

INFORMATION TO USERS

This manuscript has been reproduced from the microfilm master. UMI films the text directly from the original or copy submitted. Thus, some thesis and dissertation copies are in typewriter face, while others may be from any type of computer printer.

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleedthrough, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send UMI a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

Oversize materials (e.g., maps, drawings, charts) are reproduced by sectioning the original, beginning at the upper left-hand corner and continuing from left to right in equal sections with small overlaps. Each original is also photographed in one exposure and is included in reduced form at the back of the book.

Photographs included in the original manuscript have been reproduced xerographically in this copy. Higher quality 6" x 9" black and white photographic prints are available for any photographs or illustrations appearing in this copy for an additional charge. Contact UMI directly to order.

UMI

A Bell & Howell Information Company
300 North Zeeb Road, Ann Arbor MI 48106-1346 USA
313/761-4700 800/521-0600

THE DEVELOPMENT SECTION IN HAYDN'S LATE INSTRUMENTAL WORKS

by

MARK ANSON-CARTWRIGHT

VOLUME 1
TEXT

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

1998

UMI Number: 9908291

**Copyright 1998 by
Anson-Cartwright, Mark**

All rights reserved.

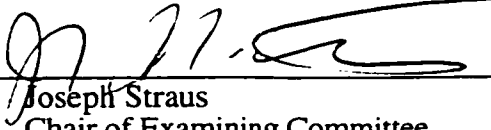
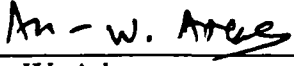
**UMI Microform 9908291
Copyright 1998, by UMI Company. All rights reserved.**

**This microform edition is protected against unauthorized
copying under Title 17, United States Code.**

UMI
300 North Zeeb Road
Ann Arbor, MI 48103

© 1998
MARK ANSON-CARTWRIGHT
All Rights Reserved

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

<u>9/15/98</u> Date	 Joseph Straus Chair of Examining Committee
<u>15 September 1998</u> Date	 Allan W. Atlas Executive Officer

Professor Carl Schachter

Professor Charles Burkhart

Professor David Gagné

Professor Bruce MacIntyre

Professor John Graziano
Supervisory Committee

THE CITY UNIVERSITY OF NEW YORK

Abstract

THE DEVELOPMENT SECTION IN HAYDN'S LATE INSTRUMENTAL WORKS

by

Mark Anson-Cartwright

Advisor: Professor Carl Schachter

Joseph Haydn's late instrumental works are universally considered to be among the greatest achievements in Western music. His sonata forms, in particular, are characterized by development sections of unprecedented length and dramatic intensity. This study investigates the harmonic and linear structure of Haydn's late developments, based on analyses of approximately 70 sonata-form movements (mostly first movements) from symphonies, string quartets, piano sonatas, and piano trios written in 1787 or later.

Chapters 1-3 deal with various aspects of the late developments in all four genres, while Chapters 4 and 5 focus on four of the London symphonies. Chapter 1 begins with a survey of theoretical accounts of the development section from Koch to Schenker as well as C. P. E. Bach's discussion of the free fantasy. A typology of middleground plans provides a general frame of reference for the discussion of specific aspects of structure and design in subsequent chapters.

Chapter 2 deals with selected characteristics of later (more foreground) structural levels in Haydn's late developments, including many of the unpredictable harmonic

techniques which are hallmarks of his style. Chapter 3 focuses on Haydn's important use of augmented sixth chords in developments. Two related issues stand out. One is that, very often, the chord to which an augmented sixth resolves has the potential to act as a dominant, but does not actually function as a dominant. The most prevalent such chord is $\text{III}\sharp$ (potentially V/VI), which typically functions as part of a large-scale arpeggiation $\text{V}-\text{III}\sharp-\text{I}$. The second issue concerning augmented sixths also has to do with ambiguity--in this case, enharmonic reinterpretation of the augmented sixth itself.

The most striking harmonic patterns in Haydn's developments are those which deceive or keep the listener in suspense--whether by enharmonic means or through the avoidance of an expected cadence. These patterns almost invariably involve chromatic tones, which often have a motivic significance that relates the development to other parts of the movement, especially the slow introduction (in the symphonies) and the recapitulation.

Chapter 4 presents comprehensive analyses of the first movements of Symphonies Nos. 93, 100, and 102, with special attention to the developments and to aspects of structure, rhetoric, and motivic design. Chapter 5 focuses on cyclic integration in Symphony No. 103 ("Drum Roll"), particularly the way the development sections of the outer movements relate to each other and shape the four-movement cycle. The study concludes in Chapter 6 with a brief epilogue on the historical significance of Haydn's developments, especially in relation to the music of Mozart, Beethoven, and Schubert.

Acknowledgments

Many people assisted and encouraged me during my work on this study. My heartfelt thanks must go first to my advisor, Professor Carl Schachter, without whose inspiring musicianship and unflagging support this project would not have been possible. As both a teacher and a friend, he has generously and enthusiastically shared his wisdom.

I am also grateful to my primary readers, Professors Charles Burkhart and David Gagné, from whom I learned much both in graduate analysis seminars and, more recently, in discussions of drafts of this study. Both scholars made this study clearer and more persuasive than it might otherwise have been. Professor Burkhart offered especially useful suggestions concerning the graphs, and Professor Gagné was most helpful in matters of prose style.

The remaining members of my committee, Professors John Graziano, Bruce MacIntyre, and Joseph Straus, also generously gave of their time and expertise. I benefitted from their perceptive criticism of the penultimate draft.

I would like to thank two CUNY graduate faculty members (past and present) for their inspirational teaching and enthusiastic interest in my research: Professor Joel Lester (now Dean of the Mannes College of Music) and Professor Stephen Blum. I am also grateful to Professor Edward Laufer of the University of Toronto, who introduced me to Schenker's approach when I was an undergraduate, and who inspired me greatly.

My work on this dissertation was supported by a Dissertation Year Fellowship for the academic year 1996-97, awarded by the Graduate School of the City University of New York, for which I am very grateful. Professor Allan Atlas encouraged me to apply for this fellowship, and he deserves thanks for assisting me during the seven years of my graduate studies.

Finally, I wish to thank my parents for their constant love and support.

CONTENTS

Volume I: Text

Chapter

1. Theoretical Perspectives on the Development Section.....	1
2. Harmonic and Thematic Procedures at Later Levels in Developments.....	46
3. Augmented Sixths and Related Chromatic Harmony in Developments.....	88
4. The Development in Three London Symphonies: Nos. 93, 100, and 102....	119
5. Development Sections and Cyclic Integration in the “Drum Roll” Symphony.....	153
6. Epilogue: The Historical Significance of Haydn’s Developments.....	177
Bibliography.....	188

Volume II: Examples

Chapter 1	Schenker, <i>Free Composition</i> , Figs. 21 & 23	
	Example 1.1.....	195
	Plans for development sections	
	Example 1.2.....	196
	Plans for development sections, elaborations with upper voice	
	Example 1.3.....	199
	Graph of Haydn, String Quartet in G, Op. 76 No. 1, I, development	
	Example 1.4.....	204
	Graph of Haydn, Symphony No. 98 in B $\flat$, I, development	
	Example 1.5.....	205
	Graph of Haydn, String Quartet in B $\flat$, Op. 64 No. 3, I, development	
	Example 1.6.....	206
	Graphs of Haydn, Symphony No. 104 in D, I, development	
	Example 1.7.....	207
	Graphs of Haydn, Symphony No. 101 in D, I, development	
	Example 1.8.....	208
	Graphs of Haydn, String Quartet in F, Op. 74 No. 2, I, development	
	Example 1.9.....	209
	Graphs of Haydn, Symphony No. 89 in F, I, development	
	Example 1.10.....	210

Chapter 2	Haydn, Piano Trio in A $\flat$, Hob.XV:14, I, mm. 80-101	
	Example 2.1.....	211
	Graphs of Haydn, Piano Trio in A $\flat$, Hob.XV:14, I, mm. 83-98	
	Example 2.2.....	212
	Haydn, String Quartet in B $\flat$, Op. 71 No. 1, I, mm. 70-79	
	Example 2.3.....	213
	Haydn, Symphony No. 103 in E $\flat$, I, mm. 94-107	
	Example 2.4.....	214
	Haydn, Piano Sonata in E $\flat$, Hob.XVI:49, I, mm. 65-83	
	Example 2.5.....	216
	Haydn, Piano Sonata in C, Hob.XVI:50, I, mm. 54-74	
	Example 2.6.....	217
	Graphs of Haydn, Piano Sonata in C, Hob.XVI:50, I, mm. 54-73	
	Example 2.7.....	218
	Haydn, String Quartet in F, Op. 74 No. 2, I, mm. 93-104	
	Example 2.8.....	219
	Haydn, String Quartet in F, Op. 74 No. 2, I, mm. 169-176	
	Example 2.9.....	219
	Haydn, String Quartet in D minor, Op. 76 No. 2, I, mm. 82-98	
	Example 2.10.....	220
	Haydn, Symphony No. 102 in B $\flat$, I, mm. 81-92	
	Example 2.11.....	221
	Haydn, Symphony No. 102 in B $\flat$, I, mm. 109-118	
	Example 2.12.....	221
	Haydn, String Quartet in G, Op. 77 No. 1, I, mm. 101-128	
	Example 2.13.....	222
	Haydn, Symphony No. 91 in E $\flat$, I, mm. 120-153	
	Example 2.14.....	223
	Haydn, Symphony No. 97 in C, I, mm. 137-147	
	Example 2.15.....	225
	Haydn, Symphony No. 103 in E $\flat$, I, mm. 108-118	
	Example 2.16.....	226
	Haydn, Symphony No. 103 in E $\flat$, I, mm. 130-141	
	Example 2.17.....	227
	Haydn, String Quartet in F, Op. 74 No. 2, I, mm. 110-130	
	Example 2.18.....	228
	Haydn, Symphony No. 96 in D, I, mm. 120-135	
	Example 2.19.....	229
	Haydn, String Quartet in E $\flat$, Op. 71 No. 3, mm. 110-186 (score and graph)	
	Example 2.20.....	230
	Haydn, Symphony No. 102 in B $\flat$, I, mm. 176-188	
	Example 2.21.....	233
	Haydn, Symphony No. 92 in G, I, mm. 83-110	
	Example 2.22.....	234

	Haydn, Symphony No. 104 in D, I, mm. 124-158	
	Example 2.23.....	236
	Haydn, Symphony No. 104 in D, I, mm. 102-112	
	Example 2.24.....	239
	Haydn, Symphony No. 91 in E $\flat$, I, mm. 175-193	
	Example 2.25.....	240
	Haydn, Symphony No. 103 in E $\flat$, I, mm. 153-9	
	Example 2.26.....	242
	Haydn, Symphony No. 100 in G, I, mm. 170-211	
	Example 2.27.....	243
	Haydn, String Quartet in G, Op. 54 No. 1, I, mm. 78-88	
	Example 2.28.....	246
	Haydn, String Quartet in B $\flat$, Op. 71 No. 1, I, mm. 96-106	
	Example 2.29.....	247
	Graph of Haydn, String Quartet in B $\flat$, Op. 71 No. 1, I, development	
	Example 2.30.....	248
	Haydn, Piano Sonata in E $\flat$, Hob.XVI:49, I, mm. 105-134	
	Example 2.31.....	249
	Haydn, Symphony No. 94 in G, I, mm. 146-158	
	Example 2.32.....	251
	Haydn, Symphony No. 94 in G, IV, mm. 131-149	
	Example 2.33.....	252
Chapter 3	Haydn, Symphony No. 104 in D, III, Trio (retransition), mm. 95-104	
	Example 3.1.....	254
	Graph of Haydn, Symphony No. 104 in D, III	
	Example 3.2.....	255
	Graph of Beethoven, Sonata in C, Op. 53 ("Waldstein"), I, mm. 14-35	
	Example 3.3.....	255
	Schubert, Waltz in A $\flat$, Op. 9 No. 2	
	Example 3.4.....	256
	Schenker, <i>Free Composition</i> , Fig. 30b	
	Example 3.5.....	257
	Major-mode expositions: Ways of modulating to V	
	Example 3.6.....	258
	Voice-leading contexts for augmented sixths that resolve to V/VI or III $\sharp$	
	Example 3.7.....	259
	Graphs of four related Haydn developments: Symphony No. 97 in C, I; Symphony No. 100 in G, I; String Quartet in C, Op. 74 No. 1, I; String Quartet in E $\flat$, Op. 64 No. 6, I	
	Example 3.8.....	262
	Graphs of Haydn developments: Symphony No. 95 in C minor, I; String Quartet in D minor, Op. 76 No. 2, I	
	Example 3.9.....	264

Graphs of three related Haydn developments: String Quartet in B $\flat$, Op. 64 No. 3, I; String Quartet in F, Op. 74 No. 2, I; Symphony No. 89 in F, I Example 3.10.....	265
Haydn, String Quartet in C, Op. 74 No. 1, II, mm. 58-95 Example 3.11.....	266
Graphs of Haydn, String Quartet in C, Op. 74 No. 1, II, development Example 3.12.....	267
Haydn, String Quartet in F, Op. 50 No. 5, I, mm. 66-103 (development) Example 3.13.....	268
Graph of Haydn, String Quartet in F, Op. 50 No. 5, I, development Example 3.14.....	270
Graph of Haydn, String Quartet in B minor, Op. 64 No. 2, I, development Example 3.15.....	271
Graph of Haydn, String Quartet in F $\sharp$ minor, Op. 50 No. 4, I, development Example 3.16.....	272
Graph of Haydn, String Quartet in D, Op. 64 No. 5, I, development Example 3.17.....	273
Graph of Haydn, String Quartet in C, Op. 76 No. 3, I, development Example 3.18.....	274
Graph of Haydn, String Quartet in G minor, Op. 74 No. 3, I, development Example 3.19.....	275
Graphs of Haydn, String Quartet in G, Op. 77 No. 1 Example 3.20.....	276
Graph of Haydn, Symphony No. 91 in E $\flat$, I, development Example 3.21.....	277
Haydn, Symphony No. 93 in D, I, mm. 149-76 Example 3.22.....	278
Haydn, Symphony No. 101 in D, I, mm. 172-217 Example 3.23.....	279
Haydn, Symphony No. 94 in G, I, mm. 131-41 Example 3.24.....	283
L. Poundie Burstein, graphs of Haydn, Symphony No. 94 in G, I, Example 3.25.....	284
Haydn, Piano Sonata in E $\flat$, Hob.XVI:49, I, mm. 120-31 Example 3.26.....	285
Haydn, String Quartet in E $\flat$, Op. 33 No. 2, I, mm. 59-66 Example 3.27.....	286
Haydn, Trio in E $\flat$, Hob.XV:30, I, mm. 128-36 and graph Example 3.28.....	287
Haydn, Piano Sonata in E $\flat$, Hob.XVI:52, I, mm. 72-9 Example 3.29.....	288
Mozart, Sonata for Violin and Piano in E $\flat$, K. 302, I, mm. 95-107 Example 3.30.....	289
Mozart, Trio in E $\flat$, K. 498, I, mm. 65-76 Example 3.31.....	290

	Mozart, Symphony No. 39 in E $\flat$, K. 543, I, mm. 179-86	
	Example 3.32.....	291
	Mozart, Symphony No. 39 in E $\flat$, K. 543, IV, mm. 134-52	
	Example 3.33.....	291
	Mozart, Symphony No. 40 in G minor, K. 550, II, mm 69-74	
	Example 3.34.....	292
	Haydn, Quartet in F, Op. 77 No. 2, I, mm. 91-119	
	Example 3.35.....	293
	Haydn, Symphony No. 102 in B $\flat$, II, mm. 33-45	
	Example 3.36.....	295
	Graph of Haydn, Quartet in F, Op. 77 No. 2, I, development	
	Example 3.37.....	297
Chapter 4	Graphs of Haydn, Symphony No. 93 in D, I, mm. 1-21/39	
	Example 4.1.....	298
	Graph of Haydn, Symphony No. 93 in D, I, exposition and development	
	Example 4.2.....	299
	Graph of Haydn, Symphony No. 93 in D, I, mm. 21-107 (exposition)	
	Example 4.3.....	300
	Graph of Haydn, Symphony No. 93 in D, I, mm. 110-69	
	Example 4.4.....	302
	Graph of Haydn, Symphony No. 93 in D, I, mm. 108-81 (detailed view)	
	Example 4.5.....	303
	Haydn, Symphony No. 93 in D, I, mm. 109-12 and 178-81 compared	
	Example 4.6.....	305
	Graph of Haydn, Symphony No. 93 in D, I, mm. 182-262 (recapitulation)	
	Example 4.7.....	306
	Haydn, Symphony No. 93 in D, I, mm. 89-96 and 228-37 compared	
	Example 4.8.....	307
	Graphs of Haydn, Symphony No. 100 in G, I, mm. 1-23	
	Example 4.9.....	308
	Graph of Haydn, Symphony No. 100 in G, I, Allegro (deep middleground)	
	Example 4.10.....	310
	Graph of Haydn, Symphony No. 100 in G, I, mm. 24-124 (exposition)	
	Example 4.11.....	311
	Graph of Haydn, Symphony No. 100 in G, I, mm. 127-202 (development)	
	Example 4.12.....	313
	Graph of Haydn, Symphony No. 100 in G, I, mm. 202-89 (recapitulation)	
	Example 4.13.....	314
	Graphs of Haydn, Symphony No. 102 in B $\flat$, I, mm. 1-23	
	Example 4.14.....	315
	Haydn, Symphony No. 102 in B $\flat$, I, mm. 2-5 and 23-6 compared	
	Example 4.15.....	317
	Graphs of Haydn, Symphony No. 102 in B $\flat$, I, mm. 23-105 (exposition)	
	Example 4.16.....	318

	Graphs of Haydn, Symphony No. 102 in B $\flat$, I, development	
	Example 4.17.....	320
	Graphs of Haydn, Symphony No. 102 in B $\flat$, I, development (in detail)	
	Example 4.18.....	321
	Graphs of Haydn, Symphony No. 102 in B $\flat$, I, mm. 192-226	
	Example 4.19.....	322
	Graph of Haydn, Symphony No. 102 in B $\flat$, I, recapitulation	
	Example 4.20.....	323
Chapter 5	Haydn, Symphony No. 103 in E $\flat$, I, mm. 26-41	
	Example 5.1.....	325
	Haydn, Symphony No. 103 in E $\flat$, I, mm. 108-116	
	Example 5.2.....	326
	Haydn, Symphony No. 103 in E $\flat$, IV, mm. 259-64	
	Example 5.3.....	327
	Haydn, Symphony No. 103 in E $\flat$, I, mm. 1-17	
	Example 5.4.....	328
	Haydn, Symphony No. 103 in E $\flat$, I, mm. 40-48	
	Example 5.5.....	329
	Haydn, Symphony No. 103 in E $\flat$, IV, mm. 1-16	
	Example 5.6.....	330
	Haydn, Symphony No. 103 in E $\flat$, I, mm. 191-201	
	Example 5.7.....	331
	Haydn, Symphony No. 103 in E $\flat$, III, Menuet and Trio (mm. 57-65)	
	Example 5.8.....	332
	Haydn, Symphony No. 103 in E $\flat$, IV, mm. 348-63	
	Example 5.9.....	336
	Graph of Haydn, Symphony No. 103, I, Adagio introduction	
	Example 5.10.....	337
	Graph of Haydn, Symphony No. 103, I, mm. 40-60	
	Example 5.11.....	339
	Graphs of Haydn, Symphony No. 103, I, transition	
	Example 5.12.....	340
	Graph of Haydn, Symphony No. 103, I, development (middleground)	
	Example 5.13.....	342
	Graph of Haydn, Symphony No. 103, I, development (foreground)	
	Example 5.14.....	343
	Graph of Haydn, Symphony No. 103, I, recapitulation	
	Example 5.15.....	346
	Graph of Haydn, Symphony No. 103, IV, synoptic view	
	Example 5.16.....	348
	Graph of Haydn, Symphony No. 103, IV, development, middleground	
	Example 5.17.....	349
	Graph of Haydn, Symphony No. 103, IV, foreground	
	Example 5.18.....	350

Haydn, Symphony No. 103, I, mm. 69-74	
Example 5.19.....	358
Haydn, Symphony No. 103, IV, mm. 364-71	
Example 5.20.....	359

List of Tables

1.1	Developments by Haydn (post-1787 works) categorized by middleground plans.....	28
2.1	Late developments by Haydn that begin with V/VI (or whose first phrase ends on V/VI).....	51
2.2	Late developments that begin with V/IV or V/II (or whose first phrase ends on V/IV or V/II).....	52
2.3	Retransitions and other procedures at the end of the development.....	76
3.1	Late Haydn developments containing an augmented sixth that marks III $\sharp$ or V/VI.....	97
3.2	Late Haydn developments containing a diminished seventh that marks III $\sharp$ or V/VI.....	97
3.3	Augmented sixths and their enharmonic equivalents in developments: A supplementary list.....	113
4.1	Haydn, Symphony No. 93 in D, I. Chart of formal design.....	122
4.2	Haydn, Symphony No. 100 in G, I. Chart of formal design.....	132
4.3	Haydn, Symphony No. 102 in B $\flat$, I. Chart of formal design.....	141
5.1	Haydn, Symphony No. 103 in E $\flat$, I. Chart of formal design.....	160
5.2	Fermatas in Symphony No. 103 in E $\flat$, I.....	167
5.3	Haydn, Symphony No. 103 in E $\flat$, IV. Chart of formal design.....	172

CHAPTER 1

THEORETICAL PERSPECTIVES ON THE DEVELOPMENT SECTION

I. Introduction and Statement of Purpose

Sonata form is a major topic of theoretical and historical writings about European instrumental music of the eighteenth and nineteenth centuries. In general accounts of sonata form, writers have tended to give more attention to expositions than to development sections, perhaps because the latter are less predictable or conventional in design than the former. This study presents theoretical observations about the structure and design of Haydn's late developments based on analyses of approximately 70 movements (mostly first movements) from 1787 onward. Works written prior to 1787 that are often regarded as "late"--e.g., the Paris Symphonies and the six Quartets of Op. 33 (1781)--are excluded from this sample for convenience, and not because of stylistic differences or personal preference. In any case, I occasionally refer to pre-1787 works by Haydn, as well as to works by his contemporaries and successors, in order to identify salient points of similarity or difference among related works.

It seems appropriate to make Haydn's music the subject of a theoretical study of developments, given his acknowledged importance not only as a great innovator in the realm of the string quartet and the symphony, but also as the first master to expand the development and intensify its dramatic power.¹ As James Webster points out in his

¹ The many books in English on Haydn since 1990 attest to his vital importance. These include: David Schroeder, *Haydn and the Enlightenment: The Late Symphonies and their Audience* (New York: Oxford University Press, 1990); James Webster, *Haydn's "Farewell" Symphony and the Idea of Classical Style: Through-Composition and Cyclic Integration in his Instrumental Music* (Cambridge Studies in Music Theory and Analysis, 1; Cambridge: Cambridge University Press, 1991); Gretchen Wheelock, *Haydn's Ingenious*

important book on middle-period Haydn: "There is no comprehensive account of Haydn's development sections, early or late, in the symphonies or in any other genre."² Although the present study centers on the late symphonies, it also takes into account string quartets, piano sonatas, and piano trios from the same period.

Chapters 1-3 address theoretical issues, while Chapters 4 and 5 are more analytical in nature. In Chapter 1 I shall first examine theoretical accounts of the development section from Koch to Schenker, as well as C. P. E. Bach's discussion of the free fantasy, then present my own typology of middleground plans, based on Schenker's analytical approach, and finally compare selected developments based on similar plans. The plans provide a general frame of reference for the investigation of specific aspects of structure and design in subsequent chapters.

Chapter 2 deals with selected characteristics of later (more foreground) structural levels in Haydn's developments, including many of the unpredictable harmonic techniques which are hallmarks of his style. Among the topics I consider are remote harmonic

Jesting with Art: Contexts of Musical Wit and Humor (New York: Schirmer, 1992); Elaine Sisman, *Haydn and the Classical Variation* (Studies in the History of Music, 5; Cambridge, Mass.: Harvard University Press, 1993); Ethan Haimo, *Haydn's Symphonic Forms: Essays in Compositional Logic* (Oxford: Clarendon Press, 1995); László Somfai, *The Keyboard Sonatas of Joseph Haydn: Instruments and Performance Practice, Genres and Styles* (Chicago: University of Chicago Press, 1995); Elaine Sisman, ed., *Haydn and His World* (Princeton: Princeton University Press, 1997); Bruce MacIntyre, *Haydn: The Creation* (New York: Schirmer, 1998).

² Haydn's "Farewell" Symphony, p. 134. A few studies of developments have appeared since Webster's book. An important general Schenkerian account of development sections --the only one of its kind, to my knowledge--is Edward Laufer, "Voice-Leading Procedures in Development Sections," *Studies in Music from the University of Western Ontario* 13 (1991): 69-120. A Schenkerian study by Saul Novack of developments in Haydn's string quartets is to appear in *The Music Forum*, vol. 6, part 2. I have not seen the manuscript of this essay, and am unfamiliar with his views. Discussions of Haydn's developments from non-Schenkerian perspectives may be found in Somfai, *The Keyboard Sonatas*, chapter 17, and in Nors S. Josephson, "Modulatory Patterns in Haydn's Late Development Sections," *Haydn Yearbook* 17 (1992): 181-91. The continuing analytical neglect of developments is noticeable in Ethan Haimo's book (cited above), which includes otherwise detailed commentary on several sonata-form movements.

juxtapositions, false recapitulations and apparent tonics, parenthetical passages, and thematic articulation of structure.

Chapter 3 focuses on Haydn's use of augmented sixth chords in developments. Despite the frequency and importance of these chords in that context, this topic has not been adequately explored in the literature. Two related issues stand out. One is that, very often, the chord to which an augmented sixth resolves has the potential to act as a dominant, but does not actually function as a dominant. The most prevalent such chord is $\text{III}^\sharp$ (potentially V/VI), which typically functions as part of a large-scale arpeggiation $\text{V}-\text{III}^\sharp-\text{I}$. The second issue concerning augmented sixths also has to do with ambiguity--in this case, enharmonic reinterpretation of the augmented sixth itself.

The most striking harmonic patterns in Haydn's developments are those which deceive or keep the listener in suspense--whether by enharmonic means or through the avoidance of an expected cadence. These patterns almost invariably involve chromatic tones, which often have a motivic significance that relates the development to other parts of the movement, especially the slow introduction (in the symphonies) and the recapitulation. Whereas Chapters 2 and 3 describe the local contexts for such chromatic phenomena in a wide range of pieces, Chapters 4 and 5 examine the global contexts for similar ideas in four London symphonies.

Chapter 4 presents comprehensive analyses of the first movements of Symphonies Nos. 93, 100, and 102, with special attention to the developments and to aspects of structure, rhetoric, and motivic design. Chapter 5 focuses on cyclic integration in Symphony No. 103 ("Drum Roll"), particularly the way the development sections of the outer movements relate to each other and shape the four-movement cycle.

In Chapter 6, an epilogue, I reflect on the historical significance of Haydn's developments, especially in relation to the music of Mozart, Beethoven, and Schubert. The remarkable formal and harmonic ingenuity that Haydn explored more daringly in his developments than anywhere else points toward many innovations in music of the nineteenth century.

II. The Development Section in the History of Sonata Form

Before outlining my own theoretical views of development sections, I shall survey theoretical writings about sonata form, focusing on conceptions of that part now conventionally called "the development section." The survey begins with the late-eighteenth-century theorist Heinrich Christoph Koch, continues with the nineteenth-century writings of Anton Reicha and Adolf Bernhard Marx, and concludes with the twentieth-century theorist Heinrich Schenker.³ I shall also briefly consider C. P. E. Bach's ideas about the free fantasy--an improvised form which, like many developments, is characterized by unpredictable and chromatic harmonic progressions. Although Bach's writings predate those of Koch and do not directly relate to sonata form, they will be discussed directly before my account of Schenker because of their significant influence on his thought.

Each of the writers surveyed, except Schenker and Bach, describes sonata form from a pedagogical standpoint, instructing the reader how to write in that form, with reference to the works of Haydn, Mozart, and Beethoven. Schenker, in contrast to earlier

³ The relevant ideas of theorists such as Kollman, Momigny, and Czerny, as well as twentieth-century theorists besides Schenker, will be referred to where appropriate in this and subsequent chapters.

writers, is more interested in structure than in form, more concerned with correctly hearing masterworks than with emulating their forms. Since my analytical approach is Schenkerian, and since it deals more with structure than with formal design, I purposely present Schenker's views on the relation between structure and form immediately before introducing my own typology of middleground plans for developments. The typology is more abstract than the earlier theoretical accounts; the issues raised in those accounts which are not engaged here will be addressed in subsequent chapters.

Heinrich Christoph Koch

Koch's *Versuch einer Anleitung zur Composition*, the most informative compositional treatise of the late eighteenth century, provides the first important account of what is now called "sonata form." In this treatise, Koch quotes Haydn's music more than that of any other composer. When the third and final volume of the *Versuch*, in which sonata form is treated most fully, first appeared in 1793, six of Haydn's London symphonies had already been premiered. But Koch's ideas are based on the musical style of the 1760s and 1770s (the period in which most of the datable musical examples were written), and thus have limited applicability to the late music.⁴

⁴ Heinrich Christoph Koch, *Versuch einer Anleitung zur Composition*, 3 vols. (Rudolstadt and Leipzig, 1782-93; facs. ed. Hildesheim: Olms, 1969); sections 3 and 4 translated by Nancy Kovaleff Baker as *Introductory Essay on Composition* (New Haven: Yale University Press, 1983). See Baker's remarks on p. xx. The German and English editions will henceforth be cited as Koch and Baker, respectively. Koch discusses harmonic aspects of sonata form already in vol. 2, p. 223, quoted in Leonard Ratner, "Harmonic Aspects of Classic Form," *Journal of the American Musicological Society* 2/3 (Fall 1949), p. 162. For a slightly later view of sonata form, see August Kollman, *An Essay on Practical Musical Composition* (London, 1799); Kollman's ideas--not substantively different from Koch's--are applied to the analysis of several London symphonies in Richard Gwilt, "Sonata-Allegro Revisited," *In Theory Only* 7/5-6 (1983-84): 3-33.

Koch describes the first allegro of a symphony as having two sections or reprises (*Theile* or *Reprisen*), the first consisting of one main period (*Hauptperiode*), and the second dividing into two main periods.⁵ The three periods correspond to the exposition, development, and recapitulation. The binary division into two reprises is conceptually prior to the ternary periodic scheme. For, as Koch describes later in the same chapter, it is also possible for the second reprise to consist of just one main period:

The second section or second reprise of a composition may contain only a single main period, that is, in this section no cadence is made in a key related to the main key. If this is the case, the entire period breaks down into two halves with regard to the course of its modulation. The first half is devoted to one or two related keys; no cadence is made in them and instead there is a modulation back again in a V-phrase of the main key, with which the first half closes as its resting point. In the second half of the period, the principal melodic sections are repeated in the main key.⁶

Yet even this two-period form is understood to have a ternary aspect, since the second period “breaks down into two halves” (corresponding to the development and recapitulation). In the three-period form, the first half of the second reprise contains a cadence in a related key. A transition may link the secondary tonic at the end of the second

⁵ Koch, vol. 3, pp. 304-7; Baker, p. 199. Koch only uses the word *Theil* here, but also uses *Reprise* synonymously elsewhere. In the sections on the sonata, duet, trio, and quartet that immediately follow the description of the symphony, Koch notes that their first movements have the same form as that of the symphony. The form of the concerto, though similar to that of the symphony, is described separately.

⁶ “Wenn der zweyte Theil oder die zweyte Reprise eines Tonstückes nur einen einzigen Hauptperioden enthält, das heißt, wenn in diesem zweyten Theile keine Cadenz in einer mit dem Haupttone verwandten Tonart gemacht wird, so zerfällt der ganze Periode in Rücksicht des Ganges seiner Modulation in zwey Hälften. Die erste Hälfte ist einer oder zwey verwandten Tonarten gewidmet, jedoch dergestalt, daß keine Cadenz in denselben gemacht, sondern statt derselben die Modulation wieder zurück in den Quintabsatz der Haupttonart geleitet wird, mit welchem die erste Hälfte, als mit ihrem Hauptruhepunkte schließt, und nach welchem in der zweyten Hälfte des Perioden die vorzüglichsten melodischen Theile in der Haupttonart wiederholt werden.” Koch, vol. 3, pp. 394-5; Baker, p. 233.

period to the main tonic at the beginning of the third period; but Koch does not explicitly identify the transition as part of either period. In any case, for Koch, an authentic cadence in a related key is a formally more significant event than a half cadence in the main key prior to the recapitulation.⁷ This periodic conception of form contrasts sharply with those of later theorists, and especially with Schenker's idea (discussed on p. 22, below) that interruption is, at the deepest level, the only formal division in sonata form.⁸

Koch describes two types of procedure for the second period of a three-period form (i.e., two kinds of development) during his account of the symphony. The first represents an older style, whose principal features are: (1) beginning in the dominant (usually with the main theme); (2) possibly returning to the main key and then modulating to a related key (VI, II, or III), in which the period concludes; and (3) a sequential link to the main key for the start of the last main period (i.e., recapitulation). Here is Koch's description in full:

The first and most usual construction of the first period of the second section begins in the key of the fifth with the theme, occasionally also with another main melodic idea, either note for note, in inversion, or also with other more or less considerable alterations. After that it either modulates

⁷ Joel Lester identifies several problems with Koch's formal theory, including the omission of the large repetition scheme of the movement; defining the status of a period solely by the tonal orientation of its ending; inattention to thematic functions; and the vague status of the transition from the second to the third period. See Lester, *Compositional Theory in the Eighteenth Century* (Cambridge, Mass.: Harvard University Press, 1992), pp. 294-6. Another commentator on Koch, Carl Dahlhaus, notes the priority of the formal cadence over thematic correspondences between the exposition and recapitulation: "Ein Satz mit Kadenz in der Paralleltonart am Durchführungsende, aber unvollständiger Reprise ist dreiteilig, ein Satz ohne Kadenz in der Paralleltonart, aber mit vollständiger Reprise dagegen zweiteilig." ("A movement with a cadence in the relative key at the end of the development, but with an incomplete reprise, is ternary; conversely, a movement without such a cadence, but with a complete reprise, is binary.") See "Der rhetorische Formbegriff H. Chr. Kochs und die Theorie der Sonatenform," *Archiv für Musikwissenschaft* 35 (1978), p. 173.

⁸ Schenker, *Free Composition (Der freie Satz)*, trans. and ed. Ernst Oster (New York: Longman, 1979), p. 134.

back into the main key by means of another melodic idea, and from this to the minor key of the sixth, or also to the minor key of the second or third. Or it may not first return to the main key; rather the phrase that goes from the fifth into one of the keys mentioned may be led there by means of a sequence or another type of extension, with which generally one or several passing modulations are used. Then a few of those melodic sections that are best suited for presentation in one of these keys are repeated or dissected in another form or combination than they had in the first period, whereupon the period ends in this key.

Usually a short passage is connected with this second main period of the symphony, which consists of a segment of a main melodic idea drawn out in a sequential way. By this means the modulation is carried back to the main key, in which the last main period begins.⁹

Two of the practices described in this passage, as Charles Rosen observes, were common in music of the second half of the eighteenth century, but “both stereotypes were felt to be tedious and old-fashioned by the end of the century.”¹⁰ The first practice is to begin the second reprise with “the theme” (i.e., the first or main theme) in the dominant. Examples

⁹ “Die erste und gewöhnlichste Bauart dieses ersten Perioden des zweyten Theils bestehet darinne, das [sic] er mit dem Thema, zuweilen auch mit einem andern melodischen Haupttheile, und zwar entweder von Note zu Note, oder in verkehrter Bewegung, oder auch mit andern mehr oder minder beträchtlichen Abänderungen in der tonart der Quinte angefangen wird, nach welchem entweder vermittelt eines andern melodischen Theils die Modulation zurück in den Hauptton geführt, und von diesem in die weiche Tonart der Sexte, oder auch in die weiche Tonart der Secunde oder Terz geleitet wird; oder die Modulation gehet nicht erst in den Hauptton zurück, sondern der Satz, mit welchem man aus der Quinte in eine von den genannten Tonarten übergehen will, wird vermittelt einer Progression, oder vermittelt einer andern Art der Erweiterung, bey welcher man sich gemeiniglich einer oder mehrerer durchgehenden Ausweichungen bedient, dahin geleitet. Alsdenn werden einige derjenigen melodischen Theile, die sich zum Vortrage in einer dieser Tonarten am besten schicken, in einer andern Wendung oder Verbindung, als die sie im ersten Perioden hatten, wiederholt, oder zergliedert; worauf der Periode in dieser Tonart geschlossen wird. Mit diesem zweyten Hauptperioden der Sinfonie ist gemeiniglich ein kurzer Satz verbunden, der aus einem Gliede eines melodischen Haupttheils bestehet, welches auf eine der Progression ähnliche Art fortgesetzt, und vermittelt dieser Fortsetzung die Modulation wieder zurück in den Hauptton geführt wird, in welchem der letzte Hauptperiode anzuheben pflegt.” Koch, vol. 3, pp. 307-9; Baker, p. 200. This description implicitly contains two types (see “Or it may not first return to the main key”). This description and that of the “second” type are restated in slightly different words later in the chapter (Koch, vol. 3, pp. 403-19; Baker, pp. 237-44). See Baker, p. 200, note 67.

¹⁰ Charles Rosen, *Sonata Forms*, rev. ed. (New York: W. W. Norton, 1988), p. 263.

from late Haydn include the first movements of Symphony No. 103 and of the Quartets Op. 50 Nos. 2 and 5; Op. 71 No. 1; Op. 76 No. 1; and Op. 77 No. 2. In these developments, the main theme is fragmented and contrapuntally modified, and digressions into other keys occur very soon after the double bar.¹¹ The development of the first movement of the Sonata in A $\flat$, Hob.XVI:43 (1783), however, begins with a literal transposition of mm. 1-6 into the dominant. The latter situation creates a clearer sense of parallelism between the first and second reprises, but delays the onset of modulatory instability which is characteristic of the development as a whole. No development from the post-1787 period begins with so literal and substantial a statement of the main theme as this.

The second practice Rosen mentions that relates to Koch's description is the important cadence in a related key at the end of the development (Rosen specifies VI, though Koch also cites II and III as possibilities).¹² Although it is true that Haydn often favors what Rosen calls "alternatives" to this cadence (e.g., a cadence on III $\sharp$ --a potential V/VI--instead of on VI), many of Haydn's late developments contain structurally important cadences in VI and/or II. (The issue of differentiating between III $\sharp$ and V/VI is treated more fully on p. 33.)

The return to tonic which Koch mentions in the foregoing description may or may

¹¹ Two well-known Mozart examples are the first movements of K. 333 and K. 428; in both cases, as in the two Haydn works, the dominant persists for only a few measures of the development. On the practice of beginning the development in the dominant, see Chapter 2, pp. 54-6.

¹² While Rosen cites Koch explicitly in connection with the retransition from the second to the third period, the reference to Koch is merely implied with regard to the concluding cadence on VI and the choice of theme at the beginning.

not occur. While this event is not identified with a thematic return, it seems to correspond to what Oliver Strunk calls the “premature reprise,” which James Webster prefers to call an “immediate reprise” (not to be confused with the “false recapitulation”).¹³ Though it is frequent in middle-period Haydn, the immediate reprise only appears in a few works written after 1787 (in the first movements of Symphony No. 91, m. 146; Op. 76 No. 3, m. 51; and Op. 77 No. 1, m. 87).

Koch describes another kind of development which is more indicative of Haydn’s later style:

The other method of building this [second] period frequently used in modern symphonies is to continue, dissect, or transpose a phrase contained in the first section--often only a segment of it--that is especially suitable for such treatment. This is done either in the upper part alone or also alternately in other parts. There may be passing modulations in several keys, some closely and some distantly related, before the modulation into that key in which the period is to end. This happens either only until the ending of the V-phrase in this key, or the phrase is continued in a similar manner until the close of the entire period. ... By the way, modern symphonies do not always start this second period in the key of the fifth; often it begins in an entirely unexpected key, either without any preparation or by means of only a few introductory tones that follow the cadence in the fifth.¹⁴

¹³ Strunk, “Haydn’s Divertimenti for Baryton, Viola, and Bass,” in *Essays on Music in the Western World* (New York: W. W. Norton, 1974), p. 150, cited and discussed in Rosen, *Sonata Forms*, rev. ed., pp. 155-7. See also Webster, “Binary Variants of Sonata Form in Early Haydn Instrumental Music,” in *Joseph Haydn: Proceedings of the International Joseph Haydn Congress Wien, Hofburg, 5.-12. September 1982*, ed. Eva Badura-Skoda (Munich: Henle, 1986), p. 128. As an alternative to Strunk’s and Webster’s terms, Mark Evan Bonds suggests “precursory recapitulation;” see “Haydn’s False Recapitulations and the Perception of Sonata Form in the Eighteenth Century” (Ph.D. diss., Harvard University, 1988), p. 222. I discuss false recapitulations, immediate reprises, and apparent tonics on pp. 63-9.

¹⁴ “Die zweyte Bauart dieses Perioden, der man sich in den modernen Sinfonien sehr oft bedient, bestehet darinne, daß man einen in dem ersten Theile enthaltene Satz, oft auch nur ein Glied desselben, welches hierzu besonders schicklich ist, entweder in der Oberstimme allein, oder auch wechselweis in andern Stimmen dergestalt fortsetzt, zergliedert, oder transponirt, daß man nach und nach erst in mehrere, theils nahe verwandte, theils auch entferntere Tonarten durchgehende Ausweichungen macht, ehe man mit der Modulation in diejenige Tonart gehet, in welcher der Periode geschlossen werden soll. Dieses geschieht

This second description is much more applicable than the first to Haydn's late developments, since, among other things, it indicates the possibility of remote modulations, a hallmark of late Haydn. Yet it still leaves important procedures unaccounted for. For example, Haydn quite frequently concludes the development on the dominant of a related key, or, to use Koch's term, ends with a V-phrase in that key.¹⁵ Of course, a section that ends in this way would not be a period by Koch's definition. But this possibility is not even mentioned in connection with the two-period form alluded to above, in which the second reprise is a single period whose first half ends with a V-phrase in the main key.

Anton Reicha

Reicha's conception of sonata form--the *grande coupe binaire*--is similar to Koch's in its fundamental binary division, with a subdivision of the second part into two sections (corresponding to the development and recapitulation).¹⁶ The latter division is a function

entweder nur bis zum Quintabsatze dieser Tonart; oder der Satz wird auf ähnliche Art bis zum Schlusse des ganzen Perioden fortgesetzt. ... Uebrigens pflegt man in den modernen Sinfonien diesen zweyten Perioden nicht immer in der Tonart der Quinte anzufangen, sondern man tritt mit demselben oft in einer ganz unerwarteten Tonart entweder ohne alle Vorbereitung ein, oder man macht die Einleitung in eine solche Tonart nur vermitteltst weniger Töne, die der Cadenz in der Quinte nachfolgen." Koch, vol. 3, pp. 309-11; Baker, pp. 200-201.

¹⁵ The dominant function may only be potential, not actual, as in the case of III♯, which sounds like V/VI. The following pre-1787 symphonic movements contain such dominants: Nos. 48/I, 50/IV, 54/II, 60/IV, 76/IV, 80/IV, and 85/I. Examples from 1787 on will be discussed later.

¹⁶ Anton Reicha, *Traité de haute composition musicale*, vol. 2 (Paris: Farrenc, 1826), p. 300. Reicha's diagram of the *grande coupe binaire* is reproduced in Ian Bent, *Analysis* (New York: W. W. Norton, 1987), p. 20.

not of a cadence in a related key, as in Koch's three-period form, but rather of the return of the opening theme in the tonic. Furthermore, Reicha regards the prolonged dominant pedal (or retransition) that concludes the development as an essential part of that section, whereas Koch views it as belonging to neither the second nor the third period, but only serving to connect them.

