use of G♯ would initiate a premature PCA ascent. Also, the use of B♭ (or A♯) would destabilize the G one-sharp eleven-note system, and open the door for a potential modification of the prevailing harmony.

as E♭ and, later, as D♯ in the retransition. Another related issue involves the very early introduction of A♯ in all the instrumental parts of measure 37, a fifth away from D♯.[139] The relationship between A and A♯ places special emphasis on the dominant of the dominant, which is allotted its own passage between measures 51 and 60.

Although the opening of the dominant area in measure 61 is rich in chromatic gestures, the texture becomes far less chromatic in the closing period, measure 85. In fact, the only non-diatonic notes of the closing period are the just-mentioned D♯ and A♯ used in close proximity as sixteenth-note chromatic neighbors. The C♮ at the very end of the codetta helps reinitiate G major for the exposition's repeat so that C♮ is heard hovering over the dominant chord in measure 16, providing the non-tonic opening renewed intensity. The C♮ is also linked to the first note of the development section.

Voice-leading considerations

The chief voice-leading issue concerns the way in which the dominant harmonic area is approached. This is accomplished with a twenty-one measure auxiliary cadence into

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[139]The use of this note may also support an earlier contention about the spelling of pc 3, specifically, that only in the early Paris set, pc 3 is spelled as a minor third above the tonic before the augmented-sixth chord and as an augmented second after the augmented-sixth chord.

the second harmonic area. As discussed in Chapter 3, in reference to more sophisticated forms assumed by some bridges, motion into the second harmonic area might be anticipated by a pre-structural dominant-descent supported by an extensive auxiliary cadence. This is the case in this symphony.[140] The arrival at a^2 in measure 51 (supported by II♯) initiates a middleground descent to d^2 which is attained in measure 61, the opening of the second harmonic area (see graph). The descent is strengthened locally by a harmonic prolongation within the dominant's dominant.

The secondary area's opening statement in measure 61 is extended in measures 71 to 77. Measures 77 to 84 forms the second part of the second harmonic area's first period. In measure 85, a closing period begins; the codetta appears in measure 97. The soprano line of the closing period and codetta unfolds a large-scale D-C♯-D before it finally descends to C♮ at the end of the exposition. This figure is related to the original C-C♯-D trichord that first appeared in the slow introduction.

The descent from the dominant's $\hat{5}$ to $\hat{1}$ that consummates the bridge and creates a strong voice-leading anticipation of the tonic's *Urlinie* $\hat{2}$, also anticipates other fifth descents (of course, in the dominant) that occur within the second

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[140]Cf. such a structure in Symphony no. 92, a considerably embellished version of the voice-leading elements in this symphony.

harmonic area. The first is the structure of the second harmonic area's opening statement between measures 61 and 65. This is followed by another descent in measures 65 through 71 that begins in the same register, but culminates in the attainment of d^3 in measure 71, at the beginning of an extension of the opening statement of the second harmonic area. A third descent between measures 77 and 81 places yet another layer of organization on this phrase. The closing area substitutes the D-C♯-D motive as an organizational device in the absence of its own $\hat{5}$ to $\hat{1}$ descent.

The augmented-sixth chord in measure 75 is almost a story in itself and will be discussed in greater detail below. Notice, however, that this chord, spelled in this way, and present within the realm of tonic harmony would have potentially invoked a chromatic voice exchange with the tonic. We have already seen this in previous examples; and, in Symphony no. 84, the position of the augmented-sixth chord was used to contradict the expected positioning of the entire second harmonic area. However, in this case, even though the augmented-sixth chord is spelled with a B♭ and G♯, this sonority ultimately must be understood as a non-structural excursion within the area of the dominant. It is a simple passing chord built upon a chromatic passing note and is used to emphasize the termination of the second harmonic area's opening statement.

Chromatic considerations

Many of the chromatic issues in this movement of Symphony no. 88 can be addressed in light of the absence of a structural vertical sonority, such as an augmented-sixth chord or a high-level diminished seventh chord, the kind that Haydn has used successfully in so many of his symphonies up to this point to bridge tonic harmony to the secondary harmonic area. The lack of such a verticality makes a linear analysis of the chromatic issues that much more crucial in this work.

As we have seen in previous examples, the employment of an augmented-sixth chord, chromatically exchanged with tonic harmony, highlighted pc 3. In the case of a symphony in G major, the use of such a sonority, spelled B♭-D-F♮-G♯, would have accomplished two things. First, B♭ and G♯ would have both resolved to A, creating the basis for a II♯ chord that would have resolved immediately into the second harmonic area. Second, B♭, a note which is "out of system" in G major, would signal the composer's intent to leave the tonic, plunging us down, if only momentarily, into the two-flat system of the parallel minor tonic. Third, C♯ would then counterpose the effects of the B♭ and bring us back to the tonic one-sharp system. Fourth, G♯, more likely than not introduced earlier in the bridge and revitalized by the augmented-sixth chord, would initiate the ascent of the PCA, continuing to A, A♯, B,

C♮ (sometimes), and then C♯ and D, and stabilize the cadence into the dominant area. The diatonic notes E and D in the bass would create a 6 - 8 cadence and harmonize pc's 6 and 7, in this case C♯ and D. In Symphony no. 88, Haydn is able to essentially accomplish the same deed without the characteristic vertical sonority and uses, in its place, the very well-stabilized auxiliary cadence.

In Symphony no. 88, the *Allegro* begins with a statement and a counterstatement (that includes the D-C♯-D neighbor note figure) before moving into the bridge in measure 32. The bridge typically circumvents C♮ as the PCA begins to unfold. In measures 47 through 51 the G-G♯-A trichord — a fifth transposition of the C-C♯-D trichord of the slow introduction — initiates the ascent of the PCA.[141] Yet, A♯, B and C are skipped before the modulation into the dominant area in measure 61.[142] Therefore, the PCA restatement that occurs within the area of the dominant, will, in the present instance, become a far more complete statement of the PCA than there was in the tonic. The PCA restatement *only* abstains, again, from using C♮, but all other chromatics are present.

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[141]In the first movement, the C-C♯-D trichord motivates, through transposition, the beginning of the PCA G-G♯-A. In the second movement (in D major) a G-G♯-A trichord in measures 6 and 7 motivates the beginning of the PCA D-D♯-E in measures 10 and 11.

[142]In Symphony no. 91, the PCA does not begin until after the second harmonic area is already established. Its bridge is non-modulatory, in the manner of J. C. Bach.

In this particular symphony, Haydn may have been saving this note to frame the second harmonic area of the exposition (see measures 63 and 101, 102).

The exposition's bridge, from measures 32 to 61, elides into the second harmonic area. It is accomplished with the G-G♯-A chromatic trichord, mentioned above, in the bass of measures 46 to 51.

Another issue that might arise is the way in which Haydn would either delay the arrival of the second harmonic area, or weaken its arrival to such an extent that the weight of the exposition would be shifted toward its end. In Symphony no. 88, Haydn places a considerable amount of weight on the closing period, compensating for all chromatics that would undermine the tonic one-sharp system; the systemic implications of A♯ are consistently countered by G♮. The only particularly odd note toward the end of the movement is the above-mentioned C♮; however, this is consistent with the conflict between C♮ and C♯ in the movement's slow introduction.

In this exposition, the first note that contradicts G major's one-sharp system, A♯, occurs in measure 37, six measures into the bridge. This passage is made prominent by unison writing in the strings and winds, an orchestrational technique used again only at the end of the exposition, pointing to the arrival of C♮. The A♯ signals Haydn's intent

to destabilize the tonic one-sharp system. The A♯, which would have initiated a systemic modulation to four sharps, is quickly deactivated by the G♮ in the next measure. In measure 47, the G-G♯-A trichord brings us to the supertonic sonority that is prolonged for ten measures. However, using our "generic" symphony as a model, Haydn fools us. Although G, G♯ and A are present as pc's 0, 1 and 2; and, although, C♯ and D, present as pc's 6 and 7, are displayed conspicuously at the cadence into dominant harmony, A♯, B and C♮ (pc's 3, 4 and 5) are skipped from this initial statement of the array, even though all of these notes have previously been introduced. Thus, we have problem number one.

Problem number two involves the character of the second harmonic area's initial statement in measure 61. Not only is it rhythmically weak, as we would expect, but it sounds like the tail end of the previous phrase, as if its function is to simply resolve II♯. Also, the pitch content of the notes circulating in this area are not absolutely consistent with D major.

In measure 75, the previously-discussed augmented-sixth chord appears just before the cadence on the dominant. Even though it does not have the high-level voice-leading significance that it has had in previous symphonies, it does, however, momentarily disrupt the background one-sharp tonic system. Of course, the C♯ above it prevents any system

modulation away from one sharp. The B♭ in the bass of the sonority is, essentially, a rewritten A♯ which first appeared in measure 37; generally, we expect that the first appearance of pc 3 be written as a minor third above the tonic, but it is not presented that way in this exposition.

Had the augmented-sixth been present in the first harmonic area, as we have come to expect, the situation would have been much different. However, with the use of an extensive and contrapuntally-secured auxiliary cadence before the entrance of the second harmonic area (complete with its own melodic descent), Haydn has found another way of instigating a background-level modulation without the use of an augmented-sixth chord. The one in measure 75 appears almost as a brief reminder of what Haydn had bypassed earlier in the movement.

Another way of solving this problem might be to substitute an analysis of the exposition that maintains tonic harmony until the arrival of the augmented-sixth chord in measure 75. Therefore, the structure of this exposition would be identical to that of Symphony no. 84, complete with an extensive phrase which appears to initiate the second harmonic area, but ultimately does not because of the absence of the augmented-sixth chord until later in the exposition. Of course, such a supposition would have to be defended through voice-leading techniques.

C H A P T E R 1 2

SYMPHONY NO. 89

Both Symphonies no. 88 and no. 89 were composed in 1787. Symphony no. 89 in F major is notable for its lack of a slow introduction and its *entirely diatonic* second harmonic area. The absence of any chromaticism in the exposition's dominant region postpones the customary developmental/chromatic agenda that comprises so much of the material of Haydn's sonata procedure.

Another notable attribute of this symphony is the way in which Haydn has so completely rewritten the exposition material, creating a highly inventive recapitulation with many unexpected features. For example, the organization of the thematic material in the recapitulation is quite reminiscent of the "reverse recapitulation" of the Mannheim symphonies in the mid-eighteenth century.

General considerations

The postponement of chromatic unfolding in the second harmonic area of this symphony might lead one to conclude that Haydn may have been increasingly inclined to restrict the

amount of second harmonic area material in symphonies whose dominant areas were totally, or almost totally, diatonic. We shall also see in Symphony no. 92, where the second harmonic area is unusually short, chromaticism is certainly not a significant concern. Perhaps these essentially diatonic areas were meant to be heard as a "resting places" before the repeat of a very chromatic exposition, or an upcoming harmonically unstable development section. However, this is not Haydn's only approach for second harmonic areas: the absence of even a single chromatic note in this section of Symphony no. 89 contrasts with the intensely-chromatic second harmonic areas in both nos. 88 and 90.

Two trichords, F-F♯-G and G-G♯-A, are introduced in the ten-measure opening statement (a two-measure fanfare-like introductory segment followed by a more lyrical eight-measure phrase). Both trichords are generated from diatonic/melodic entities. (The significance of their specific pitch content will be discussed later.) The F-F♯-G trichord in the bassoons and violas of measure 7 is a chromaticized paraphrase of the pitch content of the first violin part of measure 5; the G-G♯-A trichord in measure 10 is motivated from the content of the first violin part of measure 6. This is unusual since Haydn's chromatic inflections presented within the expositions' opening statements and, more regularly, slow introductions, are usually part of the *Ur*-chromatic musical fabric, not

something that originates as a diatonic progenitor. In Symphony no. 89, diatonic and chromatic elements become rather closely linked as the chromatic element appears as a repercussion of a developing diatonic forbearer. Haydn's use of linkage technique helps to explain the generation of the melodic material of the phrase beginning in measure 3 as an evolved restatement of measure 2.

The bridge, beginning in measure 19, introduces a simple neighbor note figure, F-E-F, which is used in conjunction with a transposition of it, C-B♮-C. The B♮ from this figure will eventually, over the course of the bridge, become part of II♯ in measure 27, where the neighbor note figure is now inverted and displayed as B♮-C-B♮. This neighbor note motive, now presented as G-F♯-G in measure 28 as a syncopated figure, becomes a springboard into the highly chromaticized remainder of the bridge. The transition into the second harmonic area, occurring between measures 40-42 on a dominant (of V) pedal, continues to employ the neighbor note figure.

The typically strong rhythmic emphasis given to the opening statement of a second harmonic area is somewhat lessened by Haydn's placement of its melodic material on the third beat of measure 43 instead of the first. This rhythmic shift is only compensated for in measure 51 by a melodic elision: i.e., the phrase beginning in measure 52, a short four-measure transition into the codetta, appears to be placed

in its "correct" rhythmic position, beginning on the first beat of the measure.[143]

The codetta is a short, autonomous three-measure period. Its last measure is rhythmically allied to measure 2, when the exposition is repeated, and to measures 65 and 66 of the development section as the movement proceeds.

Voice-leading considerations

In many previous examples where *both* scale degrees 1 and 3 of tonic harmony were chromatically altered to take part in a long-range voice exchange, that voice exchange generally culminated in an augmented-sixth chord which then cadenced on II♯ just before the entry of the second harmonic area. In this case, both scale degrees are inflected, but are not aligned as a single vertical entity; instead, an augmented-sixth sonority is avoided by shifting A♭ to A♮ in measure 39 just as F♯ is reached by the first violins. The effect of this procedure is to lessen the strong rhythmic emphasis naturally attained at the opening of the second harmonic area. We have already discussed how the delay of the entrance of the

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[143]Nowhere in this movement is the melodic material of the second harmonic area presented on the first beat of any measure. Notice, however, that the opening of the second movement exploits the opening of this melody, now on the strong beat. Notice also the same characteristic melodic figure at the opening of the third movement (presented, of course, on a weak beat!).

violin melody in measure 43 served the same purpose. Just as Haydn had done in Symphony no. 88, the first rhythmically powerful emphasis within the second harmonic area occurs at the point that a transitional phrase occurs just before the codetta; in Symphony no. 89, this phrase, in measure 52, is stressed by a *forte* dynamic indication and by the placement of the sixteenth notes on the first beat of that measure.[144]

Curiously, the A♭-F♯ does occur as a "real" augmented-sixth chord, applied to G major, four measures into the development section. However, in this case, the expected harmonic implication is not met as the music avoids moving into C major or minor. Deceptively, it moves towards a tonicization of E♭ major.

Chromatic considerations

The two chromatic trichords already mentioned, F-F♯-G and G-G♯-A, are counterbalanced by the flute's descending line C-B♮-B♭-A in measure 13; these segments create a chromatic halo around A, the *Urlinie*'s $\hat{3}$. The higher register of the descending tetrachord also portends the octave transfer of the *Urlinie* from a^1 to a^2 at the opening of the bridge.

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[144]In the recapitulation, the area that parallels the exposition's A♭-F♯ occurs in measure 135, this time rewritten as D♭-B♮. It is similarly not aligned and, too, avoids an augmented-sixth chord.

Alternately, this octave transfer is prepared by the registration of the introductory segment in the first two measures. In measures 39 and 40, the F-F♯-G trichord recurs just before the entrance of the second harmonic area. Therefore, this trichord frames the entire first harmonic area and bridge.

The unfolding of the PCA is reasonably uneventful; the array begins to unfold in measures 28 - 31 and the exposition's PCA segment is completed just prior to the opening of the second harmonic area in measure 43. Pc's 6 and 7 (B♮ and C) are reconfirmed when the codetta begins in measure 56.

In measures 35 and 36, a significant D♭-C dyad is introduced which, although not highly reactive in the exposition, plays a major role in the manner in which the development section is organized. The development includes an opening flat-area section in measures 59 - 82 which is counterbalanced by a sharp-area section in measures 83 - 100. The short retransition that begins in measure 101, aside from combining both flat and sharp components (see, particularly, measures 105 to 110), a D-D♭-C trichord initiates the structural dominant before the recapitulation.

The unusually organized recapitulation also strongly emphasizes D♭. The D♭ in measure 122, creating a momentary tonicization of ♭VI, resolves to C in measure 124 but returns

in measure 130ff. as a neighbor note to C. When the second harmonic area enters (in the tonic) in measure 139, D♭ is no longer an issue. However, C♯ enters in measure 148 and again as a neighbor note in the high register in measure 159 as part of the coda. The association of D♭ with C and the chromatic's eventual transformation to C♯ emphasizes that the C-C♯-D (or its D-D♭-C variant) is a fifth transposition of the initial chromatic element, the F-F♯-G trichord, introduced at the beginning of the opening statement of the exposition.[145]

One last issue which is important may mark a turning point in Haydn's chromatic procedure, at least in terms of his symphonic output. Previously, the entry of the missing pitch was quickly negated by the insertion of the missing pitch of the opposing system. For example, in an eleven-note tonic gamut of C major, the introduction of and potential prolongation of a three-flat system with the presence of E♭ was quickly abrogated by an F♯, introduced soon after E♭, thus keeping the eleven-note gamut within the boundaries of the C-system. Likewise, the introduction of D♯ would have been almost immediately followed by C♮ to halt an expansive system modulation into a three-sharp area. In all the symphonies examined up to this point, this has consistently been the

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[145]In the last movement, D♭ returns one last time in measure 180 as part of a D-D♭-C trichord. The resolution of D♭ to C signals the last chromatic in the symphony; the remaining thirty-one measures are purely diatonic.

case: the possibility of any extensive system modulation (more than a measure or two) never came about since the new system introduced by the presence of the missing pitch of the old system was quickly annulled by the new system's pc 3.

By Symphony no. 89 in 1787, however, Haydn had begun to experiment with the possibility of spending more time in gamuts other than the tonic system. As the symphony opens, G♯ in measure 10 is immediately countered by F♮, but the basis for this symphony's chromatic issue is now set. On the return of G♯ in measure 28, it is again countered but stubbornly reasserts itself in the next measure. Between the ten measures from 29 to 38, the G♯ provokes a system modulation to two sharps which is not rebutted until F♮ in measure 39 returns us to the tonic one-flat system. During this stretch, every note of a two-sharp eleven note system is used.

In the development section, the enharmonic of G♯ is explored: A♭ in measure 61, hinting at motion toward a four-flat system is confounded by the immediate presence of B♮ in measure 62. However, the system modulation provoked by A♭ in measure 64 is not contradicted until measure 77. By measure 91, Haydn returns to the first spelling, and the G♯ moves the gamut up to two sharps. At this point, the music moves into a prolongation of D major, thus perfectly coordinating the system with the prevailing local tonicization. This has not

always occurred in the past.[146] The two-sharp system is not restored to the tonic one-flat system until measure 106 with the arrival of F♮, six measures into the retransition. In the next two measures, the system change indicated by G♯ is almost immediately contradicted by F♮ in the same measure. Now that we are firmly back in the tonic system, the recapitulation can now begin in measure 111.

In the recapitulation, the longest non-tonic expanse occurs between measures 130, with the introduction of A♭ and, in 135, with its cancellation by B♮. Apparently, this new approach is more conspicuous in the development than in the exposition or recapitulation, inaugurating a new developmental tool for this area of a symphony or of any other genre in sonata form.

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[146]After all, in those earlier symphonies where the missing pitch was present as a chromatic passing tone, the note that would cause a return to the tonic system was very soon present. Historically, what is encountered at this point is a system modulation that supports a potentially lengthy tonal prolongation as well.

C H A P T E R 1 3

SYMPHONY NO. 90

The symphonies from no. 90 to no. 92, in C major, E♭ major and G major, were written between 1788 and 1789 and dedicated to Comte d'Ogny and Prince Oettingen-Wallerstein. This subgroup comprises some of Haydn's most sophisticated experiments just before the composition of the London symphonies only a couple of years later.

General considerations

The opening measure of the slow introduction anticipates a procedure used in Symphony no. 103 in E♭ where an anticipatory gesture precedes the downbeat of the Adagio; in no. 103, this appears as a tympani roll. In Symphony no. 90, a tutti fortissimo that also includes a tympani roll precedes the first rhythmically structural measure of the slow introduction. Rhythmically, measure 1 of each symphony could be called an upbeat to an upbeat, if we assume that the entire slow introduction prepares the first structural downbeat at the opening of the Allegro. In Symphony no. 90, even that "upbeat to an upbeat" is preceded by its own sixteenth note

anacrusis.[147]

A particularly unusual aspect of the movement, one which has never been encountered in *any* of the symphonies discussed in this essay other than the present one, involves the *verbatim* quoting of several measures from the slow introduction in the body of the exposition. In fact, the four measures of music between measures 5 and 8 so thoroughly pervades the whole movement that hardly much time goes by where one *would not* hear these measures either in tonic or some transposed harmony. In the exposition alone, it occurs three times in the tonic and once in the dominant (within the closing period), just before the codetta.[148] The character

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[147]There is a question about the authenticity of an alternative orchestration of this symphony that omits the tympani and the trumpets and uses *alto* C instead of *basso* C crooks for the horns. See "Editor's Commentary" in H. C. Robbins Landon, ed., *Joseph Haydn: Symphonies 88 - 92 in Full Score* (New York: Dover Publications), pp. 282-283.

[148]It does not, curiously, appear in the development, whose principal melodic material is based upon the exposition's second harmonic area.

Another reason why this tune seems so conspicuous is its somewhat "inconsequential" nature. This short four-measure fragment seems to have an almost naive character, very much like some of the other melodies that initiate Haydn's second harmonic areas. (See, for example, the second harmonic area of the first movement of the "Oxford" Symphony no. 92.) Around the time of the string quartets from op. 33, Haydn was increasingly influenced by *opera buffa* and was writing operas in the *style galant*. Consequently, he incorporated *buffa* elements into his symphonic and chamber works. In this symphony, *buffa* influence is seen in the principal theme's melodic and harmonic simplicity. The four-measure, rhythmically-stable, harmonically simple character of it is also typical of this style.

See Charles Rosen's discussion of the general influence

of the phrase is unusual since its rhythmic nature gives the impression of a melodically figurated V - I cadence. As a result, the Allegro opens with a gesture that sounds more like the end of something rather than the beginning of something.[149] Only when it appears just before the codetta in the dominant does it seem to be in the "correct" rhythmic position. At the point where it appears at the opening of the recapitulation, its opening dominant harmony (within a tonic context) might be heard as a substitute for the structural dominant which occurs traditionally at the retransition. In the present case, the retransition never reaches V; III♯ is elaborated just before the recapitulation.[150]

There are some interesting similarities between

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of comic opera on Haydn and other composers in the 1780's in *The Classical Style*, pp. 154-157; this section addresses issues pertaining to Haydn, Mozart, and Piccinni.

[149]Compare, also, the last movement of the String Quartet op. 33 no. 2 in E♭ ("The Joke") where a seemingly inconsequential fragment becomes the *raison d'etre* of the whole movement. The character of this movement as well may be a result of Haydn's *opera buffa* influence.

[150]The structural dominant of this movement is initiated at the opening of the second harmonic area; dominant harmony, however, is only prolonged from that point to the end of the exposition. Therefore:

$\hat{5}$			$\sharp\hat{5}$	$\flat\hat{5}\ \hat{4}\ \hat{3}\ \hat{2}\ \hat{1}$
//:I -------V----------V ://			: IV -- III♯,	I--------I ://
expo.	(2nd harm. area)		devel.	recap.

During the development section, the *Urlinie* is inflected from G to G♯, returning to G♮ at the recapitulation.

Symphonies no. 90 and no. 92, particularly in the manner that the slow introduction ends and the Allegro begins. In Symphony no. 90, the slow introduction ends on a diminished seventh chord, $VII^{\circ 6}_{5}/V$; in Symphony no. 92, the slow introduction ends with an augmented-sixth chord applied to the dominant seventh that opens the exposition. In both cases, Haydn uses pc 3 at the end of the slow introduction.[151] When he approaches an Allegro's non-tonic opening in this manner, it is most likely that the procedure he previously used in most of the Paris set (i.e., the use of pc 3 in an augmented-sixth or diminished seventh chord just before the entry of the second harmonic area) will be avoided since it would be too redundant after the slow introduction. In either case, however, pc 3 is often introduced before a significantly placed dominant triad or an area that articulates a structural dominant.

One consistent similarity among Symphonies no. 88 - 92 involves *downplaying* that one previously indispensable dissonant chord that had occurred just before the arrival of structurally dominant harmony, usually articulated by a long-

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[151]In Symphony no. 90, since the chord in question includes an F♯, the modulatory potential of pc 3, written here as E♭, is evaded. A similar event happens in Symphony no. 92 where the one-sharp system is maintained since the effect of pc 3, written as B♭, is negated by the presence of C♯. In both cases, no systemic modulation occurs even with the presence of pc 3. This situation is discussed in further detail in the Appendix.

range chromatic voice exchange.[152] It would seem that in these later symphonies Haydn's compositional inclinations may have involved attempts to "smooth out" the rough edges and potentially disruptive elements of the exposition and recapitulation, so typical in Symphonies no. 82 - 87, while maintaining the propulsive drive within the movement. We do find, however, that pc 3 may still play an important role in the way Haydn organizes his bridge material.

In Symphony no. 90, the organization of the second harmonic area is somewhat more elaborate than the organization of the first harmonic area. The first harmonic area contains an opening statement, without a counterstatement, that moves directly into a lengthy bridge.[153] In the second harmonic area, an initial statement from measures 51 - 58 is succeeded by a counterstatement in measures 59 - 66. The last measure of this counterstatement is elided to a transitional phrase (similar in position and function to the bridge in the first harmonic area) and continues into a fourteen-measure closing

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[152]In the case of Symphony no. 89, an augmented-sixth chord *would* have been created if the notes A♭ and F♯, in very close proximity to one another, had been vertically aligned. Perhaps the procedure followed in that F major symphony might be considered transitional. It was previously mentioned that an alternative to the present reading of Symphony no. 88 would involve raising the augmented-sixth chord in measure 75 to a much higher structural level; if this were the case, then a long-range chromatic voice exchange with that entity would an analytic possibility.

[153]Perhaps the repeat of the principal material would have been once too many.

area. The cadential measure of the closing area, measure 87, becomes the initial measure of the codetta.

Voice-leading considerations

One issue of long-range voice leading involves the choice of $\hat{3}$ or $\hat{5}$ for the beginning of the *Urlinie* descent; it may almost be impossible to decide this based solely upon the motion of voices within the exposition alone.[154] It has already been noted that as Haydn's symphonic style matured, he appeared to be more inclined to make the pieces of the movement better unified, with fewer rough edges.[155] In this symphony, an exhaustive analysis of both development and recapitulation are essential in making a decision about the movement's background structure. As noted above, the decision to take the *Urlinie* from $\hat{5}$ leads to the conclusion that the

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[154]Note that in the accompanying graph, the *Urlinie* is taken from $\hat{5}$.

[155]It is interesting that Haydn seems less concerned with "rough edges" in the slow introductions. Using Symphony nos. 90 and 92 again as examples, the use of pc 3 written as a minor third above the tonic (instead of as an augmented second) invokes the parallel minor, which is the reason that the succeeding augmented fourth above the tonic parallel minor resists a system modulation. Perhaps, in a minor mode environment, Haydn is more likely to add a significantly "dense" amount of chromaticism. In this way, the exposition alters the mood of the slow introduction, resolving and developing old conflicts, and initiating new ones. Those new ones, of course, are probably based on material in the slow introduction!

descent within the dominant second harmonic area is not part of the highest background structure, but is associated with high-level middleground phenomena. At the point in the development section that E major is expanded in the retransition, G is displaced by G♯, but reestablished shortly thereafter at the opening of the recapitulation.

Another possible reading would take $\hat{3}$ as the initial note of the *Urlinie* descent. In this case, $\hat{2}$ would arrive at the opening of the second harmonic area where $\hat{2} = (\hat{5})$ in G major. The *Urlinie*'s $\hat{3}$ is then regained at the point of recapitulation. If this is the case, perhaps one of the voice-leading functions of the section in E major, during the retransition, is to regain $\hat{3}$ before the recapitulation (supported by that E major harmony) as an anticipated return of the first *Urlinie* tone.

Another item should be noticed as well. As the bridge approaches the structural dominant, there is a moment between measures 44 and the first half of 47 where G appears to be tonicized. That area, however, must be understood as still subsumed under tonic harmony since the voice exchange has not yet taken place. Notice in the graph that the motion from C in the bass of measure 36 to the E in the bass of 47 exists on a higher level of structure than the intervening G major sonorities.

Although Haydn employs the chromatic voice exchange that

typifies his long-range plans in the Paris group of symphonies, it is not a double chromatic exchange as it usually is in those earlier works; i.e., while C exchanges with C♯, E♮ is maintained over the distance of this contrapuntal technique and does not exchange with an E♭. In fact, E♭ is the only note skipped in first harmonic area of the exposition.

Chromatic considerations

As a result of pc 1's late arrival in the exposition, the PCA is relatively static in the first harmonic area. In fact, since the chromatic array of the first harmonic area is represented only by C, C♯, D, and F♯, G, (pc's 0, 1, 2, 6, 7), Haydn's chromatic procedure in this symphony has certain similarities to that used by Mozart in his B♭ Piano Sonata, K. 333, discussed earlier. As was mentioned in the section above on voice leading, the chromaticism and local tonicizations just before the close of the first harmonic area are basically subsumed under tonic harmony (until E and C♯ arrive in measure 47). Therefore, the static PCA in this region and the extensive prolongation of C major harmony in the background may be related. Similar to the Mozart sonata as well, it is not until the second harmonic area that the PCA

begins to fill out.[156] Another trait that is stylistically similar to Mozart involves the "bunching up" chromatics in heavily chromaticized areas that appear in contrast to simpler, diatonic areas.

Since Haydn avoids pc 3 in the first harmonic area of the exposition, it falls upon the second harmonic area to dramatize the conflict between the tonic C system and the three-sharp system created because of the presence of D♯. This happens in a very chromatic phrase, beginning in measure 66, which extends the counterstatement of the second harmonic area and introduces pc 3 in measure 68. However, this system modulation to three sharps is short-lived, since the C♮ in the next measure quickly returns us to our tonic C system. In measure 70, Haydn respells pc 3 as E♭, moving the music down into a three-flat system; but this, too, is quickly negated by F♯ two beats later; the C system is again stabilized. With the beginning of the closing period in measure 74, Haydn no longer uses pc 3 in either of its enharmonic spellings.

The association between E♭ and F♯, representing a conflict of systems in the present mode of analysis, is first revealed in the slow introduction; although that conflict is still present in the exposition, it takes on a far more significant role in the development section. The E♭ in the

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[156]Also similar to the Mozart sonata, the most apparent statement of the full PCA does not occur until the recapitulation; cf. measures 162 - 170 of Symphony no. 90.

first measure of the development modulates the system from C to three flats; this is maintained for twenty-eight measures until F♯ negates it in measure 125, returning us to a C system. In measure 129, an augmented-sixth chord on F♮ reintroduces D♯; however, the potential system modulation to three sharps is negated by C♮ in the same chord. The C system is preserved. The next entry of D♯ in measure 144, part of the retransition, is not negated with a C♮, however, until a measure after the recapitulation enters in measure 153. Again, Haydn recalls a technique he had previously reserved for the augmented-sixth chord in the early Paris set: it becomes the dividing line between the two enharmonic spellings of pc 3.

CHAPTER 14

SYMPHONY NO. 91

Like Symphony no. 90, Symphony no. 91 in E♭ was written in 1788 and dedicated to Comte d'Ogny and Prince Oettingen-Wallerstein. The symphony has three flats in its key signature and has many other characteristics that have to do with the number three: the work is in triple meter and motivically unfolds foreground thirds; the soprano of the first harmonic area employs boundary play within the minor third G and B♭; in the second harmonic area, the eighth notes become eighth note triplets (therefore, at this point in the composition, the metrical organization has shifted to *tempus perfectum cum prolatione perfecta*); the exposition is partitioned into three essential divisions since the second harmonic area contains such an extensive closing period; the piece descends from the third scale degree (i.e., the *Urlinie* descends from $\hat{3}$) and the second harmonic area indulges its own third scale degree by introducing its flatted form which becomes a matter of some consequence.[157]

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[157]Other works of Haydn that are in E♭ and were written after the composer's entrance into a Freemason lodge in 1785 seem also to be involved with threes. For example, the little E♭ major piano sonata from 1789-90, Hob. XVI/49, is also in triple meter and utilizes the "fate knocking at the door"

General considerations

This symphony is monothematic as is the other E♭ symphony examined (no. 84). As a consequence, Haydn composes a recapitulation that needs to be highly inventive so as to avoid to often repeating the principal melodic material. This is also necessary as the initial theme of the *Allegro assai* (a rising, chromatically filled-in third) so permeates the movement on every level of structure that simply transposing all the exposition material back into the tonic would have portended a significant compositional defeat for this typically imaginative genius.

The opening statement, written as a antecedent/consequent phrase, moves directly into a bridge in measure 36 with an orchestral tutti. Yet, counterbalancing the unusually

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motive — later used by Beethoven in his Symphony no. 5 — just before the codetta and coda of the first movement. (Interestingly, Beethoven's fate motive also occurs in a three-flat composition.) This piano sonata, like Symphony no. 91, is also monothematic. Other works to examine in this regard would be both in E♭ major and in triple meter, such as Symphony no. 103 ("Drumroll") which opens with a slow introduction in 3/4 and an *Allegro* in 6/8; this work is not monothematic. The E♭ Symphonies nos. 84 and 99 are not in triple meter. Interestingly, Haydn's compositions in three sharps seem not to make "three" as persuasive an issue as some of those written in three flats (which could indicate that the solution to this question is not religious in nature). According to H. C. Robbins Landon, there is good reason to believe that Prince Nicolaus Esterházy was Master of Ceremonies in a Viennese Lodge, probably "Crowned Hope." Cf. Landon's monograph *Mozart and the Masons* (New York: Thames and Hudson, Inc., 1991), pp. 31ff.

chromaticized opening statement is the bridge that unfolds not a single chromatic. As a result, the bridge is non-modulatory, in the style of J. C. Bach, and ends on a back-relating dominant, an atypical throwback for such a progressive composer writing in 1788. Yet, this unusual bridge seems to be strategically necessary since the rampant chromaticism of the first harmonic area will return transposed into the dominant in the monothematically-organized second harmonic area. Haydn is able, therefore, to create a strong sense of contrast between chromatic and non-chromatic elements within the form of the exposition with an entirely diatonic bridge. Because of this stylistically peculiarity, the PCA does not begin to unfold until the second harmonic area is under way.

The principal melodic material of the second harmonic area occurs in an inner voice, in the second violins. This contrasts with the first harmonic area where this material was reserved for outer voices alone. (Notice that the consequent phrase in the first harmonic area's opening statement has the thematic material in the bass, creating invertible counterpoint.[158]) By placing this material into a middle register, Haydn is able to create a highly contrapuntal

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[158]Another example of invertible counterpoint occurs in measure 192, where the recapitulation is articulated in an inverted form. (A stunning example of linkage occurs at this point with the notes G-A♭-A♮-B♭ between the end of the retransition and opening of the recapitulation.)

texture between this register and the two- and three-line soprano registers.