Reicha places much more emphasis than Koch on the differences in thematic treatment between the two large parts of the form:

In pieces that are divided into two general parts (as, for example, in the first movement of a quartet or symphony) the first part is devoted to the exposition of ideas, and the second to their development.¹⁷

Reicha devotes one section of his discussion to the exposition of musical ideas and another section to their development.¹⁸ In the latter section, Reicha gives advice about how to compose a development suitable for insertion into the overture to *Le Nozze di Figaro* (which is in sonata form without development). After explaining why Mozart's overture contains no development, Reicha presents two developments to provide merely a sample of the great many possibilities from which a composer might choose. The first development is based on just three ideas (*phrases*) from the exposition, which are transposed into various keys and treated imitatively; brief ideas are more suited to this kind of development than lengthy ones. This procedure is analogous to the second method of development described

¹⁷ "Dans les morceaux qui sont divisés en deux parties générales (comme par exemple dans les premiers morceaux d'un quatuor ou d'une symphonie) la première partie sert à l'exposition des idées, et la seconde à leur développement." Reicha, *Traité*, vol. 2, p. 236 (my translation).

¹⁸ For a philological account of Reicha's ideas, see Peter A. Hoyt, "The Concept of *Développement* in the Early Nineteenth Century," in *Music Theory in the Age of Romanticism*, ed. Ian Bent (Cambridge: Cambridge University Press, 1996), pp. 141-62.

by Koch in his account of the first allegro.¹⁹ Reicha's second development differs from the first both in its use of more themes (nine as opposed to three) and in the greater range of its modulations (including important tonicizations of E♭ major and B major). Reicha singles out Haydn as a pioneer of the first type of development, and later cites Haydn's last twelve symphonies as models "that we recommend to students to analyze carefully."²⁰

Reicha makes virtually no reference to the harmonic structure of his developments for insertion into the *Figaro* overture; the reader must infer possibilities from the musical examples. Later in the treatise, however, in the fifth section of book 6, titled "Sur les coupes ou cadres des morceaux de musique qui sont les plus avantageux au développement des idées" ("On the sections of musical pieces that are most advantageous for the development of ideas"), harmony is briefly touched upon in a more prescriptive way. With regard to a piece in the form of the *grande coupe binaire* whose exposition begins in D major and concludes in A major, Reicha advises:

But one can begin the second part in one of the following keys, when the first part concludes in A major: A major, A minor, E major, F♯ minor, D minor, F major.²¹

Although these options are consistent with many of Haydn's developments, two other obvious keys in which to begin--and which Haydn often uses--are notably absent from Reicha's list: B minor (VI) and E minor (II).

Reicha also points out that, in the first section of the second part,

¹⁹ See the passage quoted above, p. 10.

²⁰ Reicha, *Traité*, vol. 2, pp. 245 and 261.

²¹ "Mais on peut attaquer la seconde partie dans l'un des tons suivans, lorsque la première partie termine en La majeur: la majeur, la mineur, mi majeur, fa dièse mineur, ré mineur, fa majeur." Reicha, *Traité*, vol. 2, p. 298.

One modulates continually: one rarely stays in the same key for eight consecutive measures; the key of D (the principal key) and the key of A major must not occur except in passing.²²

There is no reference to either the “premature reprise” or the “false recapitulation” that is often found in Haydn; this might be owing to the didactic nature of the treatise, and the fact that such procedures could present unnecessary complications for the student.

Adolf Bernhard Marx

In his highly influential *Lehre von der musikalischen Komposition* (1837-47), Marx presents a ternary conception of sonata form that is based on thematic design rather than on the harmonic criteria of most earlier formal theories--although thematic criteria are already evident in the work of Reicha and other early-nineteenth-century theorists. Marx's division of the first part (*der erste Theil*, i.e., the exposition) into two thematically contrasting main groups (*Hauptsatz* and *Seitensatz*) is notoriously unsuitable for the analysis of so-called monothematic expositions, which are so frequent in Haydn. But Marx's account of the second part (the development section) is less problematic. Although Marx's view of sonata form is strongly influenced by the music of Beethoven, his discussion of thematic and harmonic aspects of the development is nonetheless relevant to the study of Haydn.

A sonatina in G major by Marx, introduced earlier in the treatise, provides much the same pedagogical function as the *Figaro* overture does in Reicha's book. Marx discusses and illustrates several ways in which a development might be inserted in between the two

²² “On module sans cesse: rarement on reste huit mesures de suite dans le même ton: le ton du ré (le ton principal) et le ton de la majeur ne doivent s'y trouver que passagèrement.” Reicha, *Traité*, vol. 2, p. 298.

parts of the sonatina form, to give rise to a three-part sonata form. Although each procedure is defined mainly in thematic terms, questions of harmony are also addressed. With regard to the first procedure, in which there is an immediate return of the *Hauptsatz*, Marx identifies keys in which the *Hauptsatz* may be stated:

But in which key should the main theme occur?--Not in D major, which has already been used adequately, not in its dominant, A major (since otherwise we would proceed uniformly from one dominant to another, --G, D, A) and even less in the principal key of G major, which must be reserved for the last part.²³

Marx also rejects the key of G minor, since it would be “too serious and gloomy for the mood of the first part.” and chooses B minor, after comparing its suitability to that of B $\flat$ major:

We therefore prefer B minor, as relative of the previous key (D major)--If we had reason to avoid this key as well, then B $\flat$ major (relative of the tonic's parallel minor) would be used.... But the latter key [B minor] is more closely related, and B $\flat$ major, with its nearest satellite keys (F, E $\flat$ major, G minor), is in any case ... not bright enough.²⁴

It is difficult to draw general theoretical implications from these key preferences, since they apply specifically to the main theme of this particular piece. In other contexts, for instance,

²³ “Aber in welchem Tone soll der Hauptsatz auftreten?--Nicht in dem schon genugsam besetzten D dur, nicht in dessen Dominante A dur (weil wir sonst einförmig von einer Dominante zur andern,--G, D, A--gingen) und noch weniger im Haupttone G dur, der dem letzten Theil vorbehalten werden muss.” Adolf Bernhard Marx, *Die Lehre von der musikalischen Komposition, praktisch-theoretisch*, 5th (unaltered) ed., vol. 3 (Leipzig: Breitkopf & Härtel, 1879), p. 227 (my translation).

²⁴ “Wir ziehn daher H moll, als Parallele der letzten Tonart (D dur) vor.--Hätten wir Ursach', auch diesen Ton zu meiden, so würde sich zunächst B dur (Parallele des Haupttons in Mollgeschlecht).... Letzteres ist doch näher verwandt, und B dur mit seinen nächsten Umgebungen (F, Es dur, G moll) ist ebenfalls ... zu wenig hell.” Marx, *Lehre*, vol. 3, p. 227.

it might be suitable to begin the development in the key of $\flat$ III or $\flat$, though not necessarily with the main theme.²⁵

Marx subsequently enumerates several other possibilities for organizing the development, but almost exclusively in terms of themes, as opposed to harmonic structure. These possibilities include: using new transitional material leading to a statement of the *Hauptsatz* (p. 233); making the *Seitensatz* the focus of the development (p. 235);²⁶ and using both themes either in combination or in succession (p. 237). Marx also generally advises that the development be approximately as long as the first part, and recommends the use of polyphonic treatment, including fugal treatment, where possible. Finally, with regard to modulation, Marx advocates avoiding the keys used in the first part; distant modulations may occur as long as they have their basis in the plan and content of the whole development.²⁷

C. P. E. Bach in relation to Haydn and Schenker and to the notion of development

Having examined several theoretical sources that explicitly refer to developments, we now turn briefly to C. P. E. Bach's *Versuch über die wahre Art das Clavier zu spielen*, a central theoretical work of the eighteenth century. Haydn himself admired Bach's music and studied the *Versuch*, although the exact nature and extent of Bach's influence on

²⁵ Several developments by Haydn, Mozart, and Beethoven begin in $\flat$ III or $\flat$. I discuss harmonic procedures at the beginning of developments on pp. 49-60.

²⁶ Marx later cites Haydn's great $E\flat$ -major Sonata (Hob.XVI:52, first movement) for its use of the *Seitensatz* as the central idea in the development (*Lehre*, vol. 3, p. 293).

²⁷ Marx, *Lehre*, vol. 3, p. 297.

Haydn remains uncertain.²⁸ While the *Versuch* does not deal directly with musical form, the section on the free fantasy from Part II is relevant to the study of the harmonic structure of development sections, which often have the character of a fantasy.

I have placed my discussion of Bach here because Schenker's thought, to be examined in the next section, in many ways owes more to theories prior to Koch (specifically, the thoroughbass theory of Bach and the contrapuntal theory of Johann Joseph Fux) than to the theories of form surveyed above. The importance of Bach's music and his *Versuch* to Schenker is reflected most notably in his *Beitrag zur Ornamentik* (1904; rev. ed. 1908) and in his 1925 essay "Die Kunst der Improvisation," to which I shall refer presently.

The concluding chapter of Part II of the *Versuch* is devoted entirely to improvisation, specifically, the free fantasy. Bach immediately makes it clear that an improvised piece of this sort, although free in many respects, must have "a definite relationship in the succession and duration of the chords themselves."²⁹ A free fantasy must have a plan (*Gerippe*), whose harmonic coherence is thought through in advance by the composer/performer, even if that coherence is concealed by harmonic discontinuities and changes of figuration. In order to provide the reader with "a clear and useful conception of

²⁸ See Wayne Christopher Petty, "Compositional Techniques in the Keyboard Sonatas of Carl Philipp Emanuel Bach: Reimagining the Foundations of a Musical Style," (Ph.D. diss., Yale University, 1995), pp. 298-9; and A. Peter Brown, "Joseph Haydn and C. P. E. Bach: The Question of Influence," in *Haydn Studies*, ed. Jens Peter Larsen, Howard Serwer, and James Webster (New York: W. W. Norton, 1981), pp. 158-64.

²⁹ "ein gewisses Verhältniß in der Abwechselung und Dauer der Harmonien unter sich." *Versuch über die wahre Art das Clavier zu spielen*, part 2 (Berlin, 1762; facs. ed. Kassel: Bärenreiter, 1994), p. 326; *Essay on the True Art of Playing Keyboard Instruments*, trans. William J. Mitchell (New York: W. W. Norton, 1949), p. 430.

the construction of a free fantasia.” Bach presents a figured bass plan and its realization (*Ausführung*).³⁰

Several features of the plan are notable. Because it is synoptic, it resembles a Schenkerian analytical reduction, conveying the entire structure more immediately than performance (or complete notation) would allow. The use of a plan also implies that even an improvised piece is (or ought to be) to some extent premeditated. The plan indicates the piece’s approximate harmonic rhythm (in which respect it differs from a Schenkerian graph of the middleground), and thus reflects Bach’s concern for the appropriate pacing of the opening and closing tonic harmonies and of certain harmonies within the plan. Finally, the plan contains instances of what Bach refers to as “rational deceptions” (*vernünftige Betrügereyen*),³¹ in this case, dominants that do not resolve to their expected tonics. These deceptions contribute to the fantastic character of the piece.

Schenker devotes most of “Die Kunst der Improvisation” (1925) to Bach’s chapter on improvisation, and to the analysis of the free fantasy in that chapter. One aspect of improvisation that Bach himself alludes to, and that Schenker in turn emphasizes, is concealment. The following passage from Schenker’s essay conveys the essential point:

³⁰ “einen deutlichen und nußbaren Begriff von der Einrichtung einer freyen Fantasie.” *Versuch*, part 2, p. 340; *Essay*, pp. 440–41. Mitchell’s rendering of *Gerippe* as “plan” seems unobjectionable to me. Schenker likewise regarded *Gerippe* as synonymous with *Plan*—as something upon which the improvised *Ausführung* is based. But Richard Kramer claims that the term *Gerippe* “has none of the causal implications of Schenker’s *Plan* and even encourages the two ‘views’ of the work as simultaneous and inseparable.” See Kramer’s translation of Schenker’s “Die Kunst der Improvisation” in *The Masterwork in Music*, vol. 1, ed. William Drabkin (Cambridge: Cambridge University Press, 1994), p. 8, note 14.

³¹ Bach, *Essay*, p. 434; *Versuch*, part 2, p. 330.

Bach insists upon a most precise ordering of events even in the diminution of a free fantasy, and only for the sake of “fantasy” hides it behind the appearance of disorder: in this is constituted the inimitable quality of his art.³²

Wayne Petty draws a connection between the concepts of concealment and rhetoric with reference to Schenker’s 1922 analysis of Haydn’s Sonata in E♭, Hob.XVI:52.³³

According to Petty, this essay most clearly reveals the rhetorical side of Schenker’s thinking, particularly in his account of the development section of the first movement.

Among the rhetorical features of Haydn’s development are the fermatas which Schenker calls “rhetorical caesuras,” and deceptions (*Täuschungen*) like the enharmonic shift from G♭ to F♯ in the bass in mm. 63–4 and the improvisational detour (*Umweg*) to E major in m. 68. Schenker’s terms for deception and detour relate to those of Bach in his chapter on the free fantasy.

Although Bach makes no connection--as Schenker does--between improvisation or fantasy and the development section as such, there is a tradition dating back at least to the 1840s for viewing developments as similar to fantasies. Czerny, in describing how one sets about writing a development as follows, observes the fine line that exists between the sonata and the fantasy or capriccio.³⁴ Surely the same principles of improvisation which Bach formulates in the *Versuch* would be appropriate for instructing composition students

³² “Daß Bach auch in der Diminution einer freien Fantasie auf einer genauesten Ordnung besteht und sie nur eben der Fantasie halber hinter dem Schein von Unordnung verbirgt, macht das Unnachahmliche seiner Kunst aus.” Schenker, “Die Kunst der Improvisation,” in *Das Meisterwerk in der Musik*, vol. 1 (Munich: Drei Masken, 1925; facs. ed. Hildesheim: Olms, 1974), p. 28; trans. Richard Kramer, in *The Masterwork in Music*, vol. 1, p. 11. A fuller discussion of Bach’s art of concealment appears in Petty, “Compositional Techniques,” pp. 58–75.

³³ Schenker, “Haydn: Sonate Es-Dur,” *Der Tonwille* 3 (1922): 3–21. This essay is translated by Petty in *Theoria* 3 (1988): 105–60, and critiqued in Petty, “Compositional Techniques,” pp. 65–71.

³⁴ Carl Czerny, *School of Practical Composition*, vol. 1, trans. John Bishop (London: Robert Cocks, ca. 1848; facs.ed. New York: Da Capo, 1979), p. 35.

in the art of writing developments, even though Bach offers no systematic approach to composing specific forms.

In the analysis of specific developments in later chapters, I shall identify and interpret those improvisational qualities they share with more overtly improvisational pieces such as the fantasy. Bach's remarks on the free fantasy provide a theoretical precedent for the study of such unpredictable harmonic plans as one finds in Haydn's developments, and are relevant not only because of Haydn's interest in the *Versuch*, but also because of the substantial debt which Schenker's analytical approach owes to Bach's thinking.

Heinrich Schenker

As is well known, Schenker's theoretical ideas changed considerably between *Harmonielehre* (*Harmony*, 1906)--the earliest work in which he discusses at any length the relation between harmony and form--and *Der freie Satz* (*Free Composition*, 1935), his last and greatest treatise. Since the ideas of the mature Schenker provide the basis for the analytical approach taken in this study, they will be the focus of this section. But first, I shall briefly examine Schenker's early views.

In Part II of *Harmony*, in the chapter titled "On Form on a Larger Scale," Schenker discusses the technique of "cyclic compositions" which "organically join a splendid plurality of ideas." (Schenker seems to have sonata form in mind here, though he avoids referring to it as such.) According to Schenker, "the decisive criterion of cyclic composition" is "the composition, first of each single theme and later groups of several variegated ideas--no matter whether the first, second, or third thematic complex--on one

single scale step.”³⁵ Schenker illustrates this technique at the beginning of the chapter with a passage from the first movement of Beethoven’s Quartet in F minor, Op. 95. The entire excerpt, from the second group in D♭, “contains several variegated motifs and elements, which nevertheless yield the effect of a closed conceptual unit.”³⁶ Schenker points out the

invaluable advantages, hard to reach by any other technique of composition, which this principle of composition offers in general and for the ‘development’ part in particular. The whole capital has already been invested in the construction of the themes, so that interests accrue to the author without any further toil. Each single component part merely gets loosened from its original setting, and, one by one, each is elaborated the more efficiently, i.e., it manifests its own latent, original, and independent nature.³⁷

Schenker then considers how the step-progressions operate “at a higher level” (i.e., in the relation between “established keys” within a movement) and illustrates this with large-scale harmonic progressions spanning the exposition and development of selected sonata forms.³⁸ The analyses anticipate his later work in that they reduce the complex and expansive surfaces of large forms to very basic patterns. But precise relations between various levels of structure, and particularly the interaction of harmony and counterpoint, would not be clearly formulated until the 1920s.

³⁵ Schenker, *Harmony*, ed. Oswald Jonas, trans. Elisabeth Mann Borgese (Chicago: University of Chicago Press, 1954), p. 245; *Harmonielehre* (Vienna: Universal, 1906; facs. ed. 1978), p. 326.

³⁶ Schenker, *Harmony*, p. 244; *Harmonielehre*, p. 325. Schenker’s phrase *geschlossene Gedankeneinheit* is misleadingly rendered in the English edition as “closed conceptual unit,” which suggests that the unit in question is the prolonged *Stufe*, D♭. But the word *Gedankeneinheit* more likely means “thematic unity,” which is created out of a variety of material rather than from a single idea.

³⁷ Schenker, *Harmony*, p. 245; *Harmonielehre*, p. 327.

³⁸ Schenker, *Harmony*, pp. 246-9; *Harmonielehre*, pp. 327-31. The analyses are of the first movements of Beethoven’s “Emperor” Concerto and “Hammerklavier” Sonata, and of Brahms’s Piano Quintet in F minor.

In *Harmony*, then, scale-step progressions give rise to form: each “step” may provide a place for thematic and motivic activity, but the themes themselves are regarded as the content of each step rather than as formal units. This already departs from nineteenth-century conceptions of form in general, and of sonata form in particular, in which themes or theme-groups are considered the building blocks of form. In *Free Composition*, however, Schenker departs more decisively from the thematic approach, interpreting form as diminutions of the *Ursatz*. The thematic articulations of form (e.g., first group, second group, and so forth) and even, to some extent, the step-progressions that give rise to form as Schenker understood it in *Harmony*, have become secondary to more basic structural principles such as interruption--formulated only at late stage of work on *Free Composition*.

In the chapter on form in *Free Composition*, Schenker locates the binary division of sonata form not at the internal double bar where Koch and Reicha identify it, but rather at the point of interruption between the development and recapitulation. Schenker asserts, in a characteristically terse way, that “[o]nly the prolongation of a division (interruption) gives rise to sonata form.”³⁹ This statement is indicative of his disdain for what he calls “conventional theory.” Yet Schenker uses the terms “exposition,” “development,” and “recapitulation” (which reflect a ternary conception of form like that of Marx and others) both in his prose and in his graphs, thus acknowledging an interaction between two kinds of form: one based on linear-harmonic structure, and another arising from thematic and

³⁹ Schenker, *Free Composition*, p. 134. (I cite only the English translation of *Free Composition* because of its authority and wide availability.)

sectional design.⁴⁰

Schenker objects more to the way earlier writers misunderstood the relation of details to the whole form, than to their division of the form into three parts. His account of the development section in *Free Composition* begins thus:

Conventional theory calls the middle section of the sonata form the development, assigning to it the task of manipulating, or “working out,” the “motivic” material, or changing keys and of avoiding any self-contained ideas—all of this in a section about two-thirds the length of the first part. None of these assignments, rooted as they are in the motivic concept, are pertinent for the development section. Its only obligation, according to the structural division, is to complete the motion to $\hat{2}$ <or in some way to expand that point>.⁴¹

Although Schenker does not describe in a systematic way how the motion to $\hat{2}$ can be completed or expanded in the development, the prolongational techniques that apply to the development are, in principle, no different from those described in the preceding chapters of *Free Composition* on the middleground and foreground. An idea of the range of possibilities can be gleaned from numerous graphs of developments in *Free Composition* and in Schenker’s other analyses of movements in sonata form.⁴²

Schenker’s claim that interruption is the only necessary formal constraint in sonata form is problematic for three reasons. First, it leaves open the question of how to differentiate sonata form from other forms based on interruption. Charles Smith, in a

⁴⁰ Schenkerian analysts have used various terms to distinguish these two senses of form. A critical survey of these terms is given in David Beach, “Schubert’s Experiments with Sonata Form: Formal-Tonal Design versus Underlying Structure,” *Music Theory Spectrum* 15/1 (Spring 1993): 1-18; see esp. pp. 1-4. For convenience, I shall refer to these two aspects of music as “structure” and “design” throughout this dissertation.

⁴¹ *Free Composition*, p. 136. The last phrase, enclosed by angle brackets, is an editorial insertion by the translator, Ernst Oster.

⁴² For example, Schenker’s analyses of two late Haydn sonatas in E $\flat$: that of the Sonata No. 49 is in *Five Graphic Music Analyses (Fünf Urlinie-Tafeln)* (New York: Dover, 1969; originally published 1933); and that of the Sonata No. 52, in “Haydn: Sonate Es-Dur” (cited in note 33).

lengthy revisionist account of Schenker's *Formenlehre*, correctly observes that "there is no structural distinction between sonata form and three-part/division form" and suggests that Schenker must have differentiated these forms "by means of some kind of descriptive theory based on non-structural criteria."⁴³ In my view, the ternary design of sonata form--which Schenker clearly acknowledges--is complementary to the interruption scheme; each conception is valid from a different perspective.

Another problem with Schenker's account is that not every sonata form is based on interruption. As Peter Smith observes in a recent study, a small number of sonata forms have uninterrupted structures. Smith illustrates five examples by Brahms: the first movements of the String Quartet in C minor, Op. 51 No. 1, the Piano Quartet in C minor, Op. 60, and the Third Symphony; and the finales of the Third Symphony and the Violin Sonata in D minor, Op. 108.⁴⁴ This shortcoming in Schenker's thinking about sonata form has no bearing on my use of his analytical approach, however, since all the late sonata forms of Haydn I discuss have interrupted structures.⁴⁵

A third theoretical problem arises from apparent contradictions between levels of structure in sonata form, specifically pertaining to the prolongation of the interrupted structural V. In connection with Fig. 21 from *Free Composition*, shown in Example 1.1, Schenker asserts that the return to the primary tone after interruption--e.g., at the beginning

⁴³ "Musical Form and Fundamental Structure: An Investigation of Schenker's *Formenlehre*," *Music Analysis* 15/2-3 (July/October 1996), p. 233. Smith discusses what he calls "three-part/division form" on pp. 222-31.

⁴⁴ See "Brahms and Schenker: A Mutual Response to Sonata Form," *Music Theory Spectrum* 16/1 (Spring 1994): 77-103.

⁴⁵ Several movements which I read from $\hat{S}$, though uninterrupted on the first middleground level, contain a lower-level $\hat{3}-\hat{2} \parallel$ underneath the $\hat{S}$, which does not descend until the recapitulation. This procedure was first described by Ernst Oster in a footnote in *Free Composition*, p. 139.

of the recapitulation--does not represent a cadence.⁴⁶ This assertion applies only to the first level of middleground. At a later level, a passing seventh may be added over the interrupted V, creating the effect of a cadence into the recapitulatory I (see Schenker's Fig. 23, also shown in Example 1.1). In connection with Fig. 23, Schenker notes that "if the passing seventh in the inner voice is transferred to the higher octave, it has, by virtue of its new register, an effect like that of an upper neighboring note to the $\hat{3}$."⁴⁷

A large number of major-mode sonata forms have a structure like that shown in Fig. 23. The interrupted V is reached in the exposition as the second key area, articulated by its dominant; the development usually concludes with V⁷ (a notable exception being those developments that conclude on III $\sharp$ as part of a V-III $\sharp$ -I arpeggiation into the recapitulation). Charles Smith believes that interruption in sonata form or a three-part/division form occurs at the end of the first part (or exposition), but not at the end of the middle section (or development), since the dominant in the latter location "is oriented towards a cadential return to the tonic."⁴⁸ But interruption arises on the first middleground level; only at a later level does V bifurcate into an initial tonicized state and a concluding dominant state (usually underscored by the addition of a seventh). By choosing to identify interruption with only the initial manifestation of V, Smith implies (incorrectly) that the retransitional V does not prolong the former V.

In sonata forms based on interruption, the structural V may be considered in three prolongational phases. Phase (1), the bass arpeggiation I-V, provides the structure of most major-mode expositions, and of a comparatively small number of minor-mode expositions.

⁴⁶ *Free Composition*, p. 36.

⁴⁷ *Free Composition*, p. 38.

⁴⁸ Smith, "Musical Form and Fundamental Structure," p. 246.

Phase (2) is the prolongation of the space of V itself--in other words, a space that begins with V (usually within the exposition) and ends with V (or its equivalent, VII). In those sonata forms in which V is not reached until the end of the development--including many minor-mode movements--phase (2) does not apply (except insofar as the retransitional V is prolonged at the foreground level). Phase (3) is the auxiliary cadence which arises from the cadential resolution of the retransitional V⁷ into the recapitulatory tonic, and often includes other pre-cadential harmonies (such as II, III and IV) prior to V⁷. Occurring as it does on a later level than the interrupted structure, the auxiliary cadence does not negate the deeper sense of interruption, but rather complements it.⁴⁹

Schenker illustrates possible elaborations of phase (1), at the first level of middleground, in Fig. 14 of *Free Composition*. Among the harmonies which elaborate the motion from I to V are I⁶, III^b, III[#], IV, II, and II⁶, either singly or in combination. Other possible harmonies not shown in Fig. 14 (e.g., VI, IV⁶, #IV) could also be used to lead from I to V, but Schenker would place these harmonies on a later level than that shown in Fig. 14. Many of the pre-dominant chords that typically elaborate the bass arpeggiation I-V can also be used to elaborate phase (2), and I shall illustrate those elaborations of V in the typology outlined below.

The reapproach to V in the development can be understood as a reiteration of the first approach from I in the exposition--as a retracing of steps--but with the difference that, as mentioned above, the first V is treated locally as a tonic, whereas the second,

⁴⁹ For Schenker's account of auxiliary cadences, see *Free Composition*, pp. 88-9. The idea of interpreting the cadence into the recapitulatory tonic as an auxiliary cadence has not received much attention in the analytical literature. Schenker suggests a similar notion to this in Fig. 109/e6, where he reads a complete *Ursatz*-like structure superimposed over the boundary between an interrupted V and a tonic reprise.

retransitional V functions (in most cases) purely as a dominant.⁵⁰

III. A Typology of Developments

Example 1.2 illustrates thirteen bass plans for developments, notated in C for ease of comparison.⁵¹ Unlike C. P. E. Bach's *Gerippe*, these "plans" are not to be understood as preconceived constructs in the composer's mind during the compositional process (though that possibility should not be excluded).⁵² All plans are in major except the last two, and some of the plans subdivide into two variants or closely related types. In all plans except Plan X, the interrupted structural V occurs prior to the double bar, and is prolonged until the recapitulation. As Table 1.1 shows, examples of every plan (except Plans Ib and XI) can be found in works by Haydn from 1787 or later.⁵³ Some plans are used frequently, while others occur only once. The plans fall into five categories: neighboring motions,

⁵⁰ Exceptions to both rules should be noted. In expositions that employ the "bifocal close", the V with which the transition concludes functions as a dominant, and is then reasserted (after an intervening rest) as the tonic of the ensuing second group (e.g., Mozart, K. 545). This contrasts with expositions that contain a bridge setting up V as a second key by way of V/V (itself marked by V/V/V or its equivalent). See Robert Winter, "The Bifocal Close," *Journal of the American Musicological Society* 42/2 (Summer 1989): 275-337. Secondly, in certain developments, the retransitional V (often the minor V) is first asserted as a tonic, and then adjusted to act as a dominant. I explore this issue in Chapter 2, section II.iv, pp. 71-2.

⁵¹ A similar typology of development "paradigms" is presented in Laufer, "Voice-Leading Procedures in Development Sections" (cited in note 2). This important study came to my attention after this chapter was written; the similarities are coincidental, yet almost inevitable, given the deep level of structure being considered. Laufer's article also includes analyses of a wide range of 18th- and 19th-century sonata forms, whereas my typology--though of general utility--is intended mainly as a theoretical framework for the study of Haydn's late works.

⁵² Cf. Schenker, *Free Composition*, p. 18: "The concept of the fundamental structure by no means claims to provide specific information about the chronology of creation; it presents only the *strictly logical precision in the relationship* between simple tone-successions and more complex ones."

⁵³ Both in Table 1.1 and throughout this dissertation, all references to musical works are to first movements unless otherwise indicated.

Table 1.1 Developments by Haydn (post-1787 works) categorized by middleground plans shown in Example 1.2 (First movements unless otherwise indicated)

Plan Ia (V-VI-V)	Symphonies: 88, 89, 90/IV, 92, 98, 100/I & IV, 104 Quartets: Opp. 55 No. 3; 64 No. 5; 71 Nos. 2 & 3; 74 No. 1; 76 Nos. 1 & 4 Sonata Hob.XVI:49 Piano Trios: Hob. XV:21, 24, and 28
Plan Ib (V→VI-V)	(no examples in late Haydn)
Plan Ic (V-VI-I)	Quartet Op. 64 No. 3
Plan IIa (V-IV-V)	Symphonies: 91, 92/IV Quartets: Opp. 54 No. 2; 71 No. 1
Plan IIb (V- ~~IV~~ -V)	Quartet Op. 77 No. 1
Plan III (V- <u>VI-V</u> ⁶ or V- <u>VI-VII</u> ⁶)	Symphonies: 93/IV, 94/IV, 101, 104/IV Quartets: Opp. 50 No. 1; 55 No. 1; 77 No. 2; 74 No. 2 Piano Trios: Hob.XV:18 and 20
Plan IV (V- <u>III</u> ⁶ -V ⁷)	Symphony No. 98/IV Quartets: Opp. 50 No. 3; 54 No. 1; 64 No. 4 Sonatas: Hob.XVI:50 and 52 Piano Trio Hob. XV:30
Plan Va (V- <u>II</u> -V ⁷)	Symphonies: 91/IV, 103 Quartet Op. 50 No. 5 Piano Trios: Hob.XV:10 and 11
Plan Vb (V- <u>II-III-IV</u> -V ⁷)	Symphonies: 93, 96, 102 (no III ⁶)
Plan VI (V→ <u>VII</u> -V ⁷)	Symphony No. 99
Plan VII (V- <u>III-IV</u> -V ⁷)	Quartets: Opp. 50 Nos. 2 (uses III ⁶) and 6 (uses III)
Plan VIIIa (V-III ⁶ -V ⁷)	Symphony No. 97
Plan VIIIb (V-III ⁶ -V ⁷)	Quartet Op. 64 No. 1
Plan IX (V-III ⁶ -I)	Symphonies: 90, 94 (V-III-I), 95/IV 98/II, 99/II Quartets: Opp. 54 No. 3; 64 No. 6; 76 No. 3
Plan Xa (III-IV-V ⁶) or (III→II ⁶ -V ⁶)	Quartet Op. 64 No. 2 Quartet Op. 74 No. 3
Plan Xb (III-III ⁶ -V ⁶ - ⁶)	Symphony No. 95 Quartets: Opp. 50 No. 4; 76 No. 2 (III-III ⁶ -V ⁶)
Plan XI (V ⁶ - ⁶)	(no examples in late Haydn)
Plan XII (rondo form, development from I)	Sonata Hob.XVI:51 (see also numerous rondo finales)
Plan XIII (recapitulation on apparent I)	Symphony No. 103/IV

arpeggiations within V, embellishing motions, sustained or inflected V, and arpeggiations from V to I. After surveying these bass plans, I shall illustrate possible upper-voice structures associated with them.

Neighboring motions (Plans I and II)

There are two diatonic neighbors to V: the upper neighbor VI (shown in Plan Ia), and the lower neighbor IV (Plan IIa). In the vast majority of cases, VI returns to V.⁵⁴ But it is also possible for VI to proceed directly to the recapitulatory tonic, as in Plan Ic; here, the bass VI resolves to an inner voice--the fifth of tonic harmony. Although there is only one example of this in late Haydn (Op. 64 No. 3 in B $\flat$), I know of at least two earlier examples by Haydn, also in B $\flat$: the Sonata Hob.XVI:18, and the finale of the Quartet Op. 33 No. 4.⁵⁵ Besides the Haydn examples of Plan IIa (V-IV-V), two well-known examples should also be mentioned: the first movement of Mozart's Symphony No. 41 and the Finale of Beethoven's Piano Sonata Op. 27 No. 2 (a minor-mode variant).⁵⁶

Plan Ib (V $\rightarrow$ VI-V) and Plan IIb (V-~~IV~~ $\rightarrow$ V) may be viewed as chromatic variants of Plans Ia and IIa, respectively. Although Plan Ib does not occur in late Haydn, it is by no means rare in later music: see Beethoven's Op. 10 No. 3, Op. 12 No. 3, and Op. 14 Nos.

⁵⁴ For a survey of Haydn's use of VI as a harmonic goal in developments, see Harold L. Andrews, "The Submediant in Haydn's Development Sections," in *Haydn Studies*, pp. 465-71.

⁵⁵ Wayne Petty points out several examples in the keyboard sonatas of C. P. E. Bach, and comments on the neglect of this phenomenon in the Schenkerian literature. See "Compositional Techniques," pp. 288-9.

⁵⁶ My reading of the Beethoven is based on Schenker's graph in *Free Composition*, Fig. 40/4. The development of the Mozart is analyzed in great detail by Carl Schachter in "Mozart's Last and Beethoven's First: Echoes of K. 551 in the First Movement of Opus 21," in *Mozart Studies*, ed. Cliff Eisen (Oxford: Clarendon Press, 1991), pp. 227-51; see especially p. 233.

1 and 2; and Schubert's Symphony No. 9 (the "Great" C major). In the one example of Plan IIb in late Haydn, $\sharp IV\sharp$ is a major chord; an example of Plan IIb with the minor form of the neighbor chord ($\sharp IV$) is Beethoven's Piano Concerto No. 4.

Arpeggiations within V (Plans III-VI)

This category includes prolongations based on a motion from the root of V to either the third or the fifth, and (possibly) back to the root. In Plan III, the bass arpeggiates from the root of V to the third, as part of a larger motion through a fourth to the recapitulatory tonic. The upper third may be harmonized first by VII or VII $\sharp$, and subsequently by V $\sharp$; most often the third is filled in by a passing VI.⁵⁷

Plan IV is based on a arpeggiation down a fourth from V to V $\sharp$, virtually always embellished by a passing III $\sharp$ just prior to the retransition. Sometimes the V $\sharp$ appears on the foreground as V⁷, through the addition of a root; if the sense of a return to a structural root of V predominates, then it is a case of Plan VII, discussed below.⁵⁸

In Plans Va and Vb, the main harmony prolonging V is II. The ascending fourth between II and V may be arpeggiated more or less directly, as in Plan Va, or may be filled in with passing chords (e.g., III or III $\sharp$, and IV or II⁶) as in Plan Vb.

Plan VI employs the upper third of V arising from mode mixture, namely $\flat VII$. The prolongation of V is completed by a return to V⁷, which demands that the leading tone be

⁵⁷ For more on the use of VII $\sharp$ in developments, see Poundie Burstein, "Surprising Returns: The VII $\sharp$ in Beethoven's Op. 18 No. 3 and its Antecedents in Haydn," *Music Analysis* (forthcoming).

⁵⁸ A related use of III $\sharp$ is shown in Plan IX. For a discussion of Plans IV and IX, see David Beach, "A Recurring Pattern in Mozart's Music," *Journal of Music Theory* 27/1 (Spring 1983): 1-29.

restored through a semitonal adjustment. A situation analogous to Plan III is possible, wherein $\flat VII$ is followed by $V\sharp$; but in Symphony No. 99, the only piece by Haydn (as far as I know) that employs $\flat VII$ at this level of structure, there is a return to V^7 whose root is structural.⁵⁹

Embellishing motions (Plan VII)

Plan VII is similar to Plan V in that the bass moves by skip down to the main prolonging tone, in this case, $III(\sharp)$, and then returns to V. In both cases, a space is opened up between V and the embellishing harmony that is usually filled in with passing tones. Plan VII is best described as an embellishing motion rather than as an arpeggiation, since the root of $III(\sharp)$ is not consonant with V, whereas in Plans III-VI the arpeggiation is to another tone belonging to V. One might characterize $III(\sharp)$ in this context as a leaping neighbor, by analogy with Schenker's idea of the leaping passing tone. The only example of a $V-III\sharp-V$ prolongation in *Free Composition* (Fig. 113/4) occurs quite close to the foreground, in mm. 9-16 of Chopin's Polonaise in A, Op. 40 No. 1. Schenker shows more extended examples of an analogous pattern in minor ($V-III-V\sharp$) in Chopin's Etude Op. 25 No. 11 (see Fig. 76/3) and in the slow movement of Beethoven's Piano Sonata in D, Op. 10 No. 3 (see Fig. 39/2). These prolongations constitute a central section of these movements, comparable in function and scope to a development. An analogue to the $V-III\sharp-V$ pattern is Schenker's $I-VI-I$ progression, illustrated in *Free Composition*, Fig. 32/4.

⁵⁹ A related pattern to the idea of arpeggiating from V to $V\sharp$ or $V\flat$ is the use of $V\sharp$ at the end of the development, which arises out of a passing motion into an inner voice that is articulated in the bass. See, for example, Op. 33 No. 2.

The only examples of Plan VII in late Haydn that I know of are Op. 50 No. 2 (which contains III[♯]) and Op. 50 No. 6 (which contains III). Other examples with III[♯] from the Classic period are the first movements of Mozart's Piano Sonata in D, K.576, the Quartet in B $\flat$, K.589, and Beethoven's Sixth Symphony.⁶⁰

Sustained or inflected V (Plan VIII)

Plans VIIIa and VIIIb employ III and III[♯], respectively, in $\S$ -position. In the former, the bass is sustained beneath the rising upper voice (D-E-F); in the latter, the bass is embellished by a chromatic inflection (G-G[♯]-G[♮]). The fact that the G[♯] implies a possible resolution to A, but instead falls back to G[♮], is a source of dramatic interest in this plan.

Arpeggiations from V to I (Plan IX)

In Plan IX, III[♯] acts as a divider within an arpeggiation from V to the recapitulatory I. (The diatonic divider III[♮], as in Symphony No. 94, is a rare exception; cf. III[♮] in Symphony No. 97). The arpeggiation cuts across the interruption in a unique way, since III[♯] retains the leading tone of the preceding V and at the same time anticipates the third of tonic harmony. Although III[♯] functions differently here than in Plans IV, VII, and VIIIb, these four plans are closely related by virtue of that shared element. Because III[♯] sounds

⁶⁰ Carl Schachter brought K. 576 and the Beethoven example to my attention. A related (and unusual) example is the first movement of Hummel's Piano Trio in E $\flat$, Op. 96, as analyzed by Mi-Sook Han Hur in "Irregular Recapitulation in Schubert's Instrumental Works" (Ph.D. diss., City University of New York, 1992), p. 25. In this case, the development ends on III[♮], which progresses in the recapitulation to IV and then to V (completing the V-prolongation begun in the exposition).

potentially like V/VI, its usage in these plans also relates to the use of V/VI in Plans Ia, III, and VI, which contain VI as a structural harmony.⁶¹

To be sure, the similarity of III♯ to V/VI--especially because of Haydn's tendency to introduce it with an augmented sixth chord--can create an expectation of a cadence in VI. A III♯ that fails to cadence on VI would be, in C. P. E. Bach's terms, a rational deception. But the aural similarity to V/VI--which can be used to mislead the listener--should not be mistaken for the structural function of III♯, which is to divide the space between V and I.

Chief among those writers who misconstrue the structural function of III♯ is Charles Rosen. He characterizes the practice of cadencing on "V/VI" without subsequently cadencing on VI as "a way to avoid a cadence on VI at the end of the development."⁶² With reference to Rosen, Carl Schachter points out the insufficiency of characterizing a chord *solely* in terms of the key which it implies, if it fails to cadence in that key.⁶³ In order to understand how III♯ mediates between one chord and another, it is not necessary to relate it to a putative VI. In contrast to Rosen and Schachter, James Webster interprets a V/VI that does not resolve to VI as "an alternative dominant" to "the (by then) all-too-conventional dominant retransition."⁶⁴ But to describe a cadence on III♯ merely as a way of avoiding a convention, as Rosen and Webster do, is inadequate, not least because Haydn and other composers continued (in later compositions) to cadence in the submediant in developments and to employ retransitional dominants without sounding hackneyed.

⁶¹ The elaborations of Plans Ia, III, and VI in Example 1.2 show V/VI in ♯ position: at later levels, V/VI usually appears in root position.

⁶² *Sonata Forms*, rev. ed., p. 270.

⁶³ "Analysis By Key: Another Look at Modulation," *Music Analysis* 6/3 (October 1987), p. 296.

⁶⁴ *Haydn's "Farewell" Symphony*, p. 142. Webster's description applies only to Plan IX, since V is retained in Plan IV.

Minor-mode developments (Plans X-XI)

All the plans presented thus far apply to major-mode movements. Different plans usually apply in minor, however. Plans Xa and Xb illustrate two variants of the most typical situation in minor: the exposition concludes in the key of III, and the development completes an arpeggiation up to $V\sharp$ (labelled $V\sharp$ in C minor). The motion from III to $V\sharp$ may be prolonged either by a passing IV or $\flat II^6$ (as in Plan Xa) or by $II\sharp$ (V/V, as in Plan Xb).

A much less common situation in minor is Plan XI, in which the exposition concludes in minor V.⁶⁵ The dominant is transformed into a major chord at the conclusion of the development. Aside from this one essential chromatic adjustment (which does not apply to the major mode), the dominant in Plan XI could, of course, be prolonged by most of the techniques illustrated in Plans I-X. For this reason, no elaborating harmonies are shown in this plan.

Further plans: Starting from I (Plan XII); Recapitulation on an apparent I (Plan XIII)

In certain movements that are in sonata-rondo form, the development's point of departure is I, rather than V (see Plan XII). While this situation is common enough in rondo finales (excluded from Table 1.1), only one first movement in Haydn has this structure--that of the Sonata in D, Hob.XVI:51.

Another unusual phenomenon is an apparent I at the beginning of the recapitulation, which can arise in various ways. In Symphony No. 103/IV (see Plan XIII), the

⁶⁵ According to Webster (*Haydn's "Farewell" Symphony*, p. 18), the only minor-mode sonata form of Haydn's whose exposition concludes in a key other than the relative major is the first movement of Symphony No. 45 ("Farewell"), which has the three-key scheme I-III-V. Beethoven was more inclined to modulate to minor V in the exposition (see the finale of Op. 27 No. 2, and the first movements of Op. 31 No. 2, and Op. 90).

recapitulation begins on a non-structural I⁶ that connects the III⁴ from the end of the development to the IV in m. 285, which then proceeds to V.⁶⁶ (This sonata-rondo movement is analyzed in detail Chapter 5, pp. 171-4.)

Structures of the Upper Voice in Developments

Having viewed possible bass structures for the development, we shall now consider (again, in a C-major context) various ways in which the upper voice may move against each bass line. The arrival on V (always in the exposition except in Plans Xa and Xb) coincides with $\hat{2}$ (D) in the upper voice. Most expositions conclude with a fifth-descent from $\hat{2}$ ($\hat{5}$ - $\hat{4}$ - $\hat{3}$ - $\hat{2}$ - $\hat{1}$ in the key of V), so that (in C major) the upper voice of the development may take as its point of departure either D or G (the local tonic at the end of the exposition).⁶⁷ The development's upper voice usually ends with the seventh of V⁷ (F), which, as noted in Example 1.1 (Fig. 23 from *Free Composition*), originates as a passing tone from G in an inner voice, but may be reached by way of an upward register transfer accompanied by a reaching-over (D-E-F); F in this case takes on the character of an incomplete neighbor.

Example 1.3 illustrates various upper-voice patterns (but not every possibility) in

⁶⁶ Further plans incorporating either an apparent I or a IV at the point of recapitulation are presented by Laufer in "Voice-Leading Procedures," figures ix-xii, p. 74. Laufer cites two Haydn movements with an apparent I at the recapitulation: Symphony No. 52, and Op. 74 No. 3, finale (p. 75). To my knowledge, there are no recapitulations beginning on IV in Haydn.