Some of the unusual aspects of the second harmonic area wil be addressed later. For now, however, it should be emphasized that the closing period of this portion of the exposition has certain features that are more characteristic of development sections than expositions (such as sequences and modulations into several different harmonic areas). In fact, many aspects of this exposition, not to mention the entire symphony, seem rather uncharacteristic in light of our expectations.

Voice-leading considerations

The *Largo* arpeggiates a tonic triad and spends much time attempting to reach B♭ in the melody. The first time B♭ is approached in measure 7, it occurs only as an escaped tone (see graph), but it prepares the structural B♭ in measure 11. This B♭ is transferred one octave higher in measure 15, this one clarified with its own local leading tone, A♮. Thus, the slow introduction involves a coupled fifth progression whose purpose, ultimately, is to raise B♭ into a higher register. However, B♭ descends a ninth to A♭, as B♭ in the bass descends an octave, and the *Allegro assai* opens by resolving A♭ to G, the first tone of the *Urlinie*. In the *Allegro*, register,

which also played an important role in the slow introduction, becomes increasingly significant due to the nature of the melodic unfolding. (See the high-level middleground graph which makes the registration matter somewhat more apparent by consolidating structural events.)

At the opening of the *Allegro assai*, the relevance of the chromatically filled-in third is immediately apparent and the use of successive melodic thirds — ascending in the upper voices, descending in the lower voices — makes the relevance of octave coupling apparent as well. As a result, Haydn has opened fairly large registrational spaces in relatively small areas of music.

The bridge begins in measure 36 and, like the slow introduction, begins in a low register on E♭ and moves fairly rapidly to b♭² creating boundary play between itself and the *Urlinie* g² which has been transferred up an octave. Contradicting our expectations, the bridge is totally diatonic and the opening statement is totally chromatic (outside of the curious absence of E♮, which maintains a static PCA until the arrival of the second harmonic area); this also challenges one's expectations. The *Urlinie* g² moves down to f² in measure 53, preparing the way for the second harmonic area which begins in measure 57. As I have mentioned, the totally diatonic bridge ends on a back-relating dominant; without the use of A♮ and other chromatics to support it, there is no

other choice. Since the movement is monothematic, the second harmonic area also enters with a substantial degree of chromaticism that, by design, must be at least equal to that of the first. This area prolongs dominant harmony and reaches its own $\hat{5}$ in measure 60, $\hat{2}$ of the *Urlinie*. An unusual descent from f^2 to $b\flat^2$ occurs between measures 60 and 74 which passes through D♭ instead of D♮; this prepares a short excursion into D♭ major in the closing period. The structural descent in the dominant area occurs between measures 74 and 82 (see graph) and the D♭ is "corrected" (at least locally) to D♮.

The closing period is perhaps the most distinctive part of the exposition (apart from the intense chromaticism in stretches of apparent structural stability!), not just extending the space of the second harmonic area (which is unusual for Haydn[159]) but also attaining a high melodic D♭ ($d\flat^3$) in measure 88 which, ultimately, moves to C in measure 105. This line continues to B♭ in measure 115 at the beginning of the codetta. Meanwhile, $d\flat^2$ in measure 88 first reaches over to $e\flat^2$ in measure 91 and then to f^2 in measure 102. When this F arrives, D♭ in the bass ascends to D♮ (supported by I^6_5 in B♭). Notice in the inner voices that F continues to G (in the "wrong" register) in measure 104 and to

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[159]It has been discussed earlier that an extensive second harmonic area with a substantial closing period is more typical of Mozart's and Beethoven's compositional styles than Haydn's.

A♮ in measure 105 and, eventually, to B♭ as the codetta in measure 115. Harmonically, the area that momentarily stabilizes D♭ major functions as a dividing third between the local tonic, B♭, and its upper fifth, F. Although D♭ is locally stabilized, notice on the high-level middleground graph (Figure 13.6) that $d♭^3$ must ultimately be understood as an entity which will finally resolve to $d♮^3$ much later in the movement, perhaps not until a few measures before the end of the coda of the recapitulation. (The resolution of $d♭^3$ is not graphed.)

Haydn's introduction of D♭, both harmonically and in terms of voice leading, and the space required to support and unfold it *at this point of the exposition* is yet another example of the atypical, even lopsided, organization of the exposition, at least by Haydn's standards. Thus, the character of the closing period, both in terms of its chromaticism and its sheer length, makes the entire movement probably the most idiosyncratic of all those examined here. More significantly, however, is the reversed presentation of stable and unstable areas of the exposition, due to the irregular placement of the most striking chromatic gestures.

Chromatic considerations

In the works we have examined, the PCA typically begins

to unfold at a faster rate in the bridge. Since the bridge of Symphony no. 91 is completely diatonic, however, E♮ (pc 1) is not attained until the opening of the second harmonic area. (A potential explanation for this will be presented later.) Therefore, the segment of the PCA that chromatically unfolds tonic harmony, pc's 0 - 7, *occurs within an area of dominant prolongation.* As we have seen, this is not unusual for the *second* statement of the PCA — i.e., the repeat of pc's 0 - 7 — which often occurs within the second harmonic area, but it is extremely unusual for the *initial* PCA statement to occur in the second harmonic area.

Just as the segment from pc's 0 - 7 generally occurs in the opening statement and bridge (but does not in this case), the remaining segment, pc's 7 - 11, generally occurs within the development section and, within an area that, in terms of voice leading, prolongs the structural dominant. According to Burnett's description of the behavior of chromatic arrays, the second half of the PCA would generally occur between the beginning of the development and the end of the retransition of the development section within the area of structural dominant prolongation.

In Symphony no. 91, the essential purpose of the slow introduction is to unfold tonic harmony and to emphasize V^7 with an applied diminished triad that includes the notes G♭ and A♮. This provides the jumping off point for the *Allegro*

assai. However, Haydn has chosen to unfold that portion of the chromatic array usually associated with dominant harmony, giving it an increased sense of stability. Notice in the graph that the slow introduction unfolds pc's 7 - 11, yet the underlying harmony is tonic. Therefore, in the cases of the chromatic lines associated with the slow introduction and the second harmonic area, it would appear that Haydn has created a conflict between primary chromatic tones and their diatonic harmonies. In a sense, the composer had reinvented the tonal universe so that it seems to be standing on its head.

No matter how chromatic a movement this is, Haydn has, nonetheless, worked out his harmonic areas and eleven-note systems so that these two compositional aspects are carefully coordinated. I believe it would be prudent, then, to join to the previous discussion of voice leading and chromaticism some understanding of the music in terms of these systems.

In a three-flat system, in this piece, E♭ major, the missing pitch is F♯ or G♭, and Haydn will use both forms of pc 3 to move the systems in various directions to direct the underlying harmonies of the piece. In the slow introduction, eleven notes are maintained until the penultimate chord of measure 19. More often than not, the use of G♭, here in the violas, would have signalled a systemic modulation to six flats; however, in this case, Haydn prevents that possibility by simultaneously utilizing A♮. That is, on a very local

harmonic level, G♭ motivates a potential system modulation into the parallel minor, E♭ minor. However, in a six-flat system, A♮ will move the systems back into the sharp direction. In this case, E♭ and A♮ raise the specter of a modulation to the parallel minor and simultaneously prevent it from occurring. Therefore, we are in the tonic system at the opening of the Allegro, even though pc 3 had been momentarily introduced. More important, however, is that the potentially disruptive chromatics of G♭ and A♮ have already been presented as chromatic issues in this work.

As the Allegro continues, Haydn employs both G♭ and A♮ again and avoids a systemic modulation. The G♭ in the first violins of measure 25 moves the system down to six flats; but, the A♮ in the basses in measure 29 return us to a three-flat system. However, a G♭ again appears, now in the basses of measure 33 and, this time, there is no A♮ afterwards to cancel the renewed six-flat system since the entire bridge, which enters in measure 36, is diatonic. Therefore, Haydn will have to wait to regain his tonic eleven-note system until the second harmonic area. This happens in measure 58. Again, as with the later symphonies of the second Paris set, Haydn appears to be experimenting with the consequences of prolonging a non-tonic system over a considerable musical distance. The idea of presenting E♭ major during an expanses of a six-flat system will return at the end of this movement.

The three-flat system is regained in the opening of the second harmonic area and persists until the closing period, which enters in measure 82. The tonal consequences of Haydn's flat-side system manipulations can be most easily noticed at this point. In measure 85, the appearance of G♭ again moves the prevailing system down into six-flats. Tonally, the area from measures 88 through 105 moves through D♭ major, E♭ minor and F minor. As mentioned above, measure 105 begins a pedal point on the dominant of the dominant and is not resolving until the codetta in the measure 115. It is not until the entry of this II♮ in measure 105 with its leading tone A♮ that the underlying system returns to a three-flat gamut. Therefore, A♮ causes the three-flat system to reassert itself.

In every instance in the exposition, each time the missing pitch is introduced, it is spelled as a G♭; there isn't an F♯ in the symphony until the development section. This momentary deflection into a sharp direction, which moves the system up to a C system in measure 128 with the entry of F♯, underscores a short tonicization of C major. However, generally speaking, the entire symphony tends to be very "flat-oriented."[160]

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[160]The entry of the notes E♭, G♭ and A♮ just before the half cadence in measure 135 reestablishes the E♭ system. In measures 146 and 150 G♭ is consistently "deactivated" with the simultaneous presence of A♮. Yet, in measure 172, the G♭ in the violas and winds brings the system gamut down again to six

CHAPTER 15

SYMPHONY NO. 92

Symphony no. 92 in G major (The "Oxford") was written in 1789 and was dedicated to Comte d'Ogny and Prince Oettingen-

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flats; the tonic three-flat system is not reestablished until half-way through the retransition through the reentry of A♮ in 184. This allows the recapitulation in 192 to enter governed by the "correct" system.

Before the coda (measure 253), in measures 238, 242, and 246 F♯ attempt to push the tonality in a sharp direction; however, the implied C system created by the F♯'s is each time quickly canceled by a soon-to-arrive E♭. (Perhaps this hints at the second movement which is in B♭ major instead of the expected subdominant.)

One interesting curiosity is the emergence of just one more G♭ in measure 257. This one, however, is not canceled by an A♮ and the movement ends in a six-flat system. I believe this is the only movement I have seen in the group of symphonies under consideration which ends out of system. (It is not very unusual for a movement, or an entire work, in major mode to end in the system of the tonic minor, particularly when a conflict between the tonic and its parallel minor is important in the piece. This is discussed in the Appendix.)

An unusual moment in the third movement brings in E♭—F♯ and G♭—A♮ all in measure 40! Although any potential system modulation is annulled, this one measure seems to include all the major chromatic issues discussed in this symphony. This occurs just a few measures before the trio. Therefore, at the end of the *menuet da capo*, all the major issues are on the table just before the last movement begins. Like the first movement, no F♯'s are present until several measures into the development section and seem to underscore a short tonicization of C, in this case, C minor.

Wallerstein along with numbers 90 and 91.[161] It is a four-movement work; the first movement employs a slow introduction, a technique typical of Haydn's later symphonic output. This is the last symphony before the London set (nos. 93 - 104).

General considerations

Between 1787 and 1789, Haydn began to relinquish certain conventionalizations of the Paris set (Symphonies no. 82 to 87) by gradually abandoning the long-range chromatic voice exchange between tonic harmony and an augmented-sixth chord just before the structural dominant. In fact, none of the symphonies from nos. 88 to 92 entirely employ this technique. Only Symphony no. 89 comes close to the old Paris "formula"; in this work, the interval of the augmented-sixth is not presented vertically, even though those two chromatics still exchange with the tonic. Neither Symphony no. 88 nor no. 91 use the augmented-sixth chord as a tool for tonic prolongation. Both Symphonies no. 90 and no. 92 have expositions that begin on the dominant and, as a result, these symphonies with non-tonic openings have dissonant applied sonorities that end their slow introductions: the slow

[161]Joseph Haydn, *Symphonies 88-92 in Full Score*; The Haydn Society edition, edited by H. C. Robbins Landon (New York: Dover Publications, Inc., 1983.), contents page.

introduction of Symphony no. 90 ends on a diminished seventh chord applied to the upcoming dominant that starts the exposition, while Symphony no. 92 uses an augmented-sixth chord toward the end of its slow introduction that resolves to the dominant seventh chord at the opening of the Allegro.

The Allegro spiritoso opens, in measure 21, with a four-measure group forming an extended upbeat to tonic harmony before forte dynamics emphasize tonic harmony in the next phrase group. Measure 36 appears to begin the process of setting up dominant harmony by introducing C♯ but, typical of Haydn, the modulation to the dominant harmonic area is delayed. A counterstatement begins in measure 41 and lasts for four measures; the formal bridge begins in measure 45 on tonic harmony with forte dynamics. (Counterstatement/bridge exposition types start on the tonic and move into the "bridge" without restating a downbeat tonic triad.).

The succession of "weak-strong" events that defines the opening statement also motivates the organization of the bridge that opens as a counterstatement; measure 40 parallels measure 21. This succession of events creates a pervasive sense of rhythmic uncertainty which is made more pronounced by those bars between measures 37 - 39 that act like a cadential extension preceeding the counterstatement. This tends to blur the natural boundary between the opening statement and the bridge, and the two events are telescoped by the insertion of

"extra" music. The bridge ends its first period at measure 56 on the dominant of D minor.

The succeeding period also begins with the same theme as the opening statement and the bridge itself; however, that gesture is now transposed from D dominant seventh to A dominant seventh. This is the beginning of a substantial auxiliary cadence that will be discussed in more detail later. The music is now deceptively directed toward D minor but afterwards toward D major; D major *as a structural dominant* is not secured until the opening of the second harmonic area in measure 72.

In Symphony no. 90, opera buffa elements in Haydn's choices of melodic material were discussed: the persistent theme of the Allegro assai appeared to have some characteristic comedic elements. The melody that initiates the second harmonic area of Symphony no. 92 seems to hail from that same tradition. It is rhythmically even and harmonically simple, and it drastically changes the prevailing mood with its simple, naive character. (In fact, this tune — derived from the melodic figure of the slow introduction's opening measures — only becomes fully dramatized at the opening of the development section.) This phrase is rhythmically elided to a four-measure codetta at bar 79.

In all, the entire second harmonic area, codetta and all, is only eleven measures long. As we have seen previously,

Haydn has created an exposition whose center of gravity is forced, by the mere absence of much second-harmonic-area material, toward the double bar. Like the older-style Wagenseil or Monn symphonic expositions, most of this exposition is subsumed under an extended and elaborately unfolded tonic. The technique used here is not very different, in terms of balance, from that of Symphony no. 73.

Voice-leading considerations

Since the second harmonic area is so brief, Haydn must use contrapuntal and developmental techniques during the course of the bridge to organize motion into the new harmonic area. Previously, we have seen Haydn employ auxiliary cadences before the formal entrance of the structural dominant to anchor that new harmonic area. This seems to have been an issue particularly in those situations where no chromatic voice exchange was present to anchor the tonic and also to provide a jumping off point for motion into the new harmonic area. In the case of Symphony no. 92, an extensive auxiliary cadence is articulated through the interaction of the *Urlinie* with lower structural levels.

The first instance occurs in the slow introduction. This relatively short opening of only twenty measures employs its own middleground descent from $\hat{5}$ to $\hat{2}$ over the first twelve

measures and cadences on the dominant (see Figure 14.1). Motion into an inner voice takes A ($\hat{2}$) to G, a passing tone and part of a passing augmented-sixth chord, and then continues to F♯ at the opening of the Allegro. Yet, this descending line is superseded by an even higher-level chromatic descent, also from $\hat{5}$. The D at the opening of the introduction, d^2, is registrally transferred to d^3 with the arrival of the augmented-sixth chord in measure 16 and resolves to $c\sharp^3$. At the opening of the Allegro, C♯, instead of resolving upwards in a more traditional manner to D, continues down to C♮, the seventh of the dominant seventh chord that opens the exposition. The C♮ then resolves to B in measure 25 supported by tonic harmony, and this is the first *Urlinie* note of the movement. The previous E♭ that harmonically supported C♯ and created the augmented-sixth chord will be discussed below.[162]

The chromatic motion from D down to A, a filled-in version of the higher-level descending diatonic line that ends in a interruption before the entrance of tonic harmony (see graph just before measure 25), is prepared in the slow

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[162]The role of the E♭ as a prolonging neighbor note to D may be seen in the first few measures of the melodic material of the slow introduction. Although E is assumed to locally resolve to D in measure 4 (in the graph this resolution is in parentheses), it appears as an échappé and sets up a strong relationship with the previous D. In its chromaticized, more dissonant version, it still maintains its neighbor note association with D, not only a chromatic neighbor, but part of an augmented-sixth chord.

introduction in measure 11. This motive, which essentially secures tonic harmony and the first note of the *Urlinie*, plays an important role in the development's retransition: notice in the score that the recapitulation in measure 125 is organized by the same material.

Example 14.5, voice-leading analytic material for Symphony no. 92, includes background and high-level middleground graphs of the exposition, the purpose of which is to make the exposition easier to grasp in a single picture. All major descents are accompanied by their own lower-level, embedded descents. For example, we have just discussed that the chromatic descent to the initial tonic supersedes an additional diatonic one on a lower structural level. Another diatonic descent occurs in the bridge, this one based on a localized dominant prolongation between measures 50 and 56 that precedes the auxiliary cadence beginning in measure 56. The auxiliary cadence itself, between measures 56 and 72, is also controlled by its own dominant-area diatonic descent. It is the *Urlinie*'s $\hat{2}$ (the auxiliary cadence's melodic 5) that signals the beginning of this auxiliary cadence.

An interesting feature, one that can be observed in greater detail in Example 15.3, is that the auxiliary cadence initially descends to F♮ in measure 61. Curiously, this F♮, which continues into the next measure, generating B♭ (this will be discussed below), is the only F♮ in the entire

exposition. The F♮ is "corrected" to F♯ in measure 65. Yet this, too, is an embedded and, therefore, subsidiary motion, even though it exists on a slightly higher structural level. The descent from the auxiliary cadence's melodic 5 does not continue until measure 68. The entire auxiliary cadence is harmonically supported by the chromatically altered supertonic (II♯) that ultimately functions as the dominant of the structural dominant in measure 72.

Chromatic considerations

The intricate organization of voice leading in this movement is conditioned upon the complexity and abundance of its chromaticism. The first indication of this can be seen in the slow introduction which not only has its own skillful handling of melodic configuration, but also comprises an embryonic chromatic array ascending from G (see Figure 14.1). Significantly, the rising array emphasizes B♭ within the initial prolongation of tonic harmony between measures 1 and 12 (before the half-cadence). The descending arrays are lower level structures.

The principal chromatic issues in the first movement of Symphony no. 92 are initiated with a conflict between the tonic and its parallel minor. It must be kept in mind, too, that the tonic minor on G includes pc 3 which, in this case,

is spelled as B♭. There is only one A♯ in the exposition (in measure 67) and it is placed within a local tonicization of G major that demands the use of A♯. Haydn alters this two measures later by respelling A♯ as B♭, using it as an appoggiatura to A♮.

To help understand why this temporary respelling does not undermine Haydn's fundamental chromatic and voice-leading strategy, the exposition may be examined by system analysis. The slow introduction opens in G major. The tonic one-sharp system is momentarily disturbed by the use of B♭ in measure 11 (pc 3 in the local chromatic array). Although this note could initiate a system change to two flats,[163] the C♯ that is almost simultaneously introduced at that moment prevents any systemic modulation from occurring; the one sharp system is preserved. Each time that B♭ is present in this period, whether it appears as a foreground passing sonority or as part of the augmented-sixth chord, potential system modulation is prevented by C♯. Therefore, Haydn has suggested the importance of the major/minor system conflict that runs as an undercurrent throughout the movement since a B♭ would raise the possibility of motion to the parallel minor; C♯ precludes such an event.

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[163]This potential system modulation is emphasized by the prevailing local harmony of G minor. Also, pc 3 spelled as a minor third above the tonic, the most common spelling of pc 3, generally signifies the parallel tonic minor (see Appendix).

A one-sharp system is maintained throughout the opening statement and half-way through the bridge. However, it is the second period of the bridge, the section where the auxiliary cadence moves us toward the structural dominant, where Haydn creates chromatic clashes. Even though there are many ways to accomplish this, Haydn first invokes the system of the parallel tonic minor, consistent with his strategy in the slow introduction. In measure 61, Haydn locally tonicizes D minor, prompted by the A dominant seventh chord a few measures earlier. With the local tonal organization now residing on the flat side of the circle of fifths, Haydn comfortably reintroduces B♭ in measure 62, and moves down into a two-flat system.[164] However, the local harmonic goal is the dominant and C♯ moves us back up into the tonic one-sharp system, just as it had in the slow introduction. Both the upcoming A♯ and B♭ do not contradict the current system since A♯ is succeeded by G♮ and B♭ is succeeded by C♯. Haydn is, therefore, able to

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[164]It should be emphasized that the local tonicization of D minor, with its implicit key signature of one flat, is not inconsistent with the underlying system change to two flats. In this method of analysis, the alteration from a tonic major system to its parallel minor is understood to preserve the underlying background tonic. Therefore, it is not only conceivable but highly likely that during the unfolding of the tonic area of an exposition, which is very often realized with a system change of the major tonic to its parallel minor at the point that pc 3 is activated, there will be local expansions of non-tonic areas on lower levels of structure. I believe that this is consistent with the Schenkerian understanding of how a background may be prolonged by middle-ground elements not *locally* situated in tonic harmony.

exploit his primary chromatic material without disrupting with the underlying tonic system.

It has been observed that a system may be suspended momentarily after the arrival of a new formal area (such as in Symphony no. 91 where a six-flat system, the system of the parallel tonic minor, was suspended a measure into the second harmonic area before the tonic three-flat system was reestablished by A♮). In the case of Symphony no. 92, however, the system reverts to one sharp in measure 65 in anticipation of the approaching second harmonic area in measure 72, and is then further chromaticized by the enharmonic spelling of pc 3 as A♯, temporarily creating a four-sharp/one-sharp conflict between A♯ and G in measure 67. The A♯ plays a relatively foreground role before the double bar in this movement. As B♭, however, it motivates two other chromatics: the first, E♭ and the second, F♮. We have already discussed the role of F♮ in helping the tonicized D minor in the second period of the bridge. A D minor sonority is used locally to introduce the PCA's B♭ and to imply a system change that ultimately leads to the structural dominant supported by the restored one-sharp system.

The B♭/A♯ enharmonic drama played out in the auxiliary cadence in the exposition is reasserted in the development section, this time with A♮ having more of an active role than B♭. In measure 87, A♯ in the first violin, the last one that

will be heard until the coda, suggests a modulation to a four-sharp system just before G♮ in the first oboe prevents such an occurrence. This motivates most of the succeeding music to veer in the sharp direction. The B♭ in measure 113 suggests a modulation to the parallel minor again; however, it is prevented from activating a modulation because of the C♯ in measure 114. Now that the tonic system is firmly in place, the retransition begins and the D-C♯-C♮-B tetrachord is presented over the remainder of the development section and the beginning of the recapitulation.

The role of E♭, and the way it relates specifically to C♯, is more significant in the outer reaches of the first movement than internally. We have already discussed the augmented-sixth chord in the slow introduction which resolves to the dominant seventh that initiates the opening statement of the Allegro. Yet, E♭ is also important at the end of the movement as well and plays a similar role. With a few minor *en route* adjustments, a one-sharp system is stabilized until the coda begins in measure 200. During the short phrase from measure 200 to 204, the provocative role of A♯ is passed off to B♭. In fact, that A♯ is the last in the movement. The potential modulatory function of B♭ in measure 204, however, is abrogated by C♯ in the next measure. Even so, B♭ is reasserted in measure 212, moving the systems into two flats for a number of measures. The one-sharp tonic system is not

regained until measure 219, the beginning of the last phrase of the coda.

In both the slow introduction and the coda, the initial use of a prominent E♭ and its always-present B♭ chord member implies a modulation from a one-sharp to a two-flat system, i.e., between G major and its parallel minor. In both cases, C♯ maintains its presence in the area until it is able to successfully reassert the tonic one-sharp system. In both areas, the use of the notes E♭ and C♯ — in the slow introduction they are vertically aligned to create the augmented-sixth chord — are applied to dominant harmony.[165] In essence, the coda is a recomposition of chromatic elements already present in the slow introduction.

That part of the coda from measures 205 - 219 is a cognate to that area of the exposition's bridge that begins in measure 57; this area of the bridge that tonicizes D minor is paralleled in the coda by the phrase that begins on the E♭ triad in measure 212. The final phrase of the coda (measure 219ff.), finally resolves the elements of the chromatic tetrachord (D-C♯-C♮-B) that has been so prominent during the first movement. The D reenters in measure 219 (supported by V in its cadential variant), C♯ reenters in measure 200 and

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[165]In contrast, most of the other augmented-sixths we have seen allude to tonic harmony, usually by way of the chromatic double voice exchange with the initial tonic triad at the opening of the Allegro.

resolves to C♮ in measure 224, and C♮ revolves to B in measure 225. The measures from 227 to the double bar reinforce that process.

CHAPTER 16

CONCLUSIONS

This essay has examined first-movement exposition procedures in Haydn's symphonies between the years 1785 and 1789, with some mention of historically significant earlier works, particularly Symphony no. 73 from 1782. This body of work is unique, as it reveals Haydn's development at a pivotal stage in his compositional career, a stage that would soon culminate in his most sophisticated experiments in symphonic form as well as other *genres*.

Through the application of two analytical systems, one voice-leading, the other chromatic, it can be shown that prolongational techniques used by the composer to arrive at a second harmonic area relate decisively to the way in which the entire exposition takes shape. Consequently, the nature of the bridge has been of utmost relevance to these discussions. In Haydn's elaborate symphonic expositions, the most complex developmental material is unfolded in his bridge passages, thus focusing the drama of the exposition on a prolonged tonic area. This approach contrasts with that of his two most famous contemporaries, Mozart and Beethoven, who concentrate exposition intensity through the creation of innovative second

harmonic area extensions and transitional passages; these two composers are the more likely of the three to have not just closing periods, but extensive multi-phrase closing periods that generate new areas of prolongation within the exposition. Haydn's predecessors before the 1760's, working in the context of the *style galant*, were less likely than the three later Viennese masters to create particularly involved expositions, although sophisticated chromaticism was not unknown even at that time. The developmental procedures and compositional techniques of a Wagenseil or a Monn seem dwarfed when compared to the maturity of the late Classical-era composers.

Although Mozart and Beethoven increased the size and complexity of their second harmonic areas, Haydn often increased the size and complexity of his bridges, delaying the arrival of the second harmonic area until the very end of the exposition. Symphony no. 73, for example, not only has no closing area, but its structural dominant is not even secured until the codetta, just a few measures before the end of the exposition. Yes, there is an arrival at a structural dominant at the codetta, but no sustained second harmonic area and, of course, no closing period either. As we have seen, the roots of this strategy may have originated with Haydn's Viennese predecessors and Haydn himself seemed never to abandon it. For example, Symphony no. 92 ("The Oxford"), the last of the symphonies to be examined here, has a bridge that moves into

a minor dominant flat-key expanse before the second harmonic area is finally anchored eleven measures before the double bar, after the dominant's dominant forces the issue. Since the second harmonic area is a short span of only one eleven-measure phrase, there is no closing period, only a short codetta before the end of the section.

Many symphonies by Haydn from this time — not to mention string quartets, piano sonatas, piano trios, etc. — have short, two-period second harmonic areas with no closing periods. In these cases, the goal is not to expand the dominant area, but the tonic area. Not that Haydn was beyond trying his hand at extensive second harmonic areas: the second harmonic area of Symphony no. 91's exposition is quite extensive by Haydn's more conventional standards.

Haydn was the musician whom contemporary theorists — such as Koch or Kollmann — held up as the epitome of high compositional procedure and taste. By contrast, conceptions of sonata form of the nineteenth and early twentieth centuries, like those of Czerny, began to veer away from the previous models of the classical repertory, and, particularly, from Haydn's. As nineteenth-century composers began to expand the breadth of the form and also to have predilections toward a more prominently *thematic* expression of formal areas, older conceptions of sonata form, based upon large-scale harmonic articulation of musical periods, seemed slowly to vanish (at

least in the world of theory), eventually giving way to total thematic appraisal of sonata form: first theme, bridge theme, contrasting second theme, closing theme, etc. The discussions of "thematic process" reached a climax in the writings of Rudolph Réti who argued that Haydn's monothematic predilections indicated a certain primitive attitude.[166] Even today, Haydn is often seen as the composer who so frequently contradicted the "rules" of classical construction that we assume his well-known sense of humor to be the basis for his purposeful and apparently rollicking abandonment of canon.

Using voice-leading analytic techniques, we have seen that Haydn's methodology, and often Beethoven's and Mozart's, involves the transformation of the tonic triad into a quite dissonant chordal entity that resolves to the dominant of the dominant, and then leads directly into the second harmonic area. This structure is often an augmented-sixth chord, or perhaps a diminished seventh chord, and is generally propagated by a long-range chromatic progression, often culminating in a voice exchange of rather substantial proportions.[167] This transformation is generally based on

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[166]Rudolph Réti, *The Thematic Process in Music*, p. 166.

[167]This issue was first discussed by Heinrich Schenker in "Beethovens Dritte Sinfonie zum erstenmal in ihrem wahren Inhalt dargestellt," *Das Meisterwerk in der Musik* 3 (Munich: Drei Masken Verlag, 1930), 23, and Fig. 2, 3 and 6. Also, see Schenker's later discussion in *Free Composition*, trans. and

cues from earlier on — often from the slow introduction — that manifest themselves on higher and higher structural levels and create a classically balanced and well prepared compositional palette. In all of Haydn's sonatas, virtually nothing takes place in the bridge (or for that matter anywhere else in the movement) that is not a legitimate repercussion of the music's opening gambit. By this, I am suggesting that sonata form, as a conjectural-compositional process, contains within itself a kind of logic and perhaps even inevitability reminiscent of the "synthesis" of a Hegelian dialectic.[168]

And this is where Burnett's method of chromatic analysis supplements insights based on voice leading, since it also provides us with a description of process and motivic predictability that allows us to understand new aspects of compositional unity. In the chromatic analysis, we see the composer providing his listener with a simple argument that contains both its evolutionary germ and ultimate conclusion in the aftermath of the argument's resolution.

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ed. Ernst Oster (New York: Longman, 1979), p. 93 and Fig. 115/2. Edward Laufer comments on these analyses in "Heinrich Schenker, *Free Composition (Der freie Satz)*," *Music Theory Spectrum* 3 (1981), 167-71.

[168]In this vein, Maynard Solomon writes, "A new means was at hand [to Classical era composers], whose potentiality for Utopian expression had been gradually growing, almost unnoticed, and in the hands of a handful of master composers climaxed by Beethoven, it emerged as the ultimate musical expression of Utopian affirmation — the Sonata form." See Solomon's "Beethoven, Sonata and Utopia," *Telos* 9 (Fall 1971), p. 40.

More immediately, however, for the theory to continue to develop, a combination of voice-leading and chromatic inquiries should be applied to other music of the late-Classical era, not only to Haydn's London symphonies, but to Mozart's and Beethoven's late symphonic works as well. Of course, other *genres* should be addressed. The nineteenth century provides us with a body of works that provides opportunities to discuss the unparalleled expansion of bridge material and structural chromaticism. Beethoven's late quartets, for example, are of particular interest with respect to this line of inquiry. Although voice-leading studies continue to augment the analytic literature by giving us finer understandings of prolongational techniques, chromatic analyses may help to fortify these discussions with additional material and initiate new avenues of inquiry. The three-key exposition is an example of a field of study where pre-existing voice-leading analyses might well be both supported and amplified with new insights into its chromatic design. Also, in cases where areas of prolongation may not be readily discernible, chromatic analysis will prove helpful in clarifying the composer's intentions.

It is hoped that chromatic analysis may help us to comprehend the transformation of modality in the sixteenth century to common practice tonality, and also to provide us with new tools for the further examination of the dissolution

of triadic tonality in the nineteenth century and the evolution of non-triadic tonalities based on symmetrical relationships.

APPENDIX

In a recent paper, Henry Burnett and John Ondich analyzed music written between the mid-sixteenth and early seventeenth centuries, beginning with pieces written in the 1540's and culminating in the innovations of the *seconda prattica*.[169] Madrigal collections of Claudio Monteverdi were examined in terms of both pitch and hexachordal content. The authors observed that the vast majority of pieces unfolded eleven pitch classes (sometimes fewer). They also discovered that sectional divisions of longer pieces — such as the rappresentativi *Il Combattimento di Tancredi e Clorinda* and *Lamento d'Arianna* — unfolded eleven pitch classes and, at points of modulation, unfolded different eleven-note collections.[170] By cataloging pitch content, that is, determining which notes were present and, consequently, absent, the

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[169]Henry Burnett and John Ondich, "A New Theory of Hexachord Modulation in the Late 16th and Early 17th Centuries," *International Journal of Musicology*, vol. 8, Fall 1999 (forthcoming).

[170]Burnett and Ondich indicate that compositions' unfolding eleven notes was not an unknown feature, even in the Renaissance, and has been recognized before in the twentieth century. Cf., Edward Lowinsky, *Secret Chromatic Art in the Netherlands Motet* (New York: Columbia University Press, 1946), n. 34, 100-101.

authors concluded that a three-hexachordal system — comprising both recta pitch classes (diatonic pc's of the *durum*, *naturale* and *molle* hexachords) and ficta pitch classes (those notes required for cadence formation) — accounted for a consistent eleven-note gamut. By introducing the twelfth note, a note consistenly a minor third or an augmented second above the tonic of the central hexachord of the system, and concurrently deleting one of the original eleven pitches, modulations from one three-hexachord system (or eleven pitch-class area) into another could be rationally achieved.

For example, in a *naturalis* system (i.e., a hexachordal system with no sharps or flats), eleven stable pitches would be present, while E♭ or D♯ (pc 3 of the natural hexachord) would be missing. If the music modulated out of the *naturalis* system through the use of E♭, then F♯ would now be missing. If the music modulated out of the *naturalis* system through the use of D♯, then C♮ would now be missing.

The consistency with which this theory helps to illuminate music of the mid-seventeenth century is impressive and has been well demonstrated in the above-cited paper. Of particular interest to us here is Henry Burnett's speculation that a pre-compositional eleven-note sensitivity, related to aggregate completion, may very well have continued years after these early Baroque experiments. After examining a significant body of music, Burnett concluded that composers may have maintained an awareness of this issue throughout the

entire period of common-practice tonality.[171] By that historical point, however, the three-hexachordal system and its modal framework had already been displaced by key-centered tonality in which the same conditions that previously held for hexachordal systems were now applicable to a particular key. Therefore, C *naturalis* became C major, or a "C system," and the eleven pitches previously associated with the *naturalis* system were now incorporated into modern tonal organization.

Burnett has now substantiated an eleven pitch-class sensitivity in the works of early and later eighteenth century symphonic composers. Since Haydn was certainly influenced by composers such as Sammartini, Wagenseil, Monn, etc., it stands to reason that the application of this idea to Haydn's works may not be at all improper. As a result, I have often incorporated analytical musings like those above into the "Chromatic considerations" sections of the symphonic analyses.

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[171]A preponderance of eleven notes within any tonal center may not simply be a question of historic, nor even aesthetic, suitability and may have more to do with the nature of the tonal system itself. Of all the twelve available chromatic pitches, pc 3 (in major mode) is the most difficult to convincingly unfold with respect to modern diatonic harmony. The use of D♯ (in C major) would open up the door to an unlikely transposition to III♯, a jump of four keys in the sharp direction. A more likely possibility would be to introduce E♭ and move, momentarily, into the parallel minor, a technique used by Vivaldi in his works that employ the so-called *pianoidée*, and by some early Classicists such as Sammartini. Henry Burnett has suggested this possibility in his yet unpublished "Eleven Pitch-Class Tonality: A New Approach to Modulation in the Music of the 18th and 19th Centuries." For more information about *pianoidée*, see footnote no. 47 above.

These are the main points of Burnett's theory of the operation of eleven-note systems in common practice tonality:

1) In modal practice, eight (or twelve) modes represented a C system. For example, mode 1, the dorian mode, is a minor mode, but its pitch classes are derived from a segment and reordering of the C gamut. That is why the solmization syllables applied to dorian mode are derived from a C three-hexachordal system; for example, D is "re." After the gradual transformation of modality into tonality, any of the fifteen key signatures could refer to a given tonic major or its relative minor. That is, since C major and A minor share the same pitch content, they are both subsumed under the same eleven-note system. In both C major or A minor, D♯ or E♭ is the missing twelfth pitch of that particular eleven-note gamut.

2) Every eleven-pitch class system is defined not only by its missing pitch, but also by a primary tritone that divides the tonic octave at its midpoint. A C system, defined by a C tonic octave, has C–F♯ as its primary tritone. In terms of octaves as intervalic entities, only F♯ can equally subdivide the C octave. The missing pitch of an eleven-pitch class system defines its own octave and, therefore, its own tritone which is an exact complement of the primary tritone of the original tonic octave. Therefore, the missing pitch in a C system, E♭, defines its octave with its own triton, E♭–A♮, complementing the C–F♯ tritone. The two conflicting tritones

of any given system are in a symmetrical relationship that operates against, or in conflict with, the asymmetrical properties of the major/minor tonal system. It is this unique relationship, the pull of one system against its complement, that gives rise to tension and dissonance on a high structural level.

3) The relationship between the two complementary tritones of any given key — i.e., the primary tritone that defines the tonic octave, and the complementary one based on the octave of the missing pitch — forms a symmetrical axis circumscribed by cycles of minor thirds. This is creates high-level dissonances.

Therefore, the following must always be kept in mind when applying system analysis to a piece of music. In a movement in C major, the chromatic octave is filled in with eleven notes that avoid pc 3. When pc 3 is finally used (e.g., during the PCA unfolding), the missing pitch spelled as E♭ will move the system down to three flats with the tritone E♭–A defining the octave of the missing pitch. Therefore, the use of E♭ in a C system will move the chromatic gamut into a three-flat system; only an F♯ (pc 3 in a three-flat system) will reestablish the tonic C system. If pc 3 enters as D♯, however, the gamut will be shifted up into three sharps, as D♯ divides the A octave at its midpoint. The use of C♮, pc 3 in the three-sharp system, will once more reestablish the C system.

The missing pitch spelled as a flat will always move the system down in the flat direction, while the missing pitch spelled as a sharp will always move the system up in the sharp direction. Figure 15 demonstrates the symmetrical axes in the key of C major.

Of course, a composer (generally not Haydn and his Classical contemporaries) might continue moving away from the tonic system and avoid regaining it too quickly. Again, in a C system, E♭ will move us into a three-flat system. However, the introduction of G♭ (instead of F♯) will continue the process down another three flats, sending us into six flats, where G♭—C is the primary tritone of a six-flat system. The only way of returning to the C system, then, is first to cancel the six-flat system with an A♮ (pc 3 in G♭ major), a "sharp" pitch, and then to cancel the remaining three-flat system with an F♯ (pc 3 in E♭). Such a modulatory scheme could as well be accomplished in the sharp direction: in a C system, D♯ leads to a three-sharp system, and in that new environment, B♯ leads to a six-sharp system. To back us out, the six-sharp system would be canceled with an A♮ and the remaining three-sharp system would be canceled with a C♮. Notice that in either case, a six-flat system or a six-sharp system, A♮ is needed to restore the previous system level, either three flats or three sharps.

In essence, the interaction of these complementary systems creates one background symmetrically organized

diminished seventh chord that underlies diatonic tonality and serves to activate its chromatic potential.

Although this entire process may *seem* to make tonal music somewhat limited as to key choices within a given tonic framework, it does help to explain why certain music theorists, chiefly among them Heinrich Schenker, have justifiably very conservative approaches to the issue of modulation. Carl Schachter discusses the tonic key as a "matrix," a chord that is "elaborately prolonged or composed out ... Every tonic conceived as a matrix is a prolonged chord, but not every prolonged chord is a tonic."[172] Burnett has noticed that composers of the nineteenth century, beginning with Beethoven and culminating with Brahms and Wagner, often introduce key signature changes within single movements that enharmonically respell the missing pitch and allow more variety within the basic pitch field through system complementation. This may provide a reason why the issue of enharmonicism plays such a significant role in heavily chromaticized music.

Since this appendix also functions as a "how-to" manual that outlines the steps for system analysis, I have chosen

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[172]Carl Schachter, "Analysis by Key: Another Look at Modulation," *Music Analysis* 6/3 (1987), pp. 289-318, writes an excellent overview of this whole question. Schachter also quotes Fred Lerdahl and Ray Jackendoff (p. 291) who write, "the tonic is in some sense implicit in every moment of the piece" in *A Generative Theory of Tonal Music* (Cambridge, Mass.: MIT, 1983), p.295.

Symphony no. 82 to analyze by systems since the whole movement has not been examined in this way earlier in the present work, and a practical application of the theory should now be undertaken.[173] A systems analysis of the first movement of this symphony is also reasonably uncomplicated compared to Haydn's later works.

As Symphony no. 82 is in C major, pc 3, the missing pitch is E♭ or D♯. The first appearance of pc 3 is in measure 30. Written as a minor third above the tonic, pc 3 invariably changes the system from the tonic to that of its parallel (tonic) minor.[174] Therefore, in this context, E♭ motivates

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[173]It might be helpful to have already read the analysis that concentrates on voice leading and the unfolding of the PCA. See Chapter 5.

[174]The inverse also holds: in the tonic minor mode, the use of the missing pitch written as an augmented fourth above the tonic (pc 6) will invoke the system of the parallel tonic major. (For an application of this condition, cf. the analysis of Symphony no. 83 in G minor.) In reference to the development of Burnett's theory, the recognition of these two conditions — first, that pc 3 written as a minor third above the tonic in the major mode invokes the system of the parallel tonic minor and, second, that the "mirror image" of this was also true, i.e., pc 6 written as an augmented fourth above the tonic in the minor mode invokes the system of the parallel tonic major — were major discoveries.

System analysis may help to provide a reason why a major dominant as a large-scale prolongation in minor mode is unlikely, if not, indeed, impossible: since C minor, for example, exists only within an E♭ gamut, the use of the missing pitch, F♯, would be needed to tonicize G. An F♯ could only refer to C major, not to C minor, since F♯ divides the C octave at its center. A prolongation of the major dominant in the minor mode would thus provoke a system modulation to the parallel major, unless the parallel major was meant to displace the tonic minor altogether. This situation happens, for example, during the transition from the third to fourth

a system change from a C system to a three-flat system. On a foreground level, this E♭ is part of an arpeggiated D dominant minor ninth chord applied to the G dominant in measure 33 and is arrived at through mode mixture (another way of referring to the alternate system). Very locally, the E♭ creates a diminished chord that is formed from the primary and complementary tritones in a C system. As we will see, on the background level, by changing gamuts from a C system to a three-flat system, the integrity of the C tonality is secured throughout the passage by the mitigating influence of F♯, the missing pitch of the complementary system. As was mentioned in Chapter 5, part of Haydn's "game" in this symphony involves the continuous alternation between parallel major and minor sonorities.

The arrival at a three-flat system and its inference of C minor is transitory however: the F♯ present in measure 33 actually prevents the system from modulating. That is, in a three-flat system, F♯ would be its pc 3, returning us to a C system. Since they share the same eleven-note gamuts, the "three-flat system" description can be applied to either C minor or E♭ major. In either case, F♯ is the missing pitch of that three-flat system. A missing pitch written as a sharp

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movements of Beethoven's Symphony no. 5 in C minor: by the beginning of the last movement, the three-flat system has been been successfully, and finally, displaced by the C system, triumphantly propelling E♭ to E♮, using F♯ as the activating entity.

moves the system in the sharp direction, while a flat accomplishes the reverse. (Had the three-flat system been annulled with a G♭ instead of an F♯, the system would have moved even further down into the flat direction instead of up into the sharp direction.) Therefore, at this moment of the exposition, Haydn has raised the prospect of a system modulation, playing E♭ off against E♮, but has not yet allowed that modulation to occur by constantly placing F♯ (from the primary tritone) in the "way" of E♭ (from the complementary tritone).

As the Primary Chromatic Array begins to move in measure 46, the middle of the bridge, and pc 3 returns in the next bar, E♭ in the bass (an indication of the potential of moving into a three-flat system) is again contradicted by F♯ in the violas; the C system is maintained.

However, the upcoming E♭ in measure 51 is allowed to govern a more substantial area. At this point, Haydn needs to set up the tonicization of the structural dominant in measure 70. This is accomplished in the following manner: E♭ in measure 51 takes us down into three flats for eight measures; however, the transitional phrase on the D pedal that starts in measure 59 begins with a prominent F♯. This F♯, in a sense, "repairs" the disruptive influence of E♭ and initiates a short phrase into the second harmonic area beginning in measure 70.

As pointed out in Chapter 5 and later, pc 3 is exclusively spelled as E♭ in the first harmonic area, and as D♯ in the second harmonic area. This issue of enharmonic

spelling determined by the second harmonic area as a dividing line would be followed by Haydn until Symphony no. 88. In the exposition of Symphony no. 82, each D♯ in the second harmonic area, intimating a three-sharp system, is very soon canceled by C♮. At the double bar, we have returned to the C system, confirming the underlying and stable tonality of the movement.

In terms of voice leading and trichords, the development section melodically plays out the C-C♯-D trichord discussed in the Chapter 5. The first tonal area of the development, F major, supports a register transfer of C into the soprano. In measure 121, C moves to C♯ and is supported by A, functioning as the dominant seventh of D minor. At D minor in measure 125, C♯ moves to D. A melodic C♯ reasserts itself in measure 142 supported by A major. The C♯ eventually passes through C♮ before D, $\hat{2}$, is regained (from the end of the exposition) for the retransition in measure 162. Melodic motion from D into an inner voice to B precedes the recapitulation that begins in measure 174. In a high-middleground nutshell, G in the bass at the end of the development, supporting a melodic D, moves to A in measure 142 that supports the D's neighbor note motion to C♯. At the retransition, C♯ resolves to D and the neighbor note A in the bass returns to G.

I bring in this necessary aspect of voice-leading analysis in the development to emphasize that during Haydn's sophisticated *working out* of a significant neighbor-note motion, he wanders very little from the underlying tonic C

system. For example, the modulatory potential of the E♭'s in measures 111ff., are always prevented from activating the alternate system by the surrounding F♯'s. During the local excursion to A major in measure 142, the underlying system is still C until the D♯ in measure 149 finally moves the gamut to three sharps, thus coordinating the local motion to A major with a disruption of the underlying eleven-note tonal fabric in the sharp direction. The C system is regained in measure 154 for the balance of the development section with the return of C♮.

It is interesting to note that in the exposition, the only eleven-note expanse not in the C system involved a short jaunt to the three-flat gamut from measures 51ff. All the D♯'s were quickly deactivated as modulatory devices by C♮. In the development section, the reverse was true: all the E♭'s were quickly deactivated by F♯'s while the D♯ in measure 149 accomplished a short-lived system modulation to three sharps before the next entry of C♮.

The recapitulation is fairly uncomplicated, at least in terms of system analysis; the C system is preserved most of the way through this section. In measure 224, within the opening statement of the second harmonic area (now transposed to the tonic) we would expect the passing chromatic note E♭ to move us out of system; however, that prospect is prevented by the presence of F♯ in the eighth-note run and we stay in the C system. The next E♭, however, in measure 240 is somewhat

more interesting since it initiates a chromatic passage parallel to the exposition's dissonant B♭ just prior to its codetta in measure 94. Haydn's ingenious way of dealing with a sudden modulation into three flats is to employ an intense augmented-sixth harmony with its F♯, returning us to a C system and to tonic harmony.

Whereas it is quite likely that a piece of music in major mode will end in the system of the tonic major, like Symphony no. 82 above, it is often the case that a piece in major mode that emphasizes the relationship between the tonic major and its parallel minor as a compositional/motivic consideration will end in the system of the parallel minor. This might explain why Haydn's famous Piano Sonata in C major (Hob. XVI:35) ends its last movement in a three-flat system, the system of the parallel tonic minor, even though it ends, tonally, in C major.

The first movement of this sonata strongly emphasizes D♯ in the second harmonic area of the exposition (beginning in measure 36), always thwarting the potential modulation to a three-sharp system with a soon-to-enter C♮. The same D♯ also plays a significant role in the development section. However, the recapitulation's counterstatement/bridge in measure 111 begins a short expanse of material highlighting D♯'s enharmonic, E♭. In this movement, the modulatory potential of E♭ is consistently countered by F♯. Yet, the relationship between E♭ and F♯ remains an issue until a fortissimo

diminished seventh chord, VII^{o7} of the dominant in measure 151, strongly reemphasizes both E♭ and F♯ just prior to the coda in measure 152. Since the F♯ is present in the chord, the movement ends in a C system, as we expect.

However, in the Finale, the three-flat system invoked by E♭ is *not*, in the end, rebutted by an F♯ which had previously, in a sense, always "come to the rescue" of the tonic C system. In fact, the last chromatic of the movement is the E♭ in measure 89 succeeding the penultimate chromatic F♯! Therefore, the movement ends in a three-flat system. As indicated, this is not unusual.

One will often find in Haydn and, with increasing regularity, in the early works of Beethoven, that a major mode composition will often end in the system of its parallel minor. This reflects a motivic conflict between the tonic's major and minor mode variants or, to put the issue in the terms of system analysis, a conflict between the consonant primary tritone of the tonic system and its dissonant complement. Apparently, in these compositions, this issue is played out until its final moments.

Such is the case with Beethoven's Piano Sonata in D major, op. 10 no. 3. Since the second harmonic area of the first movement is in the submediant, B minor, E♯ — the missing pitch of D major — receives special attention. The emphasis given pc 3 in the first movement is reiterated in the second movement, which is in D minor, with E♯ now spelled as

F♮. In the last movement, this enharmonic issue is played out yet again, with extra weight given to F♮ and its modulatory potential of a one-flat system. This is always countered by G♯, thus preventing a system modulation. Yet, at the end of the movement, F♮ "wins": the last appearance of F♮ has no G♯ after it and, therefore, the movement — and the entire sonata — ends in a one-flat system while the tonality of the last movement is firmly expressed as D major.

Perhaps this kind of technique may open the door to a type of tonal thinking that ultimately equates major and minor modes. Certainly, this appears to be the case in the music of Bartók, whose continual circulation of the minor in major, and *vice versa*, seems to be a foreground condition of octatonicism, a completely symmetrical interpretation of the twelve-notes.

It should be pointed out that although it is common in the Classical period for a composition to end in the system of its parallel tonic minor, i.e., three systems down from the tonic, it would be virtually impossible for a composition to end three systems *above* the tonic, at least in common practice tonality. Therefore, a piece in C major that ends in a three-flat system is often seen; yet it is highly unlikely, and probably impossible, that a piece in C major could end in a three-sharp system since the last D♯ would not be succeeded by a C♮. Also, we have yet to see a piece end six systems below the tonic, i.e., a piece in C major ending in a six-flat

system. This seems equally as unlikely as ending in a three-sharp system, at least within the common practice. It is not, however, impossible for some "pseudo-triadic" music of the twentieth century to end in ways that would have been considered preposterous in the nineteenth.

The appendix has involved us in a description of Burnett's method of system analysis applied to one of the selected Haydn symphonies. In the *Chromatic considerations* areas, much of the details about the reason why such-and-such a note brings you to such-and-such a system, etc., has not generally been included; also, detailed system analyses of the background eleven-note tonic system will not be examined in detail since such analysis simply shows that the music tends not to achieve background modulation of any significant weight.[175] It is assumed that the reader will be equipped to follow the systems analyses by reading this appendix.

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[175]By the time that Beethoven began a serious career in composition, he seemed more and more to experiment with transpositions by minor thirds over long periods of musical space, such as in the exposition bridge of the Piano Sonata in A major, op. 2 no. 2. Perhaps this is why Beethoven seemed to be increasingly fascinated by diminished seventh sonorities; perhaps he might have been reflecting certain aspects of the systemic background in the immediate foreground of the music. Also, many of Beethoven's early works, such as the Piano Quartet in C, WoO 36 no. 3, move to the parallel minor of the tonic or to the dominant before the second harmonic area is secured.

BIBLIOGRAPHY

Baker, James M. "Chromaticism in Classical Music," in Christopher Hatch and David W. Bernstein, eds., *Music Theory and the Exploration of the Past*, chapter 9 (Chicago: University of Chicago Press, 1993), pp. 233-307.

Baker, Nancy. "Heinrich Koch and the Theory of Melody." *JMT* 20 (1976), pp. 3-48.

_____. "From *Teil* to *Tonstück*: The Significance of the *Versuch einer Anleitung zur Composition* by Heinrich Christoph Koch." Ph.D. diss., Yale University, 1978.

Bent, Ian. "Momigny's *Type de la Musique* and a Treatise in the Making," in Christopher Hatch and David W. Bernstein, eds., *Music Theory and the Exploration of the Past*, chapter 10 (Chicago: University of Chicago Press, 1993), pp. 309-340.

Bonds, Mark Evans. *Wordless Rhetoric: Musical Form and the Metaphor of the Oration.* (Cambridge: Harvard University Press, 1991).

Brown, A. Peter. *Joseph Haydn's Keyboard Music: Sources and Style*. (Bloomington: Indiana University Press, 1986).

_____. "The Structure of the Exposition in Haydn's Keyboard Sonatas." *The Music Review* 36 (1975) pp. 102-29.

Burnett, Henry. "Eleven Pitch-Class Tonality: A New Approach to Modulation in the Music of the 18th and 19th Centuries." (Unpublished manuscript, 1998.)

_____. "Levels of Chromatic Ordering in the First Movements of Haydn's London Symphonies: A New Hypothesis." *International Journal of Musicology*, forthcoming (1999).

_____ and Shaugn O'Donnell. "Linear Ordering of the Chromatic Aggregate in Classical Symphonic Music." *Music Theory Spectrum* 18/1 (1996).

_____ and John Ondich. "A New Theory of Hexachord

Modulation in the Late 16th and Early 17th Centuries." *International Journal of Musicology*, 8 (1999).

Burnham, Scott. "The Role of Sonata Form in A. B. Marx's 'Theory of Form'." *JMT* 33/2 (1989), pp. 247-271.

Caplin, William E. *Classical Form: A Theory of Formal Functions for the Instrumental Music of Haydn, Mozart and Beethoven* (New York and Oxford: Oxford University Press, 1998).

_____. "'The Expanded Cadential Progression:' A Category for the Analysis of Classical Form." *Journal of Musicological Research* 7 (1987), 215-57.

Chapman, Roger E. "Modulation in Haydn's Late Piano Trios in the Light of Schoenberg's Theories." In *Haydn Studies*, ed. Larsen *et al.*, 471-75 (see entry below).

Churgin, Bathia. "Francesco Galeazzi's Description (1796) of Sonata Form. *JAMS* 21 (1968), pp. 182-199.

Cole, Malcolm S. "Momigny's Analysis of Haydn's Symphony no. 103." *Music Review* 30 (1969), pp. 261-284.

Czerny, Carl. *School of Practical Composition*, op. 600, in 3 vols., trans. John Bishop. (London: Robert Cocks & Co., 1839, 1848; reprinted in facsimile, New York: Da Capo Press, 1979).

Dahlhaus, Carl. "Der rhetorische Formbegriff H. Chr. Kochs und die Theorie der Sonatenform." *Archiv für Musikwissenschaft* 35 (1978).

_____."Zur Theorie der musikalischen Form." *Archiv für Musikwissenschaft* 34 (1977).

Darcy, Warren and James Hepokoski. "The Medial Caesura and Its Role in the Eighteenth-Century Sonata Exposition." *Music Theory Spectrum* 19/2 (Fall 1997), 115-154.

Demaree, Robert W., Jr. "The Structural Proportions of the Haydn Quartets." Ph.D. dissertation, Indiana University, 1973. x, 252 pp.

Dreyfus, Laurence. *Bach and the Patterns of Invention* (Cambridge: Harvard University Press, 1997).

Pippa Drummond. *The German Concerto: Five Eighteenth-century Studies* (Oxford: Clarendon Press, 1980).

Fillion, Michelle. "Sonata-Exposition Procedures in Haydn's Keyboard Sonatas." In *Haydn Studies* (see Larsen below), pp. 475-81.

Fischer, Wilhelm. "Zur Entwicklungsgeschichte des Wiener klassischen Stils," *Studien zur Musikwissenschaft*, 3 (1915), 24-84.

Forkel, Johann Nikolaus. *Über die Theorie der Musik, insofern sie Liebhabern und Kennern nothwendig und nützlich ist.* (Göttingen: Wittwe Vandenhöck, 1777).

Forschner, Hermann. *Instrumentalmusik Joseph Haydns aus der Sicht Heinrich Christoph Kochs.* Munich: Emil Katzbichler, 1984. 289 pp.

Gerber, Ernst Ludwig. "Eine freundliche Vorstellung über gearbeitete Instrumentalmusik, besonders über Symphonien" *Allgemeine musikalische Zeitung*, 15 (1813).

Germann, Jörg. "Die Entwicklung der Exposition in Joseph Haydns Streichquartetten." Ph.D. dissertation, University of Bern, 1964. viii, 206 pp.

Gjerdomgen, Robert O. *A Classic Turn of Phrase: Music and Psychology of Convention.* (Philadelphia: University of Pennsylvania Press, 1988).

Graybill, Roger Carper. "Brahms' Three-key Expositions: Their Place Within Classical Tradition." Ph.D. dissertation, Yale University, 1983.

Grave, Floyd K. and Margaret G. Grave. *Franz Joseph Haydn: A Guide to Research.* New York: Garland Publishing, Inc., 1990. 451 pp.

Gwilt, Richard. "Sonata-Allegro Revisited." *In Theory Only* 7/5-6 (1983-84), pp. 3-33.

Haimo, Ethan. *Haydn's Symphonic Forms: Essays in Compositional Logic.* (Oxford: Clarendon Press, 1995). 294pp.

Harutunian, John. "Haydn and Mozart: Tonic-Dominant Polarity in Mature Sonata-Style Works," *Journal of Musicological Research* 9 (1990), 286-7.

Hepokoski, James and Warren Darcy. "The Medial Caesura and Its Role in the Eighteenth-Century Sonata Exposition, *Music Theory Spectrum* 19/2 (Fall 1997), pp. 115-54.

Hodgson, Antony. *The Music of Joseph Haydn: The Symphonies*. (London: The Tantivy Press, 1976).

Höll, Uwe. *Studien zum Sonatensatz in den Klaviersonaten Joseph Haydns*. Tutzing: Hans Schneider, 1984. xii, 315 pp.

Kalib, Sylvan Sol. *Thirteen Essays from the Three Yearbooks "Das Meisterwerk in der Musik" by Heinrich Schenker: An Annotated Translation*. (Northwestern University, Ph.D. diss., 1973).

Kamien, Roger and Naphtali Wagner. "Bridge Themes within a Chromaticized Voice Exchange in Mozart Expositions." *Music Theory Spectrum* 19/1 (Spring 1997), pp. 1-12.

Klein, Rudolph. "Wo kann die Analyse von Haydns Symphonik ansetzen?" *Österreichishe Musikzeitschrift* 37 (1982), pp. 234-41.

Koch, Heinrich Christoph. *Handbuch bey dem Studium der Harmonie*. (Leipzig: J. F. Hartknoch, 1811).

_____. *Versuch einer Anleitung zur Composition* (1782-1793). Rudolstadt and Leipzig. 3 vols. Facs. (Hildesheim: Georg Olms, 1969). Partial English translation in Baker 1983. Complete table of contents in Baker 1983, pp. 249-252.

Kollmann, August F. C. *Essay on Practical Musical Composition*, 2nd ed. (London: Author, 1812.)

Kornauth, Egon. "Die thematische Arbeit in Joseph Haydns Streichquartetten seit 1780 (Studie zur Entwicklungsgeschichte der Wiener klassischen Schule)." Ph.D. diss., University of Vienna, 1915.

Krüger, W. *Das Concerto Grosso in Deutschland* (Reinbek, 1932).

Landon, H. C. Robbins and David Wyn Jones. *Haydn: His Life and Music*. (Bloomington: Indiana University Press, 1988).

_____. *Mozart and the Masons*. (New York: Thames and Hudson, Inc., 1991).

Larsen, Jens Peter, Howard Serwer, James Webster. *Haydn Studies: Proceedings of the International Haydn Conference, Washington, D. C., 1975*. (New York: W. W. Norton and Company, 1981) 590 pp.

_____. "Sonata Form Problems." In Jens Peter Larsen

Handel, Haydn, and the Viennese Classical Style, trans. by Ulrich Krämer, pp. 269-79. Ann Arbor: UMI Research Press, 1988.

Lerdahl, Fred and Ray Jackendoff. *A Generative Theory of Tonal Music* (Cambridge, Mass.: MIT, 1983).

Lester, Joel. *Compositional Theory in the Eighteenth Century.* (Cambridge: Harvard University Press, 1992) 355 pp.

Lowinsky, Edward. *Secret Chromatic Art in the Netherlands Motet* (New York: Columbia University Press, 1946).

Marx, Adolph Bernhard. *Die Lehre von der musikalischen Komposition*, 4 vols. (Leipzig: Breitkopf und Härtel, 1837-47).

Momigny, Jérome Joseph de. *Cours complet d'harmonie et de composition, d'après une théorie neuve et générale de la musique*, 3 vol. (Paris, 1803-6).

Neumann, Friedrich. "Der Tonartenplan von Einzelsätzen order ihren Teilen Unter Berücksichtigung der Stimmführung und Motivik," *Mozart-Jahrbuch* (1973/4), 97-108.

Ratner, Leonard G. *Classic Music: Expression, Form and Style.* (New York: Schirmer Books, 1980) 475 pp.

_____. "Eighteenth-Century Theories of Musical Period Structure." *Musical Quarterly* 42 (1956), pp. 439-54.

_____. "Theories in Form: Some Changing Perspectives." In *Haydn Studies: Proceedings of the International Haydn Conference, Washington, D. C., 1975.* Edited by Jens Peter Larsen, Howard Serwer, and James Webster. (New York: W. W. Norton, 1981), pp. 347-51.

Reicha, Anton. *Cours de composition musicale. Vollständiges Lehrbuch der musikalischen Composition*, 4 vols., ed. and trans. Carl Czerny. (Vienna: Anton Diabelli, preface dated 1832.)

_____. *Traité de mélodie.* (Paris, Author, 1814).

Reilly, Allyn D. "Modulation and Key Relationships in Eighteenth-Century German Theory." *In Theory Only* 8/4-5 (1985), pp. 45-56.

Réti, Rudolph. *The Thematic Process in Music.* (New York: MacMillan, 1951)

Ritzel, Fred. *Die Entwicklung der "Sonatenform im musiktheoretischen Schrittum des 18. und 19. Jahrhunderts.* (Wiesbaden: Breitkopf und Härtel, 1968).

Rosen, Charles. *The Classical Style: Haydn, Mozart, Beethoven.* (New York: W. W. Norton and Company, 1972) 467 pp.

_____. *Sonata Forms.* (New York: W. W. Norton and Company, 1988) 415 pp.

Rothgeb, John. "Thematic Content: A Schenkerian View." In *Aspects of Schenkerian Theory*, ed. David Beach. (New Haven: Yale University Press, 1983) pp. 39-60.

Rothstein, William. *Phrase Rhythm in Tonal Music.* (New York: Schirmer Books, 1989).

_____. "Rhythm and the Theory of Structural Levels." Ph.D. diss., Yale University, 1981.

Rywosch, Bernhard. *Beiträge zur Entwicklung in Joseph Haydns Symphonik, 1759-1780.* Turbenthal: Rob. Furrers Erben, 1934. 133 pp.

Salzer, Felix. *Structural Hearing: Tonal Coherence in Music*, vol. 1 (New York: Dover Publications, 1962).

Schachter, Carl. "Analysis by Key: Another Look at Modulation," *Music Analysis* 6/3 (1987), pp. 289-318.

_____. "The First Movement of Brahms's Second Symphony: The Opening Theme and Its Consequences," *Music Analysis* 2/1 (1983), pp. 55-68.

_____. "The Submerged Urlinie: The Prelude from Bach's Suite No. 4 for Violoncello Solo," *Current Musicology* 56 (1994), pp. 54-71.

Sisman, Elaine. *Haydn and His World*, Bard Music Festival Series (New Jersey: Princeton University Press, 1997).

_____. *Haydn and the Classical Variation*, Studies in the History of Music, No. 5 (Cambridge: Harvard University Press, 1993).

_____. "Small and Expanded Forms: Koch's Model and Haydn's Music." *Musical Quarterly* 68 (1982), pp. 444-75.

Solomon, Maynard. "Beethoven, Sonata and Utopia," *Telos* 9

(Fall 1971), pp. 32-47.

Stevens, Jane R. "Georg Joseph Vogler and the 'Second Theme' in Sonata Form: Some 18th-Century Perceptions of Musical Contrast. *Journal of Musicology* 2 (1983), pp. 278-304.

Vogler, George Joseph. *Betrachtungen der Mannheimer Tonschule*, 3 vols. Mannheim. Facs., 1778-1781. (Hildesheim: Olms, 1974).

Webster, James. "Freedom of Form in Haydn's Early String Quartets." In *Haydn Studies* (see Larsen below), pp. 522-30.

_____. *Haydn's "Farewell" Symphony and the Idea of Classical Style: Through-Composition and Cyclic Integration in his Instrumental Music*, part of the series *Cambridge Studies in Music Theory and Analysis*, ed. by Ian Bent. (Cambridge: Cambridge University Press, 1991) 402 pp.

_____. "The D Major Interlude in the First Movement of Haydn's 'Farewell' Symphony." In *Essays in Honor of Jan LaRue*, Wolf and Roesner, eds., pp. 339-80.

Wheelock, Gretchen A. *Haydn's Ingenious Jesting with Art: Context of Musical Wit and Humor* (New York: MacMillan Library Reference, 1992).

Willner, Channan. "Chromaticism and the Mediant in Four Late Haydn Works." *Theory and Practice* 13 (1988), 79-114.

Winter, Robert. "The Bifocal Close and the Evolution of the Viennese Classical Style." *Journal of the American Musicological Society*, 42 (1989), 275-337.

Wolf, Eugene. *The Symphonies of Johann Stamitz: A Study in the Formation of the Classical Style* (Utrecht/Antwerp: Bohn, Scheltema and Holkema; the Hague/Boston: Nijhoff, 1981).