⁶⁷ A rare possibility (not found in any Haydn work known to me) is for the development to prolong V⁷, the seventh entering just before the double bar. Schenker illustrates this in his graphs of two Beethoven developments--the "Eroica" Symphony and the Sonata Op. 81a ("Les adieux")--in *Free Composition*, Figs. 62/7 & 8. See also Schenker's "Eroica" essay in *Das Meisterwerk in der Musik*, vol. 3, especially pp. 43ff.

combination with bass plans I-X from Example 1.2. Although these combinations are presented on a single staff, the reader should, in many cases, imagine the upper voice an octave higher, and infer inner voices from the roman numerals below the staff. Throughout most of Example 1.3, parallel fifths and octaves between outer voices are eliminated by passing and neighboring sonorities (other sonorities are also possible). Although D and G are equally possible starting points for the upper voice (in major), most of the graphs show lines starting from $\hat{2}$ (D).⁶⁸ But even when the motion from $\hat{2}$ (e.g., D-E-F) is foregrounded--and hence shown as the main upper voice--it is ultimately subordinate to the large-scale motion from G at the end of the exposition to F at the end of the development.

The three variations on Plan Ia all contain motions from $\hat{2}$ (D): Ia/i employs a reaching-over (D-E-F); Ia/ii contains a descending motion into the inner voice (D-C-B); and Ia/iii has a rising fourth (D-E-F-G), with the seventh F emerging after the completion of the fourth-progression.⁶⁹ The pattern D-C-B may also appear in an inner voice against either of the other upper-voice structures. Another possible pattern--an upper-neighbor motion D-E-D--is quite rare (see Symphony No. 98, discussed below, and graphed in Example 1.5), and is therefore not shown in Example 1.3.

The elaborations of Plans Ib and IIa parallel those of Plan Ia. Obvious differences in the case of Plan Ib arise from mode mixture ($E\flat$ in the upper or inner voice and $A\flat$ in the bass). With regard to Plan IIa, note that the harmony supporting E is of a lower order than

⁶⁸ Schenker reads upper voice of the development of the Sonata in $E\flat$, Hob.XVI:49 from $B\flat$; see *Five Graphic Music Analyses*, pp. 40-43. (There are several problems with this reading which cannot be conveniently addressed here.)

⁶⁹ In Plans Ia/ii and Ia/iii, and elsewhere in Example 1.3, the retransitional V is shown as V^{8-7} ; the seventh is not obligatory, however, and may arise as part of a motion into an inner voice (if the primary tone is $\hat{5}$), rather than as an incomplete neighbor to primary tone $\hat{3}$.

the VI used to support E in Plan Ia. In the pattern D-C-B, however, the passing C (analogous to E in the D-E-F pattern) is supported by IV, which is of the same order as VI in Plan Ia. A rising fourth, D-E-F-G, may occur as in Plan IIa/iii or Plan IIb. But the meaning of the fourth depends on the larger context. If the primary tone is $\hat{3}$, the goal of the fourth-progression is a registrally transferred inner voice. But in at least one case, Mozart's "Jupiter" Symphony, the goal of that fourth-progression is the primary tone, $\hat{5}$. In that piece, $\hat{5}$ is established in the exposition, but does not descend until the recapitulation. In lieu of an interrupted descent of the fundamental line ($\hat{5}-\hat{4}-\hat{3}-\hat{2}$), there is an inner-voice motion $\hat{3}-\hat{2}$ (in the exposition) beneath the prolonged $\hat{5}$.⁷⁰

The upper-voice pattern given for Plan IIb derives from Op. 77 No. 1 (a unique example). The upper voice spans a fourth, which is filled in with passing tones. Note the difference between this fourth-progression, one of whose main passing tones is chromatic (F $\sharp$), and the analogous one used in Plan IIa/iii, whose main passing tones are diatonic.

The upper-voice possibilities for Plan III are: (i) D-E-F (see Symphony No. 101, discussed below), (ii) D-D $\sharp$ -E, and (iii) a series of reachings-over from D (see Op. 77 No. 2). Plans III/i and III/iii end on V $\sharp$. A famous example of Plan III/ii--and a rare one, too--occurs in the Finale of Symphony No. 104 (see *Free Composition*, Fig. 114/2b).⁷¹

The remaining upper-voice possibilities should be self-explanatory, although one important feature of several graphs in Example 1.3 requires comment, namely, consonant

⁷⁰ See Schachter, "Mozart's Last and Beethoven's First," pp. 234 (ex. 6a) and 242 (ex. 10).

⁷¹ See also Channan Willner, "Chromaticism and the Mediant in Four Late Haydn Works," *Theory and Practice* 13 (1988), pp. 104ff.

preparation of the seventh of V⁷. In his pioneering book on Schenker, Oswald Jonas discusses ways in which a passing tone that is dissonant at a deep level may appear in a consonant state at a later level. He illustrates, in two-part counterpoint, three consonant preparations for the seventh: the octave (which corresponds to IV in Plans IIa and VII); the tenth (corresponding to II in Plans Va and Vb, and sometimes in Plan Ia/i); and the fifth (corresponding to ♭VII in Plan VI).⁷² The foreground often includes embellishing harmonies between the consonant interval and the seventh, so that the seventh may enter unprepared on the foreground--either passing or as part of a reaching-over.

In minor-mode movements based on Plans Xa and Xb, the primary tone is virtually always $\hat{5}$. The main feature that distinguishes the developments in Plans Xa and Xb from those in major is the fact that $\hat{2}$ (over V) does not arrive until the retransition. Although the graphs for these plans in Example 1.3 contain a descent to $\hat{3}$ coincident with the arrival on III, it is also possible for $\hat{5}$ to be sustained through the modulation to III, with a descent to $\hat{3}$ occurring within the second group.

In Plan Xa, the passing chord between III and V may be either IV or ♭II⁶. In the graph that illustrates IV, the third of IV (here, A $\flat$) takes over in the upper voice, by virtue of a registral transfer of the inner voice. Plan Xa/i shows a common way of approaching V from IV: a chromaticized voice exchange. The fundamental line's $\hat{2}$ (D) arrives under the umbrella of the superimposed inner voice G, which later passes on to the seventh (F). Plan Xa/ii contains ♭II⁶ supporting a chromatic tone, ♭ $\hat{2}$ (D $\flat$), in the upper voice. The awkward

⁷² Jonas, *Introduction to the Theory of Heinrich Schenker*, trans. and ed. John Rothgeb (New York: Schirmer, 1982; originally publ. 1934), p. 102. An example of ♭VII preparing the seventh of V⁷, albeit at a lower level than that shown in Plan VI, appears in Op. 76 No. 2, mm. 93-8.

succession D^b-D^a may be broken up at a later level either by substitution of B^a or by more elaborate means. In any case, the only late Haydn work that uses bII^6 in this way is Op. 74 No. 3.

Structural procedures at later levels

The plans shown in Examples 1.2 and 1.3 illustrate how developments may be categorized at a very deep level of structure. The value of such categorizations only comes to light, however, when we consider the diverse realizations of each plan, as well as affinities between developments based on different plans. Certain family resemblances already may be observed between otherwise distinct plans. For instance, Plans IV, VII, VIIIb, and IX all contain $III^{\sharp}$, but each places that harmony in a different context. At later levels of structure, other family resemblances may exist between developments based on either the same plan or different ones. Similarly, developments based on the same plan may diverge greatly at later levels. The purpose of this concluding section is to illustrate such divergences and similarities in developments based on Plans Ia, Ic, and III, which contain VI as a neighboring and a passing chord, respectively. The realizations of these and other plans are too diverse (and, in some cases, too numerous) at later levels to be categorized in the concise manner of Examples 1.2 and 1.3. But certain recurring patterns at later levels can be identified, some of which are discussed in this section. Further phenomena arising at various later levels are treated more systematically in Chapters 2 and 3, but without any aim at proceeding “level by level” (which would make comparisons very difficult to make) or at exhausting the range of phenomena found in developments.

In Plans Ia, Ic, and III, the motion from the structural V at the end of the exposition to VI arises from a 5-6-5 contrapuntal progression (see the elaborations of Plans Ia and III in Example 1.3). Occasionally, the motion to VI occurs quite early in the development, as in Op. 76 No. 1 (see Example 1.4). Upon reaching VI in m. 96 (the eighth measure of the development), Haydn prolongs this harmony until m. 129--for roughly two thirds of the development--before moving to the retransitional V in m. 131. For a similar example, see Op. 76 No. 4 (VI is prolonged in mm. 80-98).

In general, however, developments based on these plans devote more time to the 5-6-5 motion from V to VI than to the prolongation of VI itself. A characteristic way to compose out that motion is through a pair of unfolded fifths in the bass, the first from the root of V to its upper fifth, and the second from the upper fifth of VI down to its root. This pattern of unfolded fifths occurs in two developments based on Plan Ia (Symphonies Nos. 98 and 104), in the one development based on Plan Ic (the Quartet Op. 64 No. 3), and in two works using Plan III (Symphony No. 101 and the Quartet Op. 74 No. 2).

There are many ways to compose out the motion from V to its upper fifth. Certain harmonies within that motion may receive emphasis, and only retrospectively be understood as means to an end, rather than as ends in themselves. For instance, the development of Symphony No. 98 (graphed in Example 1.5) begins in m. 132 on what sounds like V/VI, which cadences deceptively to an E $\flat$ -major chord ($\flat$ VI/VI) in m. 141. The latter chord is treated as a tonic which could potentially function as IV on the middleground, but turns out to be subordinate to a later goal: the C minor that arrives in m. 152. The progression in mm. 141-52 can be understood retrospectively as an auxiliary cadence (III-IV-V-I) in C minor.

In relation to this movement's overall tonic, C minor might be viewed as II. A theorist like Koch would be content simply to identify C minor as a closely related key to B $\flat$. But it functions more significantly as a station on the path from V to VI, in other words, as IV of the subsequent G minor (VI). The handling of this pivot in Symphony No. 98 is typical; rather than simply progressing to V/VI, the C-minor chord is made more active in the direction of the D-major chord by means of a chromaticized voice exchange (see mm. 170-82 of Example 1.5). The large-scale pattern of unfolded fifths in the bass is completed with the motion from D (reached in m. 183) down to G (m. 195).⁷³

The same pattern of unfolded fifths is composed out in quite a different way in Op. 64 No. 3 (see Example 1.6). The first of the unfolded fifths, F-C, is divided by A $\flat$, which is prolonged for a substantial part of the development (mm. 78-101). The arrival on C at m. 105 (more than half-way through the development) is much later than the corresponding juncture of Symphony No. 98 (m. 152, 21 measures after the double bar--less than one third of the duration of the development). The motion from C to D also differs from that in the Symphony; rather than intensifying the C-minor chord through a chromaticized voice exchange (or some other alteration), Haydn interpolates a tonicized F minor (m. 111) between the C-minor and D-major chords.⁷⁴

The development of Symphony No. 104, based on Plan Ia, likewise contains a pattern of unfolded fifths. Example 1.7 shows the development at three structural levels: level a corresponds to Plan Ia; level b depicts the next structural level, which contains a

⁷³ The imperfect cadences on VI in mm. 190 and 191 are not definitive, largely because of the stepwise approach to G in the bass and the ascent to D in the upper voice.

⁷⁴ In m. 114 of Op. 64 No. 3, a passing augmented sixth on E $\flat$ occurs on the last sixteenth note; it is merely a foreground detail of the voice leading with no structural connection to the earlier C-minor chord.

descending third in the bass from A, at the end of the exposition, through G to F♯ in m.

174. Finally, level c reveals how the bass motion from A to G is realized at a later level: the bass unfolds first from A to E (m. 155), while the upper voice reaches over from E to G (the G♯ in mm. 155-6 is merely a foreground modal alteration). By way of a voice exchange completed in m. 166, G is transferred to the bass. In m. 172, the E-minor ♯ chord is altered to form an augmented sixth, intensifying the motion to the F♯-major chord (V/VI) in m. 174. The resolution of this dominant to VI in m. 179 yields a descending (unfolded) fifth F♯-B that answers the A-E fifth.⁷⁵

As in Symphony No. 98 and Op. 64 No. 3, the motion from V to its upper fifth takes up a significant proportion of the development (in this case, the first 32 measures). Although V of E arrives already in m. 137 (14 measures into the development), its resolution is delayed by a digression into the keys of C♯ minor, G♯ minor, and F♯ minor (not shown in Example 1.7c). The E chord arrives in m. 155 as a major chord (locally sounding like III of the previously tonicized C♯ minor), but is adjusted to its basic, minor form a mere two bars later.

I shall now discuss how the unfolded-fifths pattern is realized in developments based on Plan III. The basic contrapuntal framework for the development of Symphony No. 101 is an ascending 5-6 series in the upper voice (see Example 1.8a; compare Example 1.3, Plan III/i). At a later level, the 5-6 successions are realized not in the upper voice, but in the bass, through a series of unfolded sixths and fifths (similar to the patterns in the developments based on Plan Ia just described); see Example 1.8b.⁷⁶

⁷⁵ For a different reading of this development, see Felix Salzer, *Structural Hearing: Tonal Coherence in Music* (New York: Dover, 1962; originally publ. 1952), ex. 459.

⁷⁶ For a different reading, see Willner, "Chromaticism and the Mediant," pp. 101-2.

Example 1.8c shows the development in more detail, though still at a fairly deep middleground level. From the end of the exposition to m. 174, the bass gradually ascends by step from A to F♯. The F♯-major chord reached in m. 174 sounds like a dominant of B minor because of the E-minor chord that precedes it in the sequence, but the resolution to B minor is delayed until m. 197 by a detour to G major in m. 184. The motion to G implies that the sequence has gone one step too far; this “error” is corrected by the return to F♯ in m. 191. The detour to G, though itself subordinate to the prolongation of V/VI, foreshadows the remaining course of the development. In mm. 201-3, right after the cadence in B minor, the progression V♯-I in G that appeared in mm. 182-3 is recalled (but with different figuration).

Like the development of Symphony No. 101, that of Op. 74 No. 2 is based on Plan III (see the graph in Example 1.9). But this development is more closely related at later levels to those of Op. 64 No. 3 and Symphony No. 89, both of which are based on Plan Ia. In the first phase of the development of Op. 74 No. 2 (mm. 99-130), several keys are tonicized, but none has any long-range structural importance.⁷⁷ The C-major chord reached in m. 127 retains the dominant from the end of the exposition, but is altered to C minor two bars later, as the second phase commences (m. 131). The path of the bass of mm. 131-63 is an arpeggiation, I♭-♭III-V♭ in the dominant key, the same basic pattern that occurs in Op. 64 No. 3 (see Example 1.6, mm. 75-105). The similarity is strengthened by the analogous

⁷⁷ The initial key of the development, A major, foreshadows (but is not structurally connected to) the later dominant of D minor (V/VI) that arrives in m. 164. I examine other associations of this kind between initial regions of developments and later structural chords in Chapter 2, pp. 49-53.

use of an augmented sixth chord prepared by $\flat$ III.⁷⁸ The bass unfolding C-G in Op. 74 No. 2 is answered in mm. 164-73 by A-D (V-I in VI). Within one measure, the bass G progresses to A via $G\sharp$ (which supports a diminished-seventh chord)--this motion is much quicker than the one from C to D in Op. 64 No. 3, mm. 105-115. The treatment of VI is also quite different in these developments. Whereas, in Op. 64 No. 3, VI is the ultimate goal, and is prolonged as such in mm. 120-124, in Op. 74 No. 2, VI lasts just one measure (m. 173), as the bass quickly completes a stepwise ascent to the recapitulatory tonic.

The structure of the development of Symphony No. 89 in F, viewed at the level shown in Example 1.10a, corresponds to that of Symphony No. 104 in Example 1.7b. The development begins with a four-bar phrase in the dominant minor, ending on a half cadence in m. 62 and followed by a contrasting thematic statement in $E\flat$ ($\flat$ III of V). There is an overt similarity between this passage and mm. 70-78 of Op. 64 No. 3 (see Example 1.6), as well as a somewhat concealed parallelism with mm. 131-153 of Op. 74 No. 2 (see Example 1.9). In Symphony No. 89, the $E\flat$ from m. 63 is retained in m. 87 supporting an augmented sixth (cf. m. 101 of Op. 64 No. 3, and m. 161 of Op. 74 No. 2), which resolves to V of G minor. Instead of progressing from here to a root-position G-minor chord, which would complete an arpeggiation I-III-V $\flat$ in C minor (analogous to the arpeggiations in Opp. 64 No. 3 and 74 No. 2), the bass descends D-C-B $\flat$ in mm. 88-90, supporting the chords V-V $\sharp_2$ -I $\flat^6$ of G minor. The resulting pattern is a pair of unfolded thirds in the bass (C- $E\flat$ and D-B $\flat$), a pattern that is completed by the A-C $\sharp$ third (tenth) reached in m. 92.

⁷⁸ Augmented sixths on $E\flat$ occur twice in the development of Op. 74 No. 2, first in mm. 137-9, and then in m. 161. The former passage foreshadows the latter, without actually being structurally connected to it.

The foregoing comparisons indicate not only some of the diverse ways of realizing basic plans, but also certain consistencies among developments at later levels than the underlying plan. As Table 1.1 indicates, even at a very abstract level of structure, several developments are unique (at least within this sample). Yet, at the later levels, every development will have one or more structural features in common with at least one other. Thus, a development's uniqueness depends on how much information about its structure one takes into account. While every development, as a whole, is unique, the constituent parts tend to be shared by other developments.

In the next two chapters, the focus shifts away from the comparison of developments as entire sections, to the investigation of specific techniques--of certain constituent parts, if you will--which characterize the later middleground and foreground. In order to appreciate the significance of these more localized phenomena, it will be necessary to consider them in the context of each development (or movement) as a whole. The plans presented above will thus serve, either explicitly or implicitly, as a frame of reference for interpreting the more individual aspects of Haydn's developments.

CHAPTER 2

HARMONIC AND THEMATIC PROCEDURES AT LATER LEVELS IN DEVELOPMENTS

When viewed on a deep middleground level, the diverse developments in Haydn's music can be reduced to a relatively small number of plans. The concluding section of Chapter 1 illustrated elaborations of some of those plans, with particular attention to the composing out of a path to the main harmony prolonging the structural V. In this chapter, we shall be concerned not so much with large spans of the development as with moments or relatively brief timespans, and with specific harmonic and thematic procedures that make those moments or timespans meaningful.

The beginning and the end of the development are important formal junctures in sonata form, often providing dramatic contrasts to the conclusion of the exposition and the onset of the recapitulation. The various ways of treating those boundaries, including their durational extent, will be examined in this chapter. Between those boundaries lies the middle of the development, and I shall investigate some of the more important procedures that occur there, too. The temporal ordering of the development into a beginning, a middle, and an end is analogous to the beginning-middle-end framework of sonata form as a whole (if we grant the ternary conception of the form), except that developments rarely divide neatly into three sections comparable to the exposition, development, and recapitulation.¹ In any case--and even where there is division into three roughly equal sections--the structural

¹ Cf. V. Kofi Agawu's application of a "beginning-middle-end" paradigm to the semiotic analysis of music in *Playing with Signs: A Semiotic Interpretation of Classic Music* (Princeton: Princeton University Press, 1991).

and dramatic significance of each successive phase of a development is fundamentally different from the corresponding large phases of the movement as a whole. For example, whereas the beginning of most sonata forms involves the establishing of some stable point of tonal reference (the tonic), the beginning of a development is usually marked by a destabilizing of whatever key prevailed at the end of the exposition. Likewise, the end of a development is often culminative or climactic, but never structurally conclusive, for it does not provide the tonal closure that marks the end of the recapitulation.

The terms “beginning” and “end” of the development may refer, depending on the context, either to specific points in time or to timespans of variable length. From the perspective of design, the first event of the development marks its beginning point, and that first event may be interpreted in relation to the harmony preceding the double bar. But if the first event is not a salient agent of motion away from the concluding chord of the exposition, it is useful to conceive of the beginning as a timespan--the phrase leading up to the first salient point of rest (a half or full cadence in a related key).

The end of the development, if defined as a point in time, practically coincides with the onset of the recapitulation. But it is more meaningful to conceive of the end as a timespan extending from the arrival on V or some other important harmonic goal (e.g., VI, II, III or III $\sharp$) until the recapitulation. Various ways of treating this timespan, the most frequent being the retransition, are examined in section III (pp. 73-85).

The middle of the development, as defined here, includes events after the beginning of the development (be it a point or a timespan) until the start of the retransition (if there is one), and excludes harmonic progressions that cut across the development's formal boundaries. It might seem that this definition of the middle is too inclusive, and that some

attempt should be made to account for subsections or phases within this “middle.” Yet it is almost impossible to generalize about such subdivisions in late Haydn. More precise contexts than “beginning, middle, and end” will therefore be defined, when necessary, with reference to individual works, but not to groups of works.²

An important aspect of Haydn’s developments which requires a brief adumbration here is the use of what James Webster calls “remote harmonic juxtapositions.” These progressions occur whenever “the dominant of one key confronts the tonic of another across a caesura, or at a structural location such as the double bar.”³ Progressions of this kind are among those which C. P. E. Bach would call “rational deceptions” (*vernünftige Betrügereyen*).⁴ Webster illustrates three types: (1) III♯ (V/VI)-I; (2) V-III♯ (V/VI); and (3) VII♯ (V/III)-I. Depending on the context, the same progressions may receive different roman-numeral assignments. For example, an instance of Type 1 (root motion down a major third) across the double bar could be labelled either V↪III or I↪VI (in the key of V). In minor, the progression III-V/IV might occur across the double bar as an instance of Type 2. Finally, Type 3 implies V-VI (of a minor key) on the foreground. Webster surveys the use of these progressions in developments of symphonies through 1774, and identifies five possible locations for them (“beginning,” “early,” “middle,” “end main,” and “retransition”). My general context of “middle” includes Webster’s second, third, and fourth locations (see section II.i below).

² James Webster notes that Haydn’s symphonic developments through the mid-1760s generally follow a three-part plan, but that in works of the 1780s and 1790s, the three-part plan is replaced by a variety of constructions. (The former plan is described by Webster; the latter “constructions” are not.) See *Haydn’s “Farewell” Symphony*, p. 134.

³ Webster, *Haydn’s “Farewell” Symphony*, p. 134. The term “remote harmonic juxtaposition” was coined by Webster.

⁴ See p. 18 above.

I. The beginning of the development

At the beginning of the development of a major-mode movement, there are three basic ways of moving away from the exposition's concluding dominant (the exclusive second key area in major-mode works before Beethoven). The most frequent way is to prepare a new key either with an immediate statement of its dominant or with a linking phrase that ends on that dominant. Another way is a subcategory of the latter procedure: to continue in the dominant key across the double bar before moving (by means of a linking phrase) to a new key. Lastly, a new tonic may be asserted directly after the double bar without the mediation of an applied dominant. Only in a relatively small number of cases does the first key of the development represent a *Stufe* in one of the deep middleground plans in Example 1.2. Indeed, striking modulations at the start of developments often have only foreground significance. Bearing in mind that neither the emphasis (dynamic, thematic, etc.) placed on a harmony nor its relation (however exotic or interesting) to the preceding harmony necessarily makes it structurally important, let us now consider the various harmonic procedures for beginning the development.

I.i New key via an applied dominant or linking phrase

The most common key to which Haydn modulates at the beginning of his late developments is VI, and the agent of this modulation, V/VI, may occur either directly after the double bar, or at the conclusion of an antecedent phrase. The progression V-V/VI across the double bar is Webster's Type 2 remote harmonic juxtaposition. Among Haydn's symphonies through 1774, this progression occurs only in works from 1774, and always at the beginning of the development. Webster makes the following observation:

For Haydn, [these progressions] doubtless represented a solution to what must have been becoming an increasingly urgent compositional problem: to find new ways of beginning the development section, other than the conventional restatement of the main theme in the dominant.⁵

By the late period, the use of V/VI at the beginning of the development had itself become conventional.

Table 2.1 lists first-movement developments (from 1787 on) either beginning on V/VI or whose first phrase concludes on V/VI. The term “phrase” here is broadly defined as a continuous passage ranging from two to as many as sixteen measures, at the end of which the development’s first important half cadence occurs.⁶ More specific information is indicated in the remaining columns of Table 2.1: (1) how soon V/VI occurs after the double bar; (2) what chord follows V/VI; and (3) in cases where V/VI resolves to VI, whether VI is a structural chord. Two stylistic tendencies can be inferred from the table. First, an immediate motion to V/VI across the double bar is more characteristic of symphonies than of other genres. Secondly, V/VI resolves to the major form of VI exclusively in E $\flat$ -major movements--and frequently enough to imply that Haydn deliberately associated that harmonic move with E $\flat$. In only one of those movements, however, Symphony No. 99, is VI $\sharp$ (C major) prolonged as a structural chord (it is retained as C minor in m. 110).

In some cases, V/VI resolves not to VI, but rather cadences deceptively, as in Symphony No. 85 (m. 114) and 98 (m. 141), and the Quartet Op. 50 No. 6 (m. 58). As

⁵ Webster, p. 136. Webster further notes (p. 137) that “Haydn always relates his initial remote sonority to subsequent features, usually by means of further surprises”

⁶ V/VI may arrive before the last measure of the initial phrase. For example, in the development of the Piano Sonata in E $\flat$, Hob.XVI:49, V/VI arrives in m. 76 and is prolonged through m. 80. This passage is discussed on p. 55; see Example 2.5.

Table 2.1 Late developments by Haydn that begin with V/VI (or whose first phrase ends on V/VI)

Work (first movement)	How soon after double bar does V/VI occur?	What chord follows V/VI?	If VI, is it structural?
Symphonies:			
No. 85 (B $\flat$)	immediately	VI/VI	
No. 91 (E $\flat$)	8 measures ⁷	V $\sharp$	No
No. 92 (G)	6 measures	VII $^{\circ 7}$ /II (resolution to VI is delayed until m. 110)	Yes
No. 96 (D)	immediately	VI	No
No. 98 (B $\flat$)	immediately	VI/VI	
No. 99 (E $\flat$)	immediately	V $\sharp$	Yes
No. 104 (D)	immediately	VI	No (but VI in m. 179 is structural)
Quartets:			
Op. 50 No. 1 (B $\flat$)	immediately	V $\sharp$ /II (elision)	No (but VI in m. 103 is structural)
Op. 50 No. 3 (E $\flat$)	4 measures	V $\sharp$	No
Op. 50 No. 6 (D)	2 measures	VI/VI	
Op. 64 No. 4 (G)	2 measures	VI	No
Op. 76 No. 1 (G)	6 measures	VI	Yes
Op. 76 No. 3 (C)	2 measures	VI	No
Op. 76 No. 4 (B $\flat$)	7 measures	VI	Yes
Piano Sonatas:			
Hob.XVI:49 (E $\flat$)	12 measures	VI	Yes
Hob.XVI:52 (E $\flat$)	2 measures	V $\sharp$	No
Piano Trios:			
Hob.XV:11 (E $\flat$)	4 measures	V $\sharp$	No
Hob.XV:28 (E)	immediately	VI	Yes

⁷ A passing V/VI occurs already in m. 122, the third measure of the development. This is less significant than the V/VI that arrives in m. 127.

Table 2.2 Late developments that begin with V/IV or V/II (or whose first phrase ends on V/IV or V/II)

Work (first movement)	How soon after double bar does dominant occur?	What chord follows?	Is new tonic structural?
1) Beginning with V/IV			
Symphonies:			
No. 90 (E $\flat$)	7 measures	IV	Yes
No. 94 (G)	immediately	IV	No
Quartets:			
Op. 54 No. 2 (C)	immediately	IV	Yes
Op. 64 No. 3 (B $\flat$)	immediately	IV	No
Op. 64 No. 5 (D)	immediately	IV	No
Op. 71 No. 1 (B $\flat$)	7 measures	IV	Yes
2) Beginning with V/II			
Symphonies:			
No. 93 (D)	immediately	II	Yes
No. 102 (B $\flat$)	immediately	IV (Type 1 juxtaposition)	No (C minor arrives in 154, 44 measures into development, but no structural II until m. 185; see p. 68)
No. 103 (E $\flat$)	7 measures	IV (Type 1 juxtaposition)	No (II arrives in m. 130, 36 measures into development)
Piano Trios:			
Hob.XV:14 (A $\flat$)	6 measures	VI/II (G $\flat$) (Type 3 juxta- position)	No (G $\flat$ becomes V $\flat$ /III)

Example 1.5 shows, the V/VI (D major) in No. 98 is a neighbor chord connecting V (F major) at the end of the exposition to the E $\flat$ -major chord in m. 141. Even though the initial V/VI does not cadence in VI, it hints at the development's central harmonic goal, VI, which

arrives in m. 195. This is one of several late developments in which an important harmonic goal is foreshadowed near the beginning by either a tonicization of the same chord, or, as in this case, by a statement of its dominant, but without a cadence in the implied key. Other examples of such foreshadowing will be noted presently. Three of the developments listed in Table 2.1 contain an elided resolution of V/VI to V/II (or its equivalent, VII^o/II) rather than VI. In Symphony No. 92, V/VI progresses to VII^o/II in m. 91, thus initiating a parenthesis delaying the large-scale resolution to VI until m. 110 (for further discussion, see section II.iii below).

Table 2.2 (above) lists instances of two other dominants (V/IV and V/II) that initiate developments, one of which I shall discuss in some detail. The first phrase of the development of the Piano Trio in A $\flat$, Hob.XV:14, shown in Example 2.1, begins on V/VI, but leads to a more important half cadence on V/II. Example 2.2 shows this passage at two levels of reduction: (a) shows V/VI arising on a middleground level out of a 5-6-5 motion connecting V and V/II; (b) shows how the passing harmonies in mm. 86-7 mediate between V/VI and V/II (parallel fifths in this graph are eliminated on the foreground). The harmony that follows V/II in m. 97, G $\flat$ major, creates a deceptive cadence (a Type 3 juxtaposition). From the point of view of design, G $\flat$ is detached from F by the rest in mm. 95-6 and by thematic contrast; but, from the point of view of structure, G $\flat$ completes a rising third-progression in the bass (E $\flat$ -F-G $\flat$). Here, as in much of Haydn's music, surface discontinuity belies the underlying structural continuity.

Lii Continuation of V across the double bar before moving to new key

Among those developments that begin with a linking phrase, rather than with an immediate motion to a dominant of a new key, there are a few that begin in the dominant, thus sustaining the concluding harmony of the exposition across the double bar. In such cases, the sense of a formal division between exposition and development is marked by thematic design rather than by an immediate change of harmony. Nevertheless, the dominant rarely persists as a local tonic more than a few measures into the development. The tonicized V may turn into V⁷ very soon and then cadence briefly on a non-structural tonic.⁸ Before long, a new key is usually suggested or clinched. The beginning of the development of Op. 71 No. 1, shown in Example 2.3, clearly illustrates these features: the main theme appears in the dominant (F major), but passes through a non-structural I⁶ already three measures after the double bar (m. 72). The first stable key of the development is E $\flat$ (IV), which arrives in m. 77.

A similar, but more complex, process unfolds in the first part of the development of Symphony No. 103 ("Drum Roll"), shown in Example 2.4. As in Op. 71 No. 1, the development begins in the dominant key with material based on the main theme, and passes through the tonic into the keys of A $\flat$ (IV) and F minor (II). The first important harmonic goal, V/II, is reached in m. 101 (and implicitly sustained until m. 104).⁹ But this dominant does not resolve to II; instead, the main theme appears in the key of A $\flat$ in m. 104 (cf.

⁸ If the exposition ends with V⁷, only rarely will that harmony continue into the development. In Symphony No. 88, the V⁷ at the end of the exposition implicitly becomes V⁹ through the addition of a minor ninth after the double bar. But rather than cadencing in the tonic G, Haydn subsequently reharmonizes the unsupported seventh and ninth (C and E $\flat$) in the key of A $\flat$.

⁹ The goal is hinted at already in m. 99, but is not settled on until m. 101.

Symphony No. 102, listed in Table 2.2). While this A $\flat$ does not function as a primary goal comparable to the IV in Op. 71 No. 1, it is nonetheless analogous to the A $\flat$ in the quartet, since it coincides with a more literal statement of the main theme than that with which the development begins. But the arrival on A $\flat$ is accomplished through a remote harmonic juxtaposition--through the back door, as it were--rather than directly, as in Op. 71 No. 1. As in Symphony No. 102, the V/II in the "Drum Roll" that fails to cadence on II at the beginning of the development foreshadows a later arrival on II (see m. 130).

The development of the Piano Sonata in E $\flat$, Hob.XVI:49 begins in the key of V with a 16-measure passage based on the right-hand figuration in mm. 62-3 (see Example 2.5). This initial phrase passes through E $\flat$ and F minor before reaching its goal, V/VI, in m. 76.¹⁰

Sometimes V is converted from major to minor across the double bar, so that a balance is struck between key continuity and modal contrast. The contrast can serve both a formal function--to indicate that the development is under way--and a structural one--to provide a pivot for modulations on the flat side of the harmonic spectrum. The development of Symphony No. 89 in F, for example, begins with a four-measure phrase in C minor (V $\flat$), which ends with a half cadence followed by a fermata. The G-major chord is then answered by the main theme in E $\flat$ (yielding a Type 1 juxtaposition), which can be understood as $\flat$ III/V (not $\flat$ VII of F).¹¹

In the Piano Sonata in C, Hob.XVI:50, a change from G major to G minor across the double bar prepares a modulation to F major in m. 60 (see Example 2.6). An analogue

¹⁰ For other first movements with developments beginning on V, see Op. 50 Nos. 2 and 5 and the Piano Sonata in A $\flat$, Hob.XVI:43. See also Mozart, K. 332, 333, 428, and 458.

¹¹ See the graph of the development in Example 1.10, and the discussion on p. 44 above.

to this modal shift occurs in m. 66 with the change to F minor, which prepares the subsequent modulation to A $\flat$ ($\flat$ VI) in m. 73. The large-scale motion from G to A $\flat$ is graphed at two levels in Example 2.7. Level (a) shows the underlying 5- $\flat$ 6-5 progression over the bass G-A $\flat$; at level (b) the bass descends G-F-E $\flat$ before progressing to A $\flat$.¹²

I.iii Immediate new tonic

Haydn occasionally begins the development by immediately asserting a new tonic, without any mediating dominant. In the late works, three such unmediated tonics occur: $\flat$ III, $\flat$ III/V, and III $\sharp$ (the last two only once). In relation to the V at the end of the exposition, these tonics create remote harmonic juxtapositions. The first of these, V $\rightarrow$ III, requires some elucidation.

The progression V $\rightarrow$ III involves root motion down a major third, as in Webster's Type 1 (where the root progression is III $\sharp$ -I).¹³ Yet V $\rightarrow$ III has a significantly different meaning from III $\sharp$ -I. As in any remote harmonic juxtaposition, one of the chords is more stable than the other. In the progression V $\rightarrow$ III across the double bar, the more stable chord (the tonicized V) precedes the less stable one. In the progression III $\sharp$ -I, however, the more stable sonority (I) follows the less stable one (III $\sharp$). Since the progression V $\rightarrow$ III heightens

¹² The entire development is graphed in Willner, "Chromaticism and the Mediant," p. 87. The A $\flat$, though locally functioning as $\flat$ VI, is embedded within a large-scale motion to III $\sharp$ (m. 89). For other developments that begin in the minor dominant, see the Piano Trios in E $\flat$ (Hob.XV:10), B $\flat$ (Hob.XV:20) and D (Hob.XV:24). An example by Mozart is the Quartet in B $\flat$, K. 589.

¹³ To my knowledge, only the late works mentioned here exhibit Type 1 at the beginning of the development; none of the works cited by Webster contains Type 1 at the beginning of the development. See Haydn's *"Farewell" Symphony*, p. 135.

the sense of uncertainty, it is suitable for beginning a development. The progression $\text{III}\sharp\text{-I}$ has the contrary effect of release or “restabilization,” and is thus effective at the boundary between the development and recapitulation. (I discuss examples of the latter on pp. 83-5.)

Four of Haydn’s late developments (as well as one from 1784) begin in $\flat\text{III}$. Three of these begin with relatively complete statements of the main theme, which is subsequently presented in fragmented or modified form in other keys: Symphony No. 97 and the Quartets Op. 74 No. 1 and Op. 54 No. 3. The other two developments begin with the closing theme (or part thereof) in $\flat\text{III}$: Symphony No. 100, and the Piano Sonata in $\text{B}\flat$, Hob.XVI:41 (composed in 1784). In the latter movement, “ $\flat\text{III}$ ” lasts for just two measures, and functions as a passing-neighboring chord between V and IV. The structural function of $\flat\text{III}$ in Symphonies 97 and 100 and in Op. 74 No. 1 relates to the use of augmented sixth chords, and will therefore be discussed in detail in Chapter 3.

The progression $\text{V}\rightarrow\text{III}/\text{V}$ occurs directly across the double bar in only one movement, the Finale of Symphony No. 98. This progression ($\text{F-A}\flat$) constitutes a fourth type of remote harmonic juxtaposition (not described by Webster). The development’s opening harmonic region, $\text{A}\flat$, though locally a tonic, turns out to be the dominant of $\text{D}\flat$, which is $\flat\text{VI}$ of the exposition’s concluding F.¹⁴

The only development that begins in the key of “ $\text{III}\sharp$ ” (as opposed to V/VI) is that of Op. 74 No. 2. As Example 2.8 illustrates, the modulation from C major to A major

¹⁴ For analyses of the entire development see Willner, “Chromaticism and the Mediant,” pp. 89-98, and Wheelock, *Haydn’s Ingenious Jesting with Art*, pp. 186-8.

involves an enharmonic reinterpretation of the first ending of the exposition, in which D $\flat$ and E fill in a rising fourth from C in m. 98 to the F (not shown) at the repeat of the exposition. The gap between D $\flat$ and E represents a tonal dilemma that is resolved at the conclusion of the development. The second ending (i.e., the beginning of the development) echoes the first, except that D $\flat$ is respelled as C $\sharp$, and E is followed by A instead of F. (Without following the score, a listener would only perceive the reinterpretation of D $\flat$ as C $\sharp$ after hearing A.) Following C, the arpeggio C $\sharp$ -E-A might suggest, by itself, a possible continuation from C $\sharp$ to D. But this expectation is counteracted by the tonicization of A major, and then of its dominant, E, in mm. 101-111. Although this A major does not function structurally beyond the foreground, it is a harbinger of an important goal of the development, namely the V/VI that arrives in m. 164.¹⁵ The C $\sharp$ in that A-major chord represents, on the deep middleground, a passing tone between C at the end of the exposition and D in m. 173. The rising unison line D-E-F in mm. 173-5 (shown in Example 2.9) ushers in the recapitulation in a way that not only echoes the first and second endings of the exposition, but also fills the gap between D $\flat$ /C $\sharp$ and E.

Yet another possible key (or harmony) in which to begin the development is the tonic. Jack Adrian's valuable research on returns to the tonic at the beginning of developments indicates that, in the vast majority of cases, such tonics are only apparent (i.e., non-structural). Very often "I" really means V/IV. Interestingly, of the five movements Adrian identifies as having a structural tonic at this formal juncture, one is by

¹⁵ The context for this goal is shown in Example 1.9, a middleground graph of this development.

Haydn (the first movement of the Piano Sonata in D, Hob.XVI:51) and the remainder are by Brahms.¹⁶

One subcategory of the apparent tonic is the use, in major-mode movements, of the parallel tonic minor ($\flat$) at the beginning of the development. Examples by Haydn are the Quartets Op. 54 No. 1 and Op. 71 No. 3, and Symphony No. 87. The converse of this is the use of the parallel tonic major ($\sharp$) in minor-mode movements; but whereas $\flat$ cannot act as V/IV, $\sharp$ always functions as V/IV. This phenomenon occurs in the Piano Trio in $F\sharp$ minor, Hob.XV:26 (ca. 1794) and in two works written prior to 1787: Symphony No. 83 and the Piano Sonata in E minor, Hob.XVI:34 (1784).¹⁷

Although the unmediated keys of $\flat$ III, $\flat$ III/V, III $\sharp$, I, and $\flat$ are never of a high structural order when used at the beginning of a development (with the exception of the Piano Sonata in D, Hob.XVI:51), they often have rich tonal or motivic associations with earlier and subsequent events in the movement. This relates to an important general principle of Haydn's late developments: while the initial harmony, more often than not, articulates the formal boundary in a dramatic way (e.g., through a remote harmonic juxtaposition), and often relates associatively to later events, it rarely plays a structural role beyond the foreground level. Similarly, as noted above, it is only in a minority of cases that

¹⁶ See two articles by Jack Adrian: "The Ternary-Sonata Form," *Journal of Music Theory* 34 (1990): 57-80; "The Function of the Apparent Tonic at the Beginning of Development Sections," *Intégral* 5 (1991): 1-53. Ernst Oster first identified development sections beginning on a structural I (including the Haydn sonata) in a footnote to Schenker's *Free Composition*, p. 140.

¹⁷ Another example is the first movement of Beethoven's Op. 10 No. 1. See Adrian, "The Function of the Apparent Tonic," pp. 35-8. A related case is the opening phase of the development of Symphony No. 95 in C minor, which leads to a half-cadence on a C-major chord. Although this chord has the potential to be V/IV, it is followed rather by an $A\flat$ -major chord that acts as IV of $E\flat$ within a prolongation of III, which is retained in m. 98.

the first new key of the development--in whatever way it is introduced--represents a structural harmony in the deep middleground plan.

II. The middle of the development

In this section I shall consider four kinds of harmonic procedure that often occur within the development: remote harmonic juxtapositions (similar to the ones that occur across the double bar), false recapitulations (as well as immediate reprises and apparent tonics), parenthetical passages, and the use of the minor dominant prior to (or, sometimes, in anticipation of) the retransitional V.

II.i Remote harmonic juxtapositions

A relatively frequent juxtaposition in Haydn's late developments is Type 1 (V→III, I→VI, or III♯-I, depending on the context). The second chord generally sounds like a tonic, analogous to the recapitulatory tonic in Plan IX (cf. Table 1.1, p. 28). This local tonic is usually short-lived, and, even if it persists for several measures, eventually gives way to a more important goal on the middleground.

In Op. 76 No. 2, the main goal before the retransitional V⁷ is an E-major chord (II♯ or V/V), prolonged in mm. 82-92 (Example 2.10). This E-major chord is followed in m. 93 by a C-major chord (♯VI of E major), which is treated locally as a tonic until it progresses, via a G-minor ♯ chord, to V⁷ in m. 98. In relation to A (V), the earlier C-major harmony is heard retrospectively as its upper third (♯VII).¹⁸

¹⁸ On VII as preparation for V, see Schenker, *Free Composition*, pp. 89-90 (Fig. 111).

The Quartet Op. 64 No. 3 (in B $\flat$) and Symphony No. 89 (in F) are strikingly similar in their use of Type 1 (see the graphs in Examples 1.6 [mm. 77-8] and 1.10 [mm. 62-3]). In both developments, the first phrase leads to a half cadence in the dominant minor, followed (after a pause) by a descent of a major third to $\flat$ III/V, which is treated as a local tonic.¹⁹

Sometimes a dominant chord will appear twice in a development, followed first by a Type 1 juxtaposition, and later by its expected resolution to tonic. This situation was noted above in Symphony No. 103 (see Example 2.4). A similar pattern occurs in Symphony No. 102, but with additional layers of meaning. Example 2.11 illustrates a harmonic detour in the second group of the exposition. The passage begins with a six-measure antecedent-like phrase (mm. 81-6) in D minor (VI of F major) that ends with a half cadence. The consequent (mm. 87-92) leads to a perfect authentic cadence in F major by way of a descending-fifths progression. The development begins with a transposed statement of the material in mm. 81-6 in C minor (mm. 111-16, shown in Example 2.12). What follows is not the descending-fifths progression that occurs in the exposition; instead, the key of E $\flat$ is affirmed in m. 117, immediately after V of C minor (yielding a Type 1 juxtaposition). There is thus an implicit elision of the root progression C-F-B $\flat$ (V/II-II-V of E $\flat$), which would have linked V of C minor and E $\flat$. Although the juxtaposition of the G and E $\flat$ chords is consistent with the events in the exposition (the elision notwithstanding), it nonetheless creates the effect of avoiding a cadence in C minor. When V of C minor returns in m. 152, the promise that was denied earlier is fulfilled by a cadence in m. 154. (For a detailed analysis of this development, see pp. 144-8.) Thus, in both Symphonies Nos. 102

¹⁹ For further remarks on these developments, see pp. 101-2.

and 103, a potential cadence on II early in the development is thwarted by a remote harmonic juxtaposition, but II later manifests itself as an important middleground goal.²⁰

In the foregoing examples, the Type 1 juxtapositions occur on or near the foreground. In at least one late development, however--the Quartet in G, Op. 77 No. 1--the two juxtaposed chords operate on a deep middleground level. The central goal of the development is a C♯-major chord (see Example 2.13, mm. 101-4), which functions as ♯IV♯, a chromatic lower neighbor to V (cf. Plan IIb from Example 1.1). The A-major chord that follows in m. 105 yields a Type 1 juxtaposition. But, at a deeper level, A major (prolonged until m. 115) is part of a 5-6-5 contrapuntal progression over C♯-C♯-D. In this case, the remote harmonic juxtaposition is the turning point in the development, where ♯IV♯--what Leonard Ratner would call the "point of furthest remove" in the harmonic plan--yields to V/V, which in turn leads to the retransitional dominant.²¹ (For further analysis see pp. 108-9 and the graph in Example 3.20.)