VOICE-LEADING AND CHROMATIC TECHNIQUES IN EXPOSITIONS OF SELECTED SYMPHONIES BY JOSEPH HAYDN, INTRODUCING A NEW THEORY OF CHROMATIC ANALYSIS

by

Roy J. Nitzberg

VOLUME II: MUSICAL EXAMPLES

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

1999

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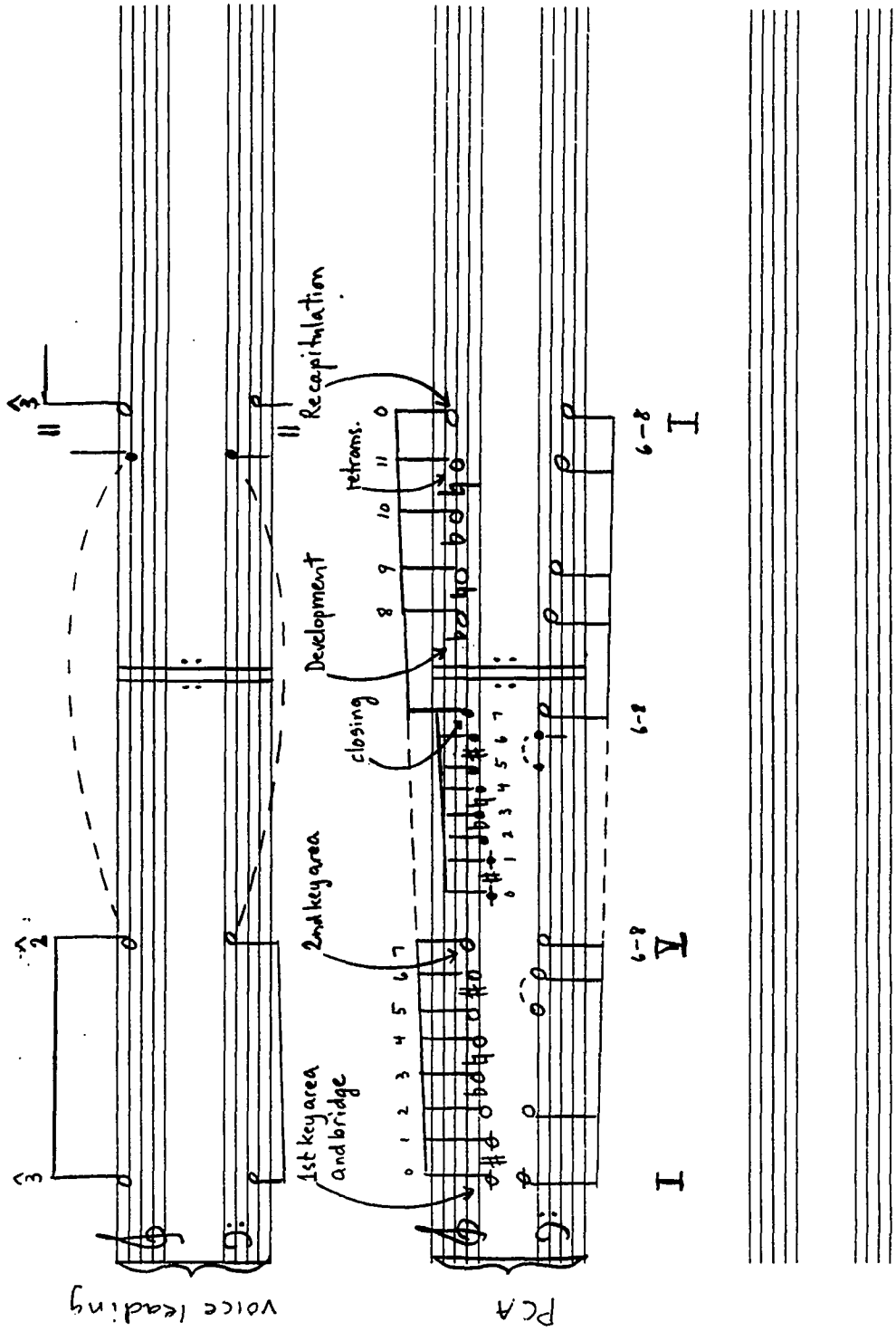

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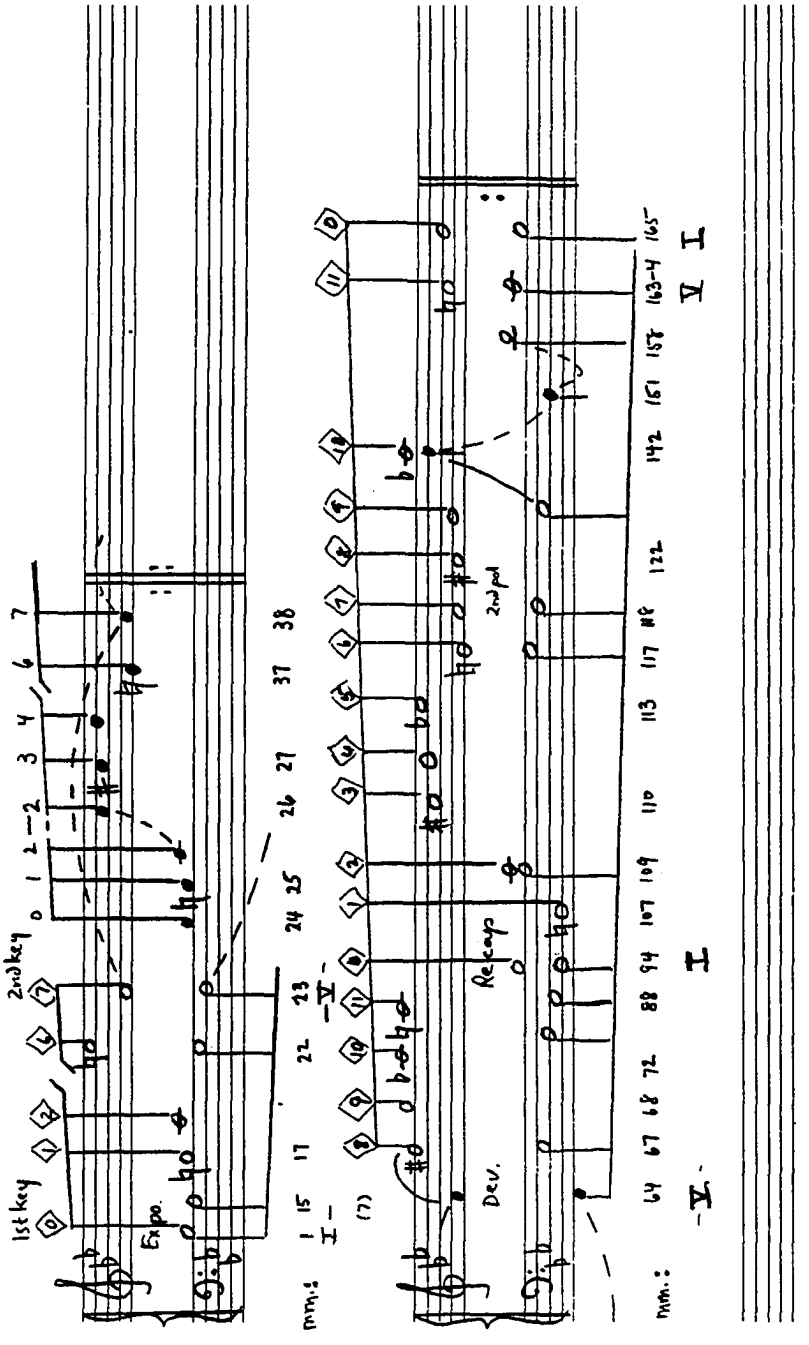

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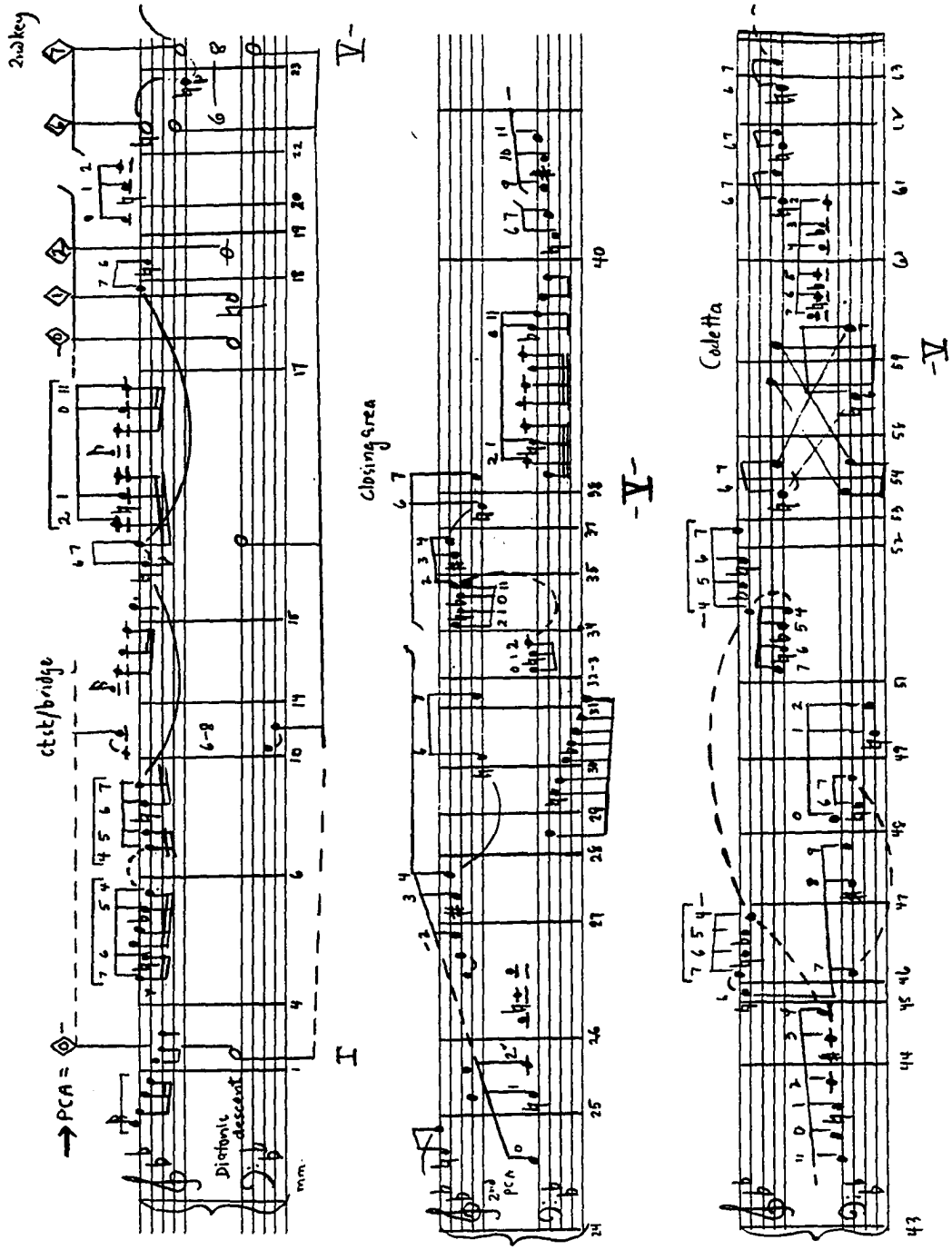

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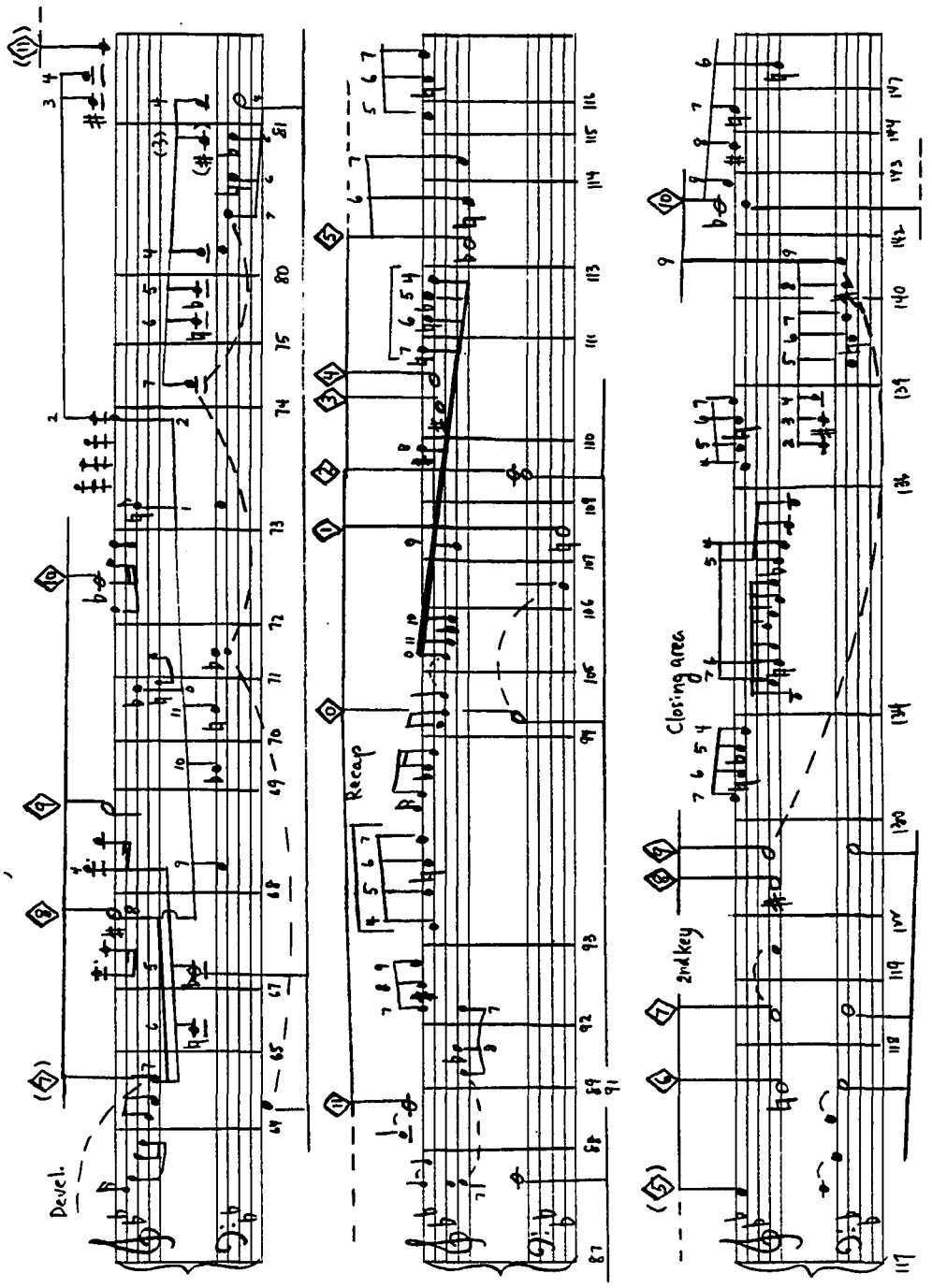

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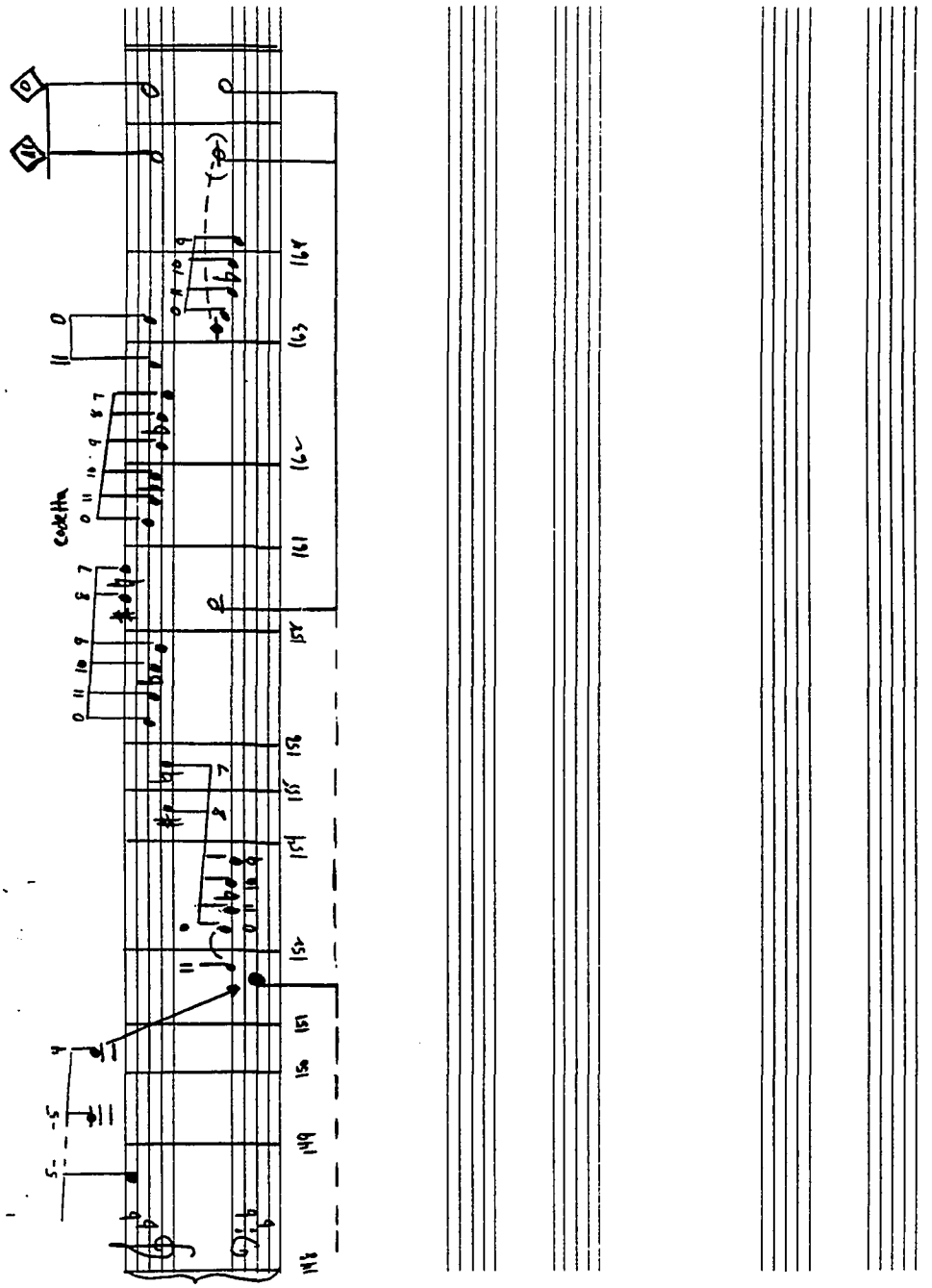

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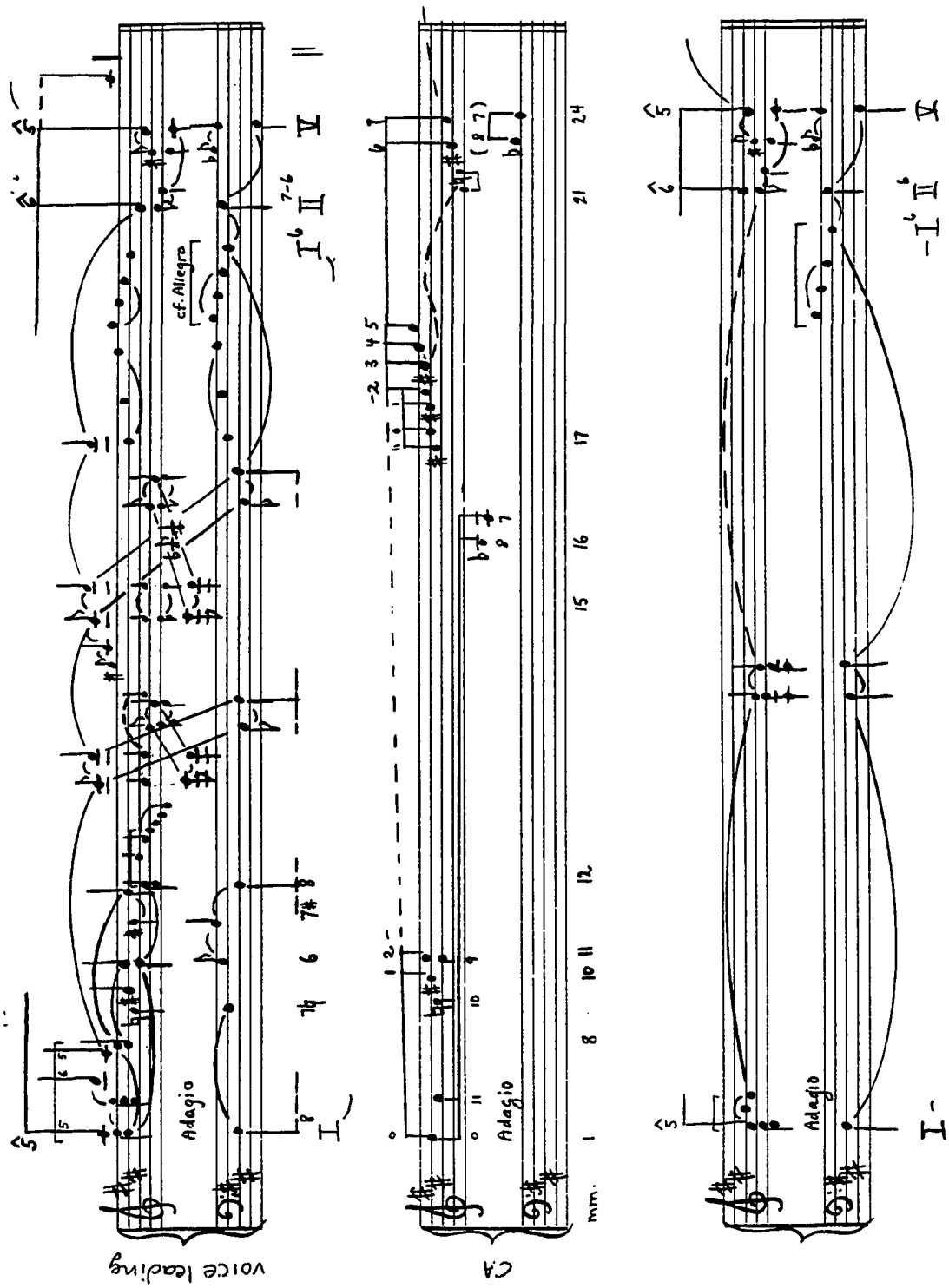

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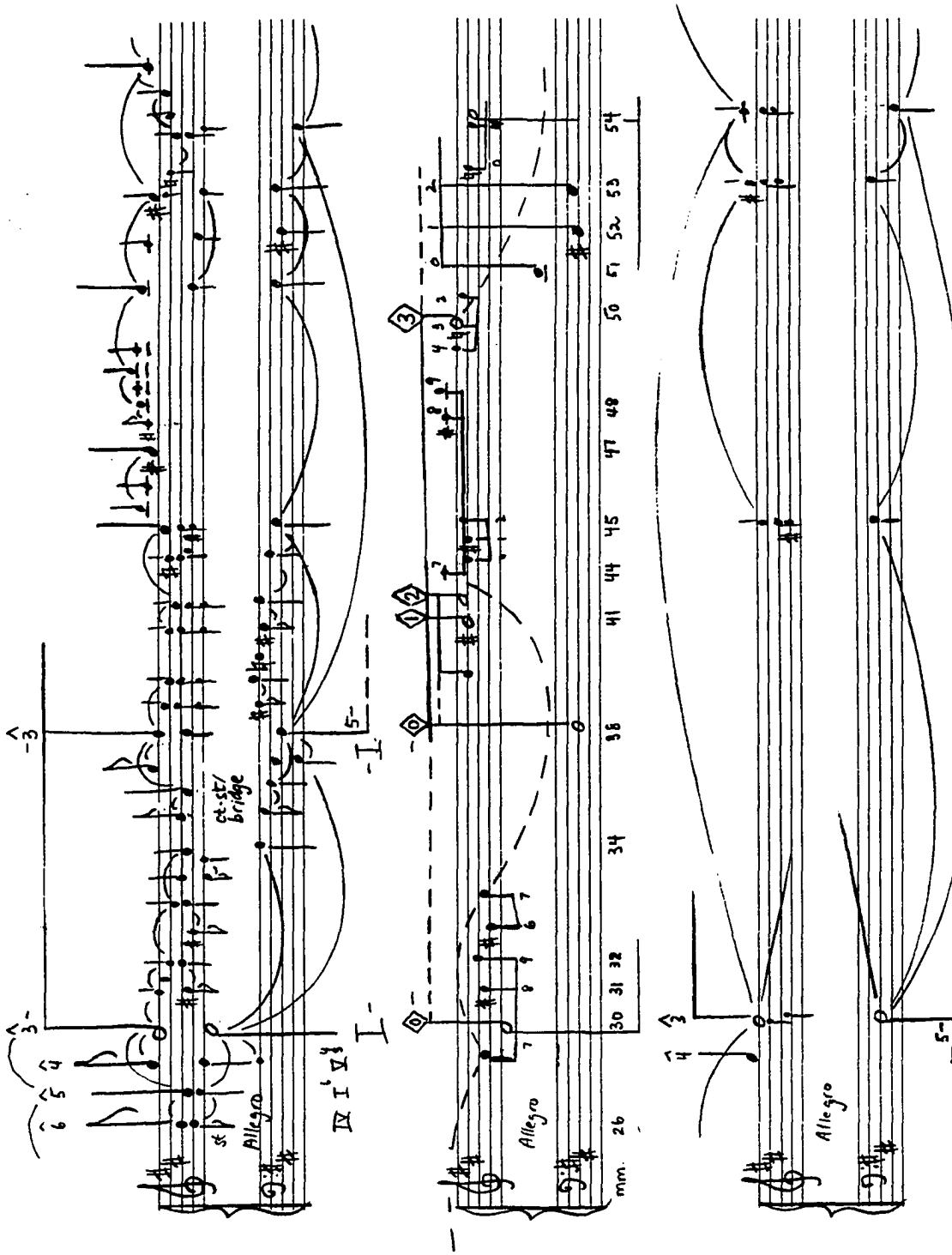

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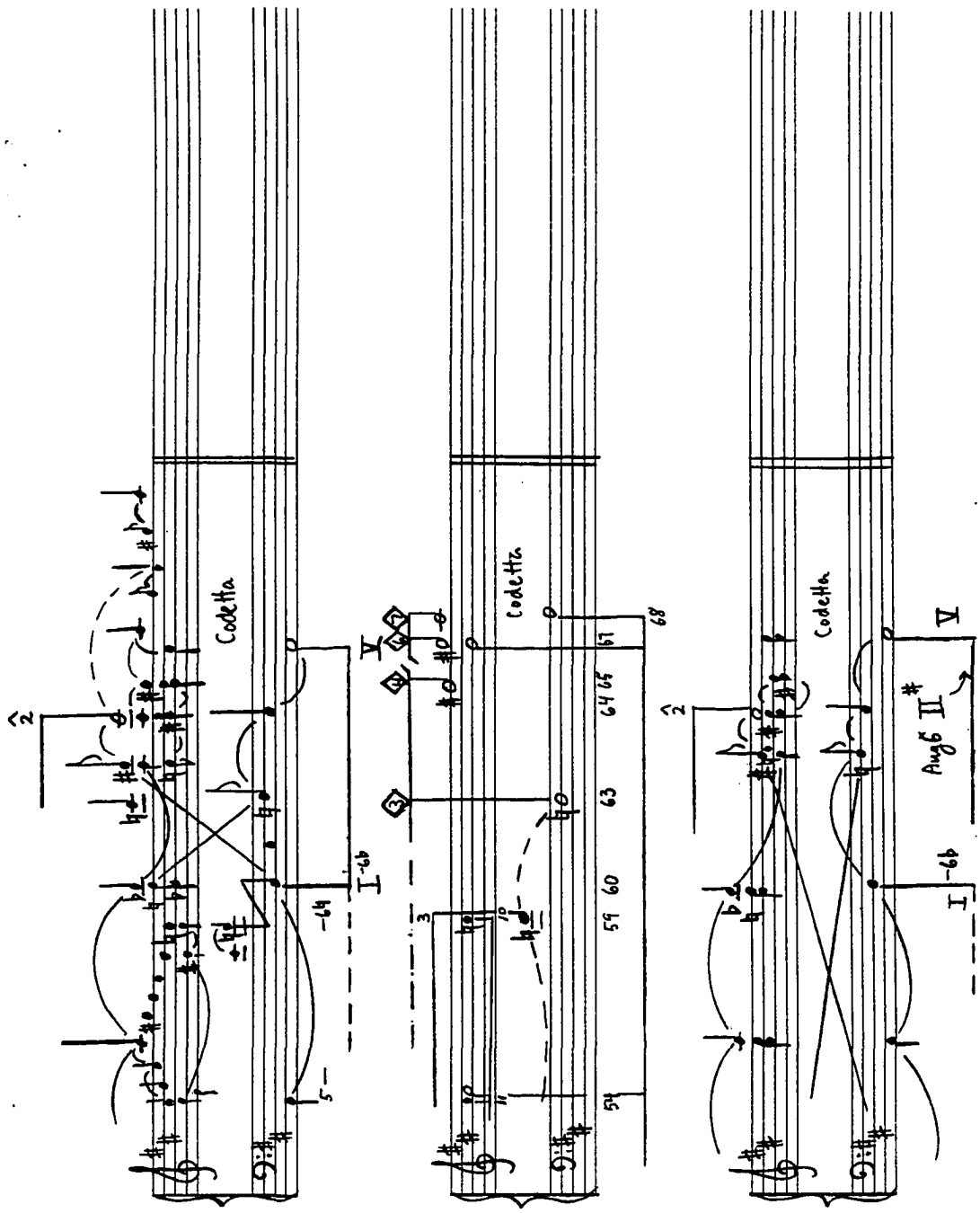

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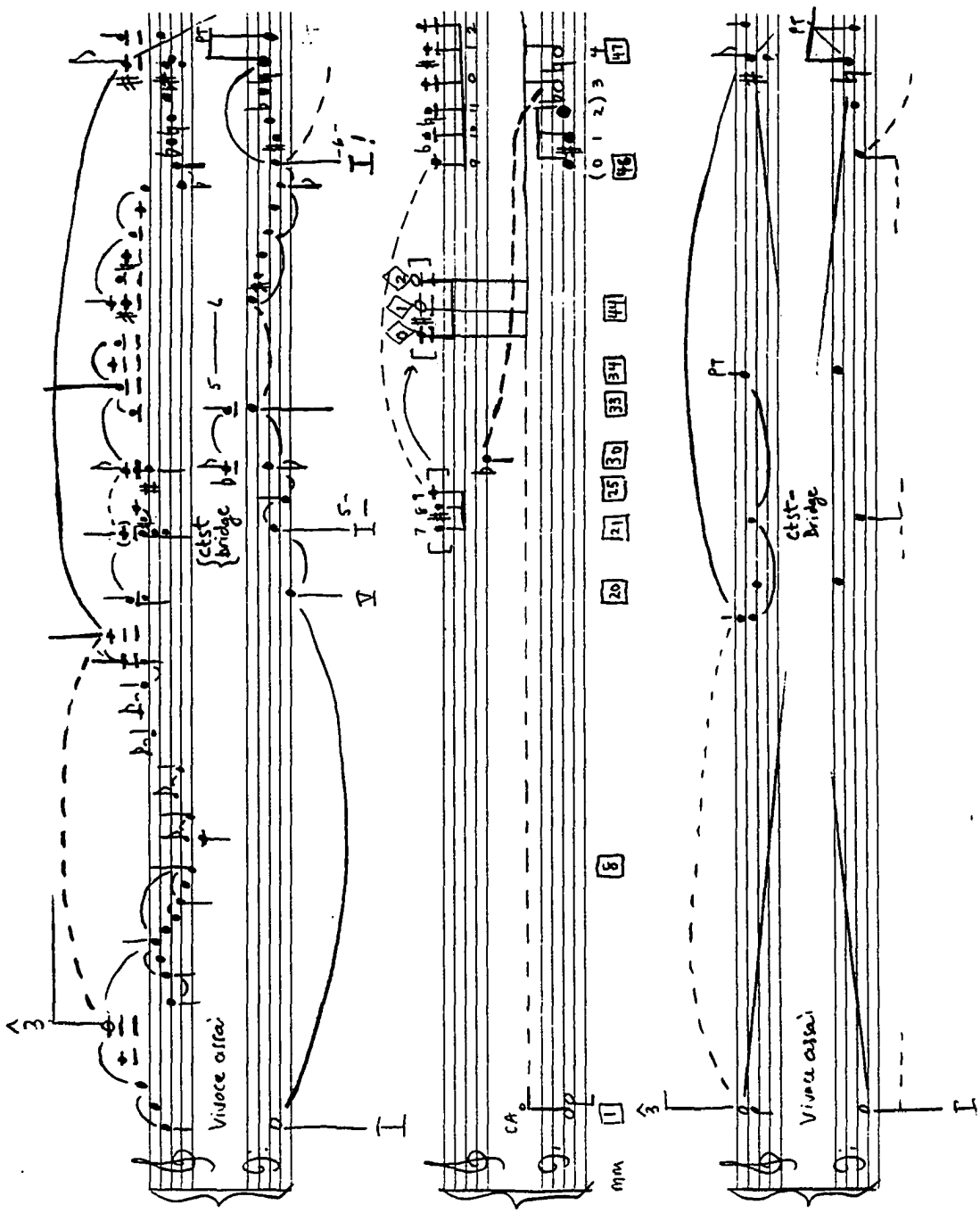

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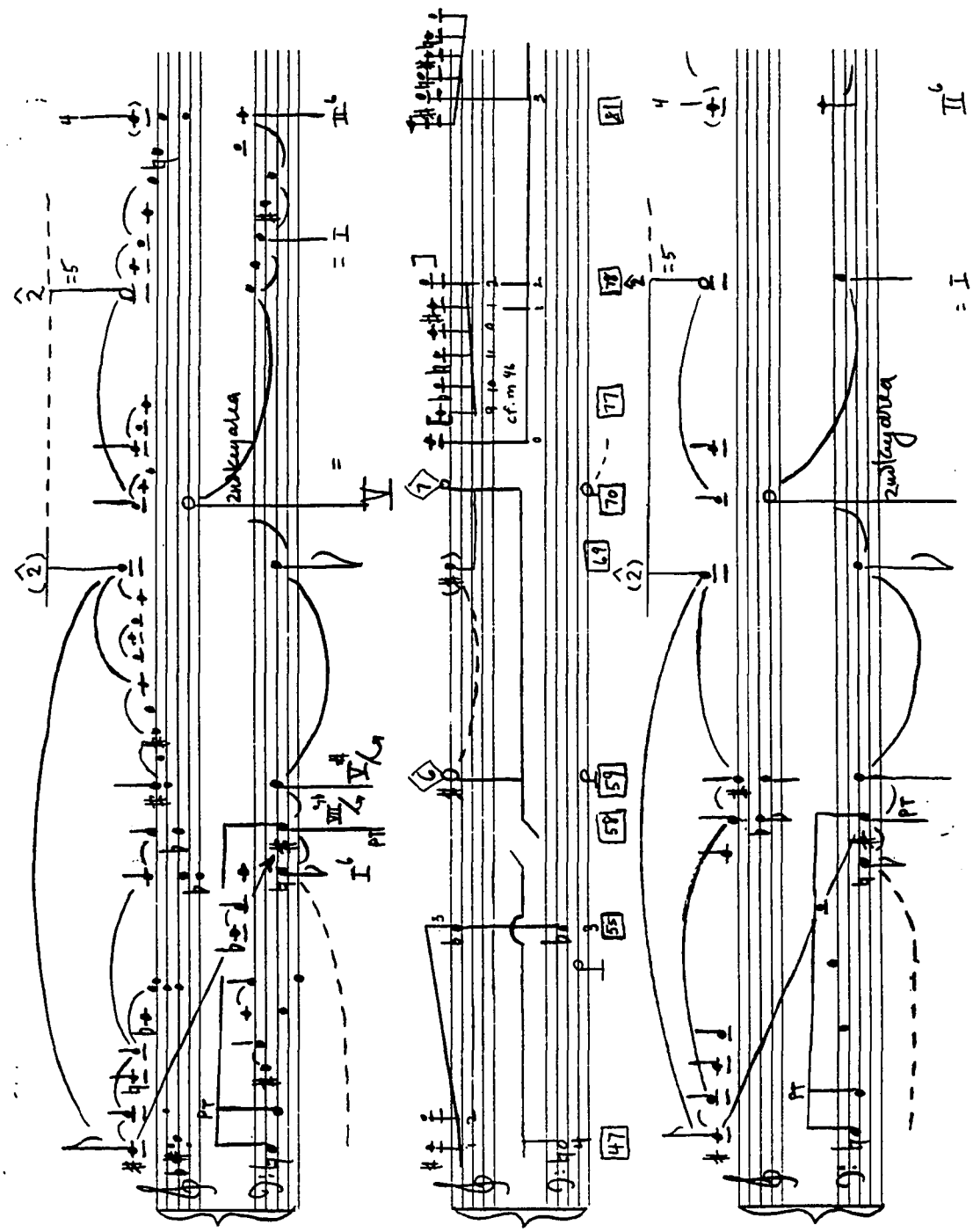

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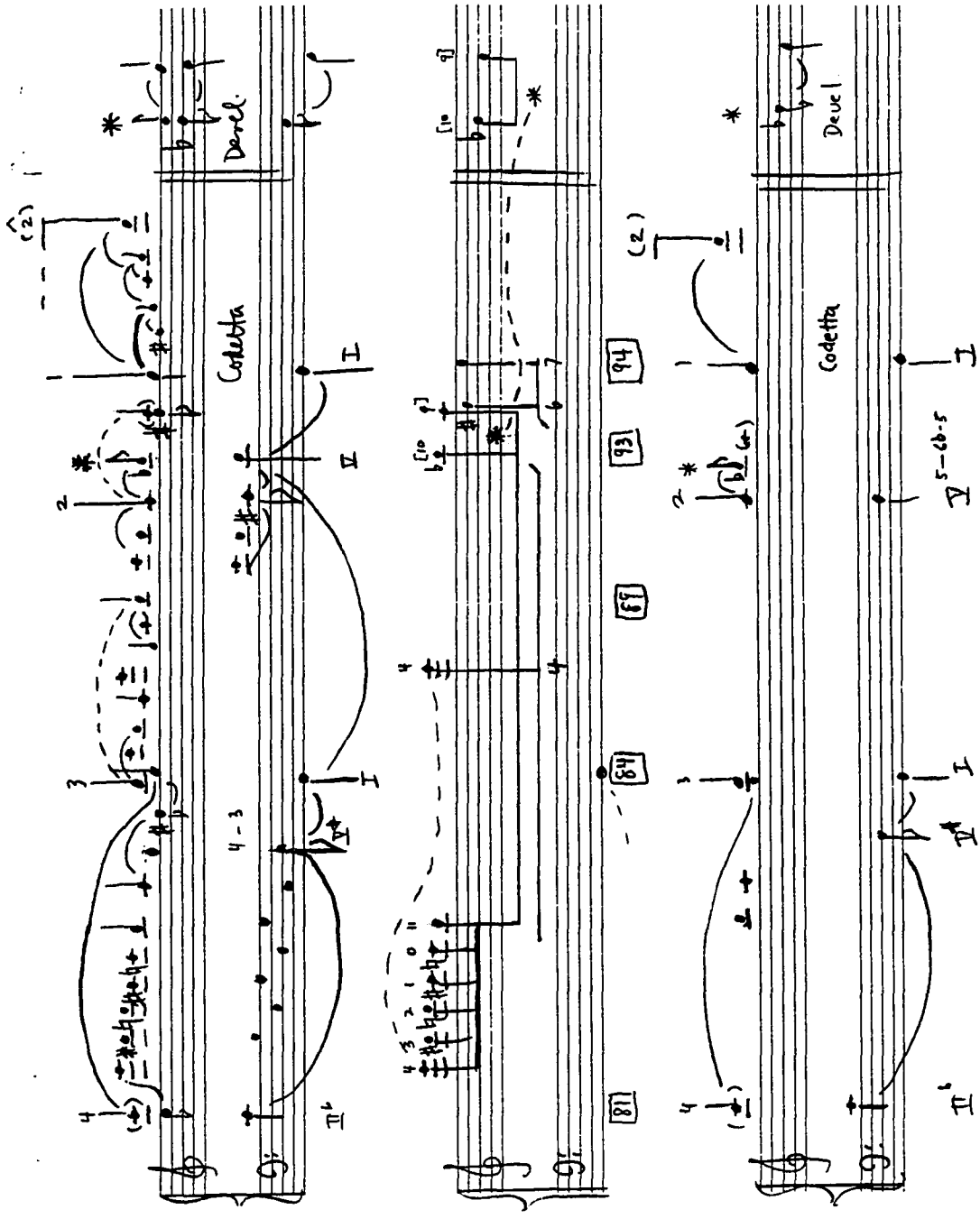

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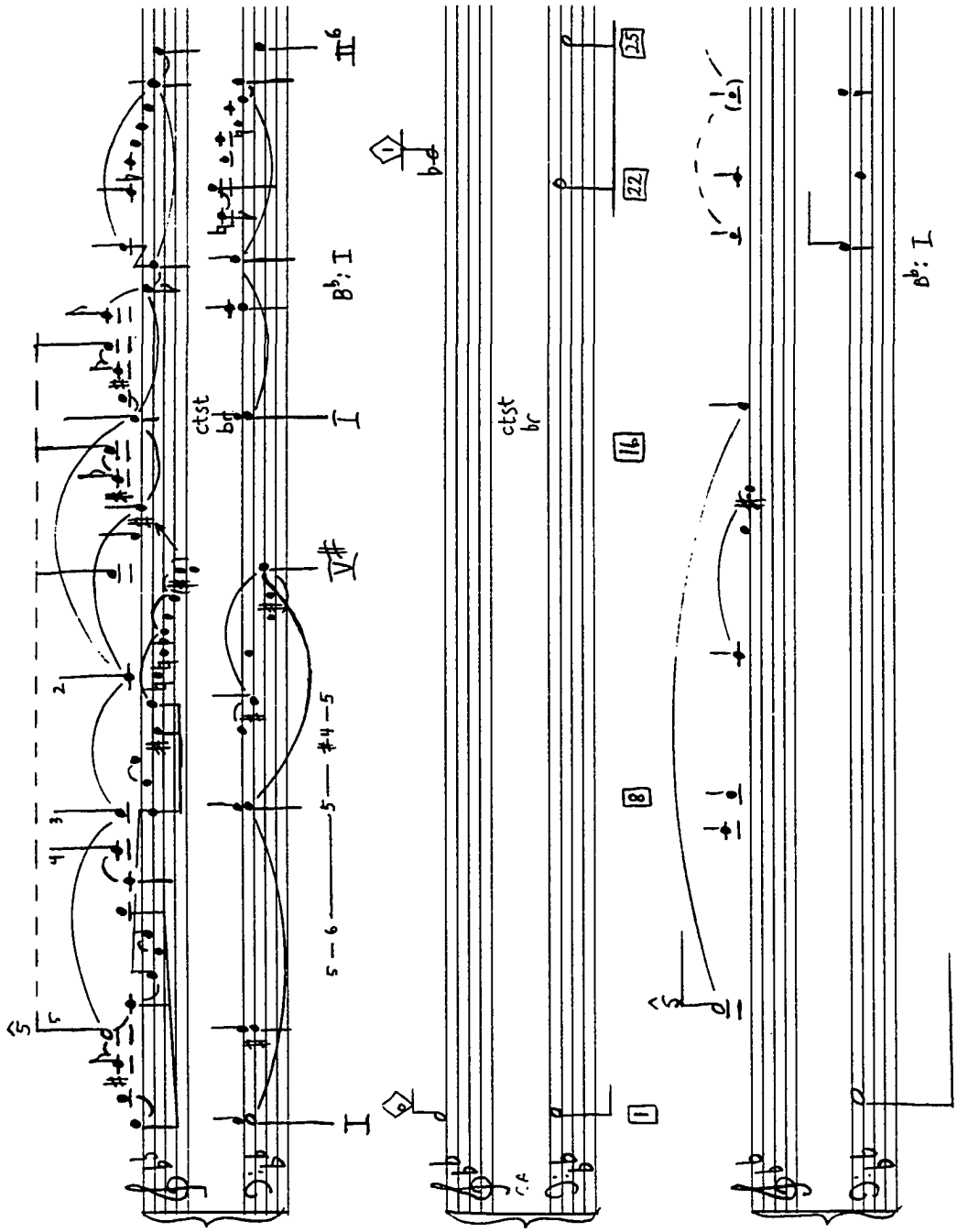

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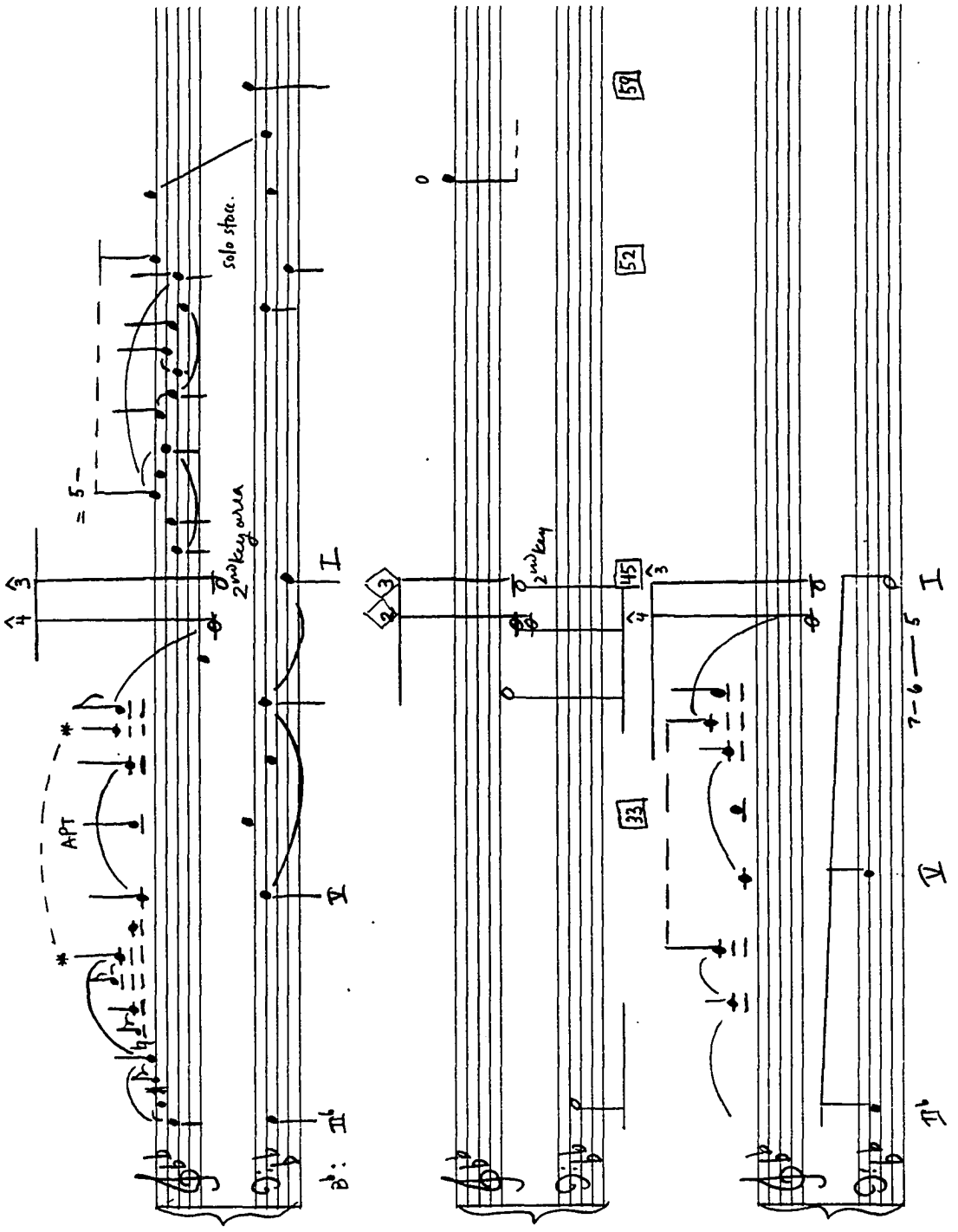

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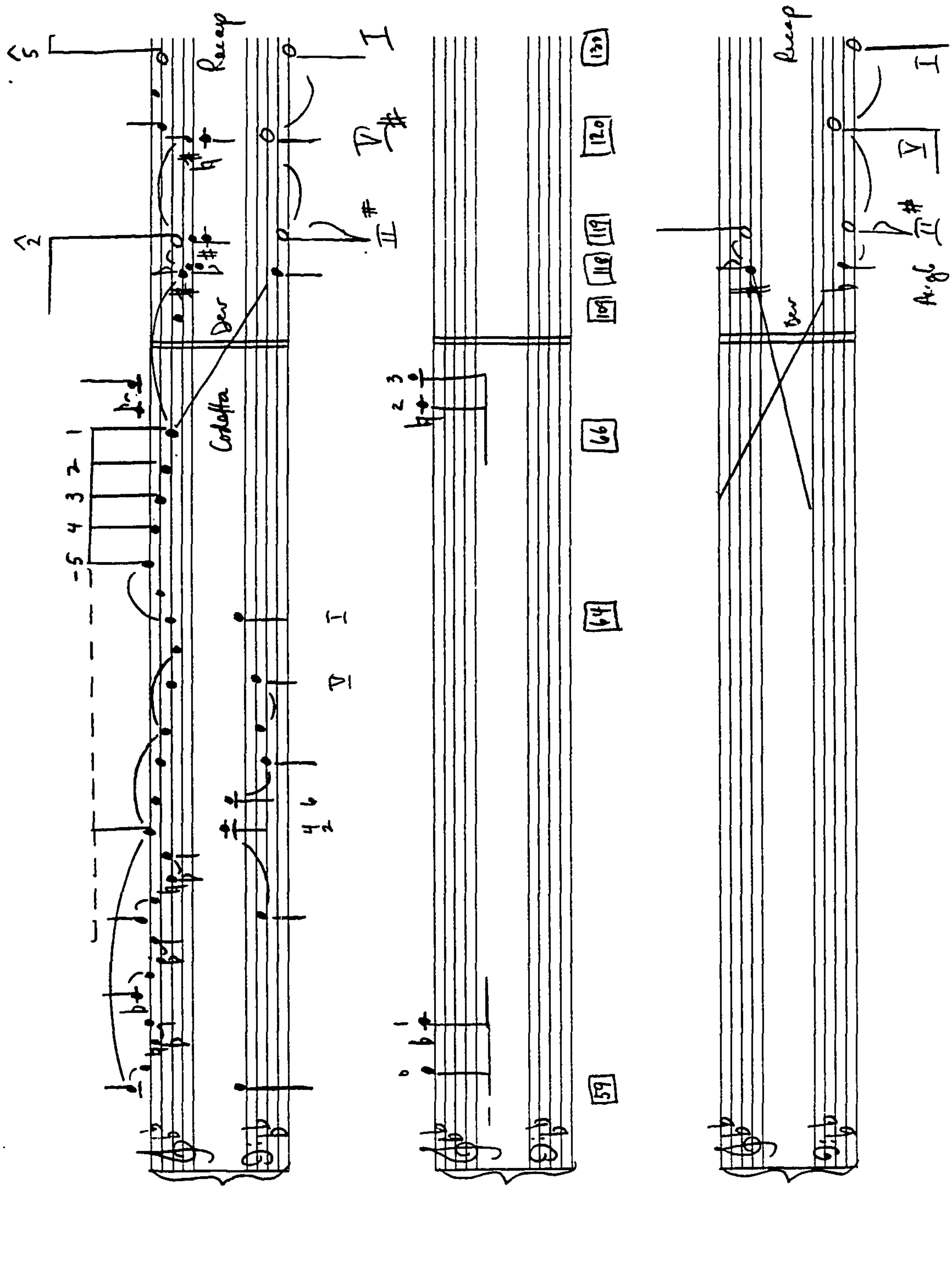

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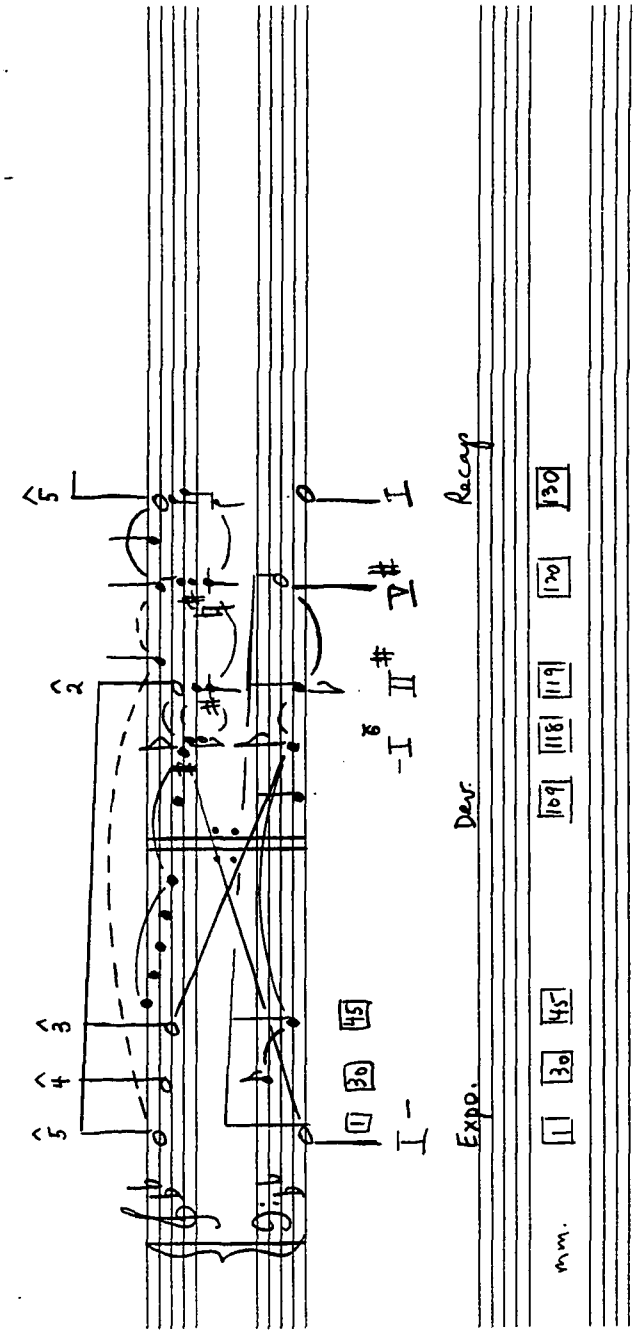

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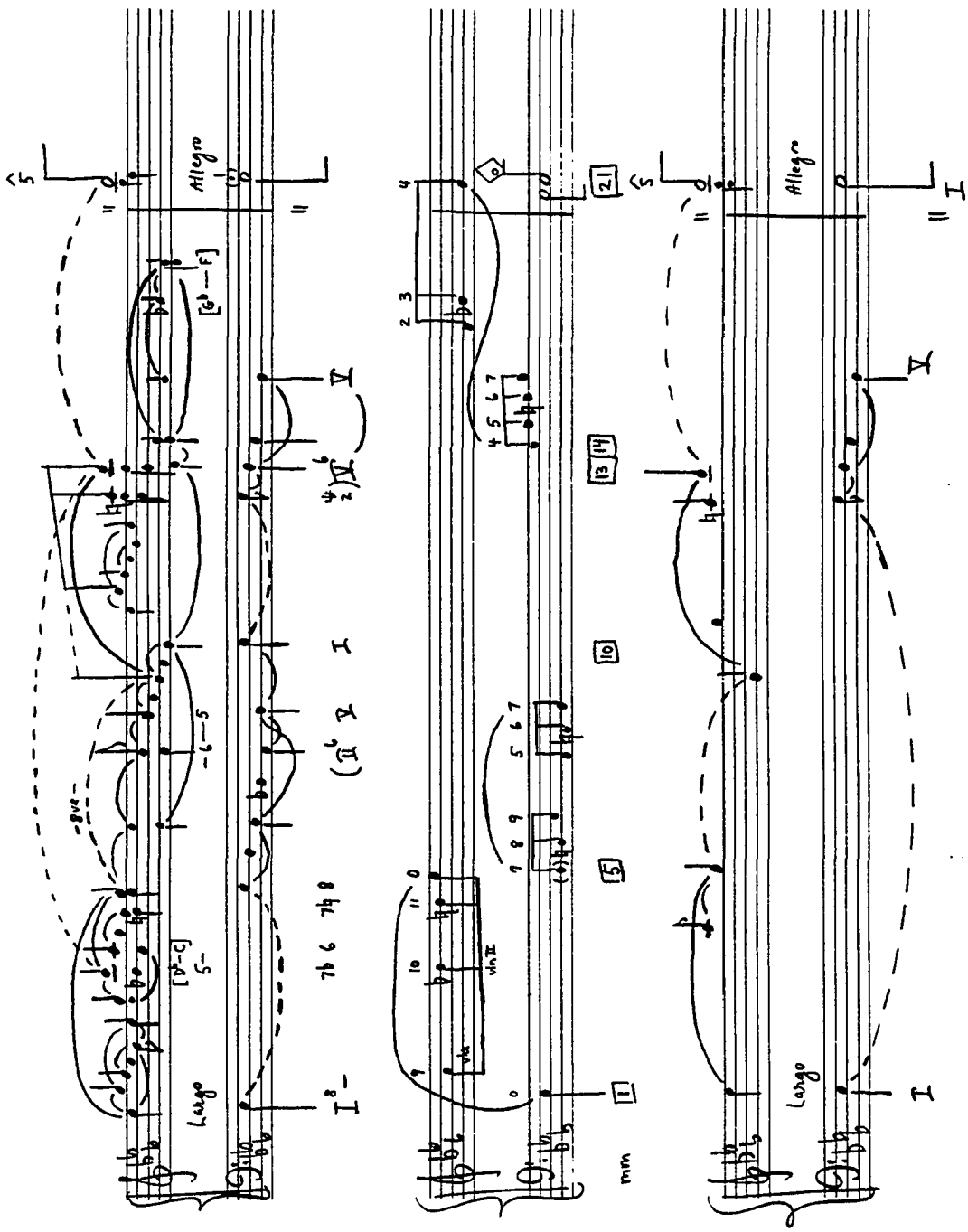

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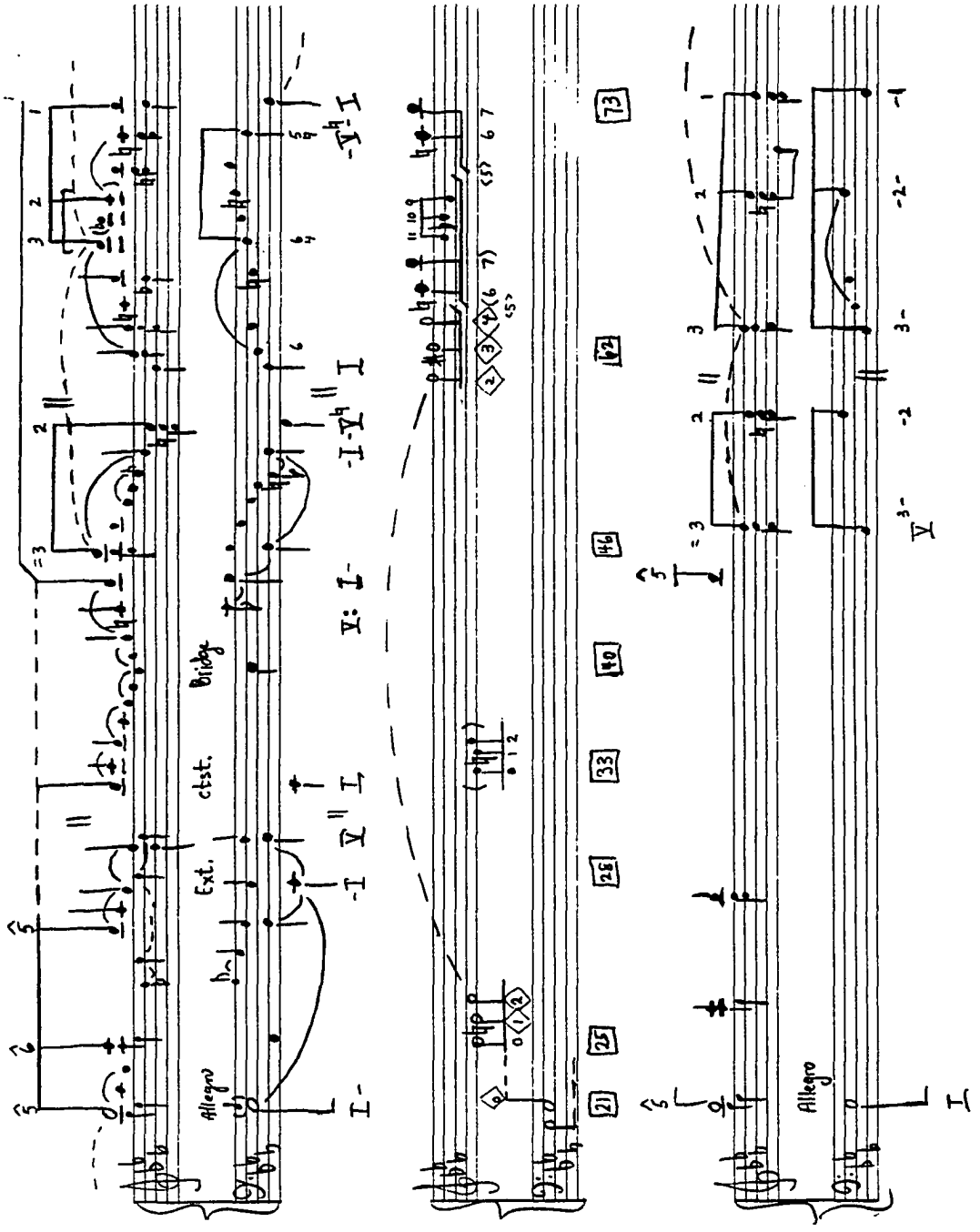

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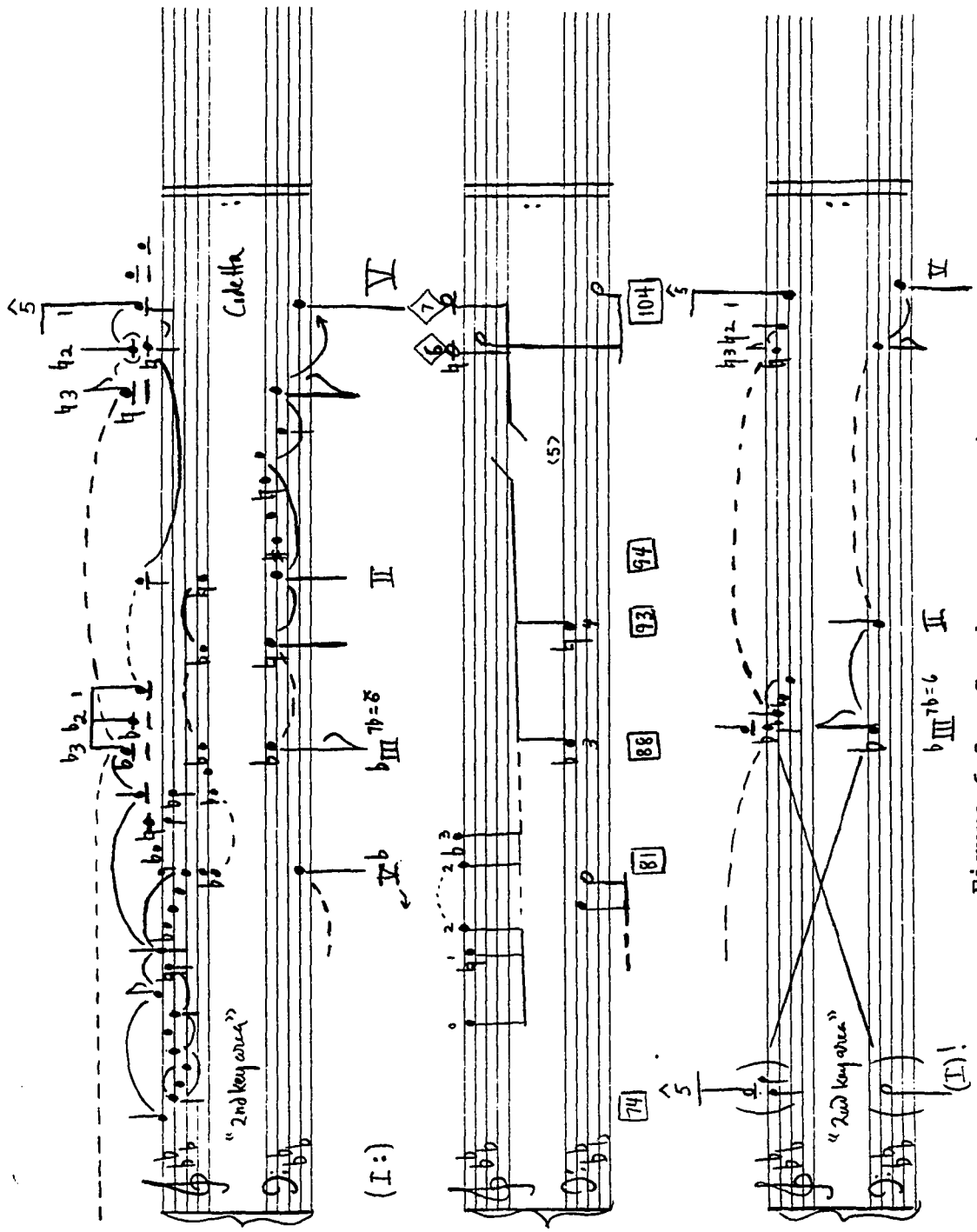

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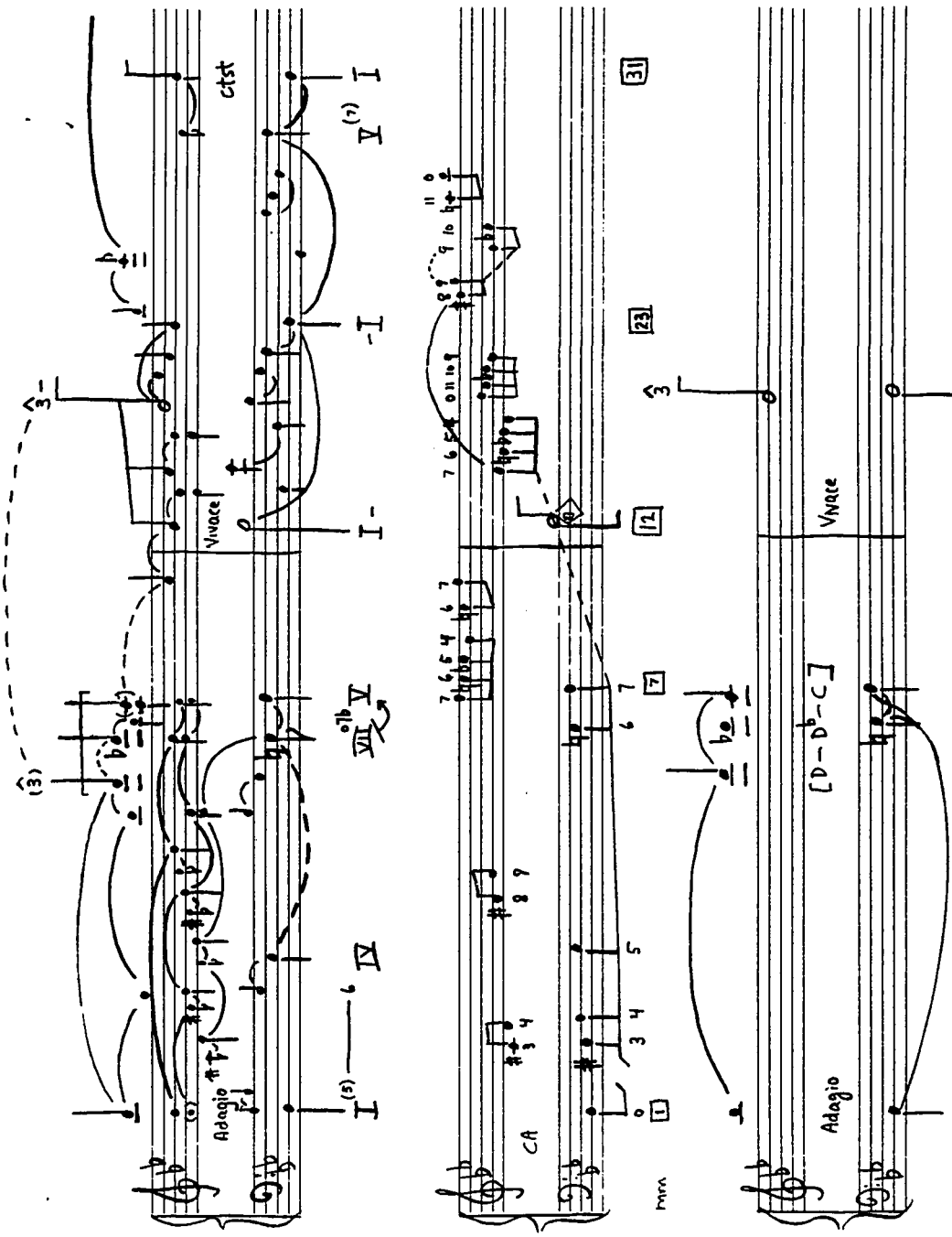

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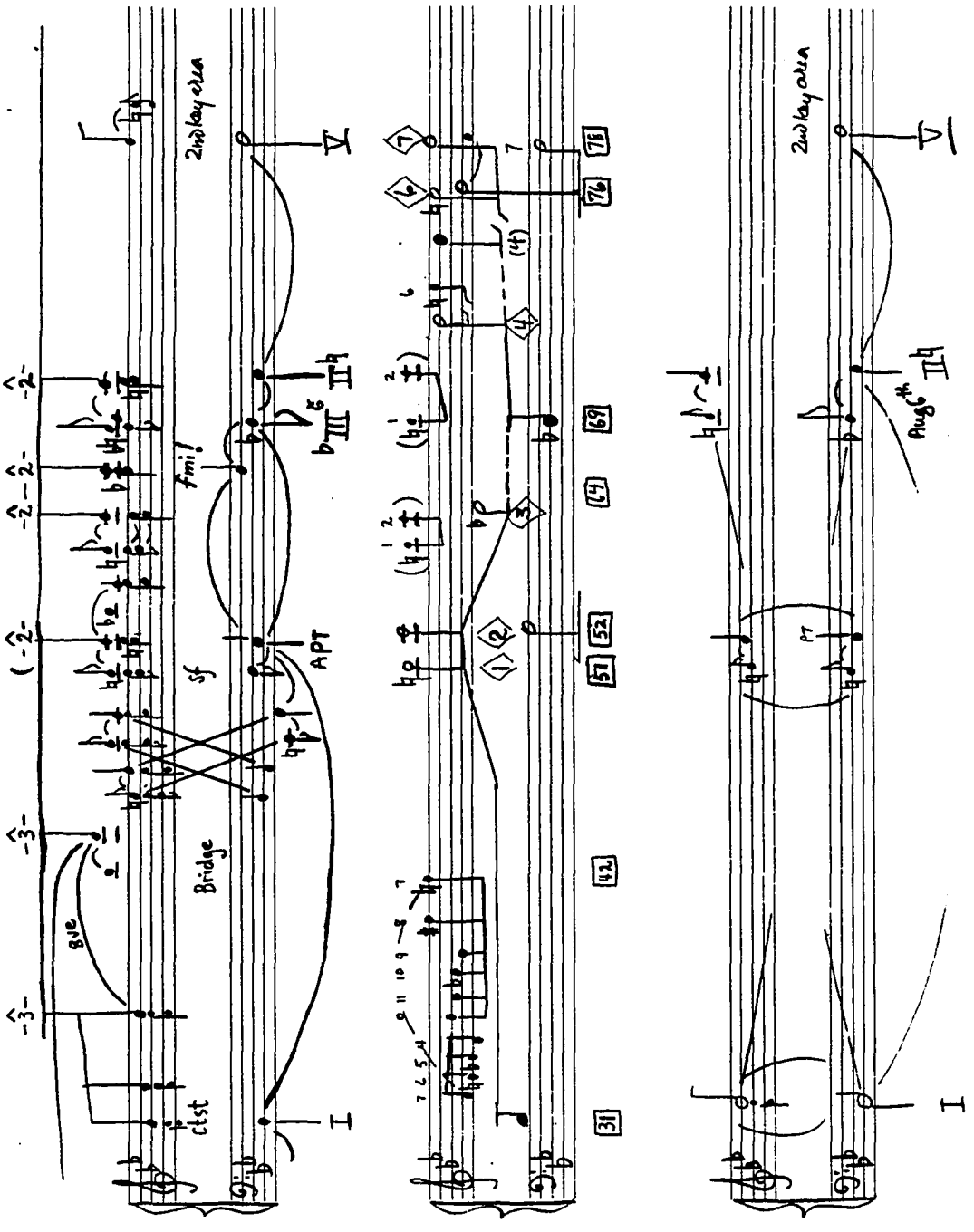