As noted in section I.i, Type 2 juxtapositions (V-V/VI) occur frequently across the double bar; yet they are infrequent within the development. Indeed, I know of only one example from the late works: the great Sonata in E♭, Hob.XVI:52. In m. 52, there is a pause on a G-major chord (V/VI); this is followed by a statement of the second (horn-call) theme in E major. The surprising effect of this juxtaposition stems in part from its association with the beginning of the development, where a half-cadence on V/VI (marked by an augmented sixth and a fermata) is followed not by C minor, but by C major,

²⁰ There is a second Type 1 juxtaposition in Symphony No. 102, mm. 131-2: C major (V/V) is followed by A♭ (♭III/V).

²¹ Leonard Ratner, *Classic Music: Expression, Form, and Style* (New York: Schirmer, 1980), pp. 226-7. Although Ratner does not analyze Op. 77 No. 1, his term applies well to the C♯-major chord in this piece.

articulated by the second theme. Since it would be jarring to present this second theme in minor (and indeed, it occurs only in major keys), the modal shift here is demanded by the theme.

Type 3 juxtapositions are like deceptive cadences (V-VI in minor), but there must be a decisive pause between the two chords to create a sense of juxtaposition. And a new theme usually enters on the second harmony (which thus sounds like a new key). We have already observed this in the Trio in A $\flat$, Hob.XV:14 (see Example 2.1, m. 97). In addition, three of the works listed in Table 2.1 (p. 51) contain this progression in the key of VI (Symphonies Nos. 85 and 98, and the Quartet Op. 50 No. 6; the last example is not a juxtaposition, however). Another example of Type 3, from Symphony No. 96, incorporates a false recapitulation and will therefore be discussed in the next section.

Thus concludes our survey of remote harmonic juxtapositions *within* the development--phenomena which are essentially harmonic, not being tied to any particular thematic treatment, though the effect of the juxtaposition may be enhanced by the themes which elaborate the harmonies (as in the E $\flat$ Sonata). We turn now to more specifically thematic issues--false recapitulations and related procedures--which nonetheless also relate to harmonic structure.

II.ii False recapitulations, immediate reprises, and apparent tonics

The term "false recapitulation" is widely used to denote a restatement of the opening theme anywhere in the development except at or near the beginning, a restatement which could be mistaken for the real recapitulation. Although false recapitulations usually occur in

the tonic key, they occasionally occur in other keys.²² An “immediate reprise” differs from a false recapitulation in that it always occurs in the tonic, but too early in the development to be mistaken for the recapitulation.²³ Furthermore, the latter phenomenon was so conventional prior to the mid-1770s that it did not upset the educated listener’s expectations. From a rhetorical point of view, the false recapitulation may convey surprise or irony; the immediate reprise does not.²⁴

There is a more general category to which false recapitulations (in the tonic) and immediate reprises belong, namely, the apparent tonic. As a structural category, it is not restricted by the thematic criteria that apply to false recapitulations and immediate reprises. As we have seen, apparent tonics occur not infrequently at the beginning of the development. But they also occur in the forms of immediate reprises and false recapitulations, or in the midst of the development in conjunction with some other thematic material than the main theme.

The immediate reprise occurs in only one late instrumental work (to my knowledge): Op. 76 No. 3 (m. 51, 7 measures into the development). The brevity of the tonic and the continuity of the music leaves no doubt that the tonic is non-structural. (A borderline instance is to be found in Op. 64 No. 6, m. 61; but the texture is so unlike that of the opening that it could scarcely be heard as a “reprise” of any kind.) A different situation arises in Symphony No. 91 (see Example 2.14). In mm. 146-51, the opening Allegro material from mm. 21-6 returns in the tonic almost unaltered—except for the addition of a counterpoint in the winds. This reprise is too late (27 measures into the development) to count as an immediate reprise; compare mm. 128-35, where there is a kind

²² At least one author restricts false recapitulations to the tonic key; see Bonds, “Haydn’s False Recapitulations.”

²³ “Immediate reprise” and related terms were discussed on p. 9-10.

²⁴ For another view of these issues, see Peter A. Hoyt, “The ‘False Recapitulation’ and the Conventions of Sonata Form” (Ph.D. diss., University of Pennsylvania, 1996).

of immediate reprise, but in the “wrong” key of C major. In m. 152, the expected I $\sharp$ chord (from m. 27) is altered to V $\sharp$ /IV--the most frequent function of an apparent tonic within the development. The initial “tonic” guise of this prolongation of E $\flat$ is simply a foreground attribute, underlined by its coincidence with the opening theme; but, all along, “I” here really means V/IV.²⁵

An occurrence of the main theme in the tonic does not necessarily qualify as a false recapitulation or immediate reprise. A case in point is the fleeting tonic that appears in the middle of the development of Symphony No. 97, at m. 143 (see Example 2.15). The sequence leading up to this tonic is characteristic of developmental writing, but not of a retransition. Several aspects of m. 143 set it apart from the opening: the resolution to E (local $\hat{3}$) in the top line; the instrumentation (clearly unlike that in the opening and later statements of the main theme); the counterpointing of the main theme by a rising scale, and, most importantly, the way C $\sharp$ usurps C in the bass almost immediately afterwards (m. 145).

Symphony No. 103 contains two apparent tonics, both of which arise unexpectedly.²⁶ The first is a special kind of reprise of the opening Adagio, but at the Allegro tempo, and in 6/8 meter (see Example 2.16). A half cadence on V/VI in mm. 109-12 is followed first by a pause, and then by the accelerated reprise of the Adagio in E $\flat$. This “tonic” (attained in m. 114, not yet in m. 112) turns out to be part of a large-scale arpeggiation, filled in by step, from B $\flat$ to F (m. 130). Later in the development, at m. 140, another apparent tonic arises in an unexpected way (see Example 2.17). A dominant

²⁵ Bonds categorizes mm. 146-51 as a false recapitulation (not a precursory--i.e., immediate--recapitulation). He makes no reference to this apparent tonic's role as an applied dominant of IV. See “Haydn's False Recapitulations,” pp. 351-5.

²⁶ For further discussion of this symphony, see Chapter 5.

seventh on A $\flat$ in mm. 132-7 suggests an imminent cadence in D $\flat$. But this dominant is transformed into a diminished seventh on A $\sharp$, which leads to V of E $\flat$ and a subsequent cadence in E $\flat$. This “tonic”, like the one in mm. 114-16, is a passing event within a larger motion from F minor (II) of m. 131 to D $\flat$ ($\flat$ VI of II), which is reached in m. 144. Both apparent tonics in this development are disruptive, contradicting the expectations set up by dominants of C minor and D $\flat$, respectively, and acting as temporary goals within larger passing motions.

Other apparent tonics in late Haydn occur in Symphony No. 93 (m. 122, within a prolongation of E minor), Symphony No. 95/IV (mm. 87-94, functioning as V/IV; IV arrives in m. 95), and Op. 74 No. 2 (m. 125). The latter is shown in Example 2.18. The half cadence in F that follows this “tonic” in m. 127 (reiterated in mm. 128-9) marks the end of the first phase of the development, and retains the C-major chord with which the exposition concluded. The F-major chord can be understood as part of a $\frac{3}{2}$ - $\frac{4}{2}$ - $\frac{3}{2}$ motion over the prolonged bass C (V). (For a graph of this development, see Example 1.9.)

Haydn’s false recapitulations occur in three keys besides the tonic: IV, III $\sharp$, and $\flat$ III. Among the late works, there are (as far as I know) three instances of subdominant false recapitulations. The first, shown in Example 2.19, is from Symphony No. 96. An F $\sharp$ -major chord arrives in m. 123 and is prolonged until m. 129. It sounds potentially like V/VI, but does not cadence in VI. Instead, it is followed by two bars of silence and then a statement of the main theme in G major (m. 132). As a harmonic progression, the motion from F $\sharp$ to G initially sounds like a deceptive cadence in B minor (Type 3 juxtaposition in Webster’s classification). But the sense of B as an implicit center is weakened by the tonicization of G major, with its melodic emphasis on C $\sharp$ (as opposed to C $\flat$, indigenous to

B minor). The foreground effect is disjunctive: one hears G major when, if anything, one might expect B minor; and already the opening theme arrives, which usually would be withheld until the return of the tonic. Yet the middleground progression is coherent: the F $\sharp$ -major and G-major chords function as III $\sharp$ and IV of D (passing chords within a bass ascent from II to V, as in Plan Vb).

The subdominant false recapitulation in Op. 71 No. 3 has a different structural function from that in Symphony No. 96. Example 2.20a is the score of entire development; 2.20b and 2.20c are graphs of two middleground levels of the development. The key of this false recapitulation (A $\flat$, in m. 150) does not represent a harmony of the same order as the IV in Symphony No. 96. Rather, it functions as a passing chord within a motion from V to V/VI (see Example 2.20c). The implicit harmonic function of A $\flat$ major here is more aptly construed as VI/VI than as IV (hence the label “IV” at m. 150), since it follows a tonicized VI, and prepares an augmented sixth chord on A $\flat$ that resolves to V/VI in m. 171. The subsequent arrival on VI in m. 173 represents the main harmonic goal of the development. The earlier tonicized VI (mm. 143–49) is of a lower structural order, and serves to foreshadow that goal.

The Piano Trio in E $\flat$, Hob.XV:22 (1795), contains what might be termed a “subdominant immediate reprise” in m. 104, just 18 measures into the development. The initial harmony forms a Type 1 juxtaposition with the C-major chord that precedes it. Measures 104–106 are an exact transposition up a fourth of mm. 1–3; but this is followed by a passage that develops material from the closing theme (mm. 64 ff.).²⁷

²⁷ Two pre-1787 works with subdominant false recapitulations are Op. 20 No. 4 and Op. 33 No. 4.

A more striking choice of key for a false recapitulation than IV is the major form of II (labelled II[♯] in flat keys), which occurs in two late Haydn developments: Symphony No. 102 (m. 185) and the Piano Trio in E[♭], Hob. XV:11 (m. 121). The only earlier example by Haydn, as far as I am aware, is Symphony No. 84; see also Beethoven, Piano Sonata Op. 2 No. 3 (mm. 109-12). Although II[♯] is functionally more remote from the tonic than IV, it is easier to mistake for the tonic because of its proximity in pitch. Unlike the false recapitulations referred to above, those on II[♯] are strongly prepared by V/II.

Example 2.21 illustrates mm. 176-88 from Symphony No. 102, beginning with a dominant preparation for C minor, and then presenting a false recapitulation (m. 185) in C *major*. Several aspects of this passage create a surprising, even distancing, effect comparable to that of the false recapitulation in Symphony No. 96: the contrast between minor and major; the suspenseful pause in m. 184; and the contrasts of texture and dynamics (not to mention the thematic contrast). The false recapitulation marks the arrival of II, the main harmony embellishing V on the middleground. (An earlier C-minor chord in m. 154, noted on p. 61, is of less structural significance.) Although II is initially heard as a major chord (II[♯]), its diatonic quality (minor) is restored in m. 192. The latter “correction” of the mode is underscored by a resumption of the tutti texture and forte dynamics of the passage immediately preceding m. 185.²⁸

There are two works with a false recapitulation in the key of ♭III: the Piano Trio in A[♭], Hob. XV:14 (from m. 117) and the Quartet Op. 64 No. 6 (from m. 84). In the Trio, Haydn respells ♭III (C[♭] major) as B major, and a key signature of five sharps is used until the recapitulation. In mm. 117-31, the first 15 measures of the exposition are presented in

²⁸ I analyze this movement, focusing on the development, in Chapter 4, pp. 137-50.

B major with almost no variation, except that the violin and cello are tacit in the first 6-measure phrase. This strategic omission of parts underscores the tonal “falseness” of this otherwise literal return. In Op. 64 No. 6, the structural function of $\flat$ III ($G\flat$) is enharmonically to prepare $F\sharp$, the top voice of an augmented sixth on $A\flat$ in m. 94. The placid, stable quality of $\flat$ III, sounding like a recapitulation, is interrupted in m. 90 by a V^7 on $E\flat$, marked *sf*, the first in a rising sequence in which $A\flat$ minor, $B\flat$ minor, and C minor are tonicized.

The effect of a false recapitulation depends, to a significant degree, on how closely it conforms to the opening theme in key, dynamics, instrumentation, register, texture, and so forth. But, as this brief survey has shown, the context for a false recapitulation is just as important as the event itself.

II.iii Parentheses

One of the basic premises of Schenker’s theory is the idea that the foreground embodies a temporal expansion--or delaying--of the contents of earlier levels. The following statement expresses this idea quite succinctly, although it contains profound and complex implications for the theory as a whole:

The transformation levels have the foreground as final goal, but, as they make their way to it, they also constitute a delaying, a *retardation*.²⁹

Parenthesis is a particular technique of delaying or, more precisely, a type of phrase expansion. Koch was possibly the earliest theorist--and certainly the most important contemporary of Haydn’s--to write about parenthesis (*Parenthese*), which he defines as

²⁹ *Free Composition*, p. 19.

“the insertion of unessential melodic ideas between the segments of a phrase.”³⁰

The most important type of parenthesis in Haydn’s developments occurs between a dominant and its long-range resolution. Example 2.22 illustrates one such parenthesis from Symphony No. 92. An applied dominant to VI is asserted in m. 88, six measures into the development. In mm. 89-90, the addition of a seventh and ninth to the harmony creates a heightened expectation of a resolution to VI. But VI is withheld until the cadence in m. 108 (repeated more conclusively in m. 110). In mm. 91-107, Haydn expands the space between V/VI and VI by a series of inventive manipulations of the main theme, both in combination with the closing theme’s turn motive (mm.95-8) and in a syncopated stretto with its own inversion (mm. 99--107). The series of rapid tonicizations keeps the music in flux--none of the fleeting “tonics” prior to m. 108 sounds like a goal. But the tonicizations of A minor in mm. 99 and 105 help prepare the eventual cadence in E minor.

Symphony No. 104 contains a more tonally adventurous parenthesis near the beginning of the development (see Example 2.23³¹). After an initial tonicization of VI (B minor) in the first two measures of the development, there is a strong motion to V/II, which is prolonged in mm. 137-140. The strong expectation of a cadence in E minor is denied in m. 141, however, by the intrusion of V⁷ of C $\sharp$ minor. Thus begins a parenthetical passage that touches on the keys of C $\sharp$ minor, G $\sharp$ minor, and F $\sharp$ minor before arriving in E major in m. 155. The major quality of the E chord in mm. 155-6 is “corrected” in m. 157 to minor, the diatonic form of II. The compositional motivation for this parenthesis in mm. 141-54

³⁰ “die Einschaltung zufälliger melodischer Theile, die ... zwischen die Glieder eines Satzes ... gesetzt werden ...” Koch, *Versuch*, vol. 3, p. 218; Baker trans., p. 53. William Rothstein provides an excellent account of parenthetical insertions in his book *Phrase Rhythm in Tonal Music* (New York: Schirmer, 1989), pp. 87-93, et passim.

³¹ Measure numbers are counted from the beginning of the Adagio, not from the Allegro, as in the Eulenburg edition (which is thus off by 16 measures throughout the Allegro).

relates both to the immediately preceding events and to a passage in the exposition. In mm. 128-38, the upper-neighbor motive B-C $\sharp$ -B recurs alternately in the bass and top voice. Haydn ingeniously reinterprets the rising semitone B-C $\sharp$ as B-B $\sharp$ in mm. 140-41, in order to reach C $\sharp$ in m. 145.

Example 2.24 shows mm. 102-12 from the exposition, which contains an enharmonic that prepares the listener for the C/B $\sharp$ transformation just described. In this passage--taken from the closing theme--the upper-neighbor motive $\hat{5}-\hat{6}-\hat{5}$ (E-F $\sharp$ -E) occurs in the second violins (mm. 103-7). The semitone E-F is then enharmonically reinterpreted an octave higher in mm. 107-9, where the first violins play E-E $\sharp$ -F $\sharp$ (the F $\sharp$ is tonicized in m. 109). The motion to C $\sharp$ minor in the development relates to this passage not only by tonal analogy (C $\sharp$ being to E as F $\sharp$ is to A), but also by virtue of the return of the thematic material of mm. 104-5 in mm. 130-55.

A somewhat different kind of parenthesis in Symphony No. 103 was described above, in which a local tonic, F minor, is prolonged by way of an elaborate detour to D $\flat$ (mm. 130-52). This parenthesis begins on V⁷ of D $\flat$ whose resolution to D $\flat$ is delayed by a detour to E $\flat$ (an apparent tonic), resulting in an embedding of one parenthesis within a larger one.³²

II.iv Minor V within major-mode developments

We have already observed major-mode movements whose developments begin with the minor V: Symphony No. 89, Symphony No. 99 (Adagio movement), and the Piano Sonata Hob.XVI:50. Whereas, in these works, no harmonies intervene between the

³² For further discussion of this passage, see p. 164. Another unusual parenthesis (in Symphony No. 93) is analyzed on pp. 126-7.

exposition's concluding V and the development's opening V $\flat$, a few other works contain a return to V (as the minor V) midway through the development, or in the retransition. The fact that four late-period first movements with this feature (as well as the Adagio of Symphony No. 99) are in G major suggests that Haydn made deliberate associations among works in that key.

The developments of Symphonies Nos. 88 and 94, though otherwise quite dissimilar, both contain a tonicized D minor (minor V) as an intermediate goal. The one in Symphony No. 88 (m. 133) connects back to the V from the exposition's conclusion, and is retained at the end of the development (m. 173). In Symphony No. 94, however, there is no subsequent return to the major V, since the large-scale goal is III.

In contrast to Nos. 88 and 94, the Quartet Op. 77 No. 1 and Symphony No. 99 in E $\flat$ contain the minor V as a large-scale goal that is converted into V⁷. These retransitions thus incorporate a foreground contrast between the minor and major forms of V.

In addition to the aforementioned uses of the minor V, one may also encounter an *apparent* minor V in the development. For example, in Op. 71 No. 1 (mm. 84-8), F minor really functions as II of IV within a prolongation of IV, and does not represent a return to the structural V established in the exposition. Similarly, in the retransition of Symphony No. 92, the tonicized D minor in mm. 115-17 functions as a passing chord within a motion from VI (E minor) to VII⁶/V (E-G-C $\sharp$), which prepares the V⁷ at the start of the recapitulation.³³

³³ My reading is based on Webster's graph in *Haydn's "Farewell" Symphony*, p. 171.

III. The end of the development: Retransitions and other procedures

Most developments conclude with a passage that prepares the return of the opening material in the tonic key. This passage, conventionally called the retransition, poses a number of problems which have not been adequately addressed in the literature on sonata form. In this section, I shall consider various kinds of retransitions in Haydn's late music, as well as developments that lack retransitions. This discussion will not necessarily apply to retransitions of later sonata forms, which often pose different (and more difficult) analytical questions than those considered here.³⁴

The most valuable research on the topic of the retransition in Classical sonata forms is by Beth Shamgar.³⁵ In her 1981 article, she addresses the question of where the retransition begins by first surveying the ideas of Koch, Portmann, Reicha, Czerny, and Marx, and then comparing their views with what happens in the opening movements of piano sonatas by Haydn, Mozart, and Beethoven. The theoretical views, as Shamgar interprets them, fall into two basic categories:

- (a) c. 1790--The goal of the development consists of a cadence in VI, II, or III, which also serves as the opening of the retransition. The retransition will make a modulatory return to the tonic of the recapitulation.
- (b) c. 1830--No such cadence marks the opening border of the retransition. Since modulatory return has been accomplished by the development, the retransition will probably coincide with dominant preparation.

³⁴ An example of an irregular retransition may be found in the *Siegfried Idyll*, which contains an apparent tonic at the point of recapitulation. See my article "Chord as Motive: The Augmented-Triad Matrix in Wagner's *Siegfried Idyll*," *Music Analysis* 15/1 (March 1996), pp. 61-2. In a number of Brahms's sonata forms the structural dominant is either prolonged past the beginning of the recapitulation (Op. 60, I; Op. 108, IV), or is only reached within the recapitulation or coda (Op. 51 No. 1, I; Op. 90, I). See Smith, "Brahms and Schenker: A Mutual Response to Sonata Form." For a discussion of Schubert's handling of retransitions, see Hur, "Irregular Recapitulation in Schubert."

³⁵ See Shamgar, "The Retransition in the Piano Sonatas of Haydn, Mozart, and Beethoven" (Ph.D. diss., New York University, 1978), and "On Locating the Retransition in Classic Sonata Form," *The Music Review* 42 (1981): 130-43.

Shamgar notes that the majority of Haydn and Mozart's retransitions (at least, in the piano sonatas) correspond to condition (a), while Beethoven's retransitions tend to correspond to condition (b). In addition to the clearly articulated borders described in eighteenth- and nineteenth-century sources, however, Shamgar identifies two further possibilities: elided and continuous borders. An elided border marks both the arrival on an important harmonic goal (e.g., VI) and the beginning of the retransition. In the example of an elided border which Shamgar cites, from the Piano Sonata in E minor, Hob. XVI:34, the implicit criterion for identifying the arrival on V_4 in m. 71 as the start of the retransition is the return of the movement's opening thematic material (albeit with the motive in the left-hand part now in the right, and vice versa).

The retransition need not anticipate the return of the opening thematic material, however, nor does it need to be set off thematically or texturally from the preceding part of the development. Shamgar's "continuous border" is a case in point. In Beethoven's Op. 10 No. 3, cited by Shamgar, the retransition clearly begins with the arrival on V in m. 167, marked by an augmented sixth, even though there is no striking textural or thematic contrast. Shamgar observes that "Beethoven guarantees border continuity by introducing retransitional material prior to the retransition proper," thus distinguishing between the retransition proper and a passage anticipating the retransition.³⁶

Haydn's late sonata forms (first movements) exhibit five different procedures at the end of the development, examples of which are listed in Table 2.3 (pp. 76-7). The most common procedures are retransitions containing the home dominant (or its equivalent, VII)

³⁶ "On Locating the Retransition," p. 137.

either as a goal (type 1), or throughout (type 2). The remaining procedures--which are much less frequent--include preparation for non-tonic harmony (or a non-structural tonic) at the point of recapitulation (type 3); a brief passage that is more aptly described as a link than as a retransition (type 4); and direct motion from a harmony other than V (usually III $\sharp$) to the recapitulatory tonic (type 5).

Type 1, the most frequent type of retransition in Haydn's late sonata forms (and, presumably, in his earlier works, too) begins soon after a cadence on a structurally important harmony such as VI, II, or III (see Shamgar's condition (a) above), or coincides with such a cadence (creating what Shamgar calls an "elided border"). I have chosen to call this type of retransition "incipient," as distinct from type 2, discussed below, because the sense of an imminent return is often not immediately perceptible, but rather gradually emerges during the course of the retransition. From the point of view of design, this type of retransition is perceived as a unit distinct from the preceding bulk of the development, and is generally divisible into two phases: one that leads to the dominant; and another that sustains it (even if only briefly). I shall examine two aspects of the first phase that contribute to the expectation of a return: harmony and thematic design.

III.i Incipient retransitions, first phase: Harmonic aspects

From a purely harmonic point of view, the surest sign of an imminent recapitulation is an arrival on V. Therefore, if there is any uncertainty during the initial phase of the retransition about where the music is leading to (as is often the case), the arrival of the structural V removes it, making the recapitulation seem inevitable.

Table 2.3 Retransitions and other procedures at the end of the development

Type 1: Incipient retransitions beginning on VI, II, III, etc. (the initial harmony of the retransition is indicated after the measure numbers; an asterisk indicates that the retransition thematically or motivically anticipates the opening theme)

- Symphonies:** 88 (mm. 165-78) VI; V reached in m. 173 (bass only), clinched in m. 175
 89* (mm. 105-10) $\flat$ II⁶/VI; V reached in m. 110
 91 (mm. 180-191) V²₃; passing I in mm. 181-3; V reached in m. 185
 93 (mm. 169-81) III¹₂; V⁷ reached in m. 176
 96 (mm. 141-53) II; passing I in mm. 143-6; V reached m. 147
 98 (mm. 195-208) VI; V reached in m. 205
 99 (mm. 120-37) $\flat$ VII; V $\flat$ reached in m. 126, V¹₃ reached in m. 134
 100* (mm. 170-201) VI; passing I in mm. 177-83; V reached in m. 195
 101 (mm. 197-217) VI; V reached in m. 211
 102* (mm. 210-26) IV; passing I in m. 214; V reached in m. 217
 103 (mm. 154-9) V²₃; passing I in mm. 154-5; V reached in m. 157
- Quartets:** Op. 50 No. 1* (mm. 103-8) VI; V⁶ reached in m. 108
 Op. 50 No. 2 (mm. 159-75) VI; passing I in m. 171; V reached in m. 173
 Op. 50 No. 3* (mm. 84-7) II; V reached in m. 87
 Op. 50 No. 4* (mm. 101-115) VII; V reached in m. 112
 Op. 50 No. 5 (mm. 85-101) VI; passing I $\flat$ in m. 93; V reached in m. 95
 Op. 50 No. 6 (mm. 98-114) IV $\flat$; V reached in m. 108
 Op. 54 No. 1 (mm. 80-86) VI; V⁷ reached in m. 84
 Op. 55 No. 1 (mm. 109-112) VI; V⁶ reached in m. 111
 Op. 55 No. 3 (mm. 123-28) VI (elided); V⁷ reached in m. 127
 Op. 64 No. 1 (mm. 84-97) III¹₂; V⁷ reached in m. 93
 Op. 64 No. 2 (mm. 59-67) I (passing); V⁷ reached in m. 66
 Op. 64 No. 4 (mm. 58-60) III; V¹₃ reached in m. 59
 Op. 64 No. 5 (mm. 96-104) VI; passing I (implied) in m. 102; V⁷ reached in m. 104
 Op. 71 No. 1 (mm. 96-112) VI; passing I in m. 105; V reached in m. 106
 Op. 71 No. 2 (mm. 65-70) VI; V⁷ reached in m. 68
 Op. 71 No. 3* (mm. 173-82) VI; V⁷ reached in m. 181
 Op. 74 No. 3* (mm. 114-27) $\flat$ II; V reached in m. 126
 Op. 76 No. 2 (m. 95-8) VII; V⁷ reached in m. 98
 Op. 76 No. 4 (mm. 96-107) VI; V reached in m. 103
 Op. 77 No. 2 (mm. 106-114) V⁶/VI; V¹₃ reached in m. 108
- Sonatas:** Hob.XVI:49 (mm. 109-31) VII⁷/II; V⁷ reached in m. 126
 Hob.XVI:50 (mm. 89-101) III¹₂; V⁷ reached in m. 99
 Hob.XVI:52 (mm. 72-8) $\flat$ VI $\flat$; V⁷ reached in m. 77

Table 2.3 (continued)

Trios: Hob.XV:11 (mm. 136-53) III; V reached in m. 150
 Hob.XV:20 (mm. 55-68) VI; V[§] reached in m. 65
 Hob.XV:21* (mm. 82-91) VI; V⁷ reached in m. 86
 Hob.XV:24 (mm. 109-121) VI; V⁷ reached in m. 117
 Hob.XV:26 (mm. 55-62) V/V; VII[§] reached in m. 61; passing I in m. 60
 Hob.XV:28* (mm. 52-8) VI; V[§] reached in m. 57

Type 2: Dominant retransitions (an asterisk indicates that the retransition begins with a continuous border)

Symphonies: 95* (mm. 108-11) V_b→^h
 97* (mm. 160-66)
 104 (mm. 185-92)
 Quartets: Op. 54 No. 2 (mm. 121-5)
 Op. 74 No. 1 (mm. 90-96)
 Op. 76 No. 1 (mm. 132-9) V arrives m. 131
 Op. 77 No. 1 (mm. 116-27) V^h; V[§] reached in m. 124
 Trios: Hob.XV:14 (mm. 152-63) V arrives m. 149; pre-retrans. from m. 143
 Hob.XV:18 (mm. 122-4)
 Sonatas: Hob.XVI:51* (mm. 73-9)

Type 3: Preparation for non-tonic opening

Symphonies: 92 (mm. 122-4) V/V
 94 (mm. 148-54) VI/III (=apparent I)

Type 4: Link

Symphonies: 90 (mm. 147-52) III[§]; recap. begins on V⁶
 Quartets: Op. 64 No. 3 (mm. 122-4) VI; common-tone preparation of I
 Op. 74 No. 2 (mm. 173-4) unison D-E linking C[§] to F
 Op. 76 No. 3 (mm. 77-8) III; recap. begins on V⁶ (upbeat)
 Piano Trios: Hob.XV:30 (mm. 133-6) tonic pedal in mm. 133-5

Type 5: Direct motion to I from harmony other than V

Symphonies: 93/IV (VII[§]-I)
 94/IV (VII[§]⁴-I)
 95/IV (III[§]-I)
 98/II (III[§]-I)
 99/II (III[§]-I)
 103/IV (III[§]-I⁶; sonata-rondo form: development begins from I, not V)
 104/IV (VII[§]-I)
 Quartets: Op. 54 No. 3 (III[§]-I); Op. 64 No. 6 (III[§]-I)

There is such a variety of harmonic paths from the beginning of the retransition until the arrival on V that it seems meaningless to try to categorize them. But I shall discuss here two characteristic phenomena that occur quite often: a passing (non-structural) tonic chord, and a root progression by descending fifths. (The former occasionally occurs within the context of the latter.) All instances of passing tonic harmony prior to the retransitional dominant are noted in Table 2.3 (see the phrase “passing I in ...” next to the items in question).

In those passages containing a passing tonic, the listener becomes aware of the tonic as a *key* on the foreground before the tonic is re-established as a *structural harmony* at the moment of recapitulation (though not all recapitulatory tonics are structural). A typical example of this situation occurs in Symphony No. 91, mm. 180-91, illustrated in Example 2.25. The beginning of the retransition is articulated at m. 180 in several ways: harmonically, by the introduction of the leading tone $D^\sharp$ as part of V_2^4 ; rhythmically, by the triplet figuration (which continues until m. 190); texturally, by the return of the oboes, bassoons, and horns; and dynamically, by the *forte* marking. The double motion from V to I (V_2^4 -I⁶- V_3^6 -I) in mm. 180-83 is an unfolding of a single harmonic progression at a deeper level. The context for this apparent return to tonic just prior to the actual return is a basic motion from IV (prolonged in mm. 153-79) through its chromaticized $\sharp$ position in m. 184 (locally VII°/V) to V in m. 185 (becoming V^7 in m. 189).

A strikingly similar, yet more complex, passage occurs in Symphony No. 103 (also in E_b), illustrated in Example 2.26. This retransition begins on V_2^4 in m. 154, and continues with the same progression as in Symphony No. 91: V_2^4 -I⁶- V_3^6 -I- VII°/V - V^{8-7} . The start of this retransition is likewise articulated by a change in texture: the entrance of the horns,

trumpets, and timpani completes the tutti ensemble. Yet this retransition differs from that of Symphony No. 91 in two important ways: the harmony that precedes it is II (in mm. 152-3), as opposed to IV; and the opening border is less clearly defined because of the motivic continuity between the sequential passage in mm. 150-52 (which ushers in the retransition) and the retransition itself.³⁷

Another characteristic of numerous retransitions is a root progression by descending fifths (e.g., III-VI-II-V). In some cases, the sequential pattern extends to I (or even to IV) before the final, decisive motion to the structural V occurs. Such is the case in Symphony No. 100, whose unusually lengthy retransition, shown in Example 2.27, divides into roughly three phases (mm. 170-83, 183-95, and 195-201).³⁸ Following a climactic statement of V/VI in mm. 165-69 (not shown), a two-bar idea derived from the main theme is stated on VI in mm. 170-71. This idea, played by solo winds, is answered by a II-V⁷-I progression in the key of V in mm. 172-3. The four-bar unit (mm. 170-73) is then almost literally repeated up a fourth in mm. 174-7. The apparent tonic that arrives in m. 177 is then prolonged until m. 183, at which point a chromatically intensified motion to the structural V gets under way. Once V arrives in m. 195, the textural density and dynamic level decrease, and the bass moves to F♯ supporting V♯. These adjustments, along with the use of solo flute and oboes in the high register in mm. 200-201, create a more dramatic sense of expectation than dominant harmony alone would elicit.

³⁷ An alternative location for the opening border is m. 150, where the sequence leading from D♭ back to F minor begins.

³⁸ This movement is analyzed in Chapter 4, pp. 130-37; for a detailed graph of the development, see Example 4.12.

In Symphony No. 100, the descending-fifths pattern is part of a larger retransitional process. More typically, such a sequence forms a retransition of only a few bars, as in Op. 54 No. 1 (see Example 2.28). Like that of Symphony No. 100, this retransition begins on VI (in m. 80) and reaches a passing I prior to the structural V. In the Quartet, the rhythmic design of the descending-fifths pattern (VI-II-V-I) is complicated by a stretto-like imitative texture in which the cello melody resolves on beat two in each of mm. 81-3; each resolution is reiterated by the first violin on the following downbeats. Once I is reached on the downbeat of m. 84, the sequence is broken and V is approached via II. The arrival on V is anticipated on beat four of m. 84, and is clinched one beat later with the re-entry of the cello.

The pacing of each tonal constituent of a descending-fifths progression can vary, as the passages from Symphony No. 100 and Op. 54 No. 1 show. Our last example of a retransition with this pattern, from the Quartet Op. 71 No. 1 (Example 2.29), differs from the other two in several significant ways. The main harmony elaborating V in this development is IV (as in Plan IIa); see Example 2.30 (m. 78). The retransition begins in m. 96 with a G-minor chord, which may be understood as the upper third of IV (i.e., III/IV), rather than simply as VI of the main key B $\flat$. This G-minor chord is prolonged until m. 100 (much longer than the corresponding initial chord of the retransition in Symphony No. 100 and Op. 54 No. 1), and the bass note G is retained in m. 105 supporting a $\sharp$ chord (IV $^{\sharp}$, or VII $^{\sharp}$ /V on the foreground). The latter chord arises from an underlying 5 $\rightarrow$ 6 motion over G. Within that motion there is a descending-fifths progression (G-C-F-B $\flat$, i.e., III-VI-II-V in E $\flat$), the last three chords of which are unfolded from $\sharp$ position to $\flat$ position (see Example 2.29, mm. 103-5). The F-minor chord in m. 104 sets this sequence apart from most

retransitional sequences that take VI as a point of departure (e.g., in the progression VI-II-V in B $\flat$, V would be an F-major chord). This F-minor chord relates to the one reached in m. 84 (see Example 2.30), which represents II of IV (E $\flat$). The sequence uses an F-minor chord because it occurs within the space of E $\flat$ (IV), not yet within the space of the tonic. The development exhibits an interesting parallelism with the exposition: the progression I-I $^{\flat}$ -II $^{\sharp}$ in the exposition is echoed by the motion from IV via IV $^{\flat}$ to V in the development. Again, the G minor in mm. 96-100, though putatively equivalent to VI of B $\flat$, is really III of E $\flat$; this interpretation permits a more climactic sense of arrival on V in m. 106 than one in which every harmony in the retransition is directly related to B $\flat$.

III.ii Incipient retransitions: Thematic aspects

I have already pointed out how, in Symphonies Nos. 91, 100, and 103, various aspects of design help to articulate the opening border of the retransition. The thematic association in Symphony No. 100 between the retransition and the main theme occurs in several other retransitions (see works marked by an asterisk in Table 2.3, under Type I). When thematic anticipation of the recapitulation occurs, it almost always coincides with the opening of the retransition. There are two exceptions: the Sonata in E $\flat$, Hob.XVI:49, and Symphony No. 102, where the thematic connection occurs after the arrival on V (thus functioning more in the manner of a link).

The placement of this thematic association makes the location of the retransition in Sonata No. 49 somewhat ambiguous: its beginning could be assigned to either m. 109 or m. 125 (see Example 2.31). A conservative choice would be the latter, since it coincides with two strong signals of imminent return: dominant harmony (V ^{7}), and anticipation of the

main theme's initial motive. The music from m. 109, in contrast, begins harmonically remote from I, and gets increasingly unpredictable as it continues. Yet the motivic material in this passage arouses a sense of expectancy not tied to any implication of V as a harmonic goal. Rather, because this material originally appears near the close of the exposition (both delaying and reinforcing closure), its reappearance enables the listener to predict—even on first hearing—that the development is nearly over.³⁹ The emergence of V⁷ shortly after the climactic VII^{♯4}/VI in m. 123 fulfills, largely through harmonic means, an expectation that initially hinges on thematic implications. While the sixteenth-note figure provides important reinforcement of the harmonic signal of imminent return, it is nonetheless subordinate to that harmonic signal. In other words, one could elaborate this V⁷ with other figuration without significantly undermining the expectation of the recapitulation.

III.iii Dominant retransitions

The second type of procedure listed in Table 2.3 (p. 77) is a retransition that coincides with the arrival on (and continued prolongation of) V. This type of retransition may exhibit any of these three features: (1) a continuous border; (2) a change of quality from minor to major within the prolongation of V; and (3) a distinction between a harmonic arrival on V and a strong thematic indication that the retransition has begun.

Three dominant retransitions exhibit a continuous border: Symphonies Nos. 95 and 97, and the Sonata No. 51. The thematic discourse in each development is so homogeneous that no harmonic goal prior to the arrival on V can be singled out as the start of the retransition.

³⁹ Elaine Sisman reads the retransition (as I do) from the pick-up to m. 109. See "Haydn's Solo Keyboard Music," in *Eighteenth-Century Keyboard Music*, ed. Robert L. Marshall (New York: Schirmer, 1994), pp. 295-6.

In minor, the dominant will only be tonicized as a minor chord, and must subsequently be inflected to major in order to resolve effectively to I. This is what happens in Symphony No. 95, whose retransition begins in m. 108 on minor V, quickly altered to major in m. 109. In major, however, it is less common for V to be tonicized as a *minor* chord, and then subsequently altered to its diatonic form (cf. Section II.iv, pp. 71-2). Whenever modal alteration occurs--whether the main tonality of the movement is major or minor--the minor form of V always precedes the major.⁴⁰

III.iv Remaining procedures at the end of the development

The first two types of procedure for ending the development make use of the dominant to prepare the return to tonic at the point of recapitulation. The three remaining types lack such a dominant, and are much less frequent. Two important issues to consider are: (1) the compositional motivations for these unusual procedures; and (2) tonal features they share with the other, more normative, types of endings.

If the opening theme at the start of the recapitulation begins off the tonic, then a retransition that ends on V may be inappropriate. The Allegro spiritoso of Symphony No. 92 begins on V⁷, and the recapitulation is prepared by VII⁶/V. But an opening theme that begins on a dominant is not necessarily prepared by V/V or its equivalent. The allegro themes of Symphony No. 90 and Op. 76 No. 3 both begin on a V⁶ which, unlike the V⁷ in Symphony No. 92, is not structural but is a passing chord between III[♯] and I. These works thus employ a link (type 4 in Table 2.3)--one that is motivated by the theme's introductory (unstable) harmony.

⁴⁰ This applies to the foreground; at a deeper level, minor V may appear within the larger frame of major V prolonged from the exposition until the end of the development.

Other links involve a playful reinterpretation of tones. In Op. 64 No. 3, the interval B $\flat$ -D is introduced as third and fifth of a G-minor chord (VI); shortly after the bass G drops out, the tones are reinterpreted as root and third of I. In Op. 74 No. 2, the end of the development echoes the end of the exposition: the unison bass line C-D $\flat$ -E-F (from the second ending of the exposition to the beginning of the repeat) is transformed into C $\sharp$ -D-E-F (compare Examples 2.8 and 2.9).

Just before the recapitulation of Symphony No. 94/I the harmonic third G-B is reached and reiterated as a goal (see Example 2.32, mm. 150-53). These tones arise in the context of B minor, and could be heard as part of an E-minor chord (note the E from which the bass G is approached). The G is then altered to G $\sharp$ at m. 154, with the onset of the recapitulation. This starts an auxiliary cadential progression leading to a structural downbeat on I in m. 158.⁴¹

Earlier in this chapter we observed Haydn's use of remote harmonic juxtapositions across the double bar and within the development. Haydn also employs two kinds of juxtapositions at the border between development and recapitulation: Webster's type 1 (III $\sharp$ -I) and type 3 (VII $\sharp$ -I).⁴² These progressions are listed in Table 2.3 as Type 5 in my classification of ending procedures for developments. Note that they occur most often in

⁴¹ See L. Poundie Burstein, "The Non-Tonic Opening in Classical and Romantic Music" (Ph.D. diss., City University of New York, 1988), p. 92 (graphs); Burstein discusses the movement on pp. 89-95.

⁴² These phenomena are surveyed in two articles: Heino Schwarting, "Ungewöhnliche Repriseneintritte in Haydns späterer Instrumentalmusik," *Archiv für Musikwissenschaft* 17/2-3 (1960): 168-82; and Jan LaRue, "Bifocal Tonality in Haydn Symphonies," in *Convention in Eighteenth- and Nineteenth-Century Music: Essays in Honor of Leonard G. Ratner*, ed. Wye J. Allanbrook et al. (Stuyvesant, N.Y.: Pendragon Press, 1992), pp. 59-73. Neither Schwarting nor LaRue take large-scale voice leading into account in their interpretations of such progressions.

symphonic finales.

The progression $\text{III}\sharp\text{-I}$ is in all but one case part of a large-scale arpeggiation $\text{V-III}\sharp\text{-I}$ (as in Plan IX). The exception is the finale of Symphony No. 103, whose development takes I as its point of departure.

Although the progression $\text{VII}\sharp\text{-I}$ is the least frequent and perhaps most radical way of connecting the end of the development and the recapitulation, it has one important structural resemblance to the V-I motion: the rising semitone from leading tone to tonic. Indeed, $\text{VII}\sharp$ is occasionally used to prepare the bass of $\text{V}\sharp$ (e.g., in Op. 77 No. 2, and Beethoven, Op. 18 No. 3). In the finale of Symphony No. 94, illustrated in Example 2.33, Haydn connects $\text{VII}\sharp$ (a putative V/III) to I by means of a $\sharp$ -chord on $\text{F}\sharp$, thus anticipating the third and fifth of the tonic chord before the final resolution of $\text{F}\sharp$ to G in the bass.

From the point of view of design, then, there is an immense variety of ways of negotiating the important border between the development and recapitulation, ranging from lengthy retransitions that give the listener ample time to anticipate the return, to abrupt juxtapositions that may catch the listener off guard. But underlying this variety of procedures are consistent and rational principles of voice leading. The element of surprise, so crucial to the wit of Haydn's art, does not require an abandonment of tonal order, but rather plays upon our sensitivity to each ingredient in that complex order.

Throughout this chapter, we have paid greater attention to direct harmonic progressions that characterize the surface of Haydn's music, than to progressions (perceived only at levels beyond the foreground) between harmonies separated by time and sound. One or both of the harmonies contained in such direct progressions may help

articulate the formal design without necessarily participating on the middleground (though they sometimes do so). This is often true of the striking remote juxtapositions Haydn favors at the border between exposition and development.