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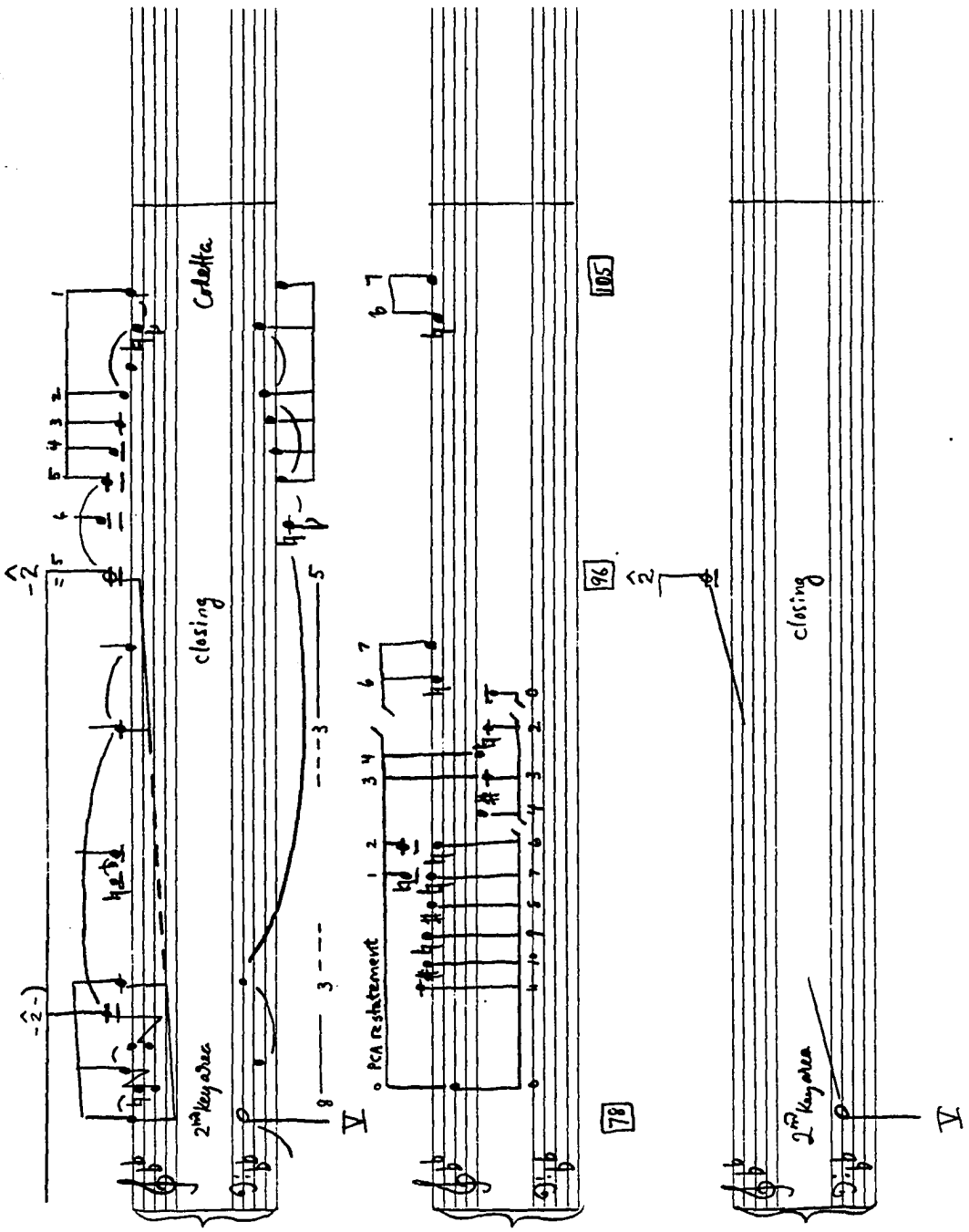

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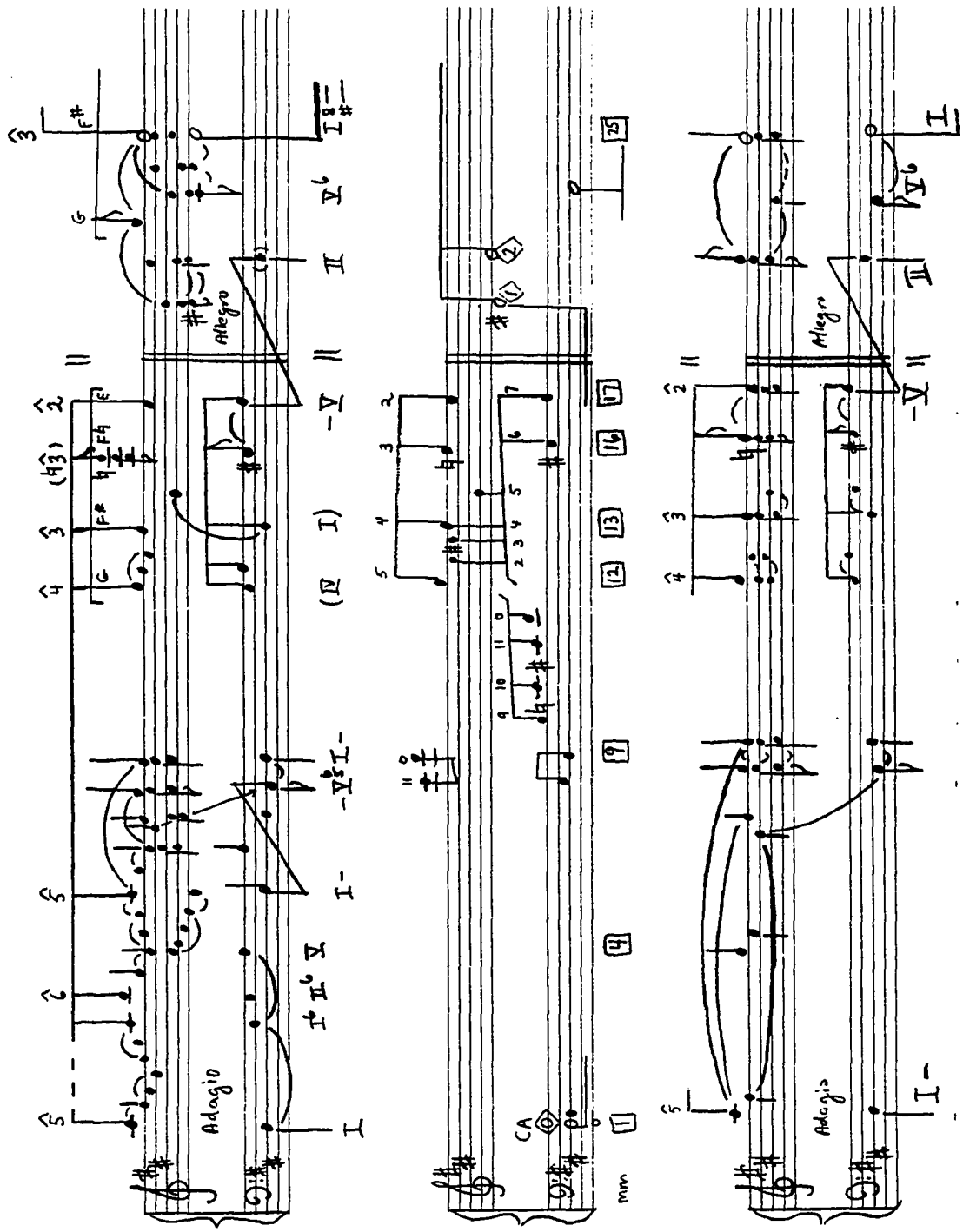

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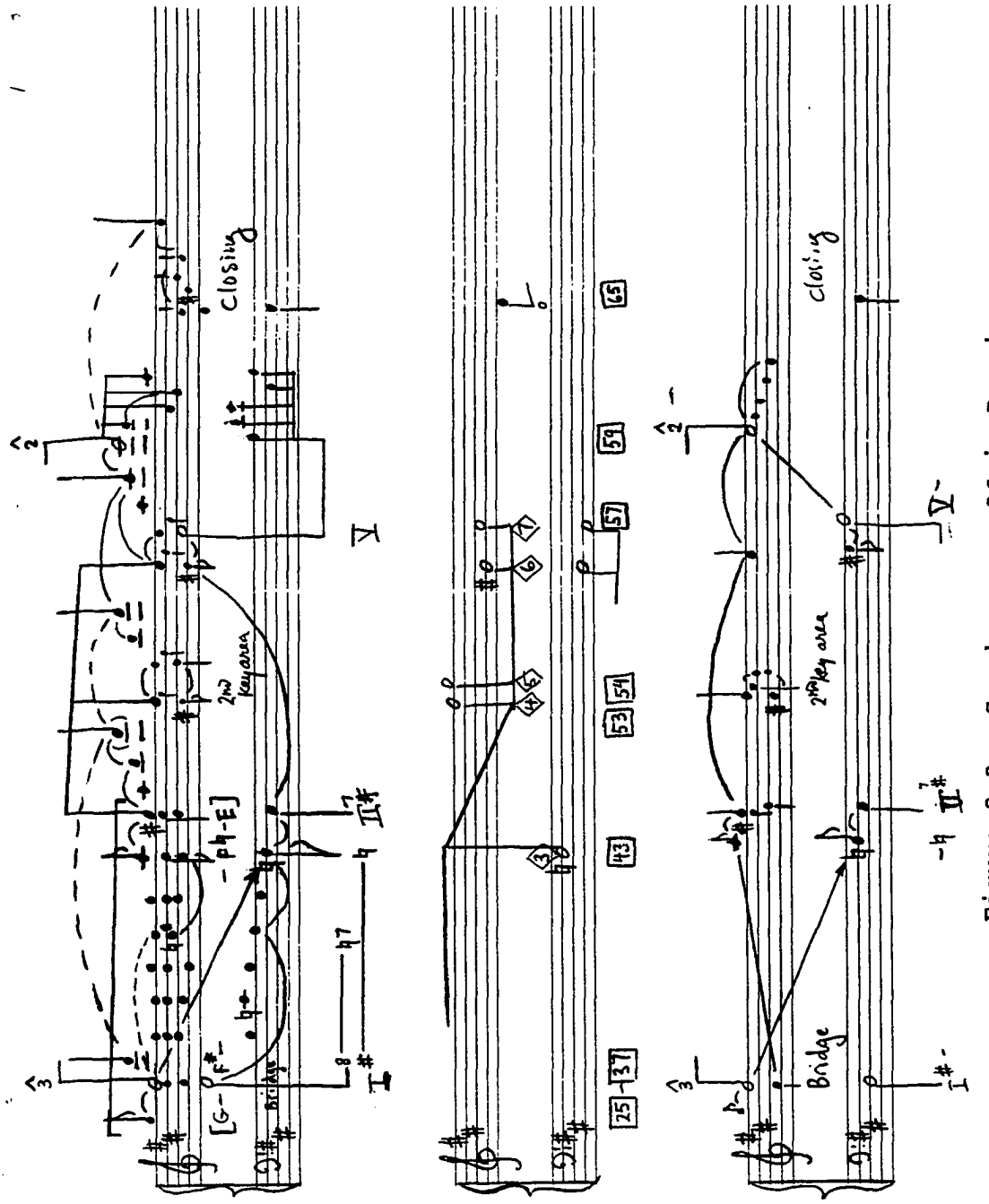

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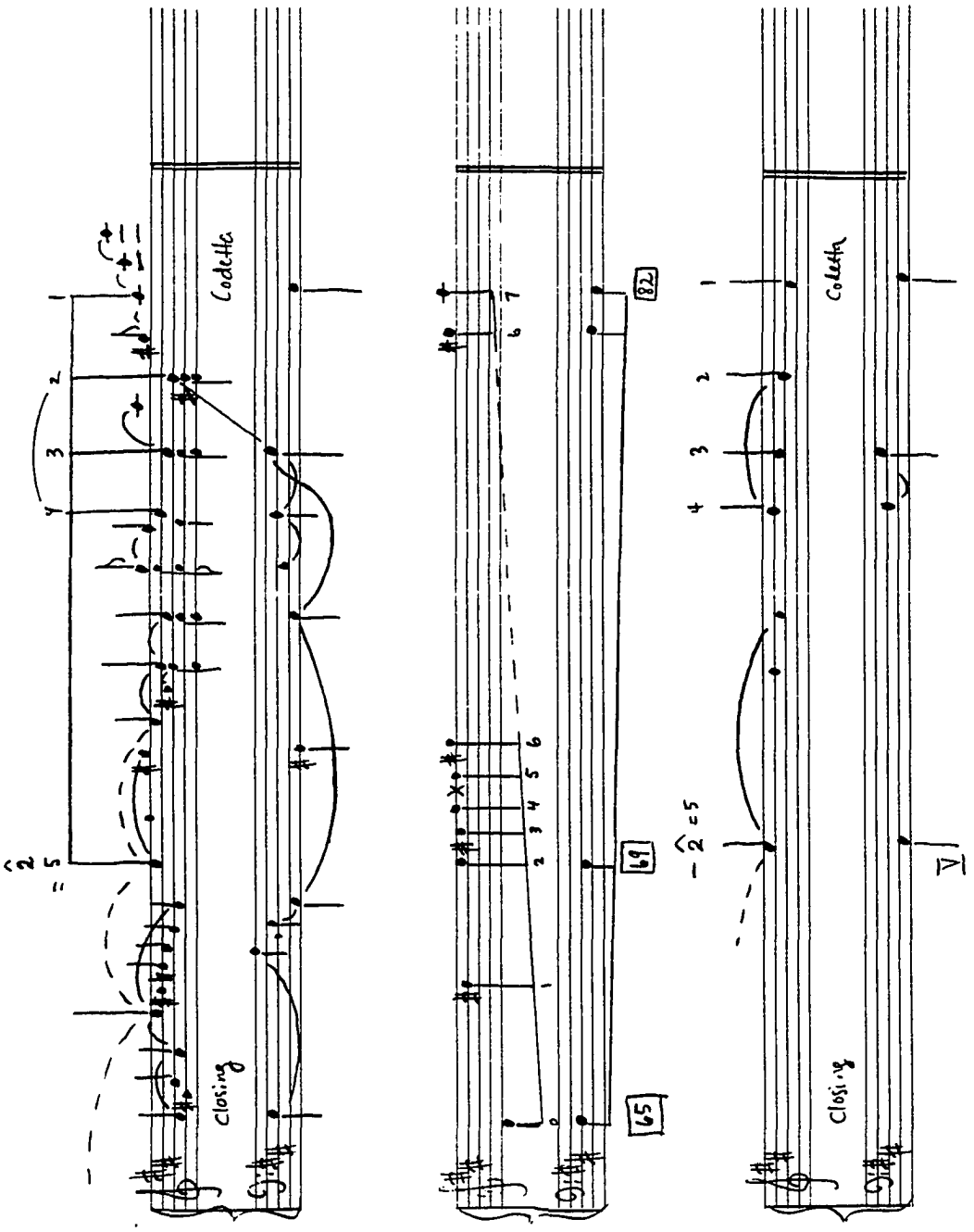

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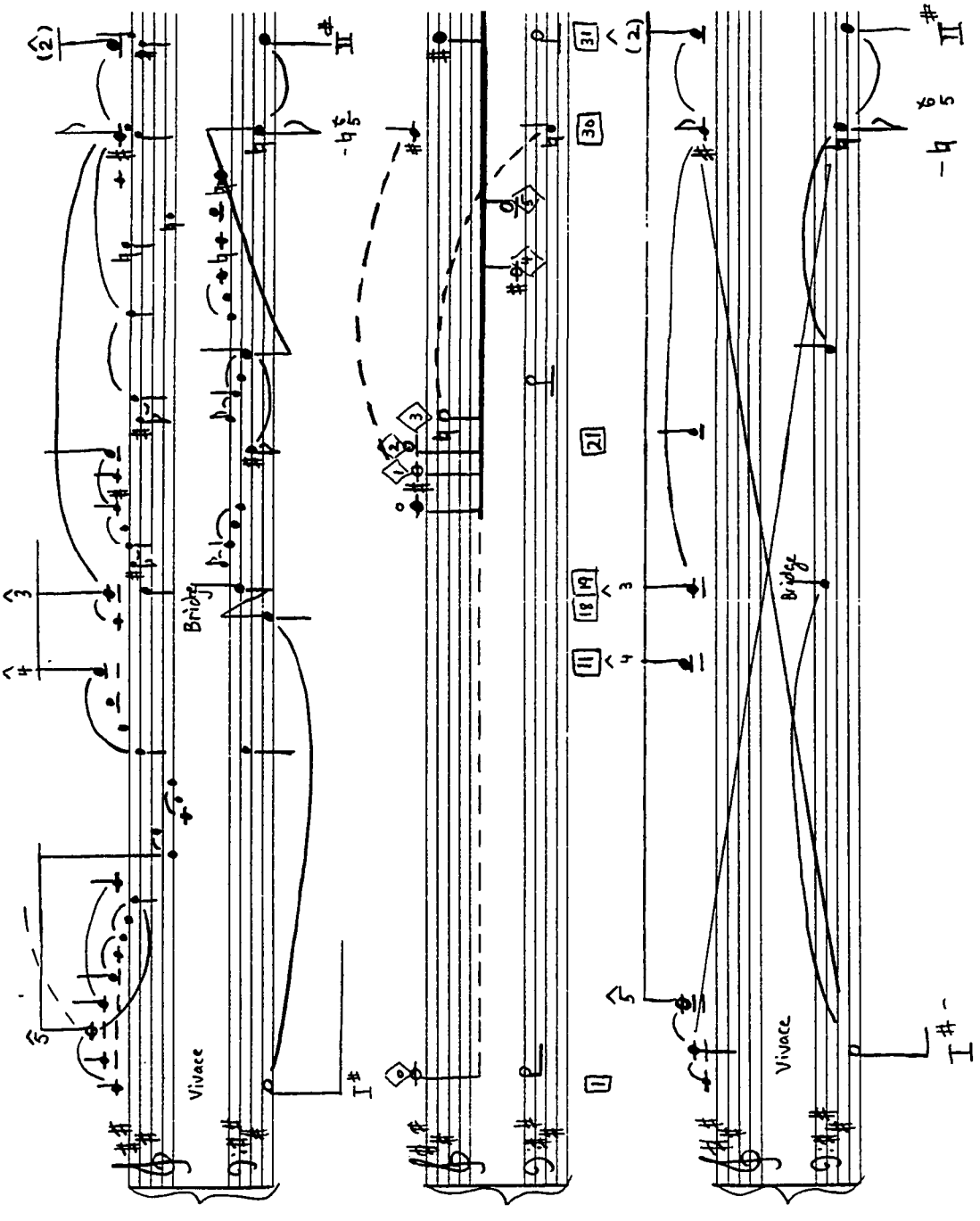

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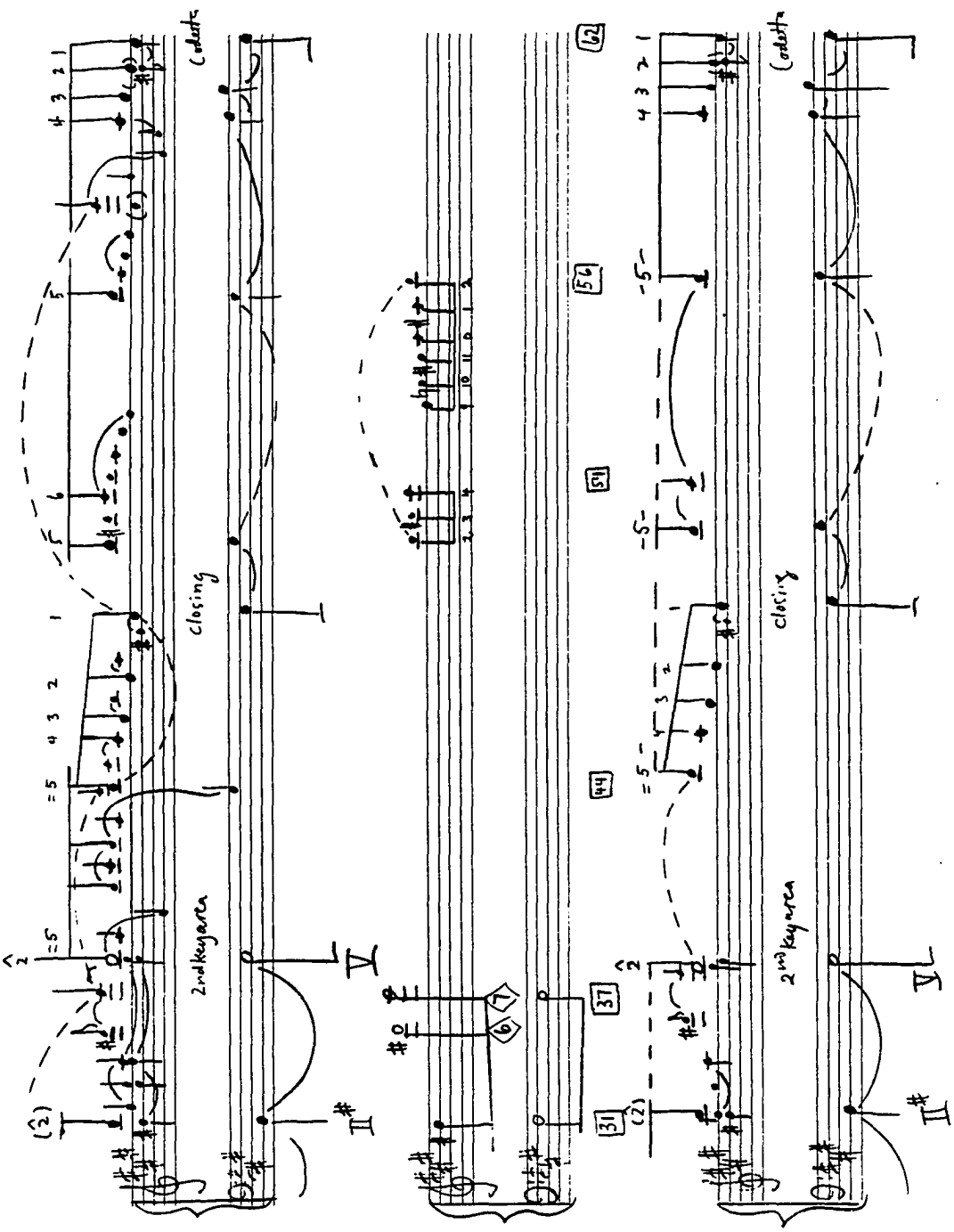

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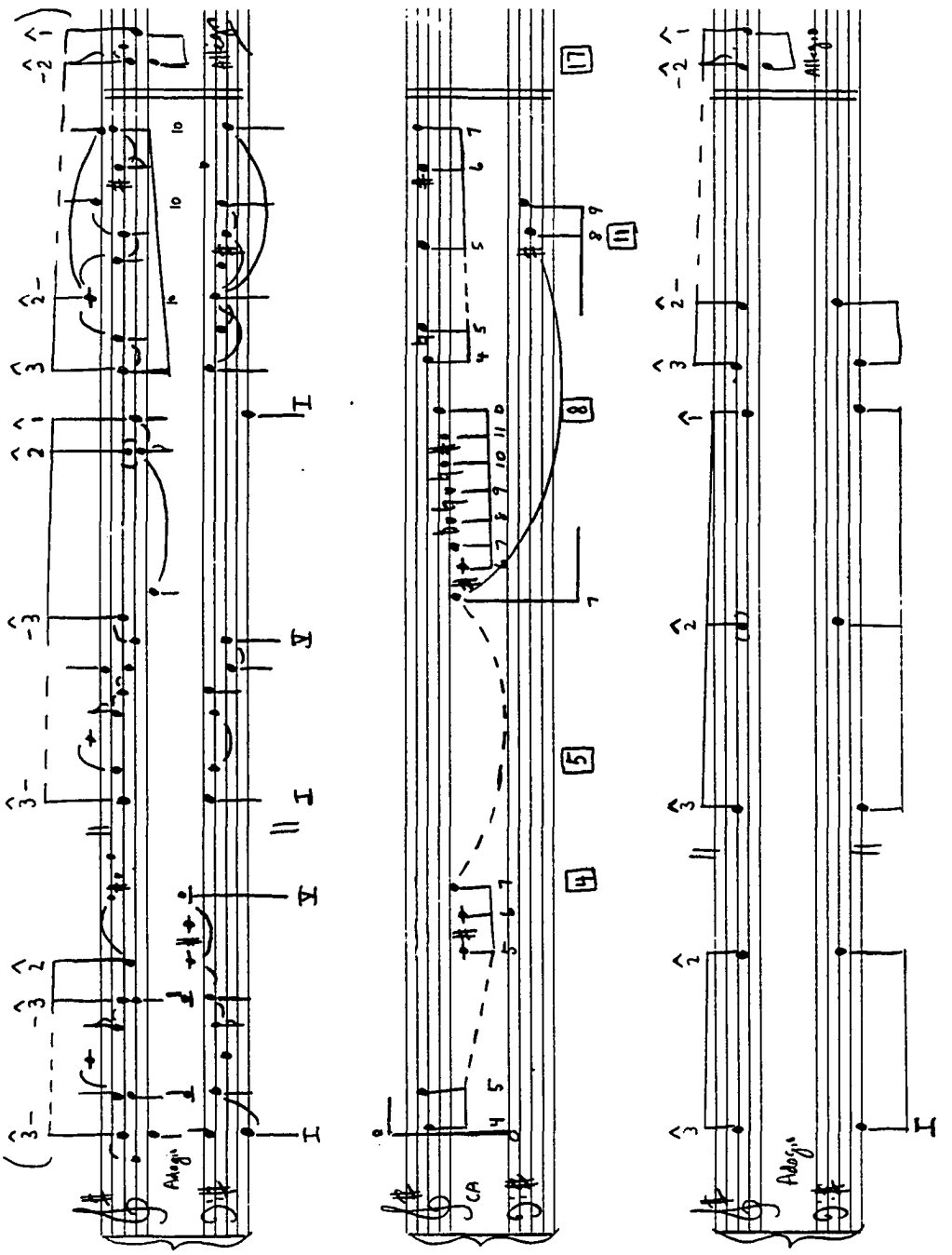

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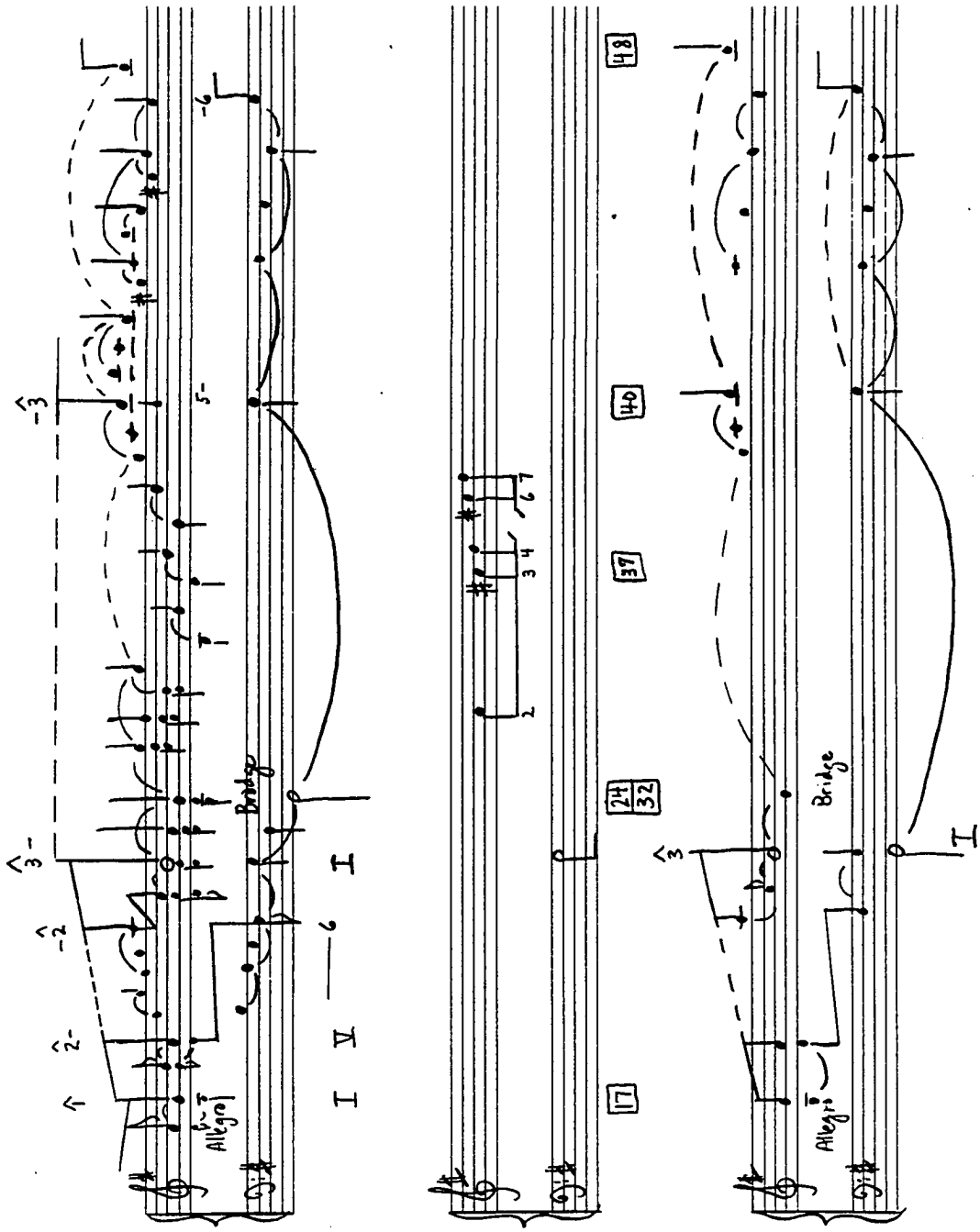

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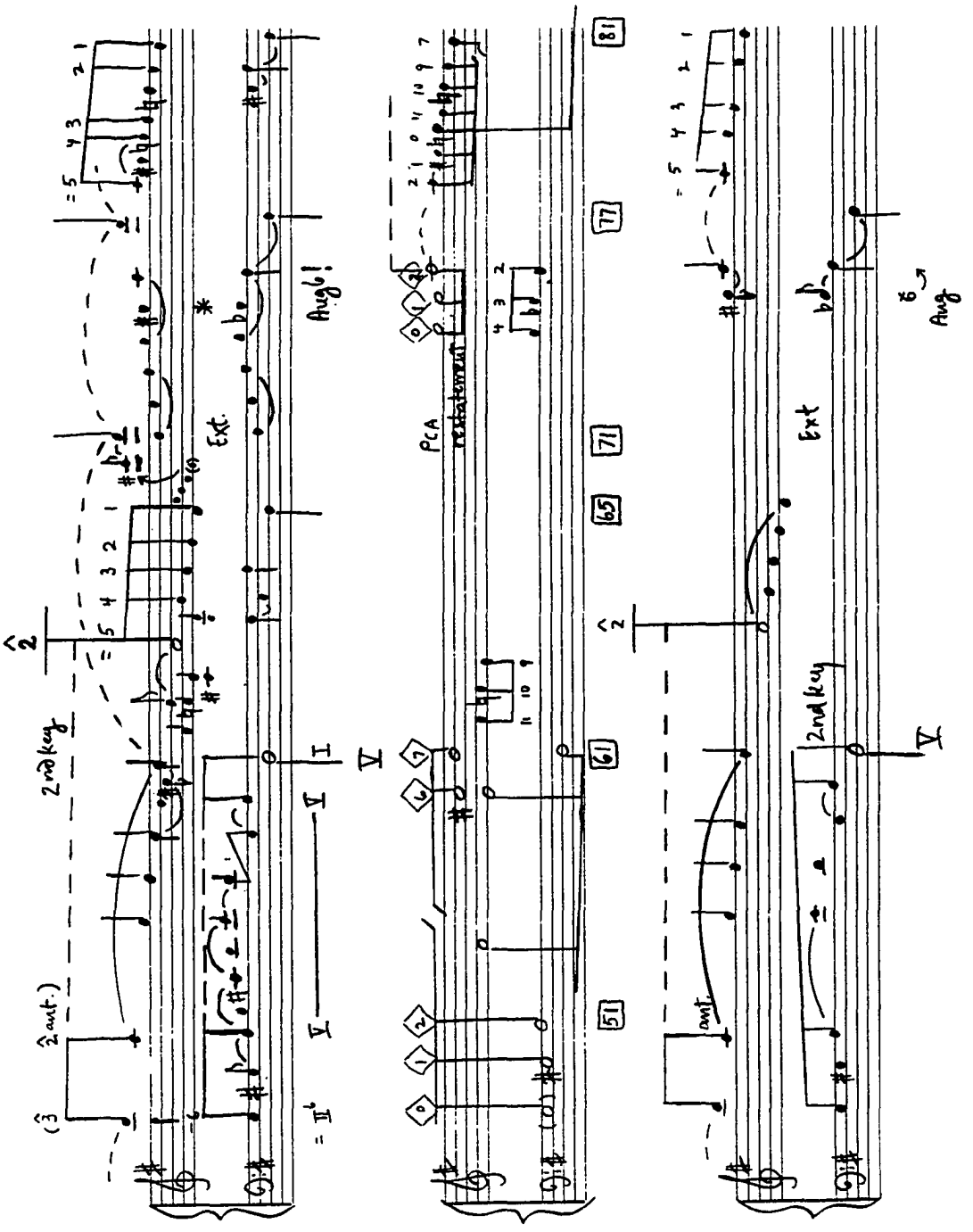