It appears that rational deceptions (C. P. E. Bach's *vernünftige Betrügereyen*, explained on p. 18)--including remote juxtapositions--are to be found in every development, and indeed contribute to an unpredictability that is almost always greater here than in the exposition or recapitulation. These deceptions can occur anywhere in the development, though they are especially effective at the beginning and end. Haydn evidently employs such progressions more than Mozart and Beethoven in general, and specifically at these formal boundaries (in the late period, at least).

In Chapter 1, we observed that much of the development may be taken up with composing out the path to one or more main harmonies elaborating V. Delaying the arrival of important goals is thus a basic principle of developments. The path can be enriched by two apparently opposing ideas: the foreshadowing of a goal, and the obstructing or concealing of an eventual goal. An early harmonic event in the development, however low-level from the point of view of structure, may hint at a middleground goal that emerges much later. Yet foreshadowing a goal near the beginning--sometimes by the implication or avoidance of a local tonic harmony--can at the same time help complicate or expand the journey to that harmony.

The harmonic and thematic procedures examined in this chapter are by no means the only ones. Thematic development, for instance--a hallmark of Classical developments--would require the space of an entire book to do it justice. Therefore, rather than theorizing about thematic development (or, more generally, thematic design), I discuss it only

occasionally, and mainly in relation to the structural issues that are the focus of this study. But the harmonic issues I have discussed are among the most significant in Haydn's developments. Another phenomenon which would fit logically into this chapter--the augmented sixth chord--is so pervasive and has such a powerful role in Haydn's developments that it requires a chapter of its own, to which we now turn.

CHAPTER 3

AUGMENTED SIXTHS AND RELATED CHROMATIC HARMONY IN DEVELOPMENTS

The important role of augmented sixth chords in Haydn's development sections has not been sufficiently acknowledged in the theoretical literature. The vast majority of Haydn's late developments contain at least one augmented sixth, which frequently marks the turning point or climax of the development, and may be useful in creating ambiguity; sometimes there are as many as three augmented sixths. More than any other chromatic chord, an augmented sixth tends to make its chord of resolution sound like a dominant (i.e., to "dominantize" the following chord).¹ And very often the resolution sounds like a dominant on the foreground without functioning as a dominant beyond the surface (e.g., III♯ may sound at first like V/VI). In addition to its dominantizing capacity, an augmented sixth has the potential to be enharmonically reinterpreted as a dominant seventh, or enharmonically prepared by earlier--often temporally remote--events. The ways in which augmented sixths create tonal ambiguity would be, in C. P. E. Bach's terms, "rational deceptions" (*vernünftige Betrügereyen*).

Sections I and II address harmonic functions, the relation between augmented sixths and diatonic chords, and some typical uses of augmented sixths and other chromatic chords in sonata-form expositions. Then, in section III, I examine more extensively the structural role of augmented sixths and (to a lesser extent) diminished sevenths in

¹ Gregory Michael Proctor, "Technical Bases of Nineteenth-Century Chromatic Tonality: A Study in Chromaticism" (Ph.D. diss., Princeton University, 1978), p. 77. Proctor credits Godfrey Winham with the term "dominantization."

developments. Finally, in section IV, enharmonic usages associated with these chords are described.

I. The Function of Augmented Sixths

The theory of augmented sixths has been marked by conflicting opinions or hypotheses about various aspects of such chords, including derivation (e.g., from II or IV), key assignation, and function (e.g., dominant or subdominant).² Although the debates are not surprising given the undeniable ambiguity of augmented sixths, my concern in this chapter is not with the harmonic function of such chords *per se*. Rather, I am interested in clarifying these three issues: (1) the harmonic and linear context for augmented sixths; (2) the functional ambiguity of the chords to which augmented sixths resolve; and (3) enharmonic ambiguity associated with augmented sixths (as opposed to functional ambiguity not connected to enharmonicism).

Chords in general, and augmented sixth chords in particular, not only embody harmonic functions, in a Rameauian or Riemannian sense, but also have a linear or contrapuntal meaning. While the functional and the linear perspectives are both valid, the latter is very often more relevant to structural analysis. Schenker, in his writings published after *Harmony*, interprets the majority of chordal phenomena in contrapuntal terms. In the spirit of Schenker's approach, one might say that the powerful effect of an augmented sixth

² A recent functional perspective on augmented sixths is presented in Daniel Harrison, "Supplement to the Theory of Augmented-Sixth Chords," *Music Theory Spectrum* 17/2 (Fall 1995): 170-195. Harrison posits three possible functions of augmented sixths: dominant (preceding I), pre-dominant (preceding V), and plagal (preceding I); the latter two reflect the double function of "subdominant." For another view of functional ambiguity, see Charles J. Smith, "The Functional Extravagance of Chromatic Chords," *Music Theory Spectrum* 8 (1986): 94-139.

chord lies not in the relation of its root (assuming it can be determined) to the root of the chord of resolution, but in the combined effect of the semitone resolutions that each member of the chord engenders.³ In the resolution of a French sixth, of course, the fourth above the bass remains stationary (or is retained in another register).⁴

II. Augmented Sixths with Pre-dominant Function

As far as I am aware, all augmented sixth chords in Haydn have pre-dominant function; they lead to dominants or to chords that might be expected to function as dominants. Yet despite the power of augmented sixths to dominantize chords, the implicit dominant function of chords marked by augmented sixths is sometimes misconstrued as their primary or sole function. Certain chromatic structural chords like III[♯] and VII[♯] often have a potential dominant function that is not realized; in other words, they do not resolve to the tonics they imply (VI and III, respectively). Such chords primarily function as passing chords, and only secondarily resemble dominant harmony on the foreground.⁵ For convenience, all augmented sixths in Haydn will be categorized according to their pre-dominant function (be it actual or potential). In this section, I consider augmented sixths in relation to other chords (especially chromatic chords) with pre-dominant function.

The class of pre-dominant chords includes the diatonic chords (II, III, IV, and VI)

³ The analysis of chords in terms of combined leading-tone tendencies was pursued at length by Ernst Kurth, who did not, however, conceive of a hierarchical relation between diatonic and chromatic chords in the way that Schenker did. See Kurth's *Romantische Harmonik und ihre Krise in Wagners "Tristan"* (Bern: P. Haupt, 1923; facs. ed., Hildesheim: Olms, 1968; originally publ. 1920).

⁴ The familiar geographical names for the three most common types of augmented sixths--Italian, German, and French--will be used in this dissertation for convenience only, despite their lack of theoretical status.

⁵ The distinction between V/VI and III[♯] was discussed on pp. 32-3 above.

which lead to V. One of these chords, III, is unique since the progression I-III-V is based on arpeggiation, whereas II, IV, and VI divide the motion from I to V into a step and a skip. Furthermore, a pre-dominant augmented sixth chord can be based on II, IV or VI, but never on III. Schenker, curiously, does not admit VI as a pre-dominant chord with the status of *Stufe*. For him, VI relates to V contrapuntally, and functions harmonically only in a descending-fifths sequence or as part of a large-scale I-VI-I progression (e.g., in an ABA form whose B section prolongs VI). Contexts for a passing or neighboring VI include the descending bass arpeggiations I-VI-V, I-VI-IV-V, and I-VI-IV-II-V.⁶

The Minuet and Trio from Haydn's Symphony No. 104 provides a clear example of an augmented sixth based on $\flat$ VI. The Minuet is in D and the Trio is in B $\flat$; the tonal plan I $\rightarrow$ VI-I thus aligns with the ABA formal design. In the retransition back to the Minuet, shown in Example 3.1, the top voice rises chromatically from F to A, and the augmented sixth resolves to V in m. 100. The basic structure of this movement, I $\rightarrow$ VI-I, is shown in Example 3.2, level (a), with the top voice moving (implicitly) $\hat{5}\rightarrow\hat{6}\rightarrow\hat{5}$. At level (b), the V at the end of the Trio provides a link between $\flat$ VI and I, and the augmented sixth in turn links $\flat$ VI to V. Meanwhile, the ascent in the top line (F-G-G $\sharp$ -A) represents a motion from an inner voice F (the local primary tone of the Trio) up to A, the primary tone of the Minuet.

Whereas, in this example, the context for the augmented sixth is a complete prolongation of I (D major), the same sort of voice leading can also occur within an auxiliary cadence structure (e.g., VI-V-I). In a modulation from C major to E major, such as appears in Beethoven's "Waldstein" Sonata, the initial tonic becomes (retrospectively)

⁶ See *Free Composition*, Figs. 66, 67, 76/6, and 81/2. Note that in Fig. 81/2b (Brahms, Symphony No. 4/I), Schenker stems I, IV, II, and V, but neither stems the passing VI nor gives it a roman numeral.

$\sharp VI$ of the new key. The transition, graphed in Example 3.3, contains a motion from the initial C major to V of E major via an augmented sixth on C. Here, the A minor $\sharp$ chord in mm. 20-21 results from a passing tone A between the G of the C-major chord and the $A\sharp$ in the augmented sixth in m. 22. This is the reverse of the usual relation between diatonic and chromatic elements, since in this case a diatonic tone (A) is structurally subordinate to a chromatic one ($A\sharp$).

Schenker's reluctance to view $\flat VI$ (or $\sharp VI$, depending on the key) as the basis of an augmented sixth can be seen in his unusual graph of Schubert's Waltz, Op. 9 No. 2 (see the score in Example 3.4 and the graph in Example 3.5).⁷ Even though the bass clearly proceeds $I-\flat VI-V$, with $\flat VI$ (spelled for convenience as E major) preparing the bass of an augmented sixth--as in Symphony No. 104--Schenker reads the German augmented sixth chord as an inversion of $\sharp IV$ ⁷ (the root of which-- $D\sharp$ --Schenker regards as harmonically prior to $F\flat$). It is Schenker's custom, when two or more bass tones fill in the arpeggiation from I to V, to read one of those tones as primary, and this is a plausible practice. I do not agree, however, with Schenker's tendency to regard the raised tone ($D\sharp$) as prior when, as in this case, the bass ($F\flat$) is clearly prior.

Now let us briefly consider the semitonal voice leading that any resolution to a dominant chord entails. Since the chords IV, II^7 , and VI each contain $\hat{1}$, any progression from one of these chords to V($\sharp$) involves the diatonic semitone $\hat{1}-\hat{7}$. By chromatically altering other tones in the predominant chord, further (chromatic) semitones may be obtained: $\sharp\hat{4}-\hat{5}$, $\flat\hat{6}-\hat{5}$, and $\flat\hat{3}-\hat{2}$. In minor, of course, $\flat\hat{6}$ and $\flat\hat{3}$ occur diatonically; in major

⁷ *Free Composition*, Fig. 30b. Again, as in Fig. 81/2b, Schenker provides no roman numeral for $\flat VI$.

they arise through mixture. When two chords occur in succession (the second of which is major), and at least two of these semitonal motions ($\hat{1}-\hat{7}$, $\flat\hat{3}-\hat{2}$, $\sharp\hat{4}-\hat{5}$, and $\flat\hat{6}-\hat{5}$) can be inferred simultaneously, then the second chord will tend to sound like a dominant. A chromatically altered predominant chord may be said to “mark” the dominant to which it resolves.

In modulations from I to V via $\text{II}\sharp$ (V/V), such as one frequently finds in expositions, I (IV/V) may be chromatically altered so as to mark $\text{II}\sharp$ (V/V); Example 3.6 illustrates the possibilities.⁸ The basic progression, I- $\text{II}\sharp$ -V (IV-V-I in the dominant key) is shown at (a). At (b), the root of I is raised, and sounds on the foreground as $\sharp\hat{4}$ in the key of V. The $\sharp\text{II}$ chord may occur in $\hat{3}$ position as the end-point of a partially chromaticized voice exchange, shown at (c). At (d), a sixth added above the inflected tonic anticipates the fifth of $\text{II}\sharp$; this chromatic variant of the 5-6 progression from fourth species serves to eliminate the background parallel fifths between I and $\text{II}\sharp$. If this sixth appears in the bass, it may be regarded as an added root. The same progression may be elaborated as at (e), which is analogous to (c).

A more chromatic, and hence more complex, approach to $\text{II}\sharp$ results from the transformation of I into a diminished seventh chord, shown in models (f) and (g). Once the two chromatic tones, $\sharp\hat{1}$ and $\flat\hat{7}$, resolve to V of V, they may be heard retrospectively as $\sharp\hat{4}$ and $\flat\hat{3}$ of the new (dominant) key.

Lastly, in models (h) and (i), the tonic chord may be inflected with the substitution of $\flat\hat{3}$ ($\flat\hat{6}$ of V), as well as the other two chromatic inflections that are present in models (f)

⁸ Example 3.6 is based on Example 29-25 from Edward Aldwell and Carl Schachter, *Harmony and Voice Leading*, 2nd ed. (San Diego: Harcourt Brace Jovanovich, 1989), p. 490.

and (g). The resulting chord is a German augmented sixth, shown as a diminished-third chord at (h), and in its more frequent ♯ position at (i). The order of presentation in Example 3.2 is not meant to imply that the German sixth derives from the diminished seventh. The fact that, in most cases, $\flat\hat{3}$ and $\sharp\hat{1}$ in model (i) arise on the same level precludes deriving (i) from (g). Moreover, other kinds of augmented sixths may occur in progressions based on a tonic voice exchange leading to $\text{III}\sharp$. The German sixth is shown in (i) mainly to illustrate the fact that it has three tones in common with the diminished seventh; this is not to imply its superiority to or greater frequency than other kinds of augmented sixths.

In Schenker's view, the forms with the stepwise bass motion C-C♭-D at (b), (d), (f), and (h) are prior levels of (c), (e), (g), and (i), respectively. In other words, in each case, a voice exchange transforms direct chromatic passing tones into incomplete neighbors.⁹

⁹ Schenker was the first to interpret the augmented sixth as the result of a chromaticized voice exchange in his analysis of the "Eroica", first movement. See *Das Meisterwerk in der Musik*, vol. 3 (Munich: Drei Masken, 1930), pp. 25-101, and *Free Composition*, Fig. 115/2. For more on chromaticized voice exchanges, see Roger Kamien and Naphtali Wagner, "Bridge Themes within a Chromaticized Voice Exchange in Mozart Expositions," *Music Theory Spectrum* 19/1 (Spring 1997): 1-12. On the avoidance of direct chromatic successions, see *Free Composition*, pp. 91-92 (§ 249) and Fig. 114. The prehistory of this phenomenon dates back to the Renaissance; see James Haar, "False Relations and Chromaticism in Sixteenth-Century Music," *Journal of the American Musicological Society* 30 (1977): 391-415.

III. Augmented Sixths in Developments

The augmented sixths that frequently occur in Haydn's developments can be categorized according to three criteria: (1) the chord of resolution (defined in relation to the overall tonic, if the chord has middleground significance); (2) key implication (in some cases secondary to the middleground significance, as in the case of III $\sharp$, which can imply the key of VI) and (3) the voice-leading context (including consonant or enharmonic preparation of specific tones in the augmented sixth). Further issues to consider are motivic relations an augmented sixth may have to other events throughout the movement (and even, in some cases, among movements), and how often augmented sixths occur in a given movement. To elaborate this last point: if only one augmented sixth occurs in a development, it usually has great middleground significance. But in movements where two or three augmented sixths occur, whether on different scale degrees or, less frequently, on the same degree, one of them stands out as structurally more salient than the others (usually, it is the last such chord in the development). This discussion will concentrate on augmented sixths with middleground significance. Chords that operate only on the foreground, which are less frequent, will be referred to where appropriate.

An augmented sixth chord gains much of its meaning from the chord to which it resolves, and may therefore be categorized as "a chord that marks (or resolves to) x." Of course, other types of chords besides augmented sixths can serve as markers (e.g., diminished sevenths and dominant sevenths), as already shown in Example 3.6, in which various altered forms of I served to introduce II $\sharp$ (V/V) in expositions. But in developments, the augmented sixth (usually of the Italian variety) is Haydn's favorite type of marker, perhaps because of its special "dominantizing" character (in contrast to

diminished or dominant seventh chords, which tonicize as often as they dominantize). In developments of the post-1787 period, augmented sixths mark the following middleground chords (listed in descending order of frequency): $\text{III}\sharp$ (V/VI), $\text{II}\sharp$ (V/V), $\text{VI}\sharp$ (V/II), V, $\text{VII}\sharp$ (V/III), $\text{I}\sharp$ (V/IV in minor), and $\text{IV}\sharp$ (the last two are extreme rarities). Within each of these categories, there is a wide variety of contexts--especially beyond the deep middleground level--in which augmented sixths occur. Yet despite the enormous diversity of contexts, categorizing these contexts is possible and, indeed, necessary for a general theory of development sections.

III.i Augmented Sixths Marking $\text{III}\sharp$ (V/VI)

The most frequent type of augmented sixth chord in Haydn's late-period development sections is that which marks $\text{III}\sharp$ or V/VI. Of the 70 movements surveyed (all listed in Table 1.1 on p. 28), 32 contain this type of augmented sixth.¹⁰ Table 3.1 lists these movements according to the typology of plans outlined in Table 1.1. Note that the examples of Plans Va and VI cited in Table 3.1 do not contain $\text{III}\sharp$ or VI on the deep middleground (according to the roman numerals given in parentheses), but do in fact contain VI or $\text{III}\sharp$ at a later level of structure. To illustrate the disparity between the number of augmented sixths and that of diminished sevenths as markers of $\text{III}\sharp$ or V/VI, I list in Table 3.2 instances of the latter.

The augmented sixth chord marking $\text{III}\sharp$ can arise in several different ways on the

¹⁰ This strikingly high percentage has never been acknowledged in the literature.

Table 3.1 Late Haydn developments containing an augmented sixth that marks III $\sharp$ or V/VI (in first movements unless otherwise indicated)

Plan Ia (V-VI-V)	Symphonies: 89, 92, 98, 100, 104 Quartets: Opp. 71 No. 3, 74 No. 1, 76 No. 1 Sonata Hob.XVI:49 (foreground only, m. 121)
Plan Ic (V-VI-I)	Quartet Op. 64 No. 3
Plan III (V-VI-V $\sharp$ or V-VI-VIII $\sharp$)	Symphonies: 94/IV, 101, 104/IV Quartet Op. 50 No. 1 Trio Hob.XV:18
Plan IV (V-III $\sharp$ -V $\sharp$)	Symphony 98/IV ¹¹ Quartet Op. 54 No. 1 Sonatas: Hob.XVI:50, 52 (foreground only, m. 44) Trio Hob.XV:30
Plan Va (V-II-V ⁷)	Symphony 91/IV Trio Hob.XV:11
Plan Vb (V-II-III $\sharp$ -IV-V ⁷)	Symphony 96
Plan VI (V $\flat$ -VII-V ⁷)	Symphony 99
Plan VII (V-III $\sharp$ -IV-V ⁷)	Quartet Op. 50 No. 2
Plan VIIIb (V-III $\sharp$ -V ⁷)	Quartet Op. 64 No. 1
Plan IX (V-III $\sharp$ -I)	Symphonies: 90, 95/IV, 99/II, 103/IV Quartets: Opp. 54 No. 3, 64 No. 6

Table 3.2 Late Haydn developments containing a diminished seventh that marks III $\sharp$ or V/VI (first movements only)

Plan III (V-VI-V $\sharp$)	Quartet Op. 74 No. 2
Plan IV (V-III $\sharp$ -V $\sharp$)	Quartet Op. 50 No. 3 Sonata Hob.XVI:52
Plan Vb (V-II-III $\sharp$ -IV-V ⁷)	Symphony No. 93

¹¹ The augmented sixth (E $\flat$ -C $\sharp$) does not occur vertically on the foreground: the bass E $\flat$ resolves to D in m. 195 and C $\sharp$ appears in the top voice in m. 197; the latter nonetheless clinches the arrival on III $\sharp$ at m. 198. The bass is thus anticipated in mm. 195-7.

middleground, some of which are shown in Example 3.7.¹² The simplest and most frequent model is shown at (a), where the augmented sixth chord harmonizes a chromatic passing tone (D♯) in the top voice. Certain developments based on Plans Ia, III, IV, VII, and IX (see Table 3.1) may exhibit this passing augmented sixth. In the case of Plans Ia and III, the root of III♯ or V/VI represents an added root, which gives rise to the descending third-progression in the bass.

While the augmented sixth in model (a) of Example 3.7 is sometimes the only significant link between V and III♯ (V/VI), there is usually consonant preparation for one or more tones of the augmented sixth. Any of the following chords may prepare the augmented sixth, and yet still be regarded as subordinate to the augmented sixth chord, even if the preparatory chord is diatonic: VI, IV, II, ♭III, and ♭VI. Although chromatic chords are typically interpreted as subservient to diatonic chords, a chromatic chord can sometimes take structural priority over certain diatonic events on the foreground—even if the foreground alone would suggest that the diatonic chord is prior. Models (b) to (g) illustrate these mediating or passing chords.

In model (b), VI provides consonant preparation for the third and (in the case of German sixth chords) the fifth of the augmented sixth chord. As the graph indicates, the fifth of VI is a neighbor that breaks up the direct chromatic succession D-D♯ in the top voice. Sometimes VI is used on the middleground as the primary preparatory harmony (e.g., Symphony No. 92, m. 86; and Symphony No. 104/IV, m. 139); more frequently, it precedes the augmented sixth to elaborate a progression from IV, II, or ♭III to III♯. This

¹² My approach is similar to that taken by Joseph C. Kraus in two related articles on Mozart's developments: "Mozart's Chromatic Third Relations: Evidence from the Late Quartets and Quintets," *Journal of Musicological Research* 9 (1990): 229-54; "Chromatic Third Relations in Mozart's Late Instrumental Works," *Mozart-Jahrbuch* (1991): 1056-65.

phenomenon is analogous to the non-structural tonicized chord that may occur within a chromaticized voice exchange (as in an exposition where a tonicized V or V_b occurs within a voice exchange of I leading to V/V).¹³ Examples of such non-structural uses of VI occur in Op. 50 Nos. 1 and 2; Op. 54 Nos. 1 and 3; Op. 64 No. 6; and Op. 71 No. 3; and Symphonies Nos. 90, 95/IV, and 99/II.

In model (c), IV provides consonant preparation for the bass, third, and fifth (again, the latter only in a German sixth). This model is analogous to Example 3.2 (the Trio from Symphony No. 104, in which bVI prepares the augmented sixth), since IV can be heard in retrospect on the foreground as VI of VI (but only provisionally so, if $III^\sharp$ occurs instead of V/VI). The following movements elaborate model (c): the first movements of Op. 50 Nos. 1 and 2; Op. 54 No. 1; Op. 64 No. 6; Op. 71 No. 3; Op. 76 No. 1 (within a prolongation of VI); and Symphonies 89, 90, 95/IV, and 99/II.

Very often, an augmented sixth is the concluding chord in a chromaticized voice exchange. Depending on the context, the augmented sixth may be of a higher structural order than the diatonic chord that prepares it via the exchange. For now, voice exchanges within prolongations of II only will be considered; those on other scale steps will be treated later. In model (d), the II out of which the augmented sixth grows is subordinate to the chromatic chord, as I have suggested earlier, since model (a) can be understood as the prior level (see, for example, Symphony No. 91/IV). In models (e) and (f), however, II is indeed prior to the augmented sixth (see Symphonies Nos. 96 and 103/IV, respectively). In certain cases model (g) shows more meaningfully than model (d) how Plan Ia is elaborated (see Symphonies Nos. 98 and 104, discussed above, pp. 40–42).

¹³ See Kamien and Wagner, "Bridge Themes," pp. 1–2.

In models (h) and (i), $\sharp 2$ is enharmonically prepared by $\flat 3$.¹⁴ The reading of the bass $E\flat$ in model (h) as a neighbor may at first seem to contradict the reading of the top line's $E\flat$. But the bass simply gives consonant support to the top line's $E\flat$, and, in the bass, $F\sharp$ is clearly prior to $E\flat$, as model (a) shows.

Occasionally, two of the contrapuntal models given in Example 3.7 may be operative in a development section, but on different levels of structure. For example, the development of Beethoven's First Symphony is based, at its deepest level, on model (h).¹⁵ But in addition to the use of $E\flat$ (supported by $\flat III$) as enharmonic preparation for the $D\sharp$ of the augmented sixth chord in m. 152, there is also a chromaticized voice exchange within II, similar to the one in model (d), preparing the bass F of the augmented sixth.¹⁶ In the Beethoven, interestingly, two elements of the augmented sixth, $D\sharp$ and F, are prepared at different levels of structure, and in this case the chromatic chord ($\flat III$) has deeper significance than the diatonic chord (II).

Four developments by Haydn are remarkably similar to the Beethoven: those of Symphony No. 100, the Quartet Op. 74 No. 1, Symphony No. 97, and Op. 64 No. 6.

¹⁴ A similar model is shown in Schenker's reading of the development of the third movement of Beethoven's Sonata Op. 10 No. 2--evidently the earliest analysis showing long-range enharmonic preparation of an augmented sixth; see *Free Composition*, Fig. 62/11.

¹⁵ See Carl Schachter, "Mozart's Last and Beethoven's First," p. 236. A similar procedure occurs in Mozart's Piano Sonata in $B\flat$, K. 570, first movement (mm. 81-94), analyzed by Roger Kamien in "Subtle Enharmonic Relationships in Mozart's Music," *Journal of Music Theory* 30 (1986), pp. 178-9. Another application of this procedure by Mozart, but using $\flat II$ in minor, occurs in K. 421, analyzed by William J. Mitchell in "Giuseppe Sarti and Mozart's Quartet K. 421," *Current Musicology* 9 (1969): 147-53. Yet another example (but without the consonant preparation) occurs in K. 465, mm. 116-17.

¹⁶ Schachter, "Mozart's Last and Beethoven's First," p. 231, Example 3. The voice exchange occurs in mm. 156-9. Mozart's "Jupiter", analyzed in great detail by Schachter, is based, in part, on model (h), but also includes a foreground reference to model (d).

graphs of which appear in Example 3.8. The first three developments begin, like the Beethoven and Mozart examples discussed by Schachter, with a $\flat$ III that enharmonically prepares $\sharp 2$ of an augmented sixth marking V/VI (or of a dominant seventh marking III, in the case of Symphony No. 97, m. 149). Symphony No. 100 contains a foreground voice exchange within II (mm. 140-52) similar to the Beethoven, except that it begins as $\sharp$ II (m. 146). In Op. 64 No. 6, however, the $\flat$ III that prepares $\sharp 2$ of an augmented sixth marking $\sharp$ III occurs near the end of the development (m. 84) rather than at the beginning. Further issues in these developments will be elaborated in the next section.

III.ji Augmented Sixths Marking $\sharp$ II (V/V)

The second most frequently marked middleground chord, after $\sharp$ III (or V/VI), is $\sharp$ II (or V/V). What is striking is that whenever Haydn uses the augmented sixth to mark $\sharp$ II, he nearly always marks $\sharp$ III (or V/VI) in a similar way later in the same development. The only exceptions are two minor-mode movements (Symphony No. 95 and Op. 76 No. 2, graphed in Example 3.9) which contain V/V but not $\sharp$ III (perhaps because $\hat{4}-\hat{5}$ in minor is a whole step, not a half step, as in major). In Op. 76 No. 2 in D minor, the development basically completes a large-scale motion to V/V via an augmented sixth on F in m. 81. This F retains the bass from the end of the exposition; but I do not read a structural return to I in m. 72. This V/V eventually connects to V^7 in m.98, but indirectly: between these harmonies there is a tonicized C-major chord (functioning as the upper third of V, or as VII), followed by a passing IV^6 .

Despite this interesting association, the significance of $\sharp$ II (or $\sharp$ II in flat keys) in major-mode movements varies greatly. In two cases shown in Example 3.10, Op. 64 No.

3 (m. 77) and Symphony No. 89 (m. 62), $\text{II}^\sharp$ is really a back-relating V/V on a level quite close to the foreground. In Op. 76 No. 1 (see Example 1.4), the marked “ $\text{II}^\sharp$ ” and “ $\text{III}^\sharp$ ” (in mm. 122 and 124) are only passing chords within a prolongation of VI, and therefore also lie on the foreground. (Such events within a prolonged VI are less significant than similar ones that precede an arrival on a structural VI.)

As mentioned above, the developments of Symphonies 97 and 100, and Op. 74 No. 1 display a special affinity in their use of $\flat\text{III}$ as a preparation for chords marking $\text{II}^\sharp$ and $\text{III}^\sharp$, respectively. Symphony No. 97 (Example 3.8c) differs from the others in two important respects: only $\text{II}^\sharp$ is marked by a preceding augmented sixth; the other similarly marked chord is a diatonic III (unfolded to III^6) rather than $\text{III}^\sharp$. Although the chord that marks III is a $\text{V}^\sharp$, rather than an augmented sixth, its function is essentially the same. The leading tone $\text{D}^\sharp$ (bass, m. 149) is enharmonically prepared by the $\text{E}^\flat$ chord ($\flat\text{III}$) with which the development opens (m. 108). This $\text{E}^\flat$ also prepares an augmented sixth on $\text{E}^\flat$ that goes to D in m. 120; but the D-major chord ($\text{II}^\sharp$) is of a lower structural order than the III that arrives in m. 151.¹⁷

In Symphony No. 100 and Op. 74 No. 1 (see Examples 3.8a and 3.8b), $\text{II}^\sharp$ and V/VI are both marked by augmented sixths and thus “rhyme” in a way that the $\text{II}^\sharp$ and III in Symphony No. 97 do not. In each movement, as in Symphony No. 97, the augmented sixth on $\flat\hat{3}$ and the $\text{II}^\sharp$ to which it resolves are subsumed under the long-range enharmonic prolongation of $\flat\hat{3}/\hat{2}$.

Thus far, all the developments involving marked $\text{II}^\sharp$ and $\text{III}^\sharp$, except that of Symphony No. 97, are based on Plan Ia or Ic of Table 3.2. Other developments featuring

¹⁷ This reading is based on Schachter’s in “Mozart’s Last and Beethoven’s First,” p. 249.

these two goal chords are those of the Sonata in E $\flat$, Hob.XVI:52 (based on Plan IV), and the Finale of Symphony No. 103 (based on Plan XIII). These developments contain enharmonic relations to be discussed in section IV below. The harmonic plan for the latter piece, shown in model (f) of Example 3.7 (transposed to C major), takes I (not V) as its point of departure, since the first return of the rondo theme merges with the beginning of the development. Both II $\sharp$ and III $\sharp$ are marked by augmented sixth chords that grow out of voice exchanges.

III.iii Augmented Sixths Marking VI $\sharp$ (V/II)

As with augmented sixths marking II $\sharp$, those marking VI $\sharp$ or V/II are most often echoed by another, more important, augmented sixth within the development. But unlike Haydn's consistent use of III $\sharp$ as a kind of "twin" to II $\sharp$ (even if one twin has greater structural significance), his use of VI $\sharp$ is much less regular. There is only one case of a true VI $\sharp$ (i.e., one that is equivalent to VI in Plan Ia): the second movement of Op. 74 No. 1 (see the score of the development in Example 3.11, and the graphs in Example 3.12).

This G-major movement contains an enharmonic analogous to, but functionally different from, the E $\flat$ /D $\sharp$ ($\flat\hat{3}/\sharp\hat{2}$) relation in Example 3.7(h). As the graph at level (d) in Example 3.12 illustrates, E $\flat$ in m. 63 is $\flat\hat{6}$ preparing $\sharp\hat{5}$ (D $\sharp$), and the augmented sixth on F (m. 79) resolves to VI $\sharp$ (E major), not III $\sharp$. This enharmonic, like the $\flat\hat{3}/\sharp\hat{2}$ pair, is introduced as an octave whose bass tone is subordinate to the top line. Another important enharmonic in this development, A $\flat$ /G $\sharp$, is highlighted in level (d).

Level (a) of Example 3.12 shows the underlying successive octaves D-E-D between bass and top voice. These are broken up at (b) by the passing tone D $\sharp$ supported by F $\sharp$; and

at (c), the $D\sharp$ is prepared by $E\flat$. Since $E\flat$ in the top voice precedes the bass F , it acts as an anticipation; the $E\flat$ in the bass is a passing tone. The motion from $VI\sharp$ back to V in mm. 80-90 contains a passing $E\flat$ (m. 84) which is poetically associated with the earlier $E\flat$'s. V is reached in the bass in m. 85, but in the top line definitively only at m. 90.¹⁸

The developments of three late Haydn movements are strikingly similar in their use of an augmented sixth marking V/II , and in other ways, too: the Quartets Opp. 64 No. 3 and 74 No. 2, and Symphony No. 89 (all graphed in Example 3.10). Each development contains VI as an important goal (either passing between V and I , in Op. 74 No. 2, or as neighbor to V , in the others). On the way to VI , three important dominants occur in this order: V/V (divider), V/II , and V/VI . These dominants are marked by augmented sixths in seven out of nine instances (see the circled figured bass symbol ϵ in the graph). The exceptions are V/V and V/VI in Op. 74 No. 2; the augmented sixth marking V/VI in Op. 64 No. 3 (m. 114) is only a foreground chord, and therefore is not shown in the graph.

In addition to the prevalent use of augmented sixths in these specific tonal locations, the path to V/II in all three developments contains these features: (1) a modal alteration of V to $V\flat$ early in the development; (2) a half cadence on a dividing V/V (articulated by an augmented sixth in Op. 64 No. 3 and Symphony No. 89); (3) a motion to $\flat III/V$ either as a remote juxtaposition (in Op. 64 No. 3 and Symphony No. 89), or via a linking V^7 (in Op. 74 No. 2); (4) the use of $\flat III/V$ to give consonant preparation for the bass of the eventual augmented sixth marking V/II . Whereas, in the two quartets, the bass arpeggiates the minor

¹⁸ A related piece involving VI as a *major* chord is the Sonata in $E\flat$, Hob.XVI:49. Here, VI appears first in its minor form (m. 81), and is retained in m. 103 as $VI\sharp$, a putative V/II . Note that $VI\sharp$ is marked by a diminished seventh--as opposed to the more common augmented sixth.

dominant, in Symphony No. 89, $\flat\text{III}/\text{V}$ is the upper third in an unfolded bass pattern (C-E $\flat$, D-B $\flat$), rather than part of a fully arpeggiated triad. The augmented sixth on E $\flat$ in the latter movement completes a chromaticized voice exchange of the V.

One development, that of Op. 64 No. 5 (graphed in Example 3.17), uses augmented sixths going to V/II and V/III , but not to V of the main harmonic goal, VI (perhaps in deliberate avoidance of the common procedure of marking V/VI with an augmented sixth). We shall examine this work in section III.v on augmented sixths marking $\text{VII}\sharp$ or V/III .

III.iv Augmented Sixths Marking V

It is perhaps ironic that the most important dominant chord, the structural dominant, is rarely marked by an augmented sixth in the development section. Of the four late Haydn developments whose retransitional V is so marked, three are in minor. The exception, Op. 50 No. 5 in F, has a structure in which V is basically prolonged by means of II (Plan Va); see the score in Example 3.13 and the graph in Example 3.14. This intermediate harmony is transformed in m. 89 into V^7/V , which relates to an augmented sixth on D $\flat$ in m. 94. The relation between V/V and the augmented sixth may be understood as a bass unfolding from G to D $\flat$.¹⁹ The rising chromatic line in the top line of mm. 93-4 (A $\flat$ -A $\sharp$ -B $\flat$ -B $\sharp$ -C) fulfills the promise of the chromatic fragment G-G $\sharp$ -A from near the beginning of the development (mm. 69-71), an idea whose enharmonic potential Haydn hints at first in m. 74 (which has

¹⁹ Other first movements in major whose retransitional V is marked by an augmented sixth include Mozart, Symphonies Nos. 36, 38 and 41, and Quartets K.465, 499, and 575; Beethoven, Piano Sonatas Op. 10 No. 3 and Op. 14 No. 2; Violin Sonatas Op. 12 Nos. 2 and 3; and the Piano Concerto No. 1 (in which the augmented sixth in mm. 326-7 is a neighbor, and the retransition begins in m. 304).

the same sound as m. 70, but is spelled with A $\flat$ in the bass). Note that, while the A $\flat$ in m. 93 rises (as if it were G $\sharp$) through A $\sharp$ all the way to C, the A $\flat$ in m. 94 (in the German sixth on D $\flat$) resolves down to an implied G in m. 95. The A $\flat$'s enharmonic duality is thus captured in the climactic measures of the development.

The other augmented sixths that mark V, all in minor-mode movements, function in quite different ways, and on different structural levels. In Op. 64 No. 2 in B minor, graphed in Example 3.15, there are two chromaticized voice-exchanges within prolongations of IV, each concluding with an augmented sixth on G (the first exchange is in mm. 47-57, the second in mm. 60-65). Although each augmented sixth resolves to a V, the structural arrival on V occurs only with the second V (m. 66). Note how g² (neighbor to $\hat{5}$) in m. 47 is retained in m. 60 and finally in m. 67, supported by VII^{ca}.

In the development of Op. 50 No. 4 in F $\sharp$ minor, graphed in Example 3.16, V is tonicized as a minor chord (m. 80) and retained in its major form (V $\sharp$) via a "dominantizing" augmented sixth on D (mm. 111-12). The fundamental line reaches an implied $\hat{2}$ (G $\sharp$) in m. 80, shown in parentheses in the graph. In Op. 76 No. 2 (graphed in Example 3.9, and discussed briefly above) an augmented sixth on B $\flat$ marks a lower-level V in m. 72 within the large-scale motion from III (at the end of the exposition) to the augmented sixth on F in m. 81.²⁰

Although Haydn uses an augmented sixth to mark V in only one major-mode development from the late period, Beethoven does so in several early works.²¹ The reason

²⁰ Agawu analyzes this movement in detail, but with little reference to structure, in *Playing with Signs*, pp. 100-109.

²¹ See note 19. Note also that, in his early works, Beethoven uses diminished sevenths with equal frequency to mark V in major keys (e.g., Op. 2 No. 3, Op. 12 No. 1, and Op. 14 No. 1).

why Haydn prefers to mark other chords than V with augmented sixths may be a desire to establish a kind of polarity between such marked chords as III $\sharp$ or VI $\sharp$ (and the keys they imply) and the background tonic. The latter strategy of dominantizing chords *other* than V may be called centrifugal since--on the foreground, at least--it may divert attention from the background tonic. But developments that dominantize V are centripetal, since they are tonally more directed to the tonic.²² Haydn's developments tend to emphasize the centrifugal impulse, which is ultimately reconciled with the centripetal one (although the latter impulse may not be perceived until after the recapitulatory tonic arrives).

III.v Augmented Sixths Marking VII $\sharp$ (V/III)

There is one movement in which VII $\sharp$ is marked by an augmented sixth as a middleground goal of the development: the Finale of Symphony No. 104 (mm. 183-5).²³ Elsewhere, the same sound functions as V/III rather than VII $\sharp$: Symphony No. 102/IV (mm. 177-9), Op. 64 No. 5 and Op. 76 No. 3.²⁴ In Op. 64 No. 5, based on Plan Ia, V/III resolves to a III of a relatively low structural order (see the graph in Example 3.17). In Op. 76 No. 3, graphed in Example 3.18, V/III resolves to a middleground III $\sharp$ (E major) in m. 65. This chord is later modified to its minor (diatonic) form in m. 75. The adjustment of G $\sharp$ to G $\natural$ prepares the recapitulation's initial g² (upbeat to m. 79).

²² With reference to developments, Leonard G. Ratner defines motion away from I "centrifugal" and motion toward I "centripetal." See his *Classic Music: Expression, Form, and Style* (New York: Schirmer, 1980), p. 225.

²³ For a middleground graph of this development, see Willner, "Chromaticism and the Mediant," p. 107. See also Schenker's deep-level graph in *Free Composition*, Fig. 114/2b.

²⁴ In Symphony No. 94, V/III is marked by a diminished seventh that grows out of a chromaticized voice exchange. This example is discussed below, pp. 111-12.

III.vi Augmented Sixths Marking I[♯] (V/IV) and ♯IV[♯]

There are two instances of I[♯] (I[♯] in minor keys with two or more flats) marked by an augmented sixth, and both, not surprisingly, are in minor-mode movements (Symphony No. 95 and Op. 74 No. 3). In minor, unlike major, the tonic must be altered to become a dominant (or potentially so), and here, the augmented sixth can underscore that change of quality. In Symphony No. 95 (graphed in Example 3.9), the III at the end of the exposition is prolonged through the first 37 measures of the development. Although the E^b-major harmony is abandoned immediately after being retained in m. 98, its bass is extended until m. 103, where it supports an augmented sixth. The dominantized I[♯] that occurs in m. 72 is a divider within a descending arpeggiation from E^b to A^b (m. 75), the latter being IV of E^b. On the foreground, the C-major chord is a back-relating V of F minor (IV).

In the development of Op. 74 No. 3 in G minor, graphed in Example 3.19, I[♯] arises in m. 96 out of a 5-6 contrapuntal progression over B^b-B[♯] at a middleground level. Instead of resolving to IV (C minor), as one might well expect, I[♯] leads to ^bII⁶ in m. 110. On the foreground, this Neapolitan sixth is tonicized with a complete harmonic progression in mm. 110-114; the structural priority of the ♯ position, rather than the root-position harmony in m. 114, is borne out by the continued series of parallel ♯ chords in mm. 124-6.

A unique use of ♯IV[♯] marked by an augmented sixth in a development occurs in m. 101 of Op. 77 No. 1, graphed on two levels in Example 3.20. The chord in m. 101 sounds like a dominant of the VII that occurs in m. 97 (see level b), but it does not resolve to VII.

This ♯IV functions at the deepest level as a neighbor to V. The 5-6-5 contrapuntal progression shown at level (a), eliminates the parallel fifths between ♯IV and V.²⁵

IV. Enharmonicism

This section is devoted to enharmonic relations involving augmented sixths or diminished sevenths. (Enharmonics *not* associated with these chords are exceptional in Haydn's late developments, and will be referred to where appropriate below.) We have already observed Haydn's use of ♭III (in several works) and ♭VI (in just one instance, the Sonata in C, Hob.XVI:50) as enharmonic preparations for tones of augmented sixths. In the Haydn developments I have examined, most enharmonic relations are associative rather than structural--situations in which a tone harks back to, but does not prolong, its enharmonic "twin."

The categories of enharmonic usage to be considered are: (1) an augmented sixth that relates to, either immediately or across time, its dominant-seventh guise (e.g., A♭-C-E-♯F respelled with G♭); (2) a reinterpreted diminished seventh (e.g., B-D-F-A♭ with B reinterpreted as C♭, with or without a change of notation); and (3) an augmented sixth or diminished seventh, one of whose tones occurs prominently (perhaps as part of a tonicized chord) earlier in the development. Since one or more of these usages may occur in the same development, no attempt will be made to rigidly separate them in the discussion that

²⁵ On the function of ♯IV, see Matthew Brown, Douglas Dempster, and Dave Headlam, "The ♯IV(♭V) Hypothesis: Testing the Limits of Schenker's Theory of Tonality," *Music Theory Spectrum* 19/2 (Fall 1997): 155-83. This article mentions no comparable use of ♯IV as a middleground complete neighbor to V, but does refer to Haydn's use of ♯IV (VII/V) in the slow movements of Op. 74 No. 1 (mm. 142-56) and Symphony No. 104 (mm. 109-114); see p. 176, n.45. Interestingly, these movements, like Op. 77 No. 1, are in G.

follows. But, in any case, we shall begin with the first category: the augmented sixth and its “harmonic pun,” the dominant seventh.

The development of Symphony No. 91, graphed in Example 3.21, is based on Plan IIa (V-IV-V). Within the prolongation of IV, two striking events occur: an augmented sixth on D $\flat$ marking C major, the upper third of IV (mm. 158-9); and a tonicization of G $\flat$ major via its dominant seventh--the enharmonic equivalent of the augmented sixth (mm. 170-74). These chromatic events arise in the context of a rising fourth-progression in an inner voice (see Example 3.21, mm. 153-79). In addition to the enharmonic relation between B $\sharp$ and C $\flat$, the neighbor motive D $\flat$ -C appears prominently three times (not including immediate foreground repetitions): (1) in the top voice, ushering in IV in mm. 152-3; (2) in the bass, mm. 158-9; (3) again in the top voice, but now greatly enlarged across mm. 166-179, the D $\flat$ being stabilized first as local $\hat{5}$ of G $\flat$ before its final return to C (over bass A $\flat$). If any passage deserves Tovey’s epithet “purple patch,” surely this is one.²⁶

Symphonies Nos. 93 and 101, both in D major, contain similar enharmonic associations--in this case, between E $\sharp$ and F. In each work, the association occurs in connection with an evaded (or deceptive) cadence in B minor. In Symphony No. 93 (see Example 3.22), there is a deceptive motion to G-major harmony in m. 152. This chord becomes V⁷ of C in m. 160, but since it comes out of a B-minor environment, the seventh (F $\sharp$) could initially be imagined as E $\sharp$ (especially to a listener not following a score). The enharmonic relation becomes explicit in m. 168, with the appearance of a diminished seventh on E $\sharp$, which resolves to III $\sharp$ in the next measure. (The III $\sharp$ sounds like V of B

²⁶ Donald Francis Tovey, *The Forms of Music* (London: Oxford University Press, 1944; reprint ed. New York: Meridian, 1956), p. 61.

minor, and thus harks back to the previous B minor. Although we might expect a resolution to B minor, this does not occur.)²⁷

In Symphony No. 101 (already discussed in some detail on pp. 39-40 above), two meanings are suggested by the simultaneous F/E♯ in m. 190 (see Example 3.23). In mm. 174-84, V⁷ of B minor is initially prolonged by neighboring ♯-chords. Instead of cadencing in B minor, the bass F♯ becomes support for an applied V⁶ going to G in mm. 182-4. This passage, unlike the one in Symphony No. 93, stabilizes G as a tonic, rather than presenting G as VI of B minor. The next harmony is C, as in No. 93, but not a tonicized C. Haydn then moves from E (the third of the C chord) to an unexpected sound in m. 190, spelled as E♯ in the violins but as F♯ in the lower strings. Until that “unison” E♯/F♯ resolves to the V⁶ of B minor in the next measure, the listener cannot be sure whether E♯ or F♯ is meant; but the resolution clearly defines the enharmonic as primarily an E♯ in function.²⁸ Haydn then proceeds to cadence in B minor. (The reader may wish to consult Example 1.8, a middleground view of this development.) Although no augmented sixth sounds in this passage, the two essential tones of that chord, G and E♯, are in a sense unfolded from bass (mm. 184-8) to top voice (m. 190).

Symphony No. 94 illustrates another enharmonic transformation of F♯ into E♯, but in a rather different context from the preceding examples. As noted in Chapter 2 (p. 72), the dominant from the exposition is retained early in the development as a minor chord (m.

²⁷ I discuss this movement in detail in Chapter 4, pp. 121-30.

²⁸ This is a good example of an ambiguity that is resolved—without our having to deny its existence prior to the moment of resolution. For a critical examination of ambiguity, see Kofi Agawu, “Ambiguity in Tonal Music: A Preliminary Study,” in *Theory, Analysis and Meaning in Music*, ed. Anthony Pople (Cambridge: Cambridge University Press, 1994), pp. 86-107.

125). The $F^{\flat}$ in that D-minor chord then reappears within a f -chord over bass A in m. 133 (see Example 3.24). The path from this harmony to the next important goal, V/III (an $F^{\sharp}$ -major chord) involves a chromatic descent in the bass from A to $E^{\flat}$. Example 3.25 reproduces L. Poundie Burstein's reading of the passage.²⁹ In this (in my view, correct) reading, the dominant seventh on G is reinterpreted as an augmented sixth, and connects, through a chromaticized voice exchange, to the diminished seventh on $E^{\flat}$. The second (deeper) level in Burstein's reading shows the augmented sixth to be prior to the diminished seventh. As Burstein indicates, the enharmonic $B^{\flat}/A^{\sharp}$ is also projected, but not as a direct transformation like that of F into $E^{\flat}$.

The "dominant seventh" on G in this passage never goes to C--unlike the one in Symphony No. 93. Yet, from a diachronic perspective, C is still at least a potential goal. That possibility is bypassed in favor of an immediate enharmonic transformation of F into $E^{\flat}$. The enharmonic transformations we have noted are either direct, as in No. 94, or temporally separated, as in No. 93. In the latter case, the V^7 of C and the diminished seventh on $E^{\flat}$ form a single prolonged entity beneath the surface, despite the foreground disjunction between $F^{\flat}$ and $E^{\flat}$.

Further examples of enharmonic relations between augmented sixths and their dominant seventh "puns" are listed in Table 3.3 below.

We turn now to a group of developments from movements in $E^{\flat}$ major that all contain the enharmonic $C^{\flat}/B^{\flat}$, which is treated in various ways, and is sometimes complemented by the enharmonic $G^{\flat}/F^{\flat}$ in the same development.

²⁹ Burstein, "The Non-Tonic Opening in Classical and Romantic Music," pp. 92-3.

Table 3.3 Augmented sixths and their enharmonic equivalents in developments:
A supplementary list

<u>Movement</u>	<u>Measure(s)</u>	<u>Enharmonic</u>	<u>Comments</u>
Symphony No. 99/II	38	E $\flat$ /D $\sharp$	“V ⁷ of B $\flat$ ” resolves to A-minor $\sharp$ cf. D $\sharp$ in III $\sharp$ (at end of development) resolves to D $\sharp$ (m. 54)
Symphony No. 100/I	158-164	B $\flat$ /A $\sharp$	V ⁷ of F respelled as augmented 6th resolving to B major (V/VI)
Symphony No. 103/IV	258	F $\sharp$ /G $\flat$	augmented 6th on A $\flat$ marks III $\sharp$ cf. V ⁷ of D $\flat$ in mm. 215-16 ³⁰
Symphony No. 104/IV	183-4	C $\sharp$ /B $\flat$	“V ⁷ of G” resolves to C $\sharp$ major (VII $\sharp$)
Sonata in E $\flat$, Hob.XVI:52/I	76	F $\sharp$ /G $\flat$	V ⁷ of B reinterpreted as augmented 6th; elided resolution to V ⁷ /V; reverses G $\flat$ /F $\sharp$ shift in mm. 63-4

Our first example from this group, from the Quartet Op. 71 No. 3, exploits the enharmonics C $\flat$ /B $\sharp$ and G $\flat$ /F $\sharp$ to the greatest extent. For this discussion, the reader should refer back to Example 2.20, which was presented in Chapter 2 to illustrate the role of the subdominant false recapitulation. The development begins in E $\flat$ minor (I $\flat$), thus introducing the first chromatic tone of the development, G $\flat$. This tone is respelled in m. 123 as F $\sharp$, and the bass subsequently moves to B $\sharp$. The B-major and B-minor harmonies in mm. 124-6 would sound like C $\flat$ major/minor after E $\flat$ minor. But since Haydn is using B minor as an enharmonic pivot to get to G minor (m. 136), he must respell what sounds like G $\flat$ and C $\flat$ as F $\sharp$ and B $\sharp$ to make the modulation possible. The decision to spell C $\flat$ as B $\sharp$ right from its first appearance is not merely for notational convenience: the sound is initially heard as C $\flat$ --but spelled as B $\sharp$ --and is subsequently reinterpreted as B $\sharp$.

³⁰ For a detailed analysis, see Chapter 5.

Thus the two enharmonics are reinterpreted very early in the development, and Haydn brings them back in new contexts during the remainder of that section. First, $B^{\sharp}$ returns as leading tone to C minor (m. 142), but its resolution to C minor is not yet definitive. Rather, Haydn articulates the main arrival on VI (C minor) by an augmented sixth on $A^{\flat}$ going to V/VI (mm. 170-71). It is this climactic augmented sixth that contains the return of $F^{\sharp}$. (The $A^{\flat}$ -major false recapitulation, starting in m. 150, prepares the bass of this augmented sixth; I would not read the C minor in mm. 167-9 as structurally connected to either the preceding or the following C minor.)

The retransition in mm. 173-82 provides the stage for the resolution of the $B^{\sharp}/C$ conflict. Since $C^{\flat}$, in its initial appearance, was immediately reinterpreted as an upward-tending $B^{\sharp}$, part of the retransition's function is to reverse that process by making $B^{\sharp}$ (leading tone to C) fall back to $B^{\flat}$ (the structural V) in the bass. The reinterpretation occurs without a change of notation: the upper tones of the diminished seventh (D-F- $A^{\flat}$) are sustained across mm. 179-82 while the bass drops to $B^{\flat}$ to form V^7 of $E^{\flat}$.³¹

Several other developments in $E^{\flat}$ -major conclude with a similar reinterpretation of $B^{\sharp}$ as $C^{\flat}$: the Sonata Hob.XVI:49 (see Example 3.26, mm. 123-5); the Quartet Op. 33 No. 2 (see Example 3.27); and the Trio Hob.XV:30 (see Example 3.28).³² A few comments on these examples are in order. In the Sonata (Example 3.26), as in Op. 71 No. 3, there is no respelling of $B^{\sharp}$. In Op. 33 No. 2, however, the inverted $^{\circ}7$ chord on $A^{\flat}$ is spelled as both $^{\circ}7$ (with $B^{\sharp}$ in the first violin) and $^{\circ}7$ (with $C^{\flat}$ in the viola); see the music enclosed by a box in

³¹ Note that the harmony in mm. 175-6 and 179-80 is actually an inverted $V^{\circ}7$, since the viola plays G.

³² A related motion from $B^{\sharp}$ to $B^{\flat}$ occurs when III $^{\sharp}$ at the end of the development progresses directly to I, as in Op. 64 No. 6 and Symphony No. 103, IV.

Example 3.27. The Trio (Example 3.28a) contains an elided resolution of V^7/VI to V^7/IV . The bass $E\flat$ in mm. 133-5 (only an apparent anticipation of the recapitulatory tonic) can be understood as passing tone transferred from an inner voice, and resolving to D in m. 136 (Unusually, the D is already present in the harmony in m. 135.) The middleground graph in Example 3.28b shows the larger context for this unconventional retransition. Note that this development, like that of Op. 71 No. 3 (Example 2.20) modulates to $C\flat$ near the beginning, and emphasizes the $G\flat/F\sharp$ enharmonic as well as $C\flat/B\sharp$.

Our last $E\flat$ -major example with the $B\sharp/C\flat$ enharmonic is the great Sonata Hob.XVI:52, discussed above in connection with the $F\sharp/G\flat$ enharmonic. The means by which Haydn achieves this transformation is quite unlike the reinterpreted diminished seventh chord (the most common way). Example 3.29 shows the last seven measures of the development and the start of the recapitulation. Haydn modulates in this passage from B minor back to $E\flat$ major by reinterpreting the $F\sharp$ dominant seventh in m. 76 as an augmented sixth on $G\flat$, without a change of spelling. The voice leading in mm. 76-7 is saturated with descending chromatic lines: $F\sharp (=G\flat)-F\sharp$ in the bass; $E\sharp-E\flat-D$ in the alto; and $A\sharp-A\sharp-A\flat$ in the top voice. (The alto and top-voice lines involve implicit elisions of F and $B\flat$, respectively.) Just before the pivotal transformation, Haydn embellishes the V^7 of B minor with upper-neighbor figures: $F\sharp-G-F\sharp$ in the bass, and $A\sharp-B\sharp-A\sharp$ in the top voice. These figures are then echoed on V^7 of $E\flat$ in mm. 77-8, such that the $A\sharp-B-A\sharp$ now sounds in the bass as $B\flat-C\flat-B\flat$ (see the brackets in Example 3.29).³³

³³ For a detailed analysis of the entire sonata, see Schenker, "Haydn: Sonate Es-Dur." On enharmonicism and rhetoric in this movement, see Petty, "Compositional Techniques," pp. 64-70.

This passage is one of the most profound enharmonic transformations in all of Haydn, and is particularly characteristic of his keyboard music, which, like all his chamber music, tends more toward such subtle effects than the more public symphonic works. (The symphonies are nonetheless far from lacking in enharmonic relations.) As a keyboard work, the E $\flat$ Sonata also illustrates an important point that C. P. E. Bach mentions in the *Versuch* in the section on performance. Regarding dynamic interpretation of an enharmonically reinterpreted chord, Bach advises: “So-called deceptive progressions are also brought out markedly [i.e., *forte*] to complement their function.” Haydn, in accord with this practice, marks the dominant seventh on F $\sharp$ in m. 76 with a decrescendo sign so the player might emphasize it just before resolving it enharmonically down to F.³⁴

Several E $\flat$ -major works by Mozart also contain B $\sharp$ reinterpreted as C $\flat$ in the retransition. This indicates at least a similar attitude toward this particular key, or, less probably, the influence of Mozart on Haydn. The interested reader should compare the Haydn examples with the excerpts I provide from the following Mozart works: Sonata for Violin and Piano, K. 302 (Example 3.30); Trio, K. 498 (Example 3.31); Symphony No. 39, K. 543, I & IV (Examples 3.32 and 3.33); and Symphony No. 40, II, K. 550 (Example 3.34).

The foregoing survey of enharmonics focuses on reinterpretations of augmented sixths and diminished sevenths. Two fascinating enharmonics arise in quite a different way from any previous examples: E $\flat$ /D $\sharp$ in the Quartet in F, Op. 77 No. 2 (mm. 91-5; see

³⁴ “Die so genannten Betrügereyen spielt man dahero, weil sie oft deßwegen angebracht werden, gemeiniglich *forte*.” Bach, *Versuch*, part 1, p. 130; *Essay*, p. 163. Bach’s enharmonic C $\sharp$ (Fig. 179b in the Mitchell translation, p. 164) is respelled as D $\flat$; Haydn’s F $\sharp$ is not.

Example 3.35) and D $\flat$ /C $\sharp$ in Symphony No. 102 (second movement, in F, mm. 37-8; Example 3.36). These passages are particularly notable because of Haydn's indication "l'istesso tuono" ("the same tone") where the notational change occurs in the autograph manuscript.³⁵ In the Quartet, E $\flat$ is a chromatic passing tone within the large-scale rising fourth-progression in the bass, C-D-E-F (Plan III). The graph in Example 3.37 shows how E $\flat$ is first stabilized, then becomes a D $\sharp$ supporting a diminished seventh chord in m. 95 (but the respelling occurs in m. 93, before D $\sharp$ is defined harmonically as unstable).

This chapter has focused on the role of augmented sixths in developments--the overwhelming importance of which has hitherto been neglected. In tracing that role, we have reflected on more general issues of chromaticism: (1) the dominantizing function of augmented sixths and (less exclusively) of diminished sevenths; (2) various ways in which structurally significant chromatic chords interact with diatony (e.g., how diatonic chords may prepare chromatic ones, and how the latter may be conceptually prior to diatonic chords); and (3) the enharmonic relations engendered by augmented sixths and their harmonic cousins, the dominant and diminished sevenths. The results of this survey have confirmed and clarified an important point made in Chapters 1 and 2: that the harmonic structure and motivic design of Haydn's late developments are characterized by rational deceptions. Rather than leaving the listener unsatisfied by such deceptions, Haydn

³⁵ The indication appears in Italian in the Quartet autograph, but in English in the Symphony. See the facsimile edition of the autograph, *Joseph Haydn, String Quartet in F*, edited with commentary by László Somfai (Budapest: Editio Musica; New York: Belwin-Mills, 1972). On Symphony No. 102, see H.C. Robbins Landon, *The Symphonies of Joseph Haydn* (London: Barrie and Rockliff, 1955), p. 592. Landon transcribes Haydn's inscription as "the same tone"; the Henle edition transcribes it as "the same tune."

heightens the listener's demand for their eventual resolution, which usually takes place in the retransition (or at least near the development's conclusion). The dramatic profile of the development tends to be an arc, or a series of arcs; and this arc, or the last (and largest) in the series, is frequently articulated at its peak by an augmented sixth. The resulting pattern of rising tension and falling release spanning the development is nested within the larger tonal trajectory of the whole movement.

CHAPTER 4

THE DEVELOPMENT IN THREE LONDON SYMPHONIES: NOS. 93, 100, AND 102

In the first three chapters I examined the development with relatively little reference to the rest of the large-scale form of which it forms the central, often climactic, part. From the standpoint of harmonic structure, the development (in major) extends the V characteristically reached in the exposition, and leads back to the recapitulatory I. But viewed from the perspective of design, each development relates to the exposition and recapitulation in more complex and individual ways than its structural function alone suggests. For example, certain thematic, motivic, and other features of the development's design may set it apart from the exposition and recapitulation or, conversely, unify it (sometimes in a concealed manner) with material in those sections. Furthermore, most of Haydn's late symphonies begin with a slow introduction, which often relates just as importantly as the exposition to the development.¹ In this chapter I shall present detailed analyses of the first movements of Symphonies Nos. 93, 100, and 102, placing special emphasis on the dramatic role of the development in relation to the entire form. The analyses are not meant to be exhaustive, and, for the most part, my discussion of each exposition and recapitulation will only include as much detail as is necessary to support my central points.²

¹ All of the London symphonies except No. 95 have slow introductions. See the discussion in Peter Benary, "Die langsamen Einleitungen in Joseph Haydns Londoner Sinfonien," in *Studien zur Instrumentalmusik: Festschrift Lothar Hoffmann-Erbrecht zum 60. Geburtstag*, ed. Anke Bingmann et al. (Tutzing: Schneider, 1988), pp. 239-51. Further literature is cited in Webster, *Haydn's "Farewell" Symphony*, p. 162, note 54.

² The reader should have scores of these symphonies at hand when reading this chapter.

Before we examine these three very different symphonies, it is appropriate to reflect on the ideas presented in the preceding chapters. We have been considering the development at various levels and with attention to structure, thematic design, and motivic relations (in Schenker's sense).³ It is the aim of the following analyses to bring these diverse perspectives into focus: to illustrate how the details of the music that are encountered diachronically--which may at first seem incongruous with their surroundings--might be understood from a synchronic perspective. The many augmented sixths in the first movement of Symphony No. 100 ("Military"), for instance, might strike us as interesting even without our considering their structural significance. But a greater appreciation--and interpretative conception--of works such as this can be achieved by complementing our knowledge of *what* happens (e.g., repeated use of augmented sixths) with a concern for *why* it happens.⁴

The fact that the "Military" Symphony makes frequent use of augmented sixths, whereas Symphonies Nos. 93 and 102 contain none, points to differences in ethos that resist simple definition.⁵ The important question is not how much chromaticism a movement contains--for the latter movements are, in quite different ways, just as chromatic as the "Military"--but rather *what sort* of chromatic techniques are used, what the motivic

³ Schenker's conception of motive--which is significantly different from the conventional one--has inspired a large and, in places, controversial literature, including Charles Burkhart, "Schenker's 'Motivic Parallelisms,'" *Journal of Music Theory* 22 (1978): 145-75; John Rothgeb, "Thematic Content: A Schenkerian View" in *Aspects of Schenkerian Theory*, ed. David Beach (New Haven and London: Yale University Press, 1983), pp. 39-60; Allen Cadwallader, "Prolegomena to a General Description of Motivic Relationships in Tonal Music," *Intégral* 2 (1988): 1-35; and Richard Cohn, "The Autonomy of Motives in Schenkerian Accounts of Tonal Music," *Music Theory Spectrum* 14/2 (Fall 1992): 150-70.

⁴ The structural analysis of music is not--as many critics think--merely a parsing of music into syntactic units, but an attempt to account for hierarchical and motivic relations that embody affective (or connotative) as well as syntactic functions.

⁵ No. 93 contains a chord which functions on the foreground as a dominant seventh, but operates on a deeper level as an augmented sixth connected with a diminished seventh.

reasons (i.e., *motivations*) are for those techniques. And the reasons cannot be gleaned except through detailed analysis. The readings that follow in this and the next chapter may be regarded as preliminary--or, at the very least, ancillary--to the study of ethos in the London symphonies--a subject suitable for a book in itself.⁶

Nos. 93 and 102, though unique in various ways, share one especially interesting feature: an important, indeed pivotal, thematic statement in C major toward the end of the development. Though C major functions differently in each movement, its remoteness from the tonic (D in No. 93, B $\flat$ in No. 102) and the rhetorical emphasis on it suggest, perhaps, Haydn's particular interest in C major--qua sound. This relates to the fact that, in the "Military," Haydn withholds C major from the first movement (where it would be closely related to the tonic G), and thus highlights the use of C as the key of the second movement.

In order to understand Haydn's approach to the development sections of these symphonies, we shall have to grapple with often perplexing tonal events such as these C-major passages, and be sensitive to the dramatic effect of such details within each form as a whole.

I. Symphony No. 93 in D, first movement

I.i. Overview of Formal Design

Of the three works to be analyzed in this chapter, this is the earliest (the first of the London symphonies) and the most readily comprehensible. Although its structure--especially in the development--is by no means easy to grasp, the motivic relations among

⁶ The aesthetics of the London symphonies is treated, though without extensive musical analysis, in Schroeder, *Haydn and the Enlightenment*. A more analytically-oriented study of Haydn's symphonies, including detailed analytical discussion of two London symphonies, Nos. 96 and 99, is Haimo, *Haydn's Symphonic Forms*.

the four sections of the movement (introduction, exposition, development, and recapitulation) are less complex than in Symphonies Nos. 100 and 102.

The formal design is charted in Table 4.1, each important theme (or group of ideas) from the Allegro assai being assigned a lower-case letter-name in the third column (a letter marked by an apostrophe denotes a modified presentation of that theme). At the far right are listed the graphic examples corresponding to particular sections, to be discussed presently. The purpose of this chart is to give the reader a convenient guide to the subdivisions of the movement, and to the recurrences of thematic material. A glance at the list of themes used

Table 4.1 Haydn, Symphony No. 93 in D, I. Chart of Formal Design

<u>Measures</u>	<u>Section</u>	<u>Theme</u>	<u>Corresponding Graph</u>
INTRODUCTION (Adagio) 1-20			Example 4.1
EXPOSITION (Allegro assai)			Examples 4.2, 4.3
21-36	First group	a	
36-74	Transition	b (several ideas)	
74-5	(link)		
76-95	Second group	c	
95-107	Closing group	d	
DEVELOPMENT			Examples 4.4, 4.5
108-35		c' + d	
136-53		e + c'	
154-60		(cf. 39-42)	
161-69		c (sequence)	
169-76	Retransition	(cf. 61-5)	
176-81	"	(cf. 108-12)	
RECAPITULATION			Example 4.7
182-199		a (cf. 21-36)	
200-213		(cf. 61-74)	
213-14		(cf. 74-5)	
215-29		c (cf. 76-90)	
230-37		(new)	
237-62		d (cf. 95-107)	

in the development indicates the prevalence of theme c (or motivic material from that theme), and the virtual absence of themes a and b (except for the brief references to

passages noted in parentheses). The recapitulation omits mm. 36-60 (most of the transition), and mm. 230-62 contain significant modifications and expansions of the material in mm. 95-107. In my discussion of the development I shall comment further on the movement's design as it interacts with the tonal structure. But first let us briefly examine the structure of the introduction and exposition.

1.ii Introduction (mm. 1-20) and Exposition (mm. 21-107)

This introduction, like the majority in Haydn's symphonies, prolongs a motion from I to V⁷ (with V⁷ cadencing into the initial I of the Allegro assai). Its top line describes an arc, shown synoptically in Example 4.1a. The initial and final points in this arc are both F[♯]'s. In my view, the f^{♯2} in m. 3 is not yet the primary tone for two reasons: first, I regard it as unsupported because the first violins play it unaccompanied; second, the introduction as a whole seems to be searching for the $\hat{3}$ in m. 21 (this f^{♯1} being retained in the obligatory register, the two-line octave, in m. 39). The peak of the top line's arc in the introduction, a², is supported by V on its arrival in m. 10, but can be understood as already present over the initial I at a background level.

Example 4.1b shows the foreground of the introduction, which is characterized by frequent shifts of register, and a proliferation of unfoldings and reachings-over. In mm. 11-15, a neighboring B $\flat$ is prolonged over a tonicized Neapolitan chord. The motion into the inner voice b^{♭1}-a^{♭1}-g¹ is then enharmonically recalled in mm. 18-20 by the chromatic passing motion from a² through g^{♯2} to g^{♯2}. As we shall see, the elided resolution of G[♯] to G[♮] has important repercussions later in the movement.

The exposition's deep middleground structure is shown together with that of the development in Example 4.2. The arrival on V does not occur in m. 66, but rather is delayed until m. 74, when the first of two fifth-progressions in A major is completed. This first progression is supported by an auxiliary cadential progression (shown in Example 4.2) that begins (unusually) on a root-position A-major chord.⁷ The second, reinforcing descent from e² is completed in m. 95, the last chord being extended until m. 107.⁸

Example 4.3 provides a more detailed view of the exposition. Note that the V in mm. 47-53 is a divider not structurally connected to the tonicized V of the second group. The transition begins to move away from I starting in m. 54, and leads to II[♯] (V/V) in m. 61 by way of a 5-6-5 series over D-D[♯]-E.

Since the foreground of the exposition does not have much bearing on the course of the development--except insofar as it includes thematic ideas that are used there--we shall proceed directly with our investigation of the development.

I.iii Development: mm. 108-181

The development's deep structure, graphed in Example 4.2, is relatively straightforward: the initial II (m. 111) provides consonant preparation for g², the seventh of

⁷ Though Schenker never mentions the possibility of starting an auxiliary cadence on root-position I, the chord in m. 66 is too unstable to be felt as already the structural V. On auxiliary cadences, see *Free Composition*, pp. 88-90.

⁸ William Rothstein, in *Phrase Rhythm in Tonal Music* (p. 116), states the following--in connection with some other Haydn symphonies--concerning the structure of the second group in general: "... there may be some question as to which of two or three cadences is the closing cadence. Normally, it is the first perfect cadence in the key of the second group. However, there may be a series of cadences, each one stronger than the last. ...The cadences that come later may be considered reinforcements of the closing cadence." While Rothstein's remarks are true of many sonata-form movements, I am less inclined to establish analytical norms for this kind of situation, each instance of which should be evaluated on its own terms.

V⁷, which arrives in m. 176. (The seventh is already present in m. 176, but emerges more emphatically in the first violins in m. 179; hence the unfolding sign from c[♯] to g² in the graph.) Within this harmonic framework, the passing chords III[♯] and IV fit in neatly, the outer voices moving in tenths. But the C-major harmony in m. 161 poses a dilemma, since it is remotely related to the overall tonic (D major) and even more remotely related to the F[♯]-major chord in m. 169.

The arrival on C major is a momentous and unexpected event--really a turning point--and my initial goal in the following discussion will be to explain that event. Example 4.4 presents a simplified view of the long and intricate path from II (E minor) in m. 111 to III[♯] (F[♯] major) in m. 169. First, note that II is attained already in the fourth measure of the development, the exposition's concluding a² (top line) becoming the dissonant tone of an applied V⁷/II in m. 110. In Haydn's late developments, it is rare that a high-level harmony is reached so soon after the double bar.⁹

The development may be divided into three phases: (1) mm. 108-36 (from II to its upper fifth, B minor); (2) mm. 136-51 (from B minor to the deceptive cadence on G-major harmony); and (3) mm. 152-80 (leading to the concluding V⁷). We shall consider these phases in detail presently; but first, the essential outlines. In mm. 111-136, the bass essentially rises by step (in part, chromatically) through the space of a fifth from E to B. The arrival of B minor as a local tonic in m. 136 is highlighted by the first appearance of theme e (in the flute and oboes) counterpointed by a motive from theme c. After tonal excursions to satellites of B minor, one is led to expect a cadence on B minor in m. 152,

⁹ For example, in the development of No. 102, also based on Plan Vb, II is not reached until m. 185 (75 measures into the development).

since the dominant of that key reappears in m. 151. But instead the music abruptly halts on G major (VI of B minor).

The surprising effect of this deceptive cadence is underscored both dynamically by the *fortissimo* marking (played *tutti*), and temporally by the *fermata* rest that follows. The dynamic then drops to *piano* in mm. 154-5 as the G chord is prolonged by the violins only playing the material that preceded the *fortissimo* outburst. After a second *fermata*, the same soft music resumes, but with the addition of G-major arpeggios that recall mm. 36-42. This reminiscence is dramatically apropos, since the arpeggio idea has the effect in the exposition (mm. 36-42) of delaying the onset of the transition--of somehow "suspending" the music on tonic harmony. The same sort of effect is achieved here in the development: the G chord does not go anywhere; one continues to hear it as VI of B minor. This makes the F $\sharp$ which is added to the harmony in m. 160 initially ambiguous: without knowledge of the score, one would hear it as E $\sharp$ (an augmented sixth). But within one measure, the harmony obeys the notation (as V ^{7} of C) by cadencing into C major. (We already observed this striking example of an enharmonic deception or *Betrügerey* in Chapter 3 above.)

The cadence in m. 161 coincides with the first statement of theme c in the development that closely resembles its original manifestation (cf. mm. 76-8; elsewhere in the development, theme c is fragmented and counterpointed by different material). It is possible to hear this C major as a Phrygian II (or Neapolitan) of B minor; this is corroborated by the similarity in contour of theme c to the E $\flat$ -major (Neapolitan) passage in the Adagio introduction (mm. 11-12). Nearly as soon as theme c gets going, however, the rug is pulled from under it: the bass embarks on a rising sequence (the foreground root-position dominant sevenths on A and B are shown in Example 4.4 as $\sharp$'s on C $\sharp$ and D $\sharp$). In

m. 168 there is a conspicuous break in the pattern: E♭ supports a diminished seventh (not a dominant seventh), and here, for the first time, the chromatic ascent is *foregrounded*, since E goes directly to E♭, not to the added root C♯, as the pattern would lead one to predict (note also the change of rhythmic figuration from eighths to a dotted half note). This E♭ fulfills the promise of the F♯ in m. 160 which sounded like E♭ but resolved according to its notated meaning. Retrospectively, mm. 161-7 may be viewed as a parenthesis, delaying the resolution of that would-be augmented sixth on G (which connects to the E♭ diminished seventh in m. 168). The E♭ diminished seventh is a chromatic intensification of the development's initial II (E minor); this is confirmed by the fact that, on the foreground, E♭ directly follows a tonicized E minor (within the parenthesis).

We are now in a position to consider the details of the development in its three phases, graphed in Example 4.5: (1) mm. 108-36; (2) mm. 136-51; and (3) mm. 152-80.

Several chords are tonicized in the first phase on the way from E minor to B minor. The first of these is the same as--but not connected to--the eventual goal, B minor. The imitation of mm. 111-14 at the fifth in mm. 115-18 harks back to Baroque style. (Such a contrapuntal procedure is of course characteristic of many Classical developments, which tend to exhibit "learned style" more than other parts of sonata form.) As we shall see, the counterpoint becomes even more learned in the development's second phase.¹⁰

The next tonicized chord of the first phase, after B minor, is D major (m. 122), an apparent tonic that functions as a passing/neighbor chord between E minor and G major, which arrives in m. 128. The series of parallel ♯ chords in mm. 122-7 has profound implications for the rest of the development. This passage catches one off guard, partly

¹⁰ On "learned style" as a musical topic, see Ratner, *Classic Music*.

because of the abrupt drop in dynamic level and the change of texture, and partly because of the changing key implications of the harmonies. The first chord, D major, is heard as a local tonic; then B minor is implied by the $A\sharp^{\flat}\flat$ chord in m. 125; and finally, the chord in m. 127 sounds like VII^6 of G major. The allusion to B minor in the midst of this motion from D to G major hints at the music's underlying urge to find B minor. And this urge is soon fulfilled in mm. 128-36, where the bass essentially rises chromatically from G to B.

A significant feature of this last passage might at first escape notice: the chromatic descent in the bass in mm. 133-5 (henceforth to be called "motive x"). This contains an elided resolution of $G\sharp$ to $G\sharp\flat$ --a striking feature of the introduction's top line (see mm. 18-20). The second phase of the development, beginning in m. 136, further develops motive x, both at this pitch level, and in transposed forms.

The structure of this second phase, shown in Example 4.5, divides into two parts (1) a motion from B minor through A major to D (upper third of B) in m. 146; and (2) a motion to G major via V of B minor. The D major in m. 146 is marked as a goal (rather than as an offshoot of A major) by the *forte* entrance of the trumpets and timpani (silent since m. 122), and by the way the flute's sustained e^2 in mm. 143-5 (doubled in m. 154 by the violins) leads to d^2 . The second part, starting in m. 146 contains a stretto of motive x, appearing a fifth higher in each successive measure (the stretto actually begins in m. 145 if one counts the bass entrance on G, an incomplete statement of motive x).

The succession of parallel $\sharp$ chords in mm. 149-51 telescopically recalls mm. 122-7. Note that, whereas m. 151 contains V^6 of B minor, rather than VII^6 of G (as in m. 127), this passage likewise leads to a G-major chord--but now functioning as VI of B minor. As

we observed above, this G major provides a link to the parenthetical C major and, ultimately, to the F♯-major chord.

Another important issue besides the pivotal motion to C major (a motion that proves to be a blind alley) is the way G major repeatedly usurps B minor in the development: first in m. 127, and then in m. 152. Though B minor is indeed stabilized in mm. 136-40, its ultimate fate is to be avoided in favor of G. This idea is brought out again by the fact that the climactic F♯-major chord (III♯) in m. 169--which at first has the potential to be V of B minor--also leads to G major, this time by way of a linking V♯ on F♯ (m. 173). The urge to go B minor is real: note how Haydn extends III♯ in mm. 170-72 with passing chords that recall the extension of II♯ (V/V) in the transition (mm. 61-5).

The path from III♯ through IV to V⁷, as shown in Example 4.5, should be self-explanatory. Example 4.6 illustrates one unusual foreground feature of the retransition: mm. 178-81 echo (or rhyme with) the first ending of the exposition (mm. 109-12), including the bar of silence before the return of theme a (marked in m. 181 by a fermata). The sweeping energy of these passages aptly contrasts with the gentle character of theme a. (Haydn's more frequent practice of motivically anticipating the first theme in the retransition would be out of place here.)

I shall reiterate what I believe to be three central ideas in this development. The first is the dramatic entrance of an originally stable, folk-like melody (theme c) in a remote key (C major). This passage is like the eye of a storm, occurring as it does in the midst of the most unstable part of the movement, whose rapid harmonic rhythm and busy contrapuntal texture must be subdued before that theme can appear. The most learned passage--the intensely chromatic stretto--thus provides a foil for the folk-like theme's arrival in the

“pure” key of C. Haydn sets the stage for that arrival magnificently with the deceptive cadence on G, the pauses, and the suspenseful violin arpeggios. The second idea, which is developed before and after the C-major passage, is a conflict between B minor and G major. In three instances, G “wins out,” each time in a different way. And finally, Haydn emphasizes a chromatic idea from the introduction (A-G♯-G♮-F♯) that finds its fulfilment in the recapitulation.

I.iv Recapitulation: mm. 182-262 (Graph in Example 4.7)

The main points of interest in the recapitulation, as it relates to the introduction and development, are the insistent references to the aforementioned chromatic descent A-G♯-G♮-F♯. The first of these is in mm. 200-203, a transposition of mm. 61-64. The second reference occurs in mm. 228-33, a recomposition of mm. 89-96 (see the two passages juxtaposed in Example 4.8). The recomposed passage incorporates a variant of motive x, and reverses the direction of the top line’s chromatic ascent A-A♯-B in mm. 90-92 to a descent D-C♯ etc. Note also the motion G♯-G♮-F♯ in the bass of mm. 233-4. The final occurrence of the descending chromatic motion occurs in mm. 246-9. This is the most explicit reminiscence of the introduction, since the bass is the same as in mm. 18-20 (B-B♭-A).

II. Symphony No. 100 in G (“Military”), first movement

II.i Introduction, mm. 1-23

The Adagio introduction to this symphony, to a greater extent than that of No. 93, is a harbinger of important chromatic elements in the Allegro (chiefly arising from mode

mixture).¹¹ A brief discussion of the introduction's structure will suffice before we turn our attention to the Allegro.

The introduction is graphed on two levels in Example 4.9. As level (a) shows, the basic harmonic framework is I-V, with V approached by a neighboring minor IV⁶ that is altered chromatically in m. 18 to an augmented sixth chord; as I show above the top line with caret numbers, the primary tone D ($\hat{5}$) is essentially embellished by a neighboring C $\sharp$ ($\hat{4}$). The introduction may be divided into two overlapping parts: (1) a prolongation of I in mm. 1-14, in conjunction with a fifth-progression in the top line; and (2) a motion from $\mathbb{B}$ (in m. 14) to V via IV⁶⁻⁶.

Aside from differences in thematic design, the two parts of the introduction are set apart by their respective emphases on $\hat{6}$ (e^2 in m. 12) and $b\hat{6}$ ($e\flat^2$ and $e\flat^3$ in m. 16). As level (b) shows, that modal contrast is anticipated in mm. 9-10, where II and I are marked sequentially by diminished sevenths (see especially the top line: $f\sharp^2-e^2-e\flat^2-d^2$).

II.ii The Movement as a Whole: Formal Design and Deep Structure

Table 4.2 outlines the movement's formal design. As in Table 4.1, principal themes from the Allegro are designated by lower-case letters, and at the far right are listed examples containing graphs of particular passages.

The exposition is monothematic, to use conventional formal terminology, since the second group begins with a restatement of the opening thematic idea (theme a) in the dominant key (cf. No. 93, which is not monothematic). The bulk of the development

¹¹ The melodic contour of mm. 1-2 also foreshadows that of the opening Allegro tune; this fairly obvious association is, in my view, less significant than the chromatic relations I shall discuss.

Table 4.2 Haydn, Symphony No. 100 in G, I. Chart of Formal Design

<u>Measures</u>	<u>Section</u>	<u>Theme</u>	<u>Corresponding Graph</u>
INTRODUCTION (Adagio) 1-23			Example 4.9
EXPOSITION (Allegro)			Example 4.10
24-39	First group	a	
39-74	Transition	b	
75-87	Second group	a	
87-93	(cont'd)	a (in D <i>minor</i>)	
93-124	Closing theme	c	
DEVELOPMENT			Example 4.12
125-34		c	
134-46			
147-57			
158-69			
170-201	Incipient retransition	a	
RECAPITULATION			Example 4.13
202-25	First group and transition	a (cf. 75-86)	
226-38	Second group	c (cf. 95-107)	
239-53			
254-73		b (cf. 50-74)	
273-89		(cf. 108-24)	

treats theme c; the lengthy incipient retransition is based on theme a. Like most so-called monothematic movements, this one does not state theme a twice in the recapitulation, but brings back theme c where theme a might otherwise have recurred (mm. 226-38). The following passages are not recapitulated: theme b (mm. 39-49); the minor-mode variation on theme a (mm. 87-92); and the two-measure “vamp” that prepares theme c (mm. 93-4).

Example 4.10 is a deep middleground view of the Allegro. Like a number of sonata forms with $\hat{5}$ as the primary tone, this movement's fundamental line does not descend to $\hat{2}$ in the exposition. Rather, an inner-voice $\hat{3}\text{-}\hat{2}$ yields an interrupted structure at a later level

than the first middleground level.¹² The development is based on Plan Ia (V-VI-V), with a top line that describes a large-scale, chromatically inflected neighboring motion: A-A♯-B-B♭-A. As we saw in Chapter 3, and shall see again presently, the enharmonic A♯/B♭ is also exploited on more immediate levels of structure than the one shown here.

II.iii Exposition: mm. 24-124

The exposition's structure is graphed in detail in Example 4.11, and divides into four phases: (1) mm. 24-74, embodying the first group and transition to V; (2) mm. 75-87, containing the first complete fifth-progression from a²; (3) mm. 87-93 in D minor; and (4) mm. 93-124, the last and most stable part of the second group--theme c.

Without commenting on the entire exposition, whose structure is interpreted in the graph, I shall now discuss what I consider to be the dramatic highlight of the exposition, as it relates to the rest of the movement: phase 3, the destabilizing passage in D minor (mm. 87-93) that delays both closure in the second key and the appearance of the closing theme.¹³ This passage has a parenthetical quality: by omitting this passage and going straight to m. 95 the descent in mm. 75-87 could be completed with less dramatic effect. In the wake of the intense chromaticism and rapid harmonic rhythm of this passage, the gentle diatonicism and broad harmonic pacing of the closing theme (theme c) brings relief and, metaphorically speaking, "restores order."

The shift to the minor mode in this detour recalls the shift to G minor in m. 14 of

¹² Ernst Oster was the first to identify this structure in certain sonata forms in his widely-cited footnote to Schenker's account of sonata form in *Free Composition*, p. 139. (Cf. Carl Schachter's reading of the "Jupiter," discussed on p. 37 above.)

¹³ Such minor-mode purple patches just prior to the closing theme are not infrequent in Haydn. See, for example, Symphony No. 99/I, mm. 63-71.

the introduction. Both modal alterations have a shock-like effect that coincides with the start of a contrasting thematic idea. Thus far in the movement, then, the two most arresting moments involve a change from major to minor at the point where one phrase ends and another begins. The next turning point occurs at the start of the development, the most challenging part of the movement, where Haydn builds upon implications of these earlier abrupt contrasts.

II.iv Development: mm. 125-201

The development opens with a pregnant two-bar silence, followed by theme c in B $\flat$. (The music that is implicitly suppressed during this silence is the prefix to theme c from mm. 93-4.) The silence seems intended to punctuate the coming remote harmonic juxtaposition (a motion from I to $\flat$ VI in D major). Here Haydn creates a sort of paradox: an unstable statement of an idea whose original function was stabilizing. As my graph of the development in Example 4.12 shows, the instability of B $\flat$ is soon intensified, for in m. 139 B $\flat$ is retained supporting an augmented sixth. This goes to the dominant of D minor (V $\sharp$ in mm. 140-44 resolving to V $\natural$ in m. 146).

Without yet taking the rest of the development into account, one could interpret the harmonic structure up to m. 146 as I $\rightarrow$ VI-IV $\sharp$ -V in the key of D major/minor (see the score). This is essentially the same harmonic structure as that of the slow introduction (see Example 4.9a), though transposed to the dominant. But this parallelism is actually a ruse, for the apparent V/V in mm. 140-51 turns out not to have any deep structural connection to the V at the end of the exposition. Rather, this A-major chord (V/V) helps prepare an augmented sixth on C $\sharp$, which introduces V/VI (mm. 152-3). The top line's A $\sharp$ is prepared

by the development's initial $B\flat$ --diachronically prior to the bass C of the augmented sixth. (At a deeper level, shown in Example 4.10, both the bass and the top voice of the augmented sixth arise simultaneously.) Thus the development begins deceptively, with no hint of the eventual goal (VI), but rather, with an apparent extension of the dominant key of D, altered to minor.

The most salient enharmonic in this development is $B\flat/A\sharp$, projected from the beginning (m. 127) until m. 152. Within that long-range span, Haydn interpolates more directly the enharmonic $A\flat/G\sharp$ (mm. 133-9), and likewise $B\flat/A\sharp$ (mm. 146-52). The foreground juxtaposition of $B\flat$ and $A\sharp$ in the latter passage lends support to my reading of a long-range enharmonic transformation of $B\flat$ into $A\sharp$.

As if to drive home the point, Haydn plays with the $B\flat/A\sharp$ pair again in mm. 157-64, but in quite a different manner from before. In this passage, as in mm. 140-46, a $\sharp$ chord eventually resolves to $\sharp$, the bass B being prolonged by a neighboring C. Haydn introduces a dominant seventh over this C, and prolongs it by passing through an F-major $\sharp$ in m. 159, to another C dominant seventh in m. 161 (without E). The extension of that chord in mm. 162-4 (now *with* E), is respelled with $A\sharp$, but still sounds like V^7 of F. Only when the chord resolves to the B-major chord (V/VI) in m. 165 is its primary function (an augmented sixth) made clear.

In my view, the arrival on VI in m. 170 marks the beginning of the incipient retransition. Since I discussed this retransition in some detail in Chapter 2 (p. 79), I shall confine my remarks here to a few important points. Having just observed the prevalence of $B\flat/A\sharp$, I should like to point out that the rising top line $A-A\sharp-B$ (from the $\hat{2}$ of the exposition to m. 153, with B prolonged until m. 193) is retrograded as $B-B\flat-A$ in mm. 192-5. I

cannot imagine a more eloquent reminiscence—or dénouement—of the B $\flat$ /A $\sharp$ enharmonic than this.