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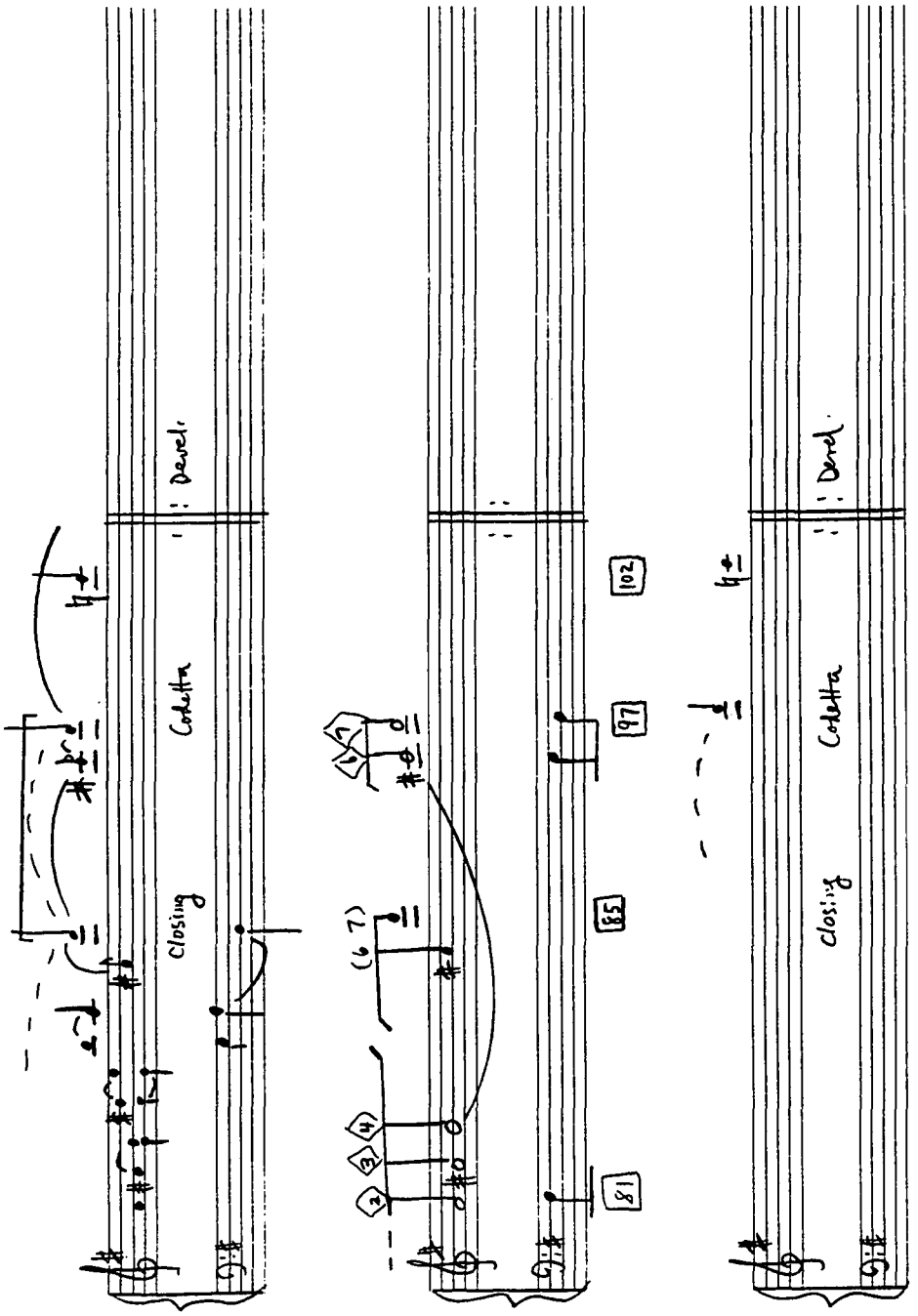

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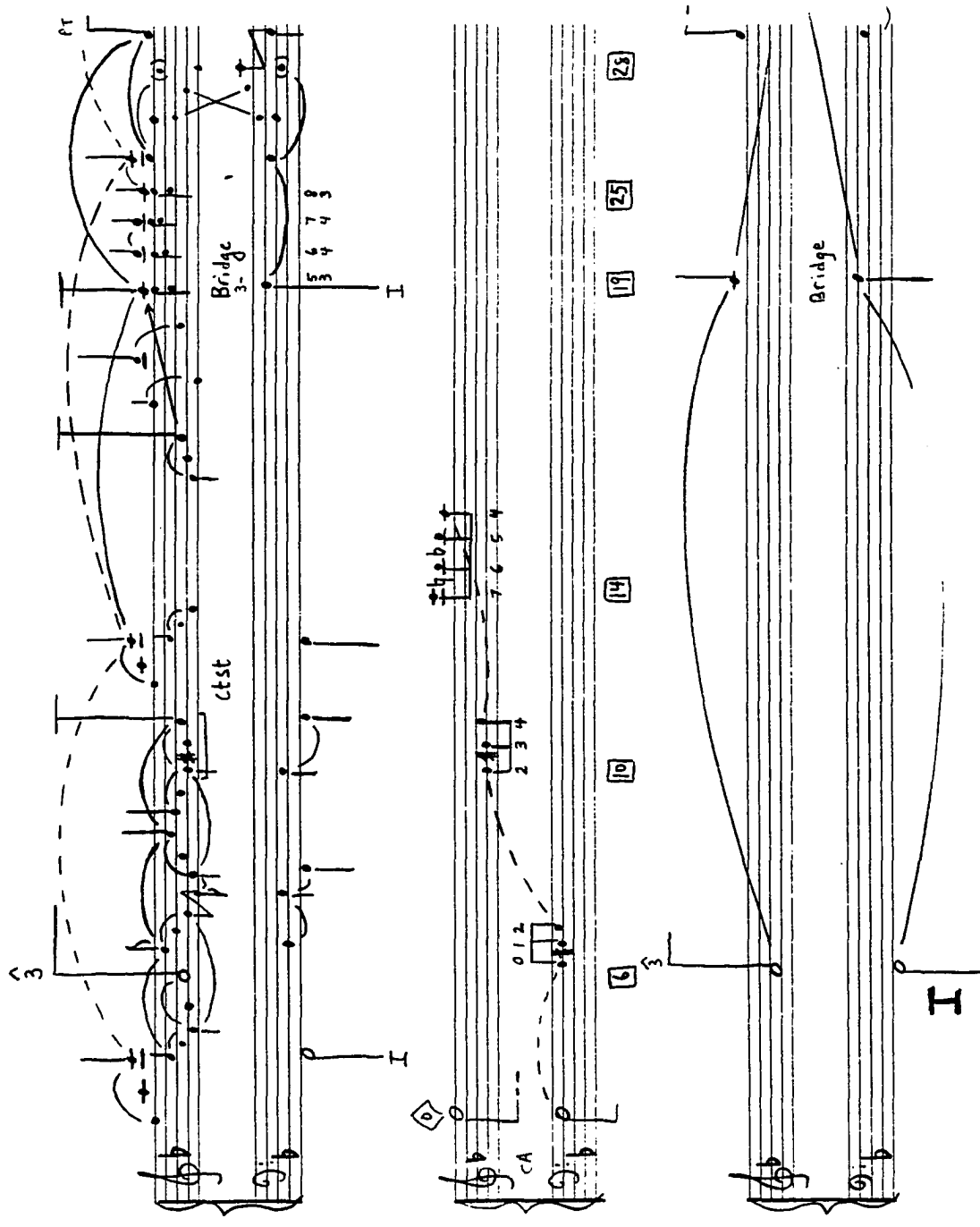

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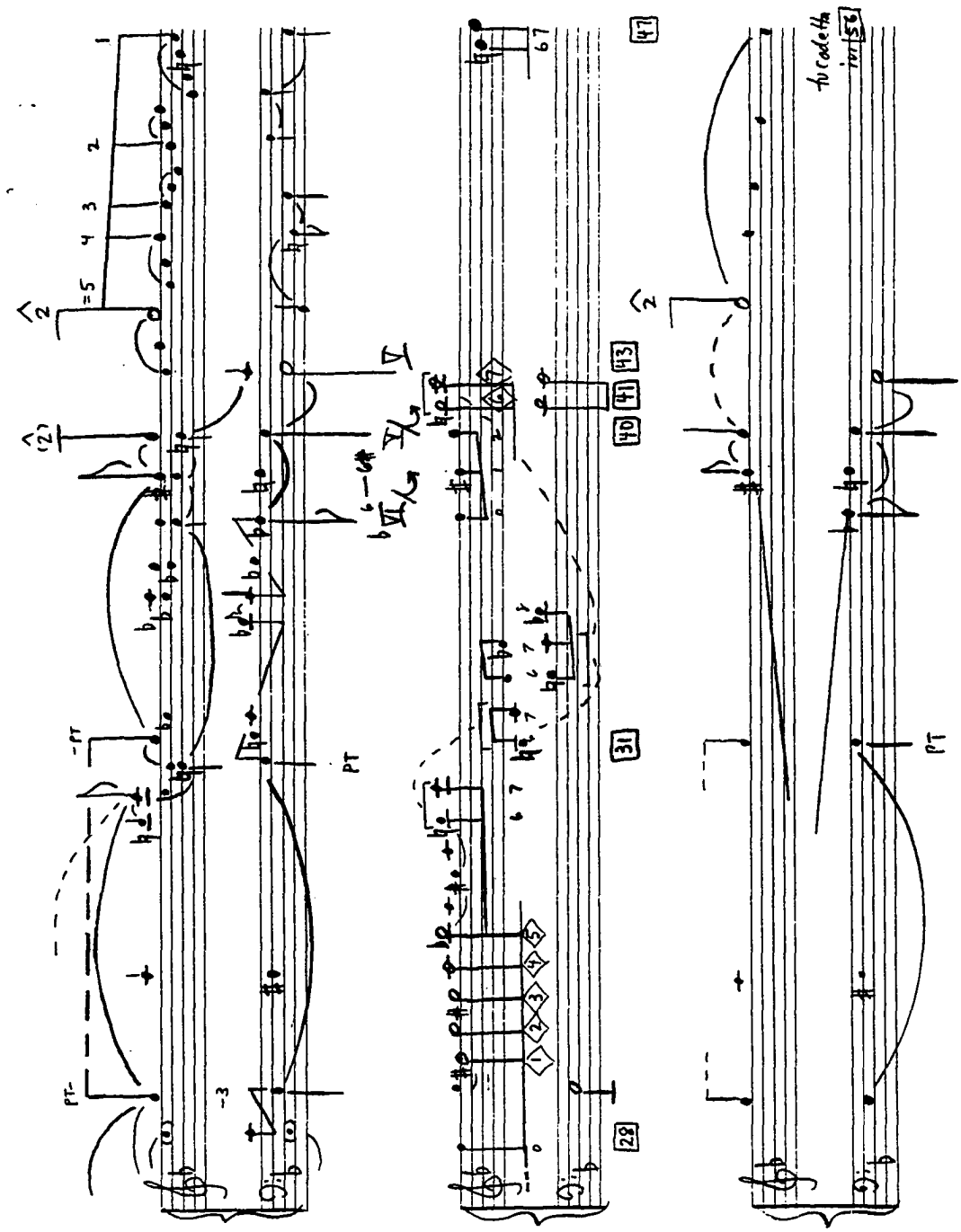

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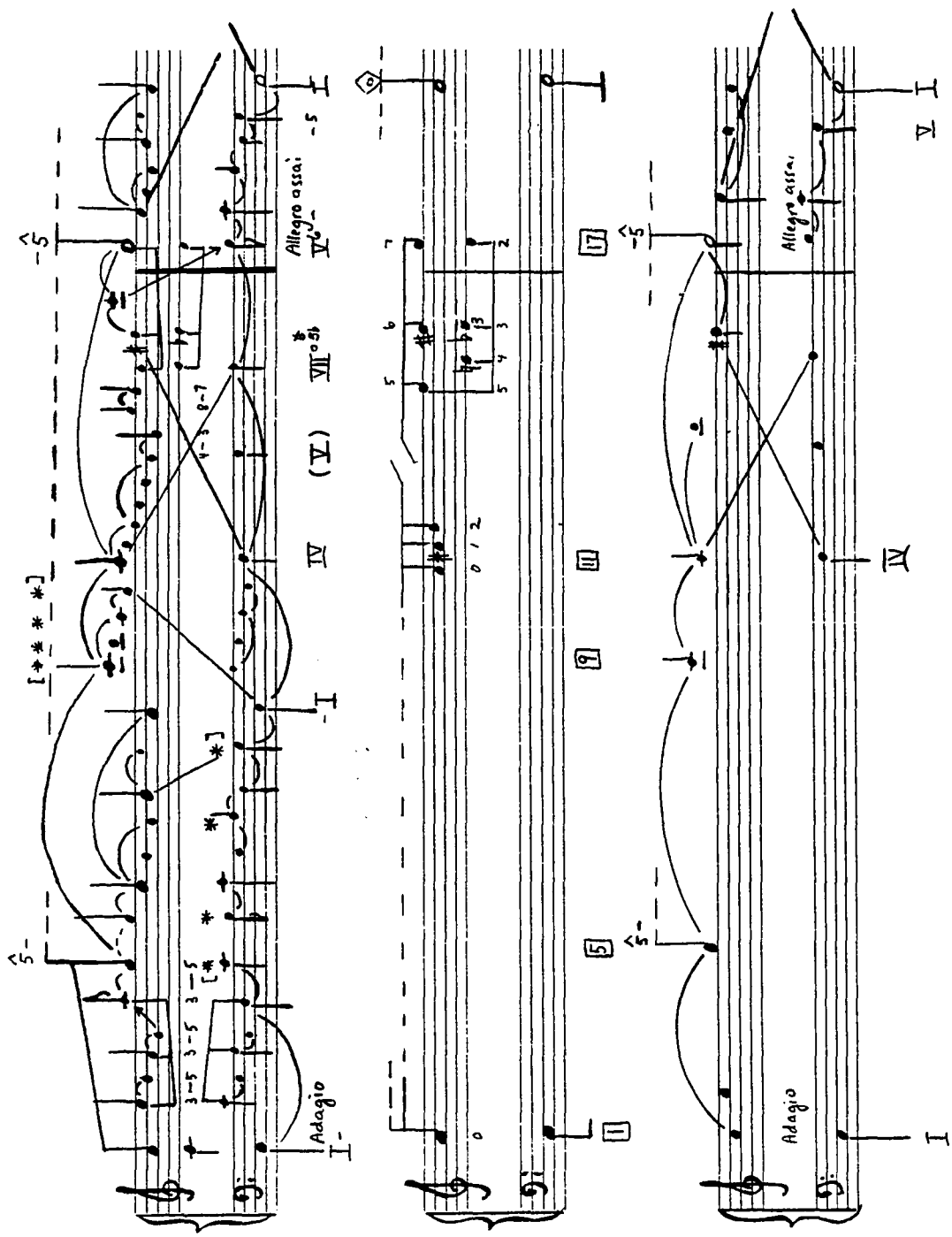

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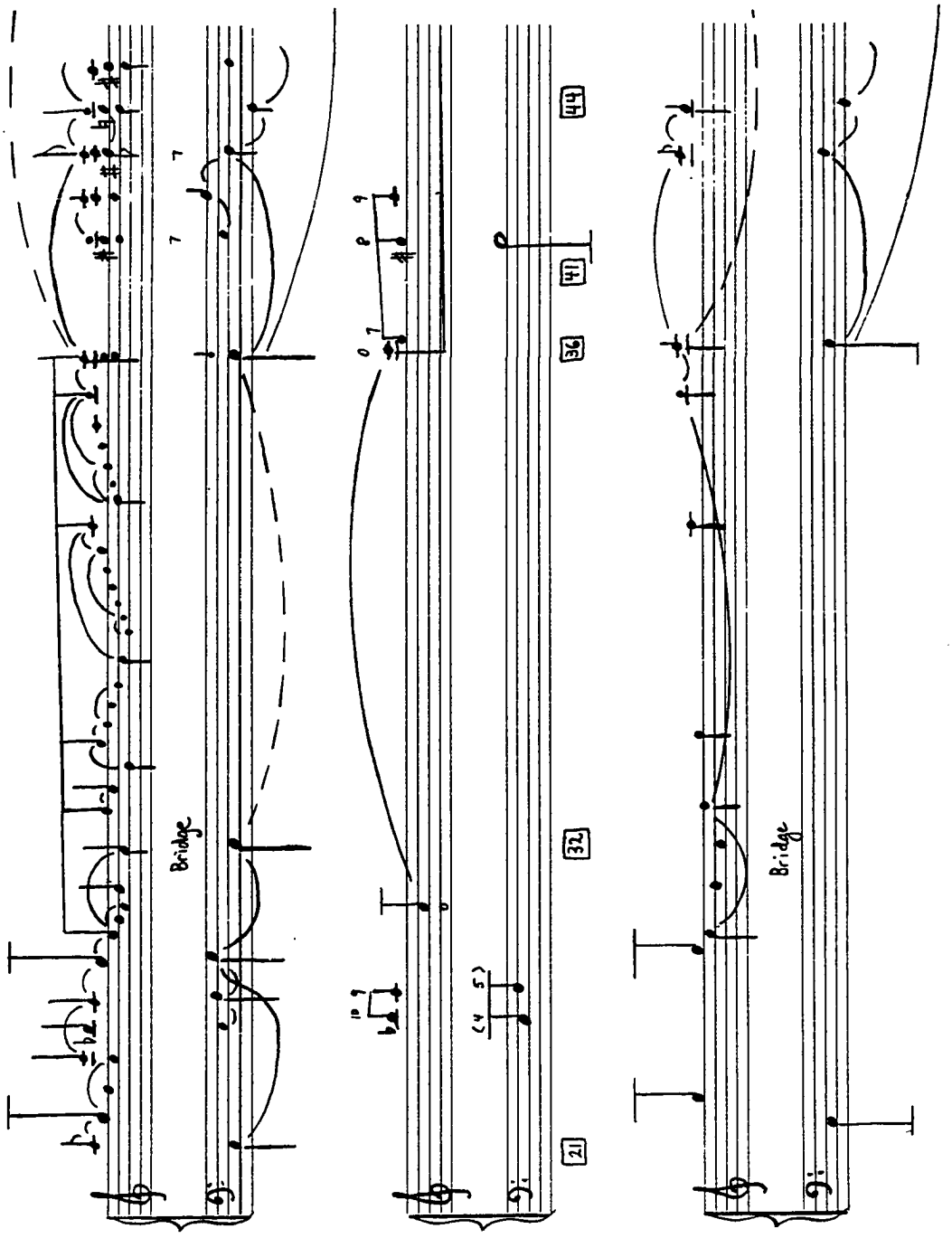

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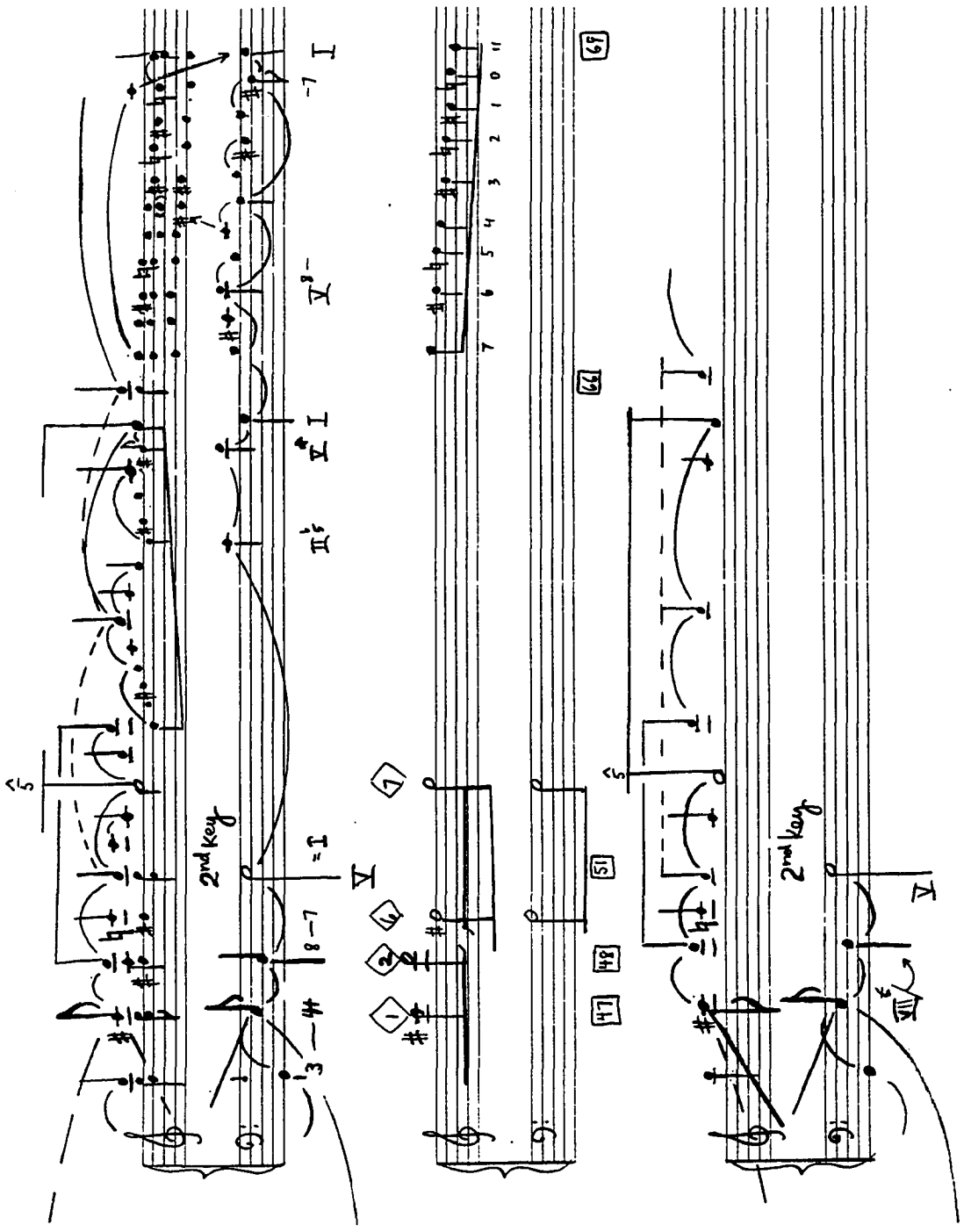

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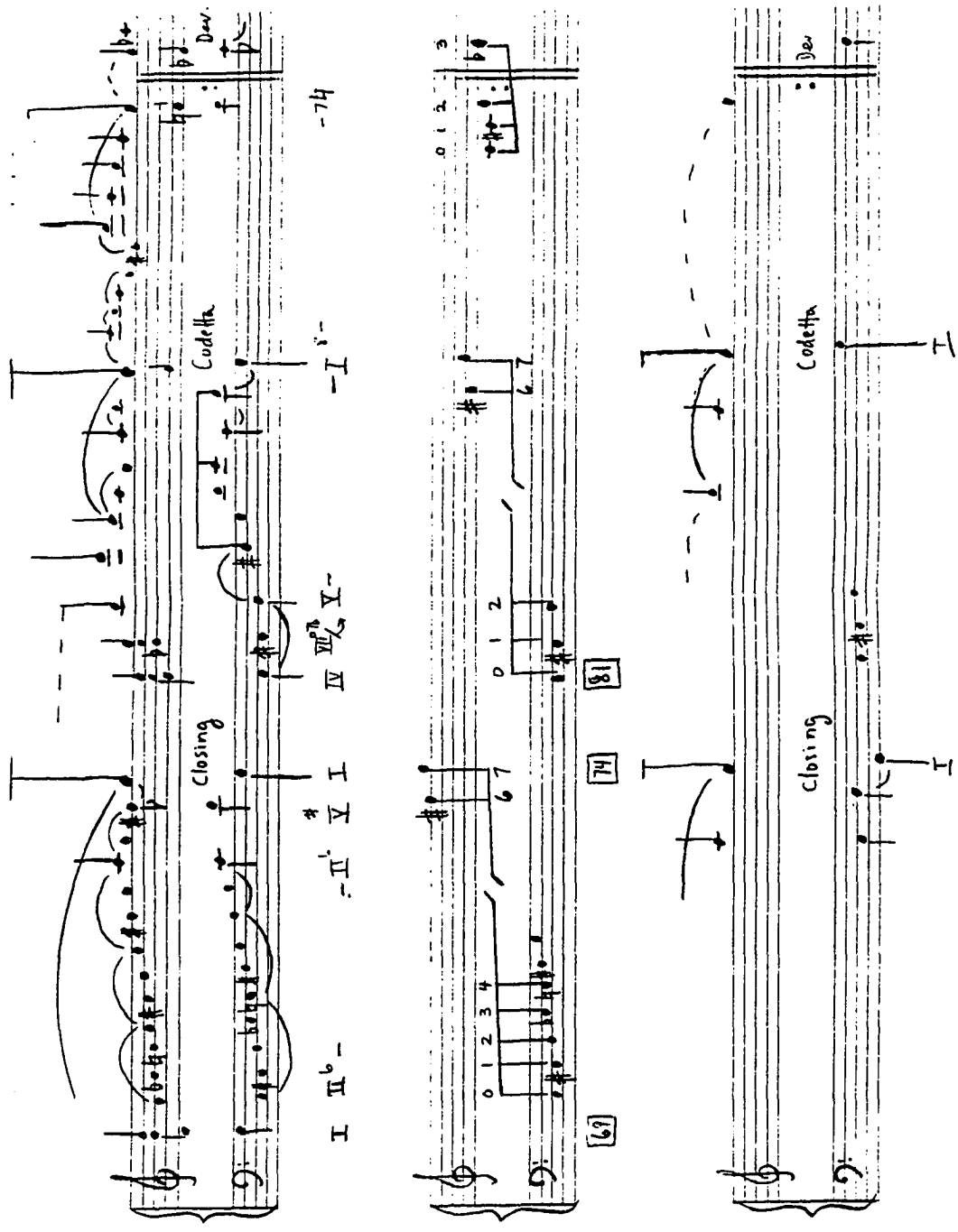

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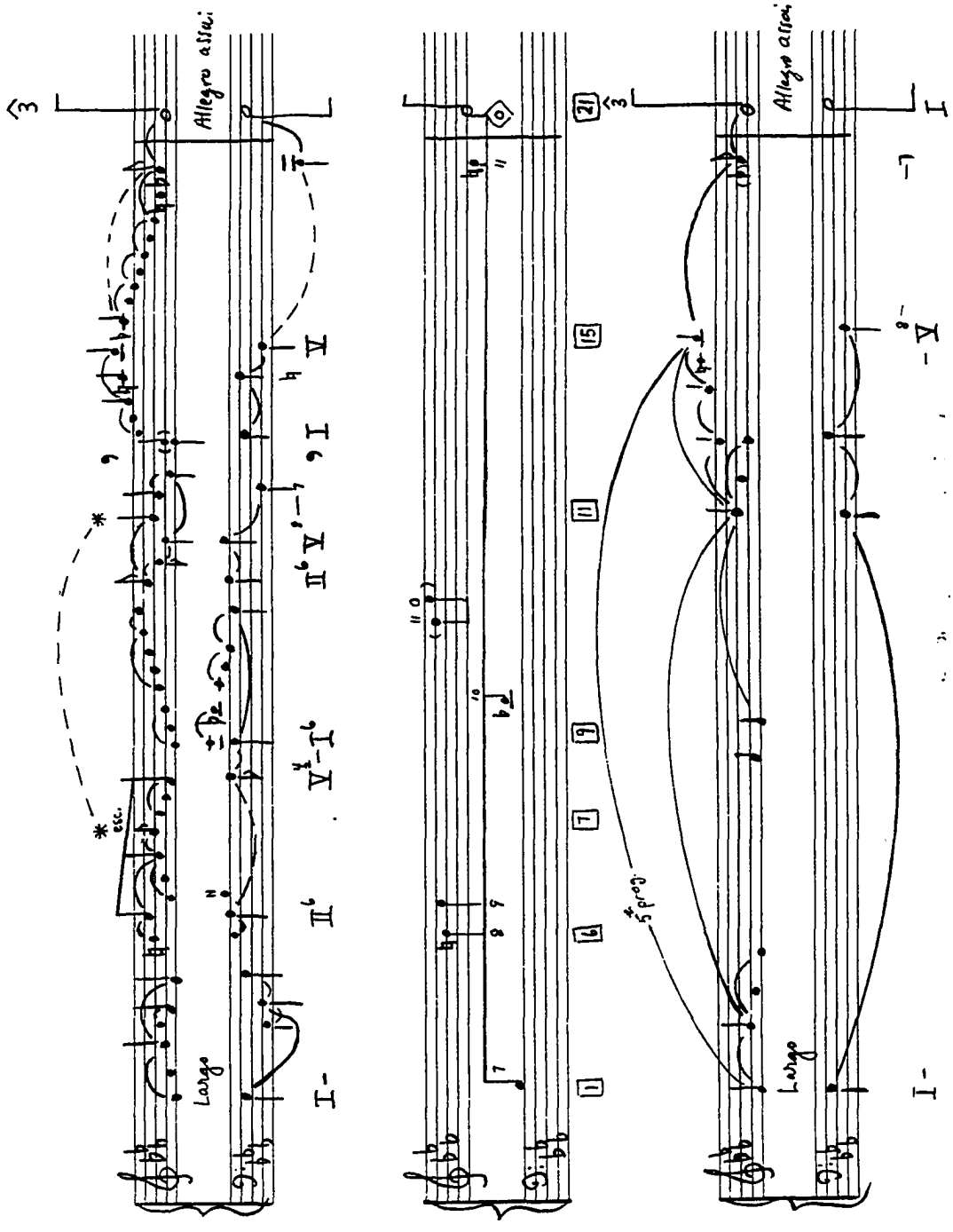

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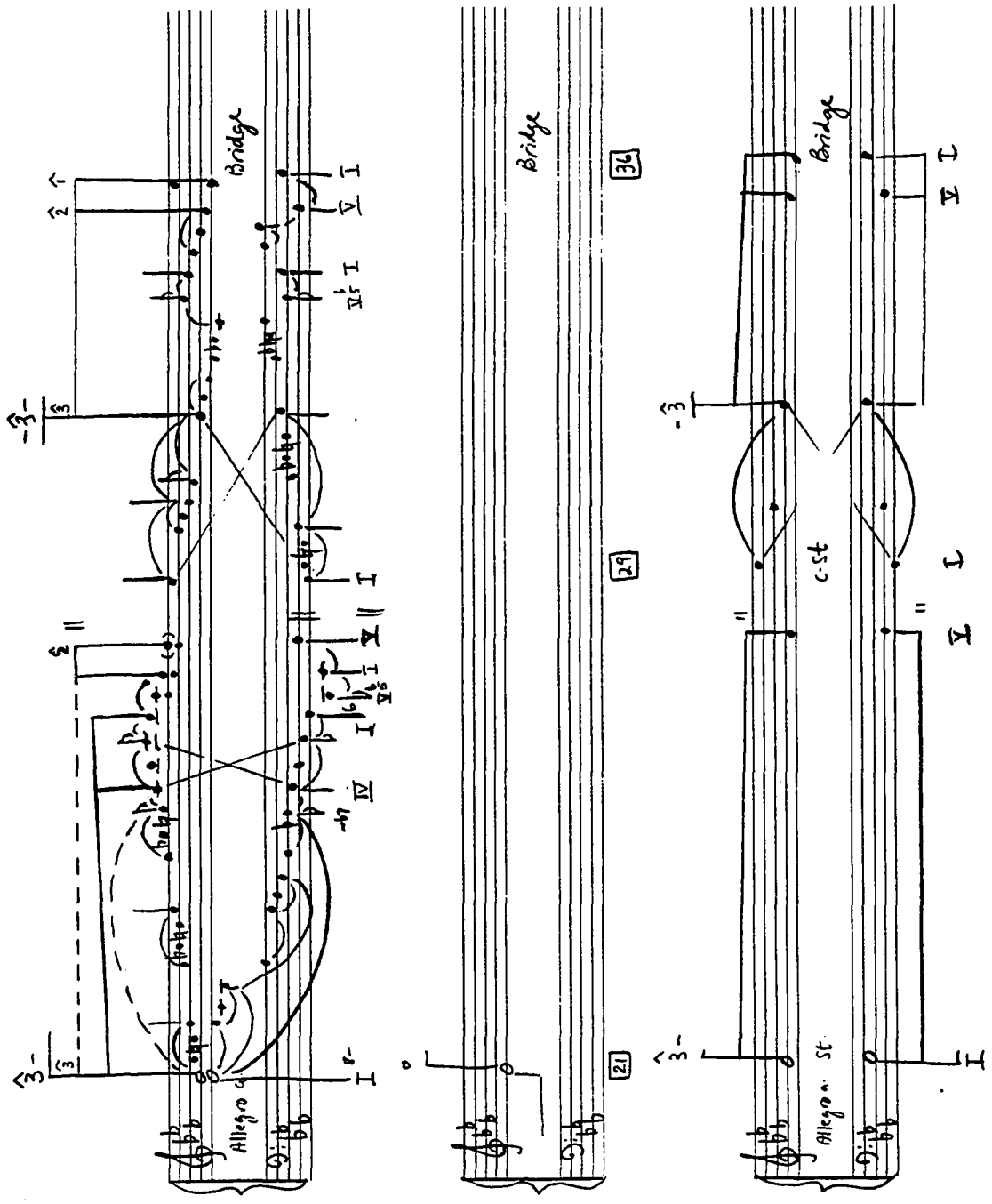