Compared to the intensely chromatic first half of the development, the start of the retransition is somewhat relaxed harmonically because of the predominant root-movement by descending fifths. The apparent return to tonic m. 177 (labelled “I” in Example 4.12) creates a suspenseful mood, precisely because the listener awaits a more momentous return to tonic—coinciding with the return of theme a. Haydn begins a strong motion toward V by first chromatically altering this “I” to a diminished seventh on G $\sharp$ (mm. 185-7), and then continuing with a syncopated descending sequence. At last, in mm. 193-5, V is clinched by a diminished seventh on C $\sharp$ (note the *crescendo* to *fortissimo* on this chord, and the drop to *piano* upon the arrival on V).

II.v Recapitulation: mm. 202-89 (Graph in Example 4.13)

The most striking feature of the recapitulation is the unexpected deceptive cadence on E $\flat$ (bVI) in m. 239.¹⁴ This chord connects to an augmented sixth in m. 24, which harks back to the very same chord in the Adagio introduction (m. 18), and—especially in its figuration—to the other augmented sixths on B $\flat$ and C in the development. The augmented sixth not only creates a harmonic association with earlier parts of the movement, including the drop to B $\flat$ at the opening of the development, but it also compensates for the recapitulation’s omission of the minor-mode passage presented in the exposition (mm. 87-

¹⁴ In his discussion of a similar digression to E $\flat$ in Symphony No. 92 (“Oxford”), James Webster makes the following observation: “‘Surprise’ outbursts on E-flat towards the end of movements in G major are an unrecognized, key-specific ‘topos’ in Haydn, Mozart, and Beethoven” See *Haydn’s “Farewell” Symphony*, p. 172.

92). The reader may wish to review Table 4.2 to verify corresponding passages in the exposition and recapitulation.¹⁵ The remaining details of the graph of the recapitulation in Example 4.13 should be self-explanatory.

II.vi Summary of main ideas in Symphony No. 100. I

A central dramatic idea in the development of this movement is the conflict between two key areas: the minor V (projected by the bass motion from D through B $\flat$ to its putative dominant on A) and VI (the main harmonic goal). The two keys are linked by means of the enharmonic transformation of B $\flat$ into A $\sharp$ through a kind of *Betrügerey* not unlike the one involving F $\sharp$ /E $\sharp$ in Symphony No. 93. The conflict is stimulated by the chromaticism of the introduction, and, as in No. 93, the chromatic issues raised in the introduction are also explored in the recapitulation. As we shall see, chromatic ideas in the introduction to No. 102 are likewise linked to material in the development and recapitulation.

III. Symphony No. 102 in B $\flat$, first movement

III.i Introduction: mm. 1-22

The Largo introduction presages ideas in both the exposition and the development in remarkable ways, and will require lengthier discussion than the other introductions. Before examining the Largo's relation to the Allegro vivace, I shall consider its structure, and how it builds a sense of expectancy or uncertainty. (The text that follows should be

¹⁵ A comparison of the exposition and recapitulation is presented in Ethan Haimo, "Haydn's Altered Reprise," *Journal of Music Theory* 32/2 (Fall 1988), pp. 341-4. Haimo also notes the integration of the introduction and recapitulation by means of the augmented sixth on E $\flat$ (p. 343).

read in conjunction with the foreground graph in Example 4.14a.)

Haydn postpones the arrival of the movement's primary tone d^3 ($\hat{3}$) until the first cadence into tonic harmony at the beginning of the Allegro vivace (m. 23). The first sound we hear in the symphony is the tonic: a tutti unison Bb , sustained throughout m. 1, and marked by a fermata.¹⁶ Our assumption of the tonic status of this pitch (or pitch class) is confirmed in mm. 2-3 by way of a neighboring $\hat{3}-\hat{4}-\hat{3}$ pattern over the bass Bb , embellished by the violins' melodic idea $f^2-bb^2-a^2-g^2-f^2$, the main motive of the introduction.

A feeling of expectancy is engendered by the cadences on V at the end of each phrase (mm. 5, 10, and 18), each set in a different way. Measures 1-10 form a modulating parallel period whose antecedent ends on $\hat{2}$ over V, and whose consequent tonicizes V with $\hat{5}$ (f^2) approached from above by an apparent fifth-progression from c^3 . This is really an enlargement of the descending fourth $bb^2-a^2-g^2-f^2$ first heard in mm. 2-3, but now embellished by the neighboring c^3 (mm. 8-10). At a deeper level, c^3 could be heard as a registrally-transferred passing tone from d^2 underneath the main line $f^2-f^{\sharp 2}-g^2$ (the 5-45-6-5 pattern is indicated between the staves of Example 4.14a).

V is then extended in a rather complex manner in mm. 10-22 (see Example 4.14a, lower system). The motive F- Bb -A-G-F from mm. 2-3 reappears in the bass in mm. 10-11 with a new meaning: whereas before, Bb and F were stable tones, now Bb is an incomplete neighbor to the harmonic tone A. The descending fourth (Bb -A-G-F) is transposed up a third in mm. 11-12, now with Db as neighbor to C. (This motive recurs at several other

¹⁶ For more on the convention of beginning a symphony with a unison, see David Gagné, "'Symphonic Breadth': Structural Style in Mozart's Symphonies," in *Schenker Studies 2*, ed. Carl Schachter and Hedi Siegel (Cambridge: Cambridge University Press, forthcoming).

pitch-levels in mm. 12-22.) D $\flat$ first appeared in m. 5 in the top voice, and the minor mode which it initiates in m. 11 remains in force for the rest of the introduction.

In m. 12 the top line begins an intensely chromatic ascent from F to B $\flat$, introducing the remaining tones borrowed from the parallel minor mode, G $\flat$ and A $\flat$. These tones resolve *upward* by semitone--thus defying their melodic tendency to fall, and thereby dramatizing the chromatic ascent. Indeed, this passage sets a precedent for the most intense moments of the development, as we shall see.

The enharmonic association of G $\flat$ in m. 13 with the F $\sharp$ in mm. 8-9 is confirmed by its continuation (marked *crescendo*) through G $\sharp$ to A $\flat$ in m. 14. The two bars on A $\flat$, marked *forte* and *decrescendo*, represent both the dynamic peak of the introduction (which does not exceed *piano* before or after this passage) and the remotest point from the tonic. The emphasis here foreshadows the important role that A $\flat$ plays in the development and recapitulation, to be considered below.¹⁷

The B $\flat$ in m. 17 completes a melodic fourth, but not a real fourth-progression, since B $\flat$ is an unstable neighbor to A $\sharp$, supported by a diminished seventh on E $\sharp$ (cf. the same chord in m. 5). The rising chromatic line from F to B $\flat$ may nonetheless be viewed--associatively if not structurally--as an enlarged statement of the rising-fourth motive F-B $\flat$ that recurs throughout this introduction. But the rising line does not stop at B $\flat$ in m. 17; it presses upward to D $\flat$ before settling on C in m. 18. This passage--and the larger relation of

¹⁷ Koch identifies the slow introduction and the development as the two areas of a symphonic first movement where distant modulations are most likely to occur. See *Introductory Essay on Composition*, trans. Nacy Kovaleff Baker (New Haven: Yale University Press, 1983), pp. 198 and 234. See also James M. Baker's valuable article, "Chromaticism in Classical Music," in *Music Theory and the Exploration of the Past*, ed. Christopher Hatch and David W. Bernstein (Chicago: University of Chicago Press, 1993), p. 233-307; Koch is cited on p. 244.

the introduction to the Allegro vivace--can be better grasped from a middleground perspective (see Examples 4.14b and c).

Example 4.14b simplifies the register of the top voice, which essentially descends stepwise f^2 - e^2 - d^2 ; the upper tones b^1 and d^2 of the diminished seventh in m. 17 are inner voices embellishing a^1 and c^2 , and presented in a reaching-over pattern. Similarly, the passing tone e^2 is introduced by a reaching-over from c^2 .

The approach to the neighboring diminished seventh in Example 4.14b is expanded at the later level shown in Example 4.14c. The expanded chromatic ascent in mm. 10-17 forms an apparent arpeggiation f^2 - b^2 - d^3 , filled in by step. (I say "apparent" because the two chords involved--V and the VII^{o7}/V --do not form an integral unit.) This "arpeggio" not only expands the previous melodic fourths, as noted above, but also foreshadows the violin figure f^2 - b^2 - d^3 at the start of Allegro vivace (see the brackets in Example 4.14c). The simultaneous change of tempo and dynamic (*piano* to *forte*) and the return to major propels the music forward; the primary tone d^3 is thus marked as both a goal and a point of departure. The shift from D^b to $D^{\natural}$ also relates motivically to the earlier ascending chromatic semitones (G^b - $G^{\natural}$, A^b - $A^{\natural}$) in the top line.

The large-scale structural connection between the Largo and the Allegro vivace--the inseparability of the Allegro's primary tone d^3 from the introduction that leads up to and, in a sense, withholds or postpones it--is complemented by thematic similarities between mm. 2-5 of the introduction and the Allegro's initial phrase. Example 4.15 superimposes these related passages. The latter phrase is not just an accelerated version of mm. 2-5--and yet it retains both essential features (the F-G-F neighbor figure, the series of $\frac{5}{4}$ chords, and the cadential $\frac{5}{4}$ in the fourth measure) as well as some incidental ones (such as appoggiaturas).

Another shared feature is E $\flat$ in the bass, whose placement and function is subtly differentiated: it occurs in m. 5 as the bass of a neighboring c^7 *after* V $\frac{1}{2}$ (and decorating V again, more emphatically, in mm. 17-19), but in m. 25 as a passing tone *before* V $\frac{1}{2}$.

III.ii The Movement as a Whole: Formal Design

Table 4.3 (below) presents the formal design of the whole movement. Four thematic ideas are identified in the table, not including the ideas used in the Largo

Table 4.3 Haydn, Symphony No. 102 in B $\flat$, I. Chart of Formal Design

<u>Measures</u>	<u>Section</u>	<u>Theme</u>	<u>Corresponding Graph</u>
INTRODUCTION			
1-22		(foreshadows a)	Example 4.14
EXPOSITION			
23-38	First group	a	Example 4.15a
38-56	Transition	a'	
56-80	Second group	b	Example 4.15b
81-92		c	
92-100		b' (invertible counterpoint)	
100-110		a'' (codetta)	
DEVELOPMENT			
111-16		c (elided)	Example 4.17
117-31		a	Example 4.18
132-60		c'	Example 4.19
161-84		b (stretto)	
185-92		a (false recap. in C major)	
192-210		d (plus motive from a)	
210-26	Retransition	a	
RECAPITULATION			
227-34	First group	a	Example 4.20
234-42	Transition	a (recomposition of 38-56)	
242-60	Second group	b	
261-74		c (cf. 81-92)	
274-88		b'	
289-97	(CODA)	a (altered consequ.)	
298-311		a'''	

introduction, which are simply identified as motivic foreshadowings of theme a at the beginning of the Allegro vivace. The most important themes, a, b, and c, are all introduced in the exposition.

III.iii Exposition: mm. 23-110

The transition (mm. 38-56, graphed in Example 4.16a) seems to take a cue from the Largo's consequent phrase, which introduced F $\sharp$ in m. 8 as leading tone to G. For in m. 47 f $\sharp^2$ and c ^{3} are introduced in a similar way, leading to G minor in m. 48, the pivot chord in the modulation to V (VI of B $\flat$ becoming II of F). There are two arrivals on V/V: first in m. 49, and again in m. 56, approached with similar figuration; the latter V/V is the decisive, structural one. Example 4.16a shows in particular how both motions to V/V come about through a contrapuntal 5-6-5 series (inner voice F-G-G over the bass B $\flat$ -B $\flat$ -C), the first within a prolongation of I (mm. 44-53), and the second in the definitive modulation (mm. 53-6).

The second group, graphed in Example 4.16b, begins in m. 56 on V/V and contains three descending progressions to F. The first and primary descent (theme b) is an auxiliary cadential progression, completed in m. 80; the remaining (reinforcing) descents (themes c and b') conclude in m. 92 and m. 100, respectively. The exposition's closing tonic (F major) is prolonged in mm. 100-110 essentially by a motion into the inner voice (8- $\flat$ 7-6- $\sharp$ 7-8) over a tonic pedal.

Theme c (mm. 81-92) is the most rhetorically charged passage in the exposition, and its significance grows as the movement unfolds. This theme has a disruptive quality, since its initial sustained unison A (played *fortissimo* by the winds and strings) and the

subsequent bar of silence (m. 82) seem to stop the music's flow--to counteract the bustling eighth-note rhythms leading to the first conclusive cadence in F in m. 80. This arresting gesture subtly recalls the Largo introduction's opening unison B $\flat$, both rhythmically and in its proximity of pitch (though at the opposite dynamic level--*fortissimo* as opposed to *piano*).

The D-minor idea that follows--a restless alternation of I and V chords--is different from anything previously presented in the movement, though it is vaguely reminiscent of the neighboring pattern V $\frac{5}{3}$ - $\frac{4}{2}$ - $\frac{5}{3}$ repeated at the end of the Largo (mm. 20-22). This somewhat mysterious detour into D minor initiates a descending-fifths progression that quickly leads back to the tonic F.¹⁸

The chromaticism in this passage as well as in the one just preceding relates significantly to that of the introduction. First, in mm. 71-2 (see Example 4.16b) the motion from A $\flat$ to A $\sharp$ recalls the same succession that occurred (albeit in a different harmonic context) in mm. 15-16. Then, over the course of mm. 80-92, the rising chromatic motions C-C $\sharp$ -D and E-(F)-F $\sharp$ -G evoke a similar effect to the rising chromatic line in mm. 10-17.

It is interesting that the "serious" theme c occurs instead of a light, folk-like theme, such as one often finds near the end of Haydn's late symphonic expositions (including those of Nos. 93 and 100). The theme's rhetorical quality takes on further importance when it returns at the outset of the development, which we shall now examine in depth.

¹⁸ Donald Francis Tovey finds the "violent rhetorical pauses" of this theme to be "impressive," and perceptively describes the passage as "Beethovenish" in *Essays in Musical Analysis*, vol. 1 (London: Oxford University Press, 1935), p. 166.

III.iv Development: mm. 111-226

With a duration of 116 measures, this development is the lengthiest in the London Symphonies (and, to my knowledge, in Haydn's entire symphonic oeuvre). It is also the largest in terms of its proportion to the exposition (88 measures) and recapitulation (85).¹⁹ Example 4.17 shows the middleground of the entire *Allegro vivace*; the development is shown at a later level than the exposition and recapitulation, corresponding to Plan Vb/ii in Example 1.3. Before going into detail about the development's structure, I shall discuss aspects of its design.

The statement of theme c at the start of the development not only recalls the first appearance of that theme in the exposition, but also parallels the introduction's opening B $\flat$. Like the B $\flat$, the development's initial unison G has a peremptory effect—it seems to draw a sharp dividing line between exposition and development.²⁰ This is precisely the sort of tonal gesture that Haydn and other Classical composers often use at the start of the development to signal—in the manner of an orator—the importance of the coming events (and perhaps to challenge the listener to follow them, since the development usually places the greatest demands on the audience's attention and intellect).²¹

As noted in Chapter 2 (p. 61), Haydn elides the development's opening statement of theme c by progressing from the G-major chord (V of C minor, m. 116) to E $\flat$ major,

¹⁹ Only two other first movements from the London set contain developments longer than the exposition (Nos. 96 and 103), neither by so great a margin as that in No. 102.

²⁰ The harmonic progression V-V/II across the double bar is a type of remote harmonic juxtaposition *not* mentioned by James Webster. For others, and their use in Haydn's middle-period developments, see Webster, *Haydn's "Farewell" Symphony*, p. 134-8. See also my discussion in Chapter 2.

²¹ For recent discussions of Classical forms in rhetorical terms, see Mark Evan Bonds, *Wordless Rhetoric: Musical Form and the Metaphor of the Oration* (Cambridge, Mass.: Harvard University Press, 1991), and John Irving, *Mozart's Piano Sonatas: Contexts, Sources, Style* (Cambridge: Cambridge University Press, 1997), especially Chapter 11.

yielding, in Webster's terms, a Type 1 remote harmonic juxtaposition.²² (The omitted continuation of theme c would be the equivalent of mm. 87-92, transposed down a major second.) This is the first of two such juxtapositions, the second being from C major to A $\flat$ major in mm. 131-2. In each instance, the first chord can be heard as a putative dominant whose tonic is only hinted at. The latter juxtaposition is less stark, since the members of the C-major chord that are foreign to the A $\flat$ -major chord, E $\sharp$ and G, drop out four measures before the change of harmony.

The arrival on A $\flat$ m. 132 marks the beginning of an extended passage in which theme c is developed through fragmentation and sequential repetition (hence the label c' in Table 4.3, mm. 132-60). As Example 4.17a shows, A $\flat$ in the bass is part of a large-scale arpeggiation F-A $\flat$ -C, concluding in m. 185. The C at the end of that arpeggiation supports II (initially altered to C major), the main middleground harmony prolonging V, and from there the bass regains V via the rising fourth C-D-E $\flat$ -E $\sharp$ -F.

Within the large arpeggiation F-A $\flat$ -C (sketched in greater detail in Example 4.17b), the development touches on C minor in m. 154. This is not yet II, but rather, the upper third of A $\flat$. The development's search for a structural II (C minor) is frustrated three times: first by the motion from V/II to E $\flat$ (m. 117), then by A $\flat$'s upper third (m. 154), and finally by the arrival of C major in m. 185 (which is *structural*, but not yet C *minor*). The latter becomes C minor with the dramatic phrase overlap in m. 192.

Now we shall look at the development's structure in even more detail, in three phases: (1) mm. 111-60 (graphed in Example 4.18); (2) mm. 160-92 (also graphed in Example 4.18); and (3) mm. 192-226 (graphed at two levels in Example 4.19).

²² Webster, *Haydn's "Farewell" Symphony*, p. 136.

The top line in Example 4.18 (phase 1) basically moves from f^2 (at the end of the exposition) to a^2 in m. 160. Meanwhile, the underlying bass pattern in mm. 146-54 is a rising chromatic line $A\flat-A\sharp-B\flat-B\sharp-C$; on the foreground, $A\sharp$ and $B\sharp$ are transferred to the top line and supported by added roots, F and G. The rising line relates back to the chromatic ascent in the introduction, which includes an emphatic shift from $A\flat$ to $A\sharp$.

As soon as C (the upper third of $A\flat$) is attained in m. 154, the bass begins to descend chromatically. In this circuitous way, the $A\flat$ from m. 132 reaches its chromatically altered form, $A\sharp$, in m. 158, supporting V^7 of D minor. This marks the most important reference to the crucial $A\flat-A\sharp$ idea from the introduction. The top voice reaches a^2 in m. 160, two measures after the bass arrives on A.

Phase 2 (in Example 4.18) begins with a stretto of theme b (all entries being spaced a half-measure apart). This is the most densely contrapuntal section of the development (mm. 160-80), whose structure is essentially a motion by descending fifths, A-D-G. G initially supports G minor (m. 173) becoming V of C minor in mm. 174-83, though the music does not settle on that dominant until m. 181.

The fermata in m. 184, following the arrival on V of II, sets up the expectation of a thematic statement in C minor--notwithstanding the fact that the earlier half cadence on the same harmony at the outset of the development was followed by theme a in $E\flat$ major. Haydn unexpectedly brings in theme a in *C major*--the mode in which that theme has always appeared, and very close in pitch (but remotely related) to the tonic, $B\flat$. The choice of key for this false recapitulation is unusual, as noted in Chapter 2, but suitable for the purpose of suggesting--at least to an inattentive listener--that this is the recapitulation. The

sparse texture does not suggest a true recapitulation (compare the tutti texture of the opening of the Allegro vivace).

Haydn elides the eighth measure of this statement of theme a with the beginning of a new passage in C minor. This modal shift restores II to its diatonic form; the motion $E^{\sharp}-E^{\flat}$ also relates motivically to the earlier $A^{\flat}-A^{\sharp}$ shifts (via retrograde) and to the remote juxtapositions earlier in the development. In Table 4.3, I refer to mm. 192-210 as theme d (which appears only here in the development). This is not so much a theme as a texture of broadly-paced block chords, enlivened by the eighth-note rhythm from theme a. The structure of this passage is shown at two levels in Example 4.19. Level a simplifies the voice leading of mm. 200-208, in particular, as compared with level b. The elided resolutions of $E^{\sharp}$ to $E^{\flat}$ in mm. 204-6, and of $A^{\sharp}$ to $A^{\flat}$ in mm. 206-8 reinforce the descending chromatic semitone idea. The $E^{\sharp}-E^{\flat}$ idea is then reversed when the bass ascends to F in mm. 210-17.

Note also that the passing D in the bass at m. 208 supports an unstable $V^{\sharp}$ of $E^{\flat}$, and therefore occupies a lower structural level than if it supported III or $III^{\sharp}$. (The other Haydn developments based on Plan Vb, Symphonies Nos. 93 and 96, contain a passing $III^{\sharp}$.)

Several features of the retransition (mm. 210-26) are noteworthy: (1) its similarity to the transition (compare mm. 47-9, mm. 215-17, and mm. 240-42); (2) its thematic anticipation of the recapitulation; and (3) the coloring of the structural V in mm. 217-21 by neighboring diminished sevenths (over V pedal), reminiscent of the closing measures of the Largo introduction. And lastly, the solo flute that introduces $e^{\flat 3}$ in m. 226, just before the

return of the primary tone d^3 , recalls the similar use of the flute in the final measure of the Largo.

Before going on to the recapitulation, let us review some of the most significant motivic relations between the introduction and the development. First of all, A^b , the dynamic climax of the introduction and the point of furthest remove from the tonic, is the focal remote region in the development. And, as in the introduction, A^b is chromatically altered to $A^{\sharp}$ (both locally in m. 147 and, on a larger scale, in m. 158). Secondly, the development contains numerous analogues to the A^b - $A^{\sharp}$ idea, including the modal shift from C major to minor, the remote harmonic juxtapositions near the outset of the development, and the elisions near the conclusion. Similarly, the contrast of D^b and $D^{\sharp}$ in the retransition echoes the modal shift between the introduction and the start of the Allegro vivace. Thirdly, the larger context for A^b - $A^{\sharp}$ in the introduction, the rising fourth F - B^b , is replicated in the harmonic structure of the development, from II to V (C-F, in mm. 185-217) part of which is filled in chromatically (E^b - $E^{\sharp}$ -F). But the movement is not yet over, and the recapitulation, as we shall see, further amplifies these ideas.

III.v Recapitulation: mm. 227-311

The recapitulation, graphed in Example 4.20, completes the descent of the fundamental line ($\hat{3}$ - $\hat{2}$ - $\hat{1}$) in m. 302. The structure of mm. 227-60 differs significantly from the corresponding part of the exposition (mm. 23-80 in Example 4.16). Whereas the initial descent in the second group of the exposition (mm. 56-80) is a fifth-progression from $\hat{2}$, the corresponding part in the recapitulation (mm. 242-60) prolongs a motion from c^2 to $b^{\flat 2}$

as a fourth, f^2 - $e\flat^2$ - d^2 - c^2 , plus a second, c^2 - $b\flat^1$. The implied tones in this line, $e\flat^2$ and c^2 , are shown in parentheses in the first system of Example 4.20.

Haydn recomposes theme c in mm. 261-274 in such a way as to recall mm. 132-54 of the development, which also uses theme c (modified). Both passages contain the rising chromatic line $A\flat$ - $A\sharp$ - $B\flat$ - $B\sharp$ -C (see the bass of Examples 4.18a, mm. 132-54, and the top line of Example 4.20, mm. 270-72). This line is divided between bass and soprano on foreground of mm. 146-54, the chromatic tones $A\sharp$ and $B\sharp$ being approached by way of motions into the inner voice C- $B\flat$ - $A\sharp$, and $D\flat$ -C- $B\sharp$ (each supported by a bass motion in parallel tenths). A similar pattern occurs in mm. 270-72, but with voice exchanges of each successive outer-voice pair rather than parallel tenths. (Note also the use of a $B\flat$ -major chord here, as opposed to $B\flat$ minor in m. 150.)

This recomposition of theme c in the recapitulation serves several functions. It is the last chapter in the tale of this unpredictable theme, which begins with its disruptive entrance in the exposition, and continues with its truncated appearances at opening of the development and again in m. 146 in $A\flat$ major. The last two statements of this theme emphasize an $A\flat$ that pushes upward to C, thus fulfilling the implications of the Largo introduction's climactic $A\flat$ major (m. 14) which also forms part of a chromatic ascent. Remote chromatic elements such as this $A\flat$ make it possible for diatonic chords or tones--most importantly the tonic itself--to be reaffirmed more emphatically (perhaps even heroically) than if such elements were absent. The very tensions that Haydn sets up in the introduction are thus amplified and resolved in different but related ways in the Allegro vivace.

In the concluding thirty-eight measures (mm. 274-311), the end of the recapitulation proper merges with the coda. Tonal closure is expected in m. 282, but is thwarted by a deceptive cadence on VII^{o7}/V, which marks the beginning of a parenthesis (until m. 301). I take mm. 282-8 to be a kind of no man's land between the recapitulation and the coda, which properly begins in m. 289 with the return of theme a. Haydn again avoids closure within the anticipated eight-measure timespan by means of a diminished seventh chord (actually, two of them): VII^{o7} in m. 295 and VII^{o7}/II in mm. 296-7.²³

The closure that was due in m. 282 finally occurs in m. 302, and the movement is rounded out in mm. 302-11 with a slightly modified transposition (into B $\flat$) of the music with which the exposition concluded (mm. 100-110). This conclusion thus beautifully integrates two hallmarks of Haydn's style, and of Classical style in general: the delay of tonal closure and the symmetrical placement of formally analogous thematic material.

IV. Concluding remarks on Symphonies No. 93, 100, and 102 as a group

In each of the movements analyzed in this chapter, the development plays a dramatic role in prolonging the structural dominant and in fulfilling the implications of chromatic ideas presented in the introduction and exposition. A central feature of each development is the integration of one or two remote harmonic regions into a basically diatonic framework. In Symphony No. 93, that region is C major; in No. 100, B $\flat$ major; and in No. 102, A $\flat$ major and C major. Although the movements have certain deep-level similarities--for instance, the developments of Nos. 93 and 102 both essentially compose out a motion from II to V⁷--each of these three movements embodies a different ethos.

²³ Ethan Haimo points out that this unexpected turn to II (C minor) in the coda relates to the emphasis on C minor in the development. See "Haydn's Altered Reprise," p. 345.

Each movement is distinguished, for example, by the way material in the second group is handled in the development. The expositions of Nos. 93 and 100 conclude with a folk-like closing theme that is altered significantly at the outset of the development. In the case of No. 93, the theme is fragmented; in No. 100, the theme is initially left intact, but transposed to an unexpected key, B $\flat$. The fragmentation of the closing theme in the development of No. 93 contributes to the intensely contrapuntal (or learned) style of this section, which provides a dramatic foil for the unexpected return of that theme (in its initially unfragmented form) in C major.

Besides the different treatment of the thematic material, in each symphony the border between exposition and development is articulated differently: whereas in No. 93 the development commences precipitously without a pause, No. 100 contains a two-bar “rhetorical” silence. The development of No. 102, like that of No. 100, begins with a literal transposition of a theme from the second group--but not the closing theme. For, as we saw, the exposition of No. 102 contains (instead of a folk-like closing theme) an interpolated “Beethovenish” theme between two statements of the second group’s principal idea. The whole mood of the development is influenced by this dramatic and suspenseful interpolated theme. The disjunctions within that theme are multiplied in the development (note the bars of silence, the remote harmonic juxtapositions, the fermata before the false recapitulation in C major), creating a much more discontinuous design than in the other developments. (The only comparable pauses in No. 93 occur just before the turn to C major.)

It is thus evident that while the introduction is the main “source” of chromatic events in each of these developments, thematic material from the exposition exercises a

greater influence on the rhetorical character of the development--a character inherent in the themes themselves (e.g., "serious" or "folk-like") and shaped by the order and the keys in which those themes are presented. The temporal flow and ordering of ideas in each development--though not as inferrable from the introduction and exposition as the chromaticism--give rise to varying degrees of continuity and discontinuity that are integral to the movement's drama.

CHAPTER 5

DEVELOPMENT SECTIONS AND CYCLIC INTEGRATION IN THE “DRUM ROLL” SYMPHONY

I. Introduction

In the preceding chapter, I observed important structural and motivic relations between the slow introduction and the development and recapitulation of the opening movements of Symphonies Nos. 93, 100, and 102. The large-scale coherence of each movement is thus projected not only by the fundamental structure (*Ursatz*), but also by more individualized features--including remote harmonies (e.g., A $\flat$ major in No. 102) and motivic associations that may operate at deeper levels than the foreground, where “themes” (in the conventional sense) occur. In this chapter, I shall look beyond individual movements to examine cyclic integration across the four movements of Symphony No. 103 in E $\flat$ (the “Drum Roll”), focusing on the especially integrative role of the developments of the first and last movements.

In his book *Haydn’s “Farewell” Symphony and the Idea of Classical Style*, James Webster argues persuasively that many of Haydn’s instrumental works--composed throughout his career--are cyclically integrated in ways that most earlier scholars overlooked. In Webster’s view, a multi-movement work may be integrated by one or more of the following means: thematic relations (or thematicism), remote or indirect tonal progressions, remote key relations between movements, progressions from minor to major (within or between movements), run-on movement pairs and compound movements, and various other techniques. A minority of works, most notably the “Farewell” Symphony,

are overtly integrated in several ways. But most cyclically integrated works contain “tangible links between only two movements, or within only one musical domain.”¹ Symphony No. 103 lies somewhere between these categories, for it contains abundant, though not especially overt, elements of integration. Webster makes an interesting comparison of No. 103 and No. 99, the only other symphony in E♭ major from the London set. Following an extensive analysis of techniques of integration in No. 99, Webster considers the extent to which these two symphonies are representatives of the same “type.” Despite their many shared attributes--their closeness in date, venue, and key; the fact that both slow introductions contain a G-major chord as a goal; and the way in which implications of the third-relation between E♭ major and G major are composed out in subsequent movements--Webster feels that the two symphonies “inhabit different continents within Haydn’s aesthetic world.”² In the course of his account of No. 103, however, Webster fails to mention many features which (in my view, at least) contribute to its overall integration, thus conveying the impression that it is less integrated than No. 99. I shall argue that No. 103 is highly integrated, but not in precisely the same way as the cyclically integrated works identified by Webster.³

¹ Haydn’s *“Farewell” Symphony*, p. 174.

² Haydn’s *“Farewell” Symphony*, p. 331.

³ In my view, Webster defines cyclic integration too strictly according to features of the “Farewell” Symphony such as run-on movement pairs and remote relations between movements--features that need not be present in every cyclically integrated work. And while strict adherence to Webster’s criteria may help prevent abuse of the term “cyclic integration,” I see no need to exclude from the “cyclic canon” works (like No. 103) that strongly display certain features (in this case, thematicism and remote tonal progressions), but do not display others.

II. Cyclic integration in No. 103: An overview

The greatest bonds of cyclic integration in the “Drum Roll” are between the first and last movements, particularly the development sections. Before examining the developments in detail, I shall consider a few ideas from the first movement that are developed or echoed within that movement and in the subsequent movements.⁴ The most important connections involve chromatic pitches or chords which, because of their “markedness” and memorableness, are especially effective means of integrating large-scale works.⁵

The Adagio introduction to the first movement exercises an unusually great influence on the Allegro con spirito. Of course, several of Haydn’s earlier slow introductions--such as those of Symphonies Nos. 93, 100, and 102--also relate motivically to the Allegro movements that follow. As far as I am aware, No. 97 is the only symphony prior to No. 103 whose introduction is almost literally recalled in the Allegro (compare mm. 99-103 with mm. 1-4). But the introduction to No. 103 is the first in the symphonic literature that returns (albeit abbreviated) at its *original* tempo near the end of the Allegro (mm. 202-13).⁶ The introduction’s thematic material also appears in rhythmic diminution within the second group (mm. 74-5 and 214-15) and in the midst of the development (mm. 112-14). In addition to these obvious connections between the Adagio and Allegro, there exist other, more abstract, relations that are just as important to cyclic integration.

⁴ Although most of the passages discussed in this overview are reproduced in the examples, the reader is urged to have the score at hand for the remaining discussion of the “Drum Roll.”

⁵ For applications of the linguistic notion of markedness to musical analysis, see Robert S. Hatten, *Musical Meaning in Beethoven: Markedness, Correlation and Interpretation* (Bloomington and Indianapolis: Indiana University Press, 1994), and Patrick McCreless, “Syntagmatics and Paradigmatics: Some Implications for the Analysis of Chromaticism in Tonal Music,” *Music Theory Spectrum* 13/2 (Fall 1991): 147-78, especially pp. 163-6.

⁶ An earlier example (but in a different genre) is the first movement of Mozart’s String Quintet in D, K. 593 (1790), whose introduction is restated in the coda.

G-major harmony has great significance in the outer movements. It occurs at two important junctures in the first movement: at the end of the Adagio (Example 5.1) and, in the development, just before the return of the Adagio's bass melody at the Allegro tempo (see Example 5.2, m. 111). In both cases, the harmony sounds initially like V of C minor, but resolves irregularly down a major third to E $\flat$. (It thus functions in the Adagio as III $\flat$; in the development the meaning is more complex, as I shall show.) The progression III $\flat$ -I between Adagio and Allegro is echoed in the Finale at the boundary between the development and recapitulation, shown in Example 5.3. Here, however, the tonic is in $\sharp$ position, not root position: the progression III $\flat$ -I ^{6} results from a 5-6 motion over the bass G. (The larger context for this progression is discussed below.) Although I believe that much of the effectiveness of these passages has to do with the implication and subsequent denial of C minor, it should be pointed out that Haydn does not always avoid cadencing in C minor--witness the first modulation in the A ^{2} section of the Finale (m. 186). But the G-major chords in the first movement indeed have a promissory function by virtue of their failure to resolve to C. And that promise is fulfilled by the key of the second movement, a set of double variations alternating between C minor and C major.

The second conspicuous link (or set of links) between the outer movements involves D $\flat$. With respect to the bass melody of the Adagio, D $\flat$ is the first chromatic pitch (see Example 5.4, m. 10). The use of D $\flat$ near the beginning of E $\flat$ -major works of the Baroque and Classic periods is a frequent and well-known phenomenon, a famous example

by Haydn being the great Sonata Hob.XVI: 52.⁷ The opening 13 measures of No. 103 consist of a single introductory measure (containing the drum roll that gives the symphony its nickname) followed by two six-measure phrases in an antecedent-consequent relation. Note that the consequent begins with a restatement of the neighbor motive $E\flat-D-E\flat$ up a fourth, which is then varied so as to create a brief tonicization of IV (including a $D\flat$) before the cadence on I in m. 13.

The Allegro con spirito's main theme, shown in Example 5.5, resembles the Adagio's opening in that its initial two-measure idea is also repeated a fourth higher (but with variations after the fifth note), yielding the neighbor figure $C-D\flat-C$. The same pattern of varied transposition characterizes the main theme of the Finale, shown in Example 5.6. In this case the initial idea, which begins on $E\flat$, is first restated a fourth higher, but varied so as to lead to a cadence on the dominant. Then the motive appears in a kind a stretto between the bass (starting on $B\flat$) and top voice (starting on $D\flat$). The main themes of the outer movements are linked not only by the repetition of motives at a fourth above, but also by the association of $D\flat$ with a tonicized F-minor chord. This foreground association hints at much deeper structural relations that emerge in the development sections of both movements, to be discussed in detail below.

Enharmonicism is an especially powerful chromatic technique of cyclic integration in this symphony. The resolutions of G-major harmony to $E\flat$ major (mentioned above) create--at least implicitly--the semitone shift $B\sharp-B\flat$, and thus suggest an enharmonic association of $B\sharp$ with $C\flat$. The latter occurs explicitly in the first, third, and fourth

⁷ Other examples are the Prelude from Bach's Suite No. 4 for Violoncello Solo, both $E\flat$ Preludes from *Das wohltemperirte Clavier*, and the opening of Beethoven's "Harp" Quartet, Op. 74.

movements, with increasing frequency as the symphony unfolds. Example 5.7 shows the first prominent use of $\text{C}\flat$, near the conclusion of the first movement (mm. 191-201).⁸ This passage suspensefully prepares the famous reminiscence of the slow introduction.

The next appearance of $\text{C}\flat$ is in the B section and the second A of the Menuet. It functions first as a pivot in a modulation to $\text{G}\flat$ (mm. 13-16), then as the bass of an augmented sixth chord marking the structural V (mm. 24-7), and finally (in mm. 41-2) as the bass of a VII^{ord} decorating the final V. In the otherwise purely diatonic Trio, there is a play on the $\text{C}/\text{B}\sharp$ enharmonic (mm. 60-61) which, along with a $\text{D}\flat$ in m. 58, adds enough color to recall the Menuet's chromaticism without upsetting the basic affective contrast between the Menuet and Trio (see Example 5.8; instances of $\text{C}\flat$ are circled).

The Finale contains several foreground instances of $\text{C}\flat$ (see mm. 41, 66-9, 147-9, 332-3), but the most important use of it is saved until the first part of the coda (mm. 351-61, see Example 5.9). In mm. 351-4, the neighbor motive $\text{C}\flat\text{-B}\flat$ is reiterated in an inner part (second violins); moments later, in mm. 356-9, $\text{B}\sharp$ appears in the bass in connection with the lower-neighbor motive $\text{B}\sharp\text{-C}$. An almost direct enharmonic transformation of $\text{B}\sharp$ in the symphony occurs in m. 360, where $\text{B}\sharp$ becomes $\text{C}\flat$ (the repeated diminished-seventh harmony facilitating the change of meaning), and resolves down to $\text{B}\flat$ in m. 361. This is the last we hear of $\text{C}\flat$ in the whole symphony—at least in the final version. In Haydn's original conclusion to the Finale, however, $\text{C}\flat$ returned as part of a broken-third motive ($\text{C}\flat\text{-E}\flat$) stated three times in a broad rhythm (this follows $\text{V}^{\text{ord}}/\text{V}$ in mm. 364-9 and a dramatic pause in mm. 370-71). Webster argues that Haydn rejected this passage because of its similarity to the passage in the first movement just before the recall of the slow

⁸ The only previous $\text{C}\flat$ in the movement is a foreground melodic detail in m. 20.

introduction, and because it (the rejected passage) “would have introduced a powerful emphasis on $\flat\hat{6}$, not now present anywhere in the symphony. It would have altered and augmented the meaning of every previous $B^{\sharp}$ and $C_{\flat}$.”⁹ Although it is true that—prior to the coda— $C_{\flat}$ does not receive much emphasis in the Finale, the instances of $C_{\flat}$ in the first and third movements (cited above) are certainly emphatic. And there is sufficient emphasis on $C_{\flat}$ in the final version of the Finale (notably in the passage involving the enharmonic change of $B^{\sharp}$ into $C_{\flat}$) to support my view that $B^{\sharp}/C_{\flat}$ is a central element of cyclic integration in the symphony.

To conclude this overview of techniques of integration, I shall point out another enharmonic that plays an important role throughout the symphony: $F^{\sharp}/G_{\flat}$. The first movement gives initial priority to $F^{\sharp}$, which is introduced in the Adagio as an applied leading tone to $III^{\sharp}$ (mm. 30-33), returns in the middle of the exposition as part of a detour to G minor (mm. 68-70), and intrudes as a melodic detail in mm. 60 and 76. The enharmonic relation between $F^{\sharp}$ and $G_{\flat}$ becomes a central idea in the developments of both the first and last movements, as we shall see. In the second and third movements, each side of the $G_{\flat}/F^{\sharp}$ enharmonic appears independent of the other. In the Andante, the most prominent chromatic pitch is $F^{\sharp}$. It stands out because of its frequency and position in the first measure of both the minor and major themes, and also because of the resulting augmented second between $E_{\flat}$ and $F^{\sharp}$ in the minor-mode theme and variations. The Menuet, in contrast, contains a significant tonicization of $G_{\flat}$ (m. 16), but no $F^{\sharp}$. The latter omission actually contributes to the Finale’s culminative effect, since it is there that both sides of the $F^{\sharp}/G_{\flat}$ enharmonic are exploited to the fullest.

⁹ Webster, *Haydn’s “Farewell” Symphony*, p. 331.

III. The first movement: The development in context

In order to appreciate the development's dramatic impact, we must consider the Adagio introduction and the exposition. I shall focus on those features that are central to my argument for cyclic integration; aspects of the structure of these sections that are not explicitly discussed in the text are inferrable from the graphs presented in this chapter. For reference, a chart of the movement's form is provided in Table 5.1 below.

Table 5.1 Haydn, Symphony No. 103 in E $\flat$, I. Chart of Formal Design

<u>Measures</u>	<u>Section</u>	<u>Theme</u>	<u>Corresponding Graph</u>
INTRODUCTION (Adagio)			
1-39		a	Example 5.10
EXPOSITION (Allegro con spirito)			
40-48	First theme	b	Examples 5.11, 5.12
48-60	Transition I	c	
60-67	Transition II	b'	Examples 5.13, 5.14
68-74	Transition III	d ("G minor" purple patch)	
74-80	Second key clinched	a'	
80-94	Closing theme	e	
DEVELOPMENT			
94-104		b' (stretto)	Examples 5.13, 5.14
104-12		b'' (with new counterpoint)	
112-31		a' (in diminution)	Example 5.15
132-43		b'	
144-53		e (in D♭ major)	
154-59	Retransition	e'	
RECAPITULATION			
159-67	First theme	b	Example 5.15
167-79	Transition	c	
180-88	Closing theme	e	
189-201	(preparation)	f	
202-13	Adagio reprise	a	
214-20	(cf. 74-80)	a'	
220-29	(cf. 88-94)	b (fragment) and e (cadential material)	

The Adagio's structure, shown at the foreground level in Example 5.10, unfolds in three phases (each occupying one system of this example): mm. 1-13; 14-25; and 25-39.

The first phase is a twelve-measure period, prefixed by the single measure of drum roll. This is repeated with variation in mm. 14-25--the original bass melody now appears in the treble register with accompaniment. The consequent in mm. 20-25 moves more emphatically to II (F minor) than its counterpart in mm. 8-13 (note the applied $\sharp 3$ chord in m. 22). This plaintive tonicization of II hints at the importance of II in the development. The third phase of the Adagio presents yet another tonicized II (again, preceded by a $\sharp 3$), which passes between I and III⁴, rather than leading to V.

The Adagio's top voice asserts b^2 as a local primary tone (indicated as $\hat{5}$ in parentheses). Not until m. 32 is the primary tone of the movement, g^2 , attained. Note that $a^{\sharp 2}$ in m. 30 proceeds *downward* through g^2 to $f^{\sharp 2}$ (which continues the rising chromatic line $e^{\flat 2}$ - $e^{\sharp 2}$ - f^2), as if to refute the earlier upward resolutions of $a^{\sharp 2}$ to $b^{\flat 2}$ in mm. 6-7 and 18-19. (Indeed, before the diminished seventh on $F^{\sharp}$ resolves to G, it would be reasonable to expect a resolution to a $B^{\flat}$ chord, assuming $F^{\sharp}$ is heard as $G^{\flat}$; this is the first hint of the $F^{\sharp}/G^{\flat}$ enharmonic that is exploited later.)

The exposition, graphed in Examples 5.11 and 5.12, is difficult to grasp because of a conflict between design and structure: the dominant $B^{\flat}$ emerges as a key in m. 63, but does not occur as a structural harmony until m. 74. (Note that $B^{\flat}$'s arrival is more strongly articulated by the cadence at m. 80, which overlaps with the start of the closing theme.) As I show in Table 5.1, the transition made be divided into three phases. Transition I (mm. 48-60) is a "first try" that ends with a half cadence in the tonic key. As Example 5.11 shows, the V at the end of this phase is a divider. Transition II (mm. 60-67) modulates to $B^{\flat}$ in m. 63, and seems to contain the start of the second group in m. 64 (in the manner of a "monothematic" exposition). (Note the ease of this modulation, compared to what

follows). Transition III (mm. 68-74) upsets the stability of this apparent second group, starting with $F\sharp$ in m. 68 and $B\sharp$ in m. 69. One is led to expect a cadence in G minor (VI of $B\flat$) in m. 71; but that cadence is thwarted by a shocking diminished seventh on $E\sharp$ in mm. 71-72. Although this emphatic chord could be initially heard as $VII^{\circ 3}$ of V in G minor (assuming $D\flat=C\sharp$), it turns out to be $VII^{\circ 7}$ of V in $B\flat$.¹⁰ (The conflict between the notation and function of $D\flat$ is part of Haydn's large-scale cyclic plan. For, as we shall see, at two later junctures in this movement, and in the Finale as well, Haydn again reinterprets diminished sevenths without a change of spelling.)