Figure 13.2: Symphony no. 91 in Eb major

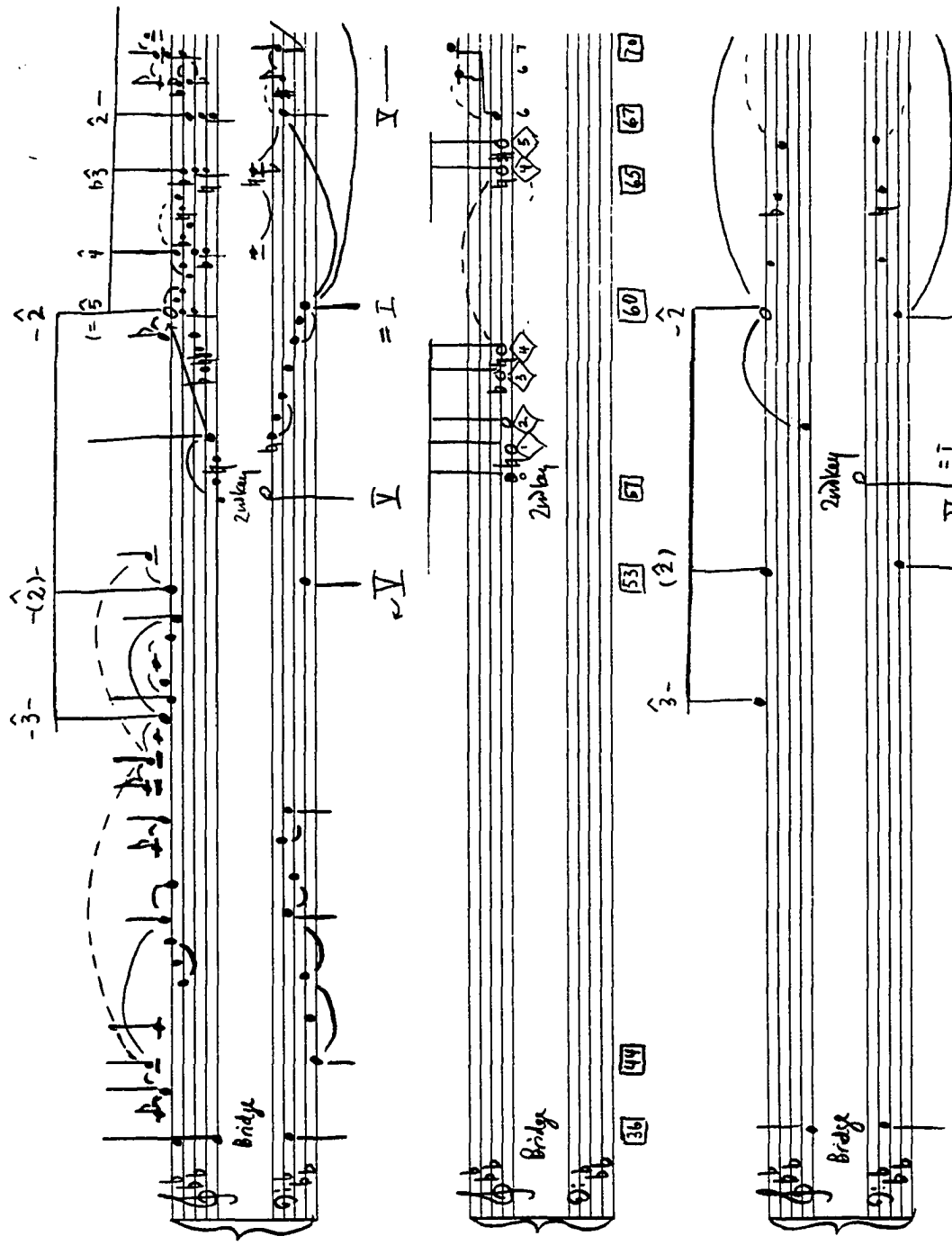

Figure 13.3: Symphony no. 91 in Eb major

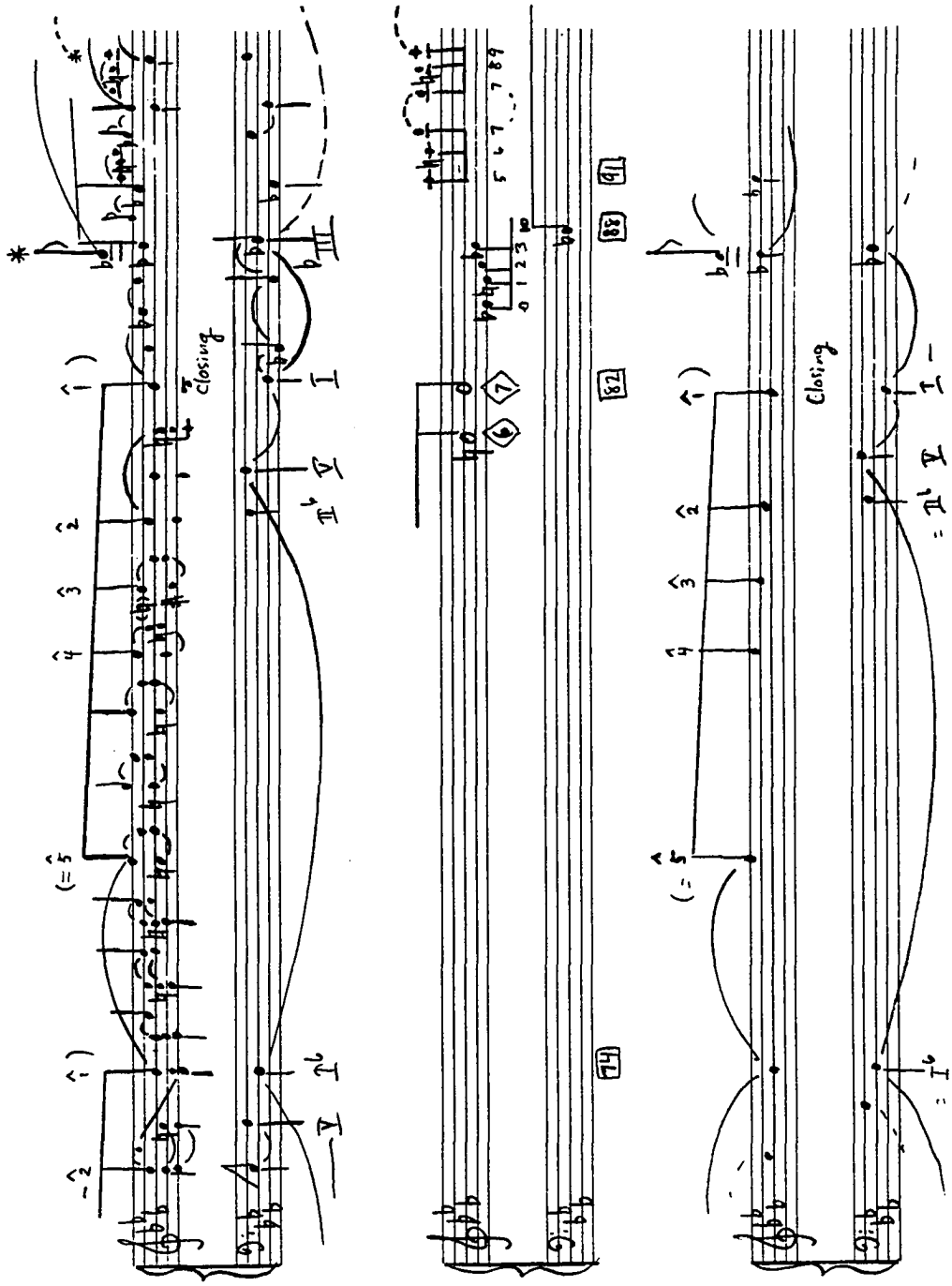

Figure 13.4: Symphony no. 91 in Eb major

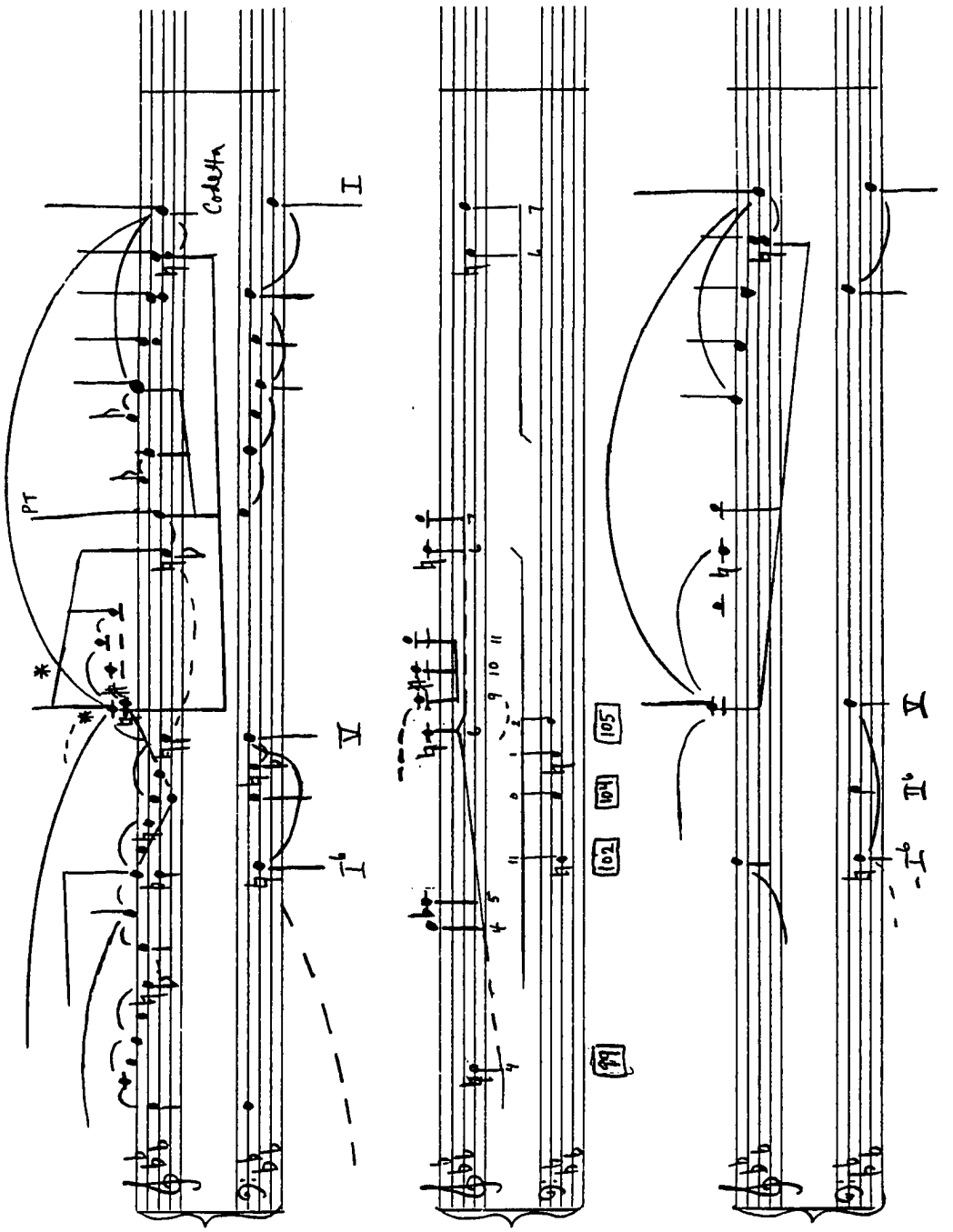

Figure 13.5: Symphony no. 91 in Eb major

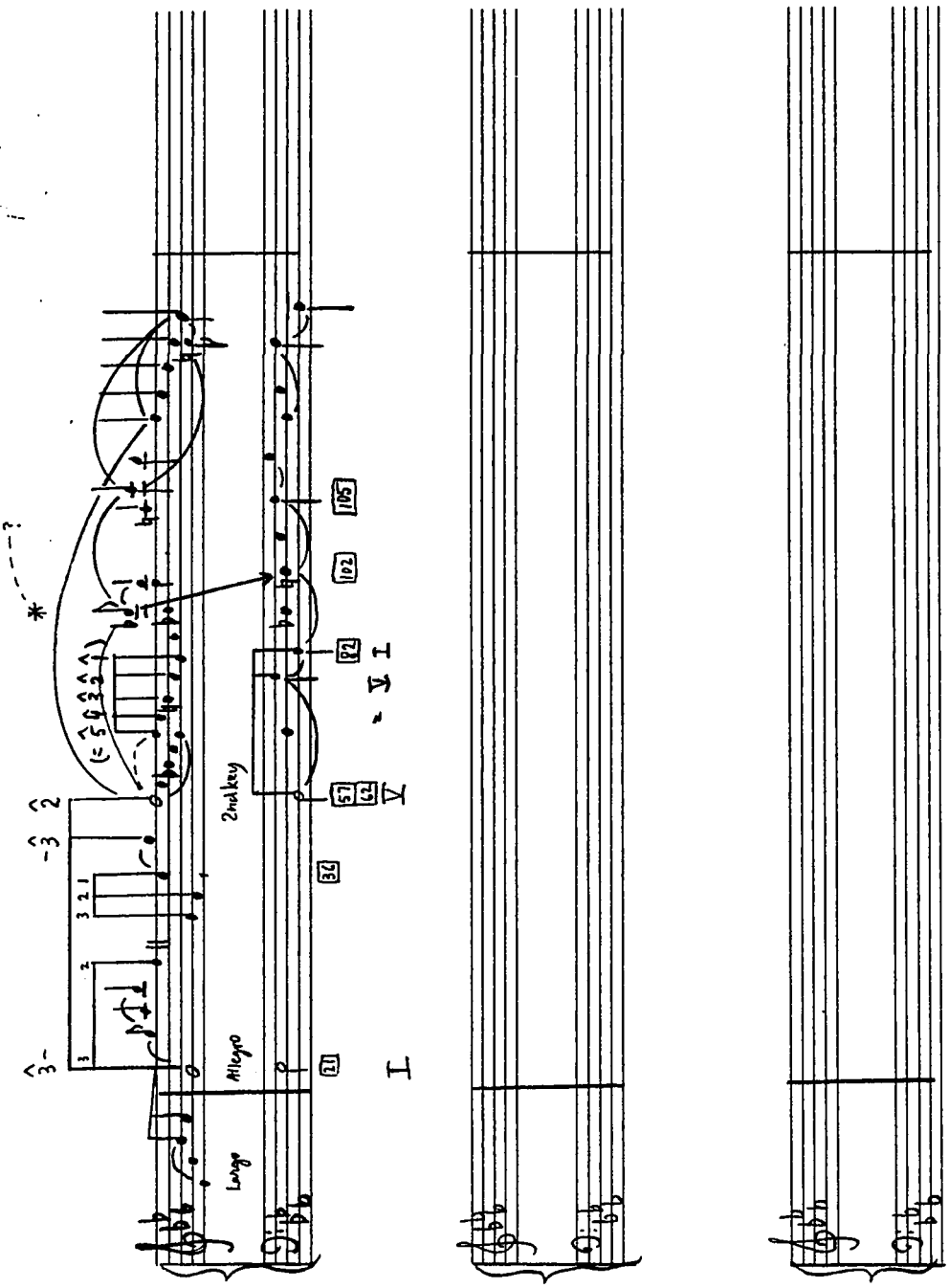

Figure 13.6: Symphony no. 91 in Eb major

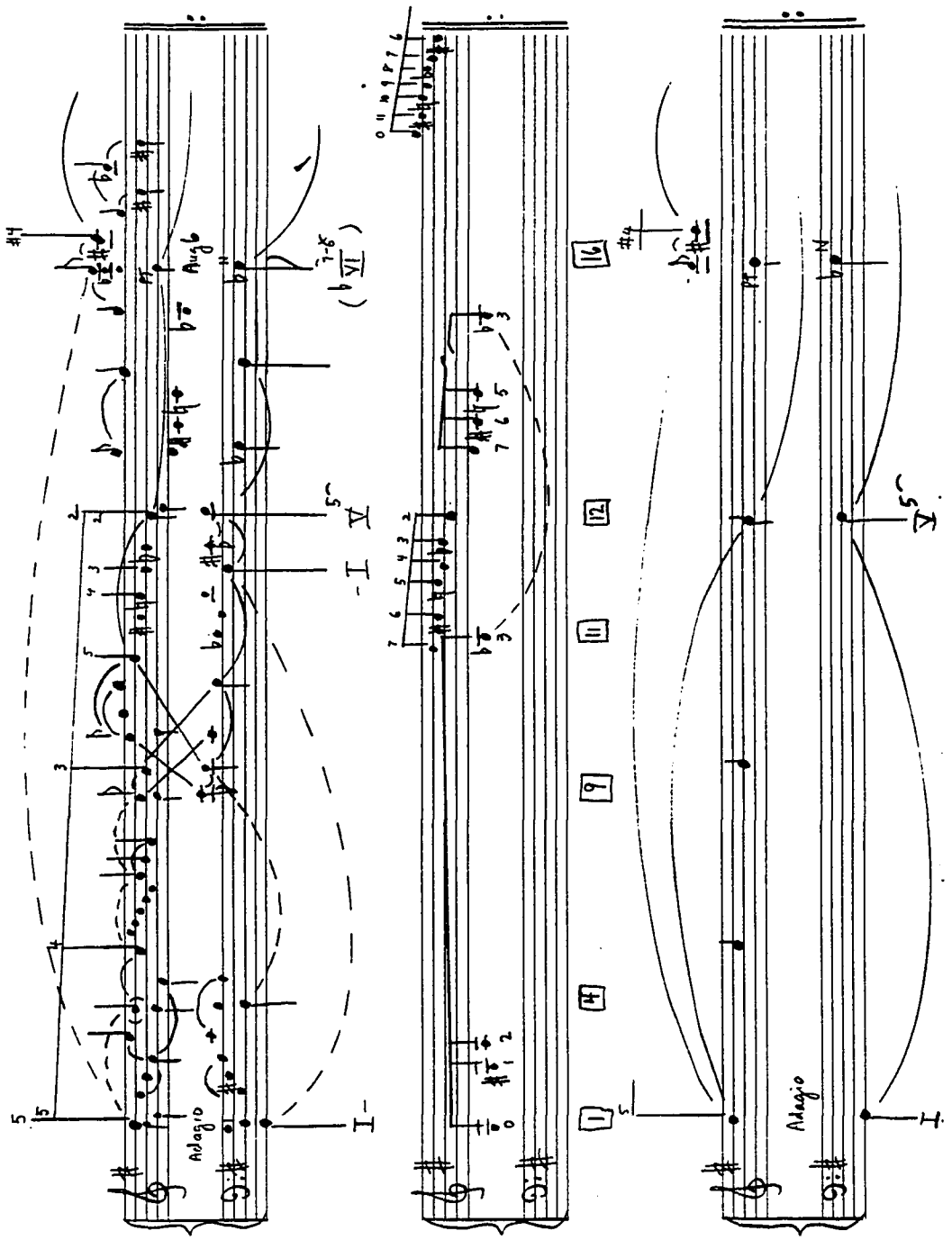

Figure 14.1: Symphony no. 92 in G major

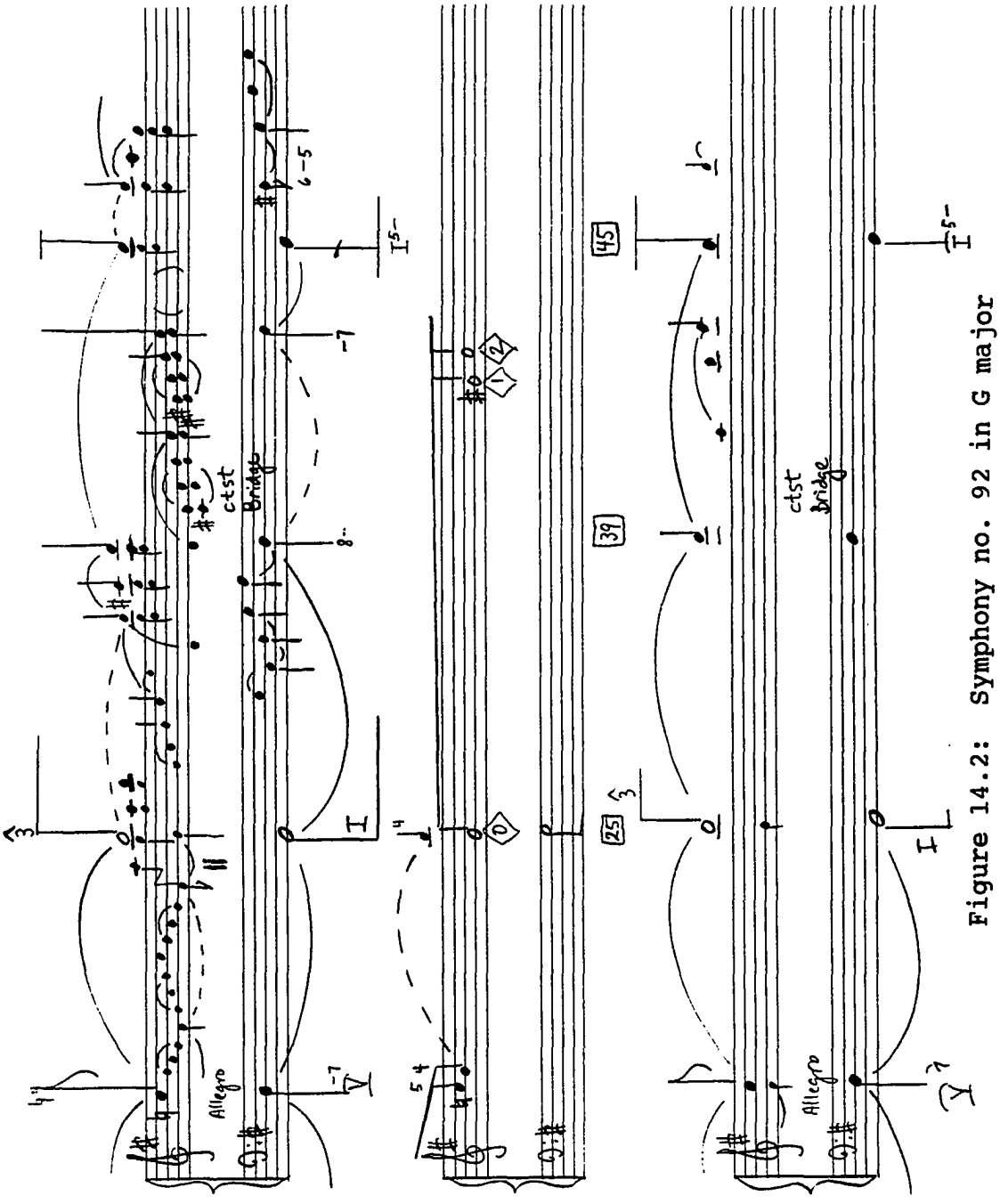

Figure 14.2: Symphony no. 92 in G major

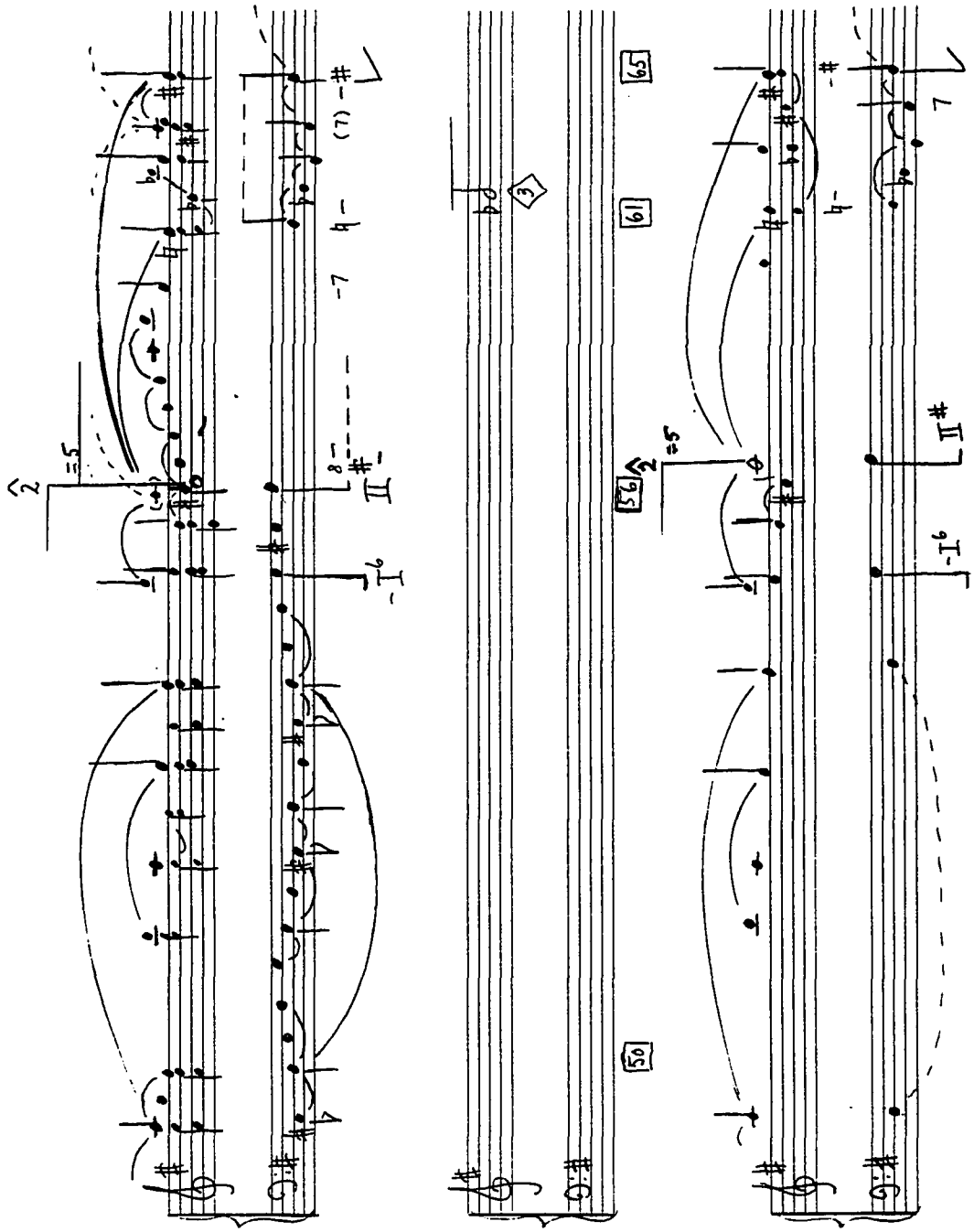

Figure 14.3: Symphony no. 92 in G major

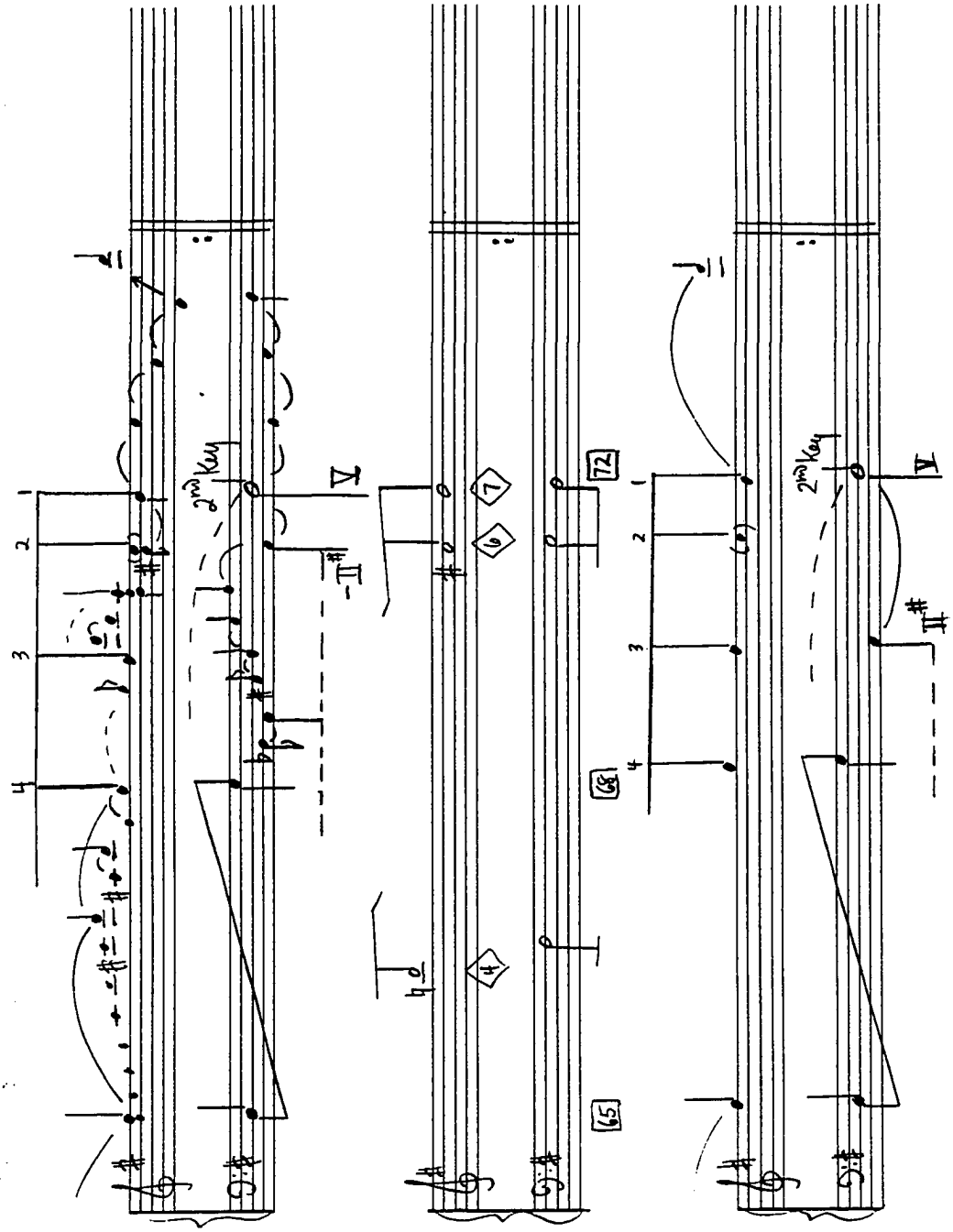

Figure 14.4: Symphony no. 92 in G major

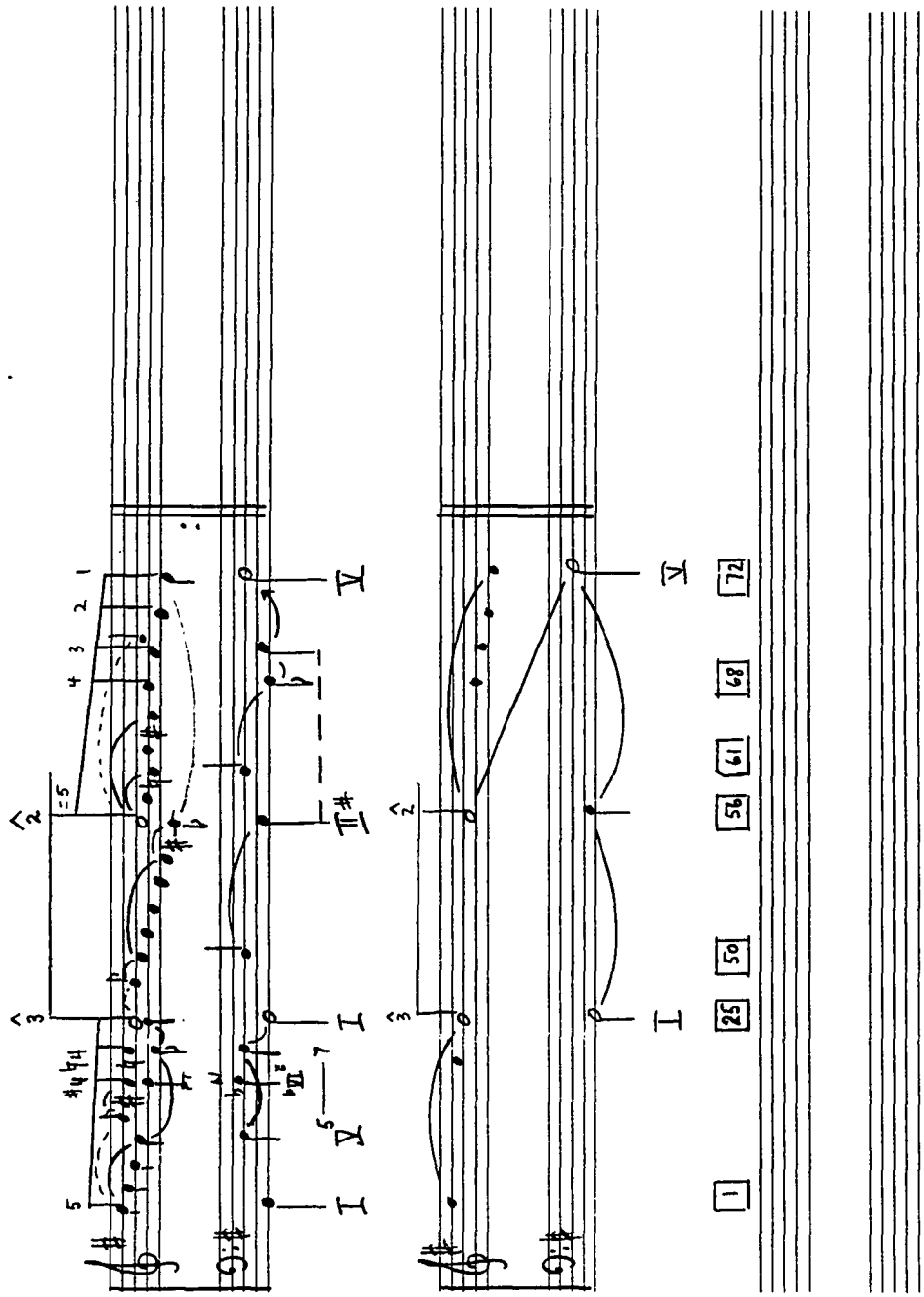

Figure 14.5: Symphony no. 92 in G major

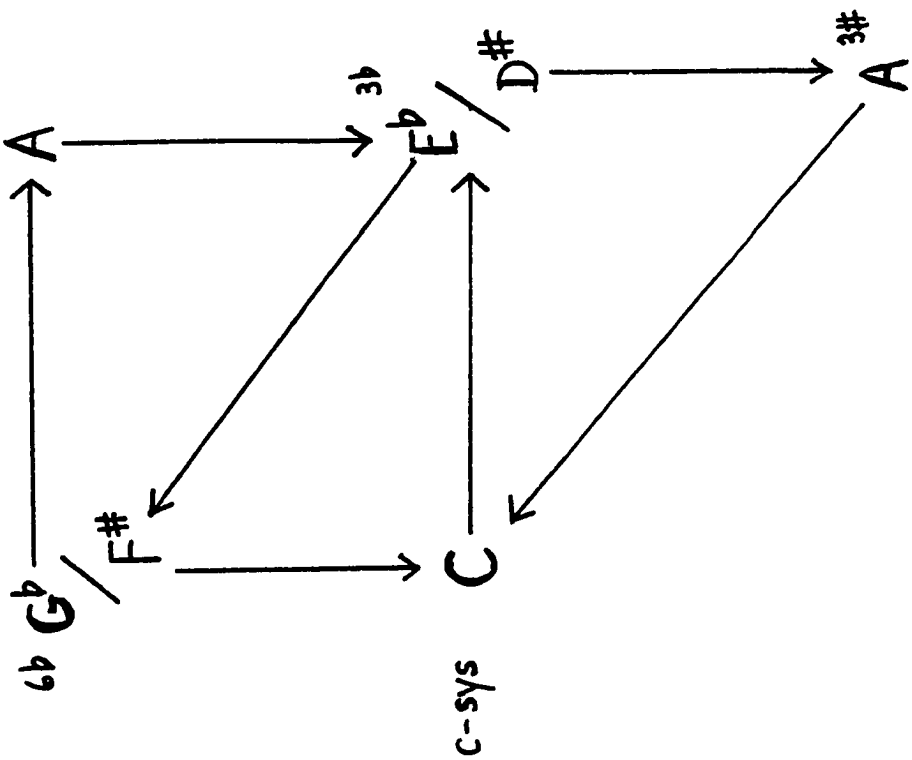

Figure 15: The symmetrical axes of systems analysis, in C major