The conflict between the apparent start of the second group in m. 64 and the delay of the structural V until mm. 74-80 is not insoluble (though it is a great source of drama in this exposition). As I show in Example 5.12a, one can reconcile the apparent contradiction by reading the dominant harmony in mm. 63-7 as a neighbor chord between the initial I and its chromatically intensified form, the $E\sharp^{\circ 7}$ chord in mm. 71-2, which leads urgently to the $II^{\sharp}$ (V/V) in m. 73.

We are now in a position to consider the development in the context of this movement: its relation to the development of the Finale will be addressed in the next section. I shall begin with a middleground perspective on the development, shown in Example 5.13. This level already includes significant chromatic ideas relating to the integrative features noted above. (Parallel fifths and octaves in this graph in m. 104-9 and mm. 140-44, are eliminated in the detailed graph that follows.)

The development is based on Plan Va (see Table 1.1 on p. 28), in which the main

¹⁰ This diminished seventh is prefigured in mm. 22 and 42, where the same sound functions, however, as an applied chord to II (F minor).

harmony prolonging V is II. Note that II provides consonant preparation for $A\flat$, the seventh of V^7 , introduced in m. 130 and retained in m. 152 and 158. The first subsection of the reduction ends in m. 130 with the arrival on II.¹¹ Within this subsection, the bass arpeggiates up a fifth, $B\flat$ -F, but not before an intermediate stop on $E\flat$ (m. 114). The top-voice's basic structure up to m. 130 is a rising third-progression f^2 - g^2 - $a\flat^2$ (see mm. 94, 114, and 130). Within that large third the same third appears nested twice, as indicated by the slurs to $a\flat^2$ in m. 98 and again in m. 113.

Perhaps the hardest aspect of this subsection to understand is the bass, particularly in mm. 109-14. The G-major chord immediately preceding the return of the Adagio's opening bass melody (theme a) in diminution is in root position, but the bass G can be understood as an added root supporting the structural note $B\sharp$. The latter pitch is a chromatic inflection of the $B\flat$ from the end of the exposition, and G (also present in the top voice) arises from a 5-6 motion over $B\flat$ - $B\sharp$. Following the fermata in m. 112, the bass continues to rise, but in a slightly concealed fashion, in the accelerated statement of theme a. Example 5.14 (a foreground graph of the entire development) highlights those tones in the bass melody in mm. 112-14 that form the main linear progression. Although some analysts of this passage might read a return to $E\flat$ in m. 112, I prefer to hear an arrival on $E\flat$ at m. 114. In any event, this "tonic" (wherever one reads it) is not structural, but is rather embedded within the larger motion from V to II; hence the label "I" in Example 5.13 and 5.14.

The second large subsection of the development--the prolongation of II in mm. 130-52--is more complex than the first. The beginning of this prolongation is marked by

¹¹ In this discussion of the middleground, I refer to three "subsections." Later, with respect to the foreground, I shall describe six shorter "phases" of the development.

the return of theme b's neighbor motive, which last appeared in m. 110 (see the score).

After just two measures of F-minor harmony, the flow of the development is interrupted by a second fermata, which is followed in m. 132 by V⁷ of D $\flat$. This is the beginning of a detour away from F minor, which is not regained until m. 152.

Instead of resolving immediately to D $\flat$, the bass A $\flat$ that is sustained in mm. 132-7 rises chromatically in mm. 137-8 through A $\sharp$ to B $\flat$. Meanwhile the top voice's G $\flat$ is reinterpreted as F $\sharp$ (without a change of notation), and resolves to g $\sharp^2$ in m. 138, supported by a $\sharp$ -chord on B $\flat$.¹² (This reinterpreted diminished seventh recalls the one on E $\sharp$ in mm. 71-2 of the exposition with D $\flat$ resolving to D $\sharp$; similar enharmonics in the Finale will be noted below.) On first hearing, one might imagine the cadential $\sharp$ on B $\flat$ to be structural--perhaps the start of a retransition--and, indeed, there is an imperfect authentic cadence in E $\flat$ in m. 140. But this apparent tonic (again, labelled "I") is really a detour within a detour. In mm. 140-144, there is a sequence by descending thirds (bass: E $\flat$ -C-A $\flat$ -F-D $\flat$).¹³ The goal, D $\flat$, represents the delayed resolution of the A $\flat$ dominant seventh in mm. 132-7. The arrival on D $\flat$ is underscored here by the return of the closing theme (theme e)--its first appearance since the exposition.¹⁴

¹² In his well-known analysis of the "Drum Roll," Jérôme-Joseph de Momigny writes the following with regard to the reinterpreted G $\flat$ in m. 137: "Haydn n'a pas voulu le convertir en fa $\sharp$ afin d'être plus sûr des hautbois et peut-être aussi pour causer une plus grande surprise...." ("Haydn did not want to change [the G $\flat$] into F $\sharp$ so as to be more sure of the oboes and perhaps also to cause a greater surprise.") See Momigny, *Cours Complet d'Harmonie et de Composition*, vol. 2 (Paris, 1806), p. 597.

¹³ This sequence is motivically related to the implied descending chain of thirds in the introduction's opening bass theme.

¹⁴ Compare the similar phenomenon in the development of Symphony No. 93, in which the closing theme comes back in C major (which is to the tonic D as D $\flat$ is to E $\flat$ in Symphony No. 103, although the structural contexts are quite different).

Having strayed so far from the home tonic, Haydn abruptly introduces another, more angular, sequence in mm. 150-52, propelling the music back to the F minor which had been abandoned in m. 131. The bass $D\flat$ in m. 150 proceeds in two directions: chromatically ascending, $D\flat$ - $D\sharp$ - $E\flat$ - $E\sharp$ -F (the $D\sharp$ and $E\sharp$ appear as inner voices on the foreground, as in Example 5.14, but are shown as bass notes in Example 5.13); and, more basically, downward by semitone to C in m. 151. In m. 152, the fortissimo dynamic and the shift to the high register in the first violin part mark F minor as a structural harmony, completing the prolongation begun in m. 130. The harmony in m. 156 can be understood as an altered form of II, with F omitted, and $A\flat$ raised to $A\sharp$; the affinity of this “VII⁶/V” to the preceding II is conveyed by the unfolding symbol in the bass in Example 5.13, and by the slur in Example 5.14 (mm. 152-6).

Referring now to the score and to the graph in Example 5.14, let us examine the foreground structure and design of the development. The development’s design divides into roughly six phases, each labelled in Example 5.14: (1) mm. 94-104; (2) mm. 104-112; (3) mm. 112-131; (4) mm. 132-43; (5) mm. 144-9; and (6) mm. 150-59. Note that the boundaries between the larger subsections described above (m. 130 and m. 152) do not precisely coincide with these divisions in the design. Momigny divides the development into seven periods, most of which correspond to the phases that I have indicated.¹⁵ Momigny’s third, fourth, and fifth periods are as follows: mm. 112-21, mm. 121-9, and mm. 130-43. The main difference between my reading and Momigny’s is my choice of m. 132 rather than m. 130 as the beginning of phase 4, since it follows a fermata. Two

¹⁵ Momigny, *Cours Complet*, vol. 2, p. 586. For a discussion of Momigny’s analysis, see Malcolm S. Cole, “Momigny’s Analysis of Haydn’s Symphony no. 103,” *Music Review* 30/4 (1969): 261-84.

reasons for taking m. 130 are the return of the main theme's neighbor-motive and the arrival on II. But--to my mind--the arrival on II sounds, at least from the point view of design, more like the conclusion of a phase than the beginning of one. And the fermata clearly marks the end of phase 3.

A kind of topos of this development (in a different sense from Leonard Ratner's notion of "topic") is the idea of pausing on a dominant and withholding resolution to the expected tonic. This happens three times. First, V⁶/II (m. 101) is followed by IV (m. 104); then V/VI (mm. 109-12) is answered by an accelerated variant of the Adagio theme in the tonic key; and finally, V⁷ of D^b (mm. 132-7) is chromatically inflected so as to lead to a "false retransition" on V of a non-structural E^b. The first and last of these dominants act as harbingers of F minor (reached in m. 130) and D^b (reached in m. 144), respectively. Although the sense of expectancy aroused by such dominants--and of surprise at the events that follow each dominant--is characteristic of many Haydn developments, it is exploited here more than in any other development from the London symphonies.

Webster holds that the primary idea of this symphony "comprises precisely its mysterious gestures of annunciation"--starting with the opening drum roll.¹⁶ Like the unison B^b which begins Symphony No. 102 (echoed in the second group and at the start of the development), the drum roll becomes a point of reference in Symphony No. 103. The development in particular explores several different ways of introducing--or announcing--thematic material, be it theme a, the accelerated theme b, or theme e, each of which emerges in quite a different manner from its initial presentation in the exposition. A rhetorical device related to the opening drum roll is the use of fermatas throughout the movement (see Table

¹⁶ Haydn's *"Farewell" Symphony*, p. 331.

5.2); the fermatas reinforce the disruptive effect of the dominants that do not resolve to their tonics (at least, not immediately). The development is striking not only because the themes are placed in new and often surprising contexts, but also because Haydn consistently brings the music to a kind of standstill before continuing along a seemingly unrelated path.

Table 5.2 Fermatas in Symphony No. 103, I

<u>Location</u>	<u>Harmony marked by a fermata</u>	<u>Harmony following the fermata</u>
m. 1 (drum roll)	I	I
m. 39	III ^b (potentially “V/VI”)	I (Allegro con spirito)
m. 112	V/VI	“I” (Adagio theme in diminution)
m. 131	II	V ⁷ of D ^b
m. 159	V ⁷	I (recapitulation)
m. 201	VII ^o ₃	I (Adagio reprise)
m. 202 (drum roll)	I	I

I shall now examine more closely Haydn’s handling of thematic material in the development, which is largely derived from three previously stated themes: theme a (specifically, mm. 2-4); theme b (mm. 40-42); and theme e, the closing theme from mm. 80-86. Three related techniques Haydn uses to “develop” this material are imitation, sequence, and repetition. Imitation and sequence are specific kinds of repetition in which the copy occurs at a different pitch than the pattern. If the copy is presented in a different voice from the pattern, it is a case of imitation; if the copy is presented in the same voice, one speaks of sequence. I shall use the term “repetition” only when the copy is at the same pitch level as the pattern.

Phase 1 (mm. 94-104) begins with freely imitative treatment of the first seven notes of theme b (characterized by the initial neighbor-motive), and concludes with repetition of a one-measure pattern (m. 99-100) followed by repetitions of just the second half of that pattern (C-C-D $\flat$ -[C]) in a monophonic texture (mm. 102-4). This progressive reduction of theme b to a three-note pattern is akin to the “condensing technique” which Schoenberg called liquidation, except that the neighbor motive that characterizes the theme is never eliminated.¹⁷

The latter passage provides a link to phase 2 (mm. 104-112), which begins with a nearly literal transposition of theme b (mm. 40-42) down a fifth. By the second measure of this phase, Haydn sets in motion a passage that involves both imitation and sequence. The second measure of theme b in the first violin is treated sequentially (the pattern outlining an A $\flat$ -major triad is repeated on B $\flat$ -minor and C-minor harmony), and is meanwhile imitated at the eleventh below by the cellos a half-measure later. A new counterpoint to this material is stated in the flute and second violin, and is likewise treated sequentially and imitated at the fourth below (by the oboe and violas). Although the sequence ends with the arrival on G-major harmony in m. 108, the structurally more salient G chord occurs one measure later. The concluding measures of this phase (mm. 108-112) are characterized by repetitions of I-V in C minor, first at one-measure intervals, and then twice as quickly, stopping on G-major harmony in m. 111. This passage thus “rhymes” with the repeated I-V progressions in F minor at the end of phase 1.

¹⁷ In his account of sentence construction, Schoenberg states: “*Liquidation* consists in gradually eliminating characteristic features until only uncharacteristic ones remain, which no longer demand a continuation.” See Arnold Schoenberg, *Fundamentals of Musical Composition*, ed. Gerald Strang and Leonard Stein (London: Faber and Faber, 1967), p. 58.

Phase 3, which begins with theme a in diminution, contains two sequences. The first (mm. 114-17) consists of a two-measure pattern repeated (slightly varied) a whole step higher; the second (mm. 121-4) consists of a half-measure pattern repeated on four successively higher steps of the E $\flat$ -major scale, and varied at the fifth step (the arrival on C in the bass, V/II). The F minor tonicization in mm. 117-20, embedded within the E $\flat$ prolongation of mm. 114-21, foreshadows the imminent motion to F minor in m. 130. Once that goal is reached, the pattern stated in m. 130 is repeated at intervals of both the half-measure (in the basses) and whole measure (in the upper strings). Thus each of the first three phases concludes with a passage characterized by repetition, a relatively static means of traversing time, as compared to imitation and sequence, which fill time in a tonally more dynamic way.

The pattern of overlapping periodicities of repetition (intervals of a half- and whole-measure) continues after the fermata into phase 4, beginning in m. 132. Although the melodic pattern is not literally repeated after m. 133, the neighbor motive and eighth-note rhythm persists until m. 137. The change in surface rhythm in that measure subtly heightens the listener's awareness of what is about to happen, namely, the chromatic motion in the bass from A $\flat$ through A $\natural$ to B $\flat$. The metric placement of theme b on the downbeat of m. 138 (rather than in the middle of the measure, as in m. 40) gives the lie to any belief that the retransition is under way.¹⁸

Two further sequential passages occur in the development: one by descending thirds leading from E $\flat$ (an apparent tonic, in m. 140) to D $\flat$ (m. 144); and another by

¹⁸ Earlier in the development, theme b's "mid-bar downbeat" character is preserved (see mm. 94-105); the shift of the perceived downbeat to the beginning of the bar begins in m. 130.

ascending steps from D $\flat$ through E $\flat$ to F (in mm. 150-52). Couched between these two dynamic passages is a relatively stable passage in D $\flat$ --a fairly literal transposition of theme e (mm. 80-86). It is ironic that the most extended quotation of material from the exposition should be in the most remotely related key in the development. And yet the very stability of this D $\flat$ --however brief--provides an essential foil for the intensely active reapproach to the dominant in mm. 150-57. Indeed, the development's design is characterized--more so than any other from the London set--by regular alternation between tonally static passages (involving mostly simple repetition) and unstable passages with a sequential or imitative design.

The recapitulation, graphed in Example 5.15, presents few complications compared to the exposition and development. The chief point of interest is the reprise of the Adagio, which is suspensefully prepared by the shift to IV in m. 189, which becomes IV $\flat$ in m. 191. This provides consonant preparation for the VII $\sharp_3$ (then $\natural$) in mm. 199-201 that is resolved, albeit only gradually, by the drum roll and the Adagio theme. This reprise takes the place of theme d (mm. 68-74), not only by virtue of theme d's absence from the recapitulation, but also because the Adagio reprise is immediately followed by what had originally followed theme d (theme a'; compare mm. 74-80 with 214-20).

Aside from the unprecedented use of the Adagio reprise to integrate the first movement, the preparation for that reprise introduces C $\flat$ as an integrative element for the entire symphony--specifically, as a sign of imminent closure in this movement and the Finale. A motion to the subdominant is a frequent phenomenon toward the conclusion of movements in many forms. But the coloring of IV in the first movement by means of mode mixture, and its subsequent evolution into the cadenza-like passage on diminished-seventh

harmony just before the Adagio reprise, could hardly be predicted. The emphatic presence of $\text{C}\flat$ in this passage returns to haunt us in the Menuet and, more significantly, toward the conclusion of the Finale.

IV. The development of the Finale

As I stated near the beginning of this chapter, the greatest integrative ties in Symphony No. 103 occur in the developments of the outer movements, the most significant ties being the tonicizations of $\text{D}\flat$ within lengthy prolongations of F minor. The manner in which not only $\text{D}\flat$ but also other chromatic elements are presented in the Finale is more emphatic than in earlier movements, thus achieving a culminative effect that contributes to the cyclic form of the entire symphony.

The larger context for these elements in the Finale is quite different from that of the first movement. The Finale is in a sonata-rondo form $\text{A}^1\text{B}^1\text{A}^2\text{CA}^3\text{B}^2$ (plus coda), whose A^2 merges with the developmental C section. Table 5.3 (below) is a detailed chart of the form; it may be compared with Example 5.16, a synoptic graph of the entire movement. The structure is rather unusual in that it is interrupted twice (at the end of sections B^1 and A^3), but not at the most likely place: the end of the C section (development). As we shall see, in this hybrid of rondo and sonata forms Haydn achieves structural continuity between the C and A^3 sections, despite the discontinuity--i.e., the sectional character--of the formal design.

Table 5.3 Haydn, Symphony No. 103 in E $\flat$, IV. Chart of Formal Design

<u>Measures</u>	<u>Section</u>	<u>Theme</u>
	A ¹	
1-18		a
18-35		extension
36-44		link
45-57		a
57-73		new extension
73-91		transition
	B ¹	
91-107		b
108-33		a' (going into minor)
133-45		c (cadential passage)
146-57		retransition
	A ²	
158-71		a (=5-18)
171-82		modified extension
182-90		link (cf. 49-57)
	C	
190-208		a (stretto)
208-17		II $\sharp$ $\rightarrow$ to $\flat$ VI/II (D $\flat$ major)
217-47		a' (D $\flat$ prolonged)
247-63		c (going to III $\sharp$)
	A ³	
264-87		a (cf. 45-62)
287-300		extension (cf. 28-40)
	B ²	
300-316		b
317-42		a' (going into minor)
342-50		c'
	Coda	
350-68		(cf. 146-57) C $\flat$ vs. B $\sharp$
368-86		peroration

My analytical discussion focuses on the middleground of the development, graphed in Example 5.17 (which also includes the structure of the recapitulation until m. 287). For reference, I also provide a foreground graph of the entire movement in Example 5.18; although I shall not comment directly on the latter graph, the reader is urged to study it as well as the middleground graph.

The harmonic point of departure for this development is not V, as in the first movement, but I (from m. 190). (Note that, within the A² section, there is a brief modulation to VI in m. 186, which might appear at first to articulate the start of the development; but I is soon regained in m. 190.) The basic structure of the development alone is I-II-III^b. This progression actually continues into the recapitulation, which begins on a I⁶ (not a structural return). As mentioned earlier, this I⁶ can be understood as arising from a 5-6 motion over the bass G from the end of the development. This unstable tonic is transformed into an applied dominant of IV, which is reached in m. 285, and is itself chromatically intensified so as to mark the arrival on V in m. 287.

The prolongation of the development's II begins in m. 208 as an F-major chord, marked by an augmented sixth on G^b that results from a large-scale chromaticized voice exchange within tonic harmony. The initial major quality of II is a foreground alteration; its basically minor quality is restored in m. 214. One measure later, however, F minor is usurped by a V⁷ of D^b (compare the interruption of F minor at m. 132 of the first movement). This V⁷ of D^b, unlike the one in the first movement, resolves immediately to D^b in m. 217. (Note that a passing tonicization of D^b in m. 204 subtly anticipates this more dramatic motion.)

Within the prolongation of D^b (which lasts until m. 249), F minor reappears (m. 231); at first, one might be inclined to hear it as retaining the F minor that was abandoned in m. 214. But the return of D^b in m. 247 outweighs that F minor interlude. The true completion of the F minor prolongation occurs in mm. 256-8, where F minor appears first as a ♯ chord, which is then inflected to form an augmented sixth chord. The result is

another large-scale chromaticized voice exchange spanning mm. 208-58, analogous to the expansion of I in mm. 158-207.

The way the augmented sixth in m. 258 is approached, with a motion from the inner voice $E\flat-E\sharp-F-F\sharp$, creates a momentary ambiguity (or, at least, a potential ambiguity) about whether $F\sharp$ or $G\flat$ is meant (assuming the listener is not following the score). The augmented sixth can be heard as a kind of harmonic pun, echoing the V^7 of $D\flat$ from m. 214; note that both chords are marked *fortissimo*, and are similarly orchestrated (including the entrance of the horns, trumpets, and timpani). The enharmonic association recalls the reinterpretation of $G\flat$ as $F\sharp$ in m. 137 of the first movement. But whereas, in that movement, $G\flat$ is denied immediate resolution to F, going instead to G (locally), in the Finale, both semitone resolutions ($G\flat-F$ and $F\sharp-G$) are emphatically presented (each instance is marked with letter names in Example 5.16). The Finale is thus a culmination and celebration of chromatic ideas introduced in previous movements. Other passages related to these are shown in Example 5.19 (first movement, mm. 69-74), and Example 5.20 (from the coda of the Finale, mm. 364-71).

V. Conclusion

I have argued that three chromatic elements-- $D\flat$, $F\sharp/G\flat$, and $B\sharp/C\flat$ --are the central means of integration in the symphony, and that the ties are strongest between the outer movements. Interestingly, the most important of these pitches, $D\flat$, is not exploited enharmonically to the extent that the others are (the one instance being the upward resolution of $D\flat$ to $D\sharp$ in Example 5.19, which suggests $C\sharp$). Whereas $D\flat$ tends to function in this symphony as $\flat 6$ of F minor, most instances of $G\flat$ and $C\flat$ function as minor-mode

variants of scale degrees $\hat{3}$ and $\hat{6}$ of $E\flat$. Indeed, the basic principle of mode mixture applies not only to the main key of $E\flat$, but also to the key of the second movement (the double variations alternating between C minor and C major), to the second key area of both the first movement (see mm. 71-2), and, to a much greater extent, the Finale (mm. 121-32). It might be argued that such chromatic techniques are so basic to the tonal language of the Classic period as to be irrelevant to cyclic integration. Yet I would claim that it is precisely by means of basic techniques that a composer gives pieces their individual character. While chromatic elements have an abstract function that is common to hundreds of pieces, they can assume a specificity by virtue of the context a composer creates for them.

Unlike Webster, I believe that No. 103 is cyclically integrated, but in different ways from No. 99. In Webster's view, the following features set No. 99 apart from No. 103: it exhibits few direct thematic links; all its movements begin straightforwardly, it is about tonal (as opposed to psychological) relationships; and $C\flat/B\sharp$ is an important idea. No. 103, in contrast, is characterized by mysterious gestures of annunciation (specifically in the outer movements); its primary *Affekt* is the invocation of the sublime; remote sonorities are less important than in No. 99; and there is no play on the $C\flat/B\sharp$ enharmonic on the structural level.¹⁹ As I have argued, No. 103 places more emphasis on $C\flat/B\sharp$ than Webster allows. Furthermore, in this symphony, abstract tonal relationships are just as important as the psychological implications of particular gestures. The abstract association between the developments of the framing movements, with their respective use of F minor, $D\flat$ major, and the $G\flat/F\sharp$ enharmonic, is just as compelling a source of integration as any tonal connection between movements in Symphony No. 99.

¹⁹ Haydn's "Farewell" Symphony, p. 331.

Since the Finale presents the chromatic elements in the most emphatic way, it represents the culmination of an integrative process set in motion in the first movement. The recurrences of the Adagio introductory theme within that movement point toward the more abstract cyclic design spanning all four movements. Both Webster, in his analysis of the “Farewell” Symphony, and Wayne Petty, in his analysis of the Piano Sonata No. 38 in E♭ major, identify a progression through the movements of a cycle, from a state of ambiguity and conflict to one of resolution and celebration.²⁰ The first three movements of the “Drum Roll” do not present such unresolved conflicts requiring resolution. But the Finale does constitute a kind of apotheosis akin to what happens in the works interpreted by Webster and Petty. For Haydn reserves for the Finale the most powerful uses of the chromatic pitches that pervade the first three movements. This goal-directed aspect of the cycle is complemented by the associative symmetry of the developments of the outer movements.

²⁰ Petty, “Cyclic Integration in Haydn’s E♭ Piano Sonata, Hob. XVI:38,” *Theory and Practice* 19 (1994): 31-55.

CHAPTER 6

EPILOGUE: THE HISTORICAL SIGNIFICANCE OF HAYDN'S DEVELOPMENT SECTIONS

In this study, I have identified, classified, and interpreted significant structural and formal properties of Haydn's late-period developments. It has not been my intention to trace the evolution of sonata form with respect to developments, either in general or over the course of Haydn's entire career. Rather, my intention has been to discover, with greater precision than heretofore, what happens in these developments. The most significant aspect of Haydn's developments that I have observed is the use of chromatic progressions or "rational deceptions," which (as I have shown in Chapters 4 and 5) often have a motivic relation to ideas presented in the slow introduction or exposition. In addition to progressions between consonant (but remotely related) triads, chromatic chords such as augmented sixths and diminished sevenths play a crucial, often deceptive, role in articulating the main turning points of developments. Haydn's developments do not, of course, depend entirely on deceptions; but it is essential to probe and, ultimately, to explain such potentially disorienting or unpredictable events in order to appreciate the larger context in which they occur, namely, the entire piece.

In the main, I have assessed Haydn's music with only occasional reference to the music of other composers; in this concluding chapter, I shall compare some of Haydn's developmental practices with those of Mozart, Beethoven, and Schubert, as well as two lesser contemporaries of Haydn: Dittersdorf and Pleyel. In so doing, I intend not only to place Haydn's achievements in a wider historical context, but also to stimulate further

inquiry into the ways in which these and later composers learned--and differed--from Haydn.

It is universally acknowledged that Haydn was the first master to endow sonata form with a substantial development section. Friedrich Blume describes the historical situation as follows:

For the most part, one can hardly speak, in the early Classic period, of a "development" section in the sense of thematic work. Instead, the middle section wrestles with new melodic material (as is so often the case in early Mozart), with free modulation and sequential constructions (as in Johann Schobert and C. P. E. Bach), and the like. The father of thematic work in the sense of logically evolved thematic material, and hence also of development, is without doubt Joseph Haydn.¹

Besides the fact that Haydn invested his developments with thematic work, it should also be noted that, in expanding the development, Haydn made use of existing compositional techniques. From at least as early as 1770, he integrated bold harmonic progressions--similar to the *Betrügereyen* in the fantasies and sonatas of C. P. E. Bach--with a rich process of thematic work in an unprecedented manner. In comparing Haydn's late developmental practices with those of his contemporaries and successors, I shall consider the interrelation of various thematic and harmonic processes. Haydn's influence, though sometimes overt, is often not readily verifiable.² As we shall see, later composers (e.g., Beethoven and Schubert) make use of ideas and procedures found in Haydn's developments, sometimes by adapting them to other formal contexts than those in which Haydn used them.

¹ Blume, *Classic and Romantic Music*, trans. M. D. Herter Norton (New York: W. W. Norton, 1970), p. 64.

² Charles Rosen makes a similar point in "Influence: Plagiarism and Inspiration," *19th-Century Music* 4/2 (Fall 1980), p. 91.

With regard to Haydn's influence on Mozart, it should be noted first that, by 1787 (the chronological starting point for this study), Mozart had already had intensive contact with Haydn's music.³ The reciprocal admiration of Haydn and Mozart from the mid-1780s on makes it very difficult to say precisely who influenced whom with regard to stylistic features of almost any genre. The extent to which their mutual influence can become a kind of "chicken-and-egg" question is evident in Charles Rosen's account of codas, where he asserts that "[t]he greater breadth of some of Mozart's conceptions [of the coda] must have influenced Haydn's later practice." A few lines later, he states: "It is clear, however, that Mozart often follows Haydn's lead."⁴ Regarding development sections, it is equally difficult to make such comparative judgments; but a few points may nonetheless be made.

In an insightful essay on Mozart's modulations, Hans T. David broadly distinguishes Mozart's sonata forms from those of Haydn as follows:

Mozart was more inclined [than Haydn] to display in the outer sections of sonata form a variety of themes and styles, but for the inner section he wholeheartedly adopted the principle [of continuous key changes and intense thematic elaboration] established by Haydn. Thus his development sections are somewhat more definitely differentiated from exposition and recapitulation than Haydn's.⁵

David further argues (though without reference to Haydn) that Mozart mostly avoids the second subject in his developments, since its typically lyrical and stable quality makes it

³ The pivotal influence is, of course, that of Haydn's Op. 33 of 1781 upon Mozart's "Haydn" Quartets, written between 1782 and 1785. Another important influence is that of Bach, whose music Mozart discovered in 1782; the contrapuntal ingenuity of many of Mozart's developments from that time onward owes much to his study of Bach.

⁴ Rosen, *Sonata Forms*, rev. ed., pp. 314-15.

⁵ Hans T. David, "Mozartean Modulations," in *The Creative World of Mozart*, ed. Paul Henry Lang (New York: W. W. Norton, 1963), p. 68.

unsuitable for a basically modulatory section.⁶ Mozart does, however, occasionally present the closing theme in the development (e.g., at the start of the development in the “Jupiter” Symphony, first movement). Haydn, in contrast, uses themes or motives from the second group quite frequently in his developments, and is especially fond of reserving such material for an unexpected return near the end of the development (as in the “Drum Roll”). Lastly, it should be noted that, whereas Mozart not infrequently introduces new thematic material in his developments--especially in the early ones, as noted by Blume in the quotation above--Haydn rarely does so in general, and least often in his late works.⁷

No other composer of symphonies in the late 1780s and 1790s besides Mozart matches the eloquence, scope, and inventiveness of Haydn's developments. The symphonies of Carl Ditters von Dittersdorf (1739-99), a longtime friend of Haydn's, exhibit occasional signs of innovation, but mostly without Haydn's depth and expansiveness. His Symphony in C of 1788, for instance, contains forward-looking harmonic procedures such as an E $\flat$ -major “purple patch” within the G-major second group, and a juxtaposition of G major and E major across the double bar. But the development is both brief--25 measures as compared to the exposition's 69--and thematically and harmonically uninspired.⁸ Another composer whose symphonies generally reflect Haydn's influence is Ignaz Pleyel (1757-1831), a student of Haydn and later his competitor in

⁶ The notion that lyricism is inappropriate in a development section has colored assessments of Schubert. See, for example, Felix Salzer, “Die Sonatenform bei Schubert,” *Studien zur Musikwissenschaft* 15 (1928), pp. 86-125.

⁷ A striking exception (from Haydn's middle period) is the D-major interlude in Symphony No. 45 (“Farewell”); more on this below.

⁸ The score of this symphony is available in *The Symphony: 1720-1840*, series B, vol. 1: *Carl Ditters von Dittersdorf (1739-1799): Six Symphonies*, ed. Eva Badura-Skoda; general ed. Barry S. Brook (New York: Garland, 1985).

London in the 1790s. His symphonies are often of large dimensions, with developments as long as 100 measures (see the Symphony No. 20 in D minor of 1791); but they do not match Haydn's symphonies in expressive range.⁹

Of the developmental procedures that are especially characteristic of Haydn, false recapitulations of various kinds have received perhaps the most scholarly attention recently.¹⁰ They occur in Mozart and Beethoven only occasionally, and (to my knowledge) almost always in other keys than the tonic. Pleyel's Symphony No. 25 in C (1790) contains a subdominant false recapitulation in the midst of the lengthy development--a reflection of either Haydn's or Mozart's influence.¹¹ Tonic false recapitulations--and, more generally, the practice of modulating back to the tonic early in the development, which Koch described in 1793 as conventional--were evidently already out of fashion by the 1790s.

The false recapitulation is but one manifestation of Haydn's rhetorical art of redefining the relation between a theme's formal function and the tonal context in which it occurs (or recurs). In a false recapitulation, the expository quality of a theme is temporarily called upon to help give an air of stability to a harmonic region (be it an apparent tonic or

⁹ The score of this symphony is available in *The Symphony 1720-1840*, series D, vol. 6: *Ignaz Pleyel, 1757-1831: Four Symphonies*, ed. Raymond R. Smith; general ed. Barry S. Brook (New York: Garland, 1981).

¹⁰ See Bonds, "Haydn's False Recapitulations," and Hoyt, "The 'False Recapitulation' and the Conventions of Sonata Form."

¹¹ This movement may have been modelled after the first movement of Mozart's "Jupiter" (1788), which also has a subdominant false recapitulation. (Both symphonies are in C major and have very similar opening themes.) This influence is difficult to prove, since it is not known if the "Jupiter" was performed or circulated as early as 1790. In any event, it was Haydn who provided both younger composers with a general model of symphonic style and form, and who would have stimulated both to incorporate false recapitulations.

some other harmony) that is actually unstable. A related procedure is to bring back a theme from the second group in a remote key--usually late in the development, by analogy to a false recapitulation.

In Symphonies Nos. 93 and 103, for instance, the closing theme returns in a key a whole step below the tonic. In each case, the structural context for the theme's return is rather complex--even deceiving. In No. 93, the C-major statement of the closing theme is embedded within a larger motion from an augmented sixth on G (=“V⁷ of C”) to an F♯-major chord (III[♯]). Likewise, in No. 103, the D♭-major statement of the closing theme is embedded within a prolongation of F minor (II). Much of the dramatic effect of each passage lies in the fact that the closing theme appears for the first time in the development in its original--seemingly stable--guise, but in a remote key that cannot support the illusion of stability for very long. In other words, within the context of the development, the closing theme carries both the stable connotation it had in the exposition, and, in addition, the disruptive, unstable quality afforded by the new context in which it returns.

This practice of Haydn's anticipates certain phenomena in the sonata forms of Beethoven and Schubert. In the first movement of Beethoven's Piano Sonata in D, Op. 28, the climax of the development is the arrival of an F♯-major chord (V/VI), which is then extended for 38 measures. Toward the end of this lengthy extension, the music settles quietly in a low register, and then there is a brief pause. Beethoven disrupts the serious mood of this passage by unexpectedly bringing back the playful theme which closed the exposition, but in B major (rather than B minor, as one might expect). This idea is then immediately repeated in B minor as if to correct the mode. The closing theme--hitherto withheld from the development, like those in the Haydn symphonies--provides material for

a brief retransition that seems to mock the enormous duration of the F $\sharp$ -major chord. (This passage perfectly embodies the adage, “brevity is the soul of wit.”) Although this passage has no precise precedent in Haydn, it recalls Haydn’s playful attitude in general, and his manner of writing developments, in particular. Like Haydn and Mozart, Beethoven mastered the rhetorical art of presenting themes and motives in new harmonic and formal contexts that are, in turn, shaped by the themes themselves.

Some of Beethoven’s more radical conceptions can be viewed as extensions of Haydn’s art of placing themes in unexpected or remote tonal contexts. A case in point is the famous E-minor theme that appears in the middle of the development of the first movement of the “Eroica” Symphony. (Although the theme is not drawn from the exposition, unlike those in the Haydn examples mentioned above, it is motivically related to the opening theme.)¹² Despite its extreme remoteness from the tonic E $\flat$, E minor is strongly prepared (unlike the remote keys in the Haydn examples above) and is then stabilized for eight measures. The seeming incommensurableness of E minor with the larger E $\flat$ tonality is not unlike the effect of certain passages in Haydn’s developments: e.g., the D $\flat$ -major passage in the first movement of the “Drum Roll,” or the E-major statement of the second theme in the development of the great Sonata in E $\flat$, Hob.XVI:52, first movement, mm. 68-9.

Another use of a theme in an unexpected or unstable key is the “irregular recapitulation”--that is, a recapitulation beginning either on a non-structural tonic or in a key

¹² Webster (*Haydn’s “Farewell” Symphony*, p. 370) hears strong similarities between this passage (involving a new theme) and the D-major interlude in the development of the first movement of the “Farewell” Symphony, which likewise involves a new theme. A crucial difference is noted by Webster: whereas Beethoven integrates his E-minor theme into the large plan of the development, Haydn does not integrate his D-major interlude, leaving it “unresolved” until the very end of symphony (in the service of cyclic integration).

other than the tonic. Haydn's irregular recapitulations are exclusively of the former kind, two examples being the first movement of Symphony No. 94 (the "Surprise") and the finale of the "Drum Roll." Irregular recapitulations that start on non-tonic harmony are rare in Mozart and Beethoven, but occur in several works of Schubert.¹³ The most palpable affinity to Haydn is to be found in early Beethoven. In the first movement of the Piano Sonata in F, Op. 10 No. 2, Beethoven handles the opening of the recapitulation in a manner not unlike certain passages in Haydn. The recapitulation begins irregularly--one might say, "deceptively"--in the key of D major (VI $\sharp$). In my view, this arrival completes a large-scale prolongation of the D minor harmony established at the beginning of the development, and thus has a structural function not accorded the remote keys in our Haydn examples.¹⁴ Beethoven's passage resembles the ones in Haydn's Symphonies Nos. 93 and 103 (mentioned above) in that it presents a stable theme in a key that turns out to be unstable. Whereas Haydn's tonal deviations occur within the development, in Beethoven the deviation coincides (or even collides) with the opening of the recapitulation. Beethoven creates an ambiguity about where the development ends by recapitulating the opening theme before the motion back to the tonic is completed. Although this formal conception is without precedent, it is consistent with Haydn's often unpredictable handling of form.

¹³ On Schubert, see Hur, "Irregular Recapitulation in Schubert's Instrumental Works." In Chapter 1, Hur discusses precedents for Schubert's practice, including the subdominant recapitulations in Mozart's Piano Sonata in C, K. 545, first movement, and in Beethoven's Coriolan Overture.

¹⁴ This is how Schenker interprets the development's middleground structure in his graph in "Vom Organischen der Sonatenform," in *Das Meisterwerk in der Musik*, vol. 2, p. 50, fig. 5; Eng. trans., *The Masterwork in Music*, vol. 2, ed. William Drabkin (Cambridge: Cambridge University Press, 1996), p. 27. Hur reads this development differently; see "Irregular Recapitulation," p. 33.

Certain strictly harmonic aspects of Haydn's developments find more overt parallels in Beethoven than the thematic procedures just outlined; e.g., the articulation of the border between development and recapitulation by a motion from $\text{III}\sharp$ or $\text{VII}\sharp$ to I (either directly or mediated by some form of V^7). While Beethoven's use of $\text{III}\sharp$ as part of a large-scale $\text{V}-\text{III}\sharp-\text{I}$ arpeggiation (e.g., in the first movement of the "Spring" Sonata) could have been influenced by either Haydn or Mozart, his use of $\text{VII}\sharp$ as a goal of the development in such works as the Quartet in D, Op. 18 No. 3 and the outer movements of the Second Symphony has more precedents in Haydn than in Mozart (a unique example by the latter being the Piano Concerto in D, K. 451, third movement).¹⁵ Such use of $\text{VII}\sharp$ remained exceptional in nineteenth-century sonata forms; this is perhaps an indication that Haydn's most original conceptions were the most resistant to widespread imitation. (The same is true of Beethoven: his influence on later generations is measurable not only by overt, if often unsuccessful, attempts to echo him, but also by the fact that many of his boldest ideas cannot be imitated, because they work only in the particular context Beethoven created for them.) It is harder to explain why apparently no composer uses augmented sixths in developments as often as Haydn (though Mozart comes close), since these chords are not in themselves unusual.

The remote harmonic juxtapositions which occur with relative frequency in Haydn's developments mostly involve root movement down a third (e.g., $\text{V}-\text{III}\sharp$, $\text{V}\rightarrow\text{III}$, $\text{III}\sharp-\text{I}$, or $\text{I}\rightarrow\text{VI}$). These progressions, particularly down by major third, are routinely described as "Schubertian," despite the fact that Haydn and Mozart used them long before

¹⁵ On the topic of $\text{V}-\text{III}\sharp-\text{I}$ in Mozart, see Beach, "A Recurring Pattern in Mozart's Music;" on $\text{VII}\sharp$, see Burstein, "Surprising Returns."

Schubert. Yet, in general, Schubert used such progressions much more often than previous composers, and particularly in his so-called three-key expositions. The very presence of more than one modulation away from the tonic within such expositions gives them a developmental character. In most three-key expositions the second key does not represent a structural harmony, but rather belongs to the transition. It is in the expansive quality of their transitions that such expositions resemble developments.

Although some of the more exotic harmonic procedures in Haydn's developments may have inspired Schubert to expand his harmonic palette, Schubert's developments generally reflect a different attitude from Haydn's toward large-scale form. Two distinctive aspects of Schubert's developments, in particular, have been noted by critics: a tendency toward lyricism, and large-scale sequential organization (the latter being at times a corollary of the former). Unlike Haydn, Mozart, and Beethoven, who tend to abbreviate or fragment their themes in the development, rather than to leave them intact, Schubert likes to preserve the periodic structure of his themes--whose lyrical character is often unsuited to fragmentation--and to create large sequences out of them (especially in late works like the Quartet in G, the Piano Trio in E $\flat$, and the String Quintet).¹⁶

Later composers of sonata forms--especially those, like Mendelssohn and Brahms, who were as much Classical as Romantic in spirit--were just as indebted to Haydn as the

¹⁶ For a detailed discussion of formal issues in Schubert's developments--and a useful survey of the literature on the subject--see Hans-Joachim Hinrichsen, *Untersuchungen zur Entwicklung der Sonatenform in der Instrumentalmusik Franz Schuberts* (Tutzing: Schneider, 1994), pp. 221-80. An excellent assessment of critical attitudes toward Schubert's music in general, and his developments in particular, is presented in Poundie Burstein, "Lyricism, Structure, and Gender in Schubert's G Major String Quartet," *Musical Quarterly* 81/1 (Spring 1997): 51-63.

composers discussed above. Although Haydn's influence is less apparent in music written after 1830 than it is in Beethoven's music, it manifests itself indirectly through the overwhelming impact of Beethoven on later composers. Despite the undeniable stylistic changes that occurred in music during the nineteenth century, many, if not most, of the developmental procedures that Haydn pioneered remained in use. The harmonic structures of Haydn's developments--which are often as rich and challenging as anything in Chopin or Wagner--constitute perhaps his most remarkable legacy.

The development section is the dramatic focus of Haydn's late sonata forms, a place where his improvisatory gifts are given the freest reign. Haydn draws upon the greatest variety of expressive means, thereby exploring his themes and motives to their fullest potential, and arousing expectations that he may fulfill or subvert in dramatic or subtle ways--as his imagination demands. As we have seen, the debt of later composers to Haydn manifests itself not so much in direct correspondences as in a similar spirit of formal freedom. One of the main purposes of this study has been to identify recurring features of Haydn's developments, as well as those phenomena that occur but rarely in this part of the form. But no matter how much we strengthen our theoretical grasp of Haydn's sonata forms in general, and of his developments in particular, we shall never cease to hear his music in new ways, and to marvel at his inventiveness and wit.

BIBLIOGRAPHY

Critical EditionsDittersdorf and Pleyel:

The Symphony: 1720-1840, general ed. Barry S. Brook. New York: Garland.

Series B, vol. 1. *Carl Ditters von Dittersdorf (1739-1799): Six Symphonies*, ed. Eva Badura-Skoda, 1985.

Series D, vol. 6. *Ignaz Pleyel, 1757-1831: Four Symphonies*, ed. Raymond R. Smith, 1981.

Haydn:

Joseph Haydn Werke, ed. Joseph Haydn-Institut, Cologne, directed Georg Feder (1962-) and Jens Peter Larsen (1958-1961). Munich: G. Henle, 1958- .

Series I, vol. 18. *Londoner Sinfonien, 4. Folge*, ed. Hubert Unverricht, 1963.

Series XII, vol. 5. *Streichquartette "Opuss 64" und "Opus 71/74"*, ed. Georg Feder and Isidor Saslav in collaboration with Warren Kirkendale, 1978.

Series XVII, vol. 2. *Klaviertrios, 2. Folge*, ed. Wolfgang Stockmeier, 1974.

Series XVII, vol. 3. *Klaviertrios, 3. Folge*, ed. Irmgard Becker-Glauch, 1986.

Series XVIII, vol. 3. *Klaviersonaten, 3. Folge*, ed. Georg Feder, 1966.

Joseph Haydn: Critical Edition of the Complete Symphonies, 12 vols. ed. H. C. Robbins Landon. Salzburg: Haydn-Mozart Presse, 1962-68.

Volume 10: Symphonies Nos. 88-92.

Volume 11: Symphonies Nos. 93-98.

Volume 12: Symphonies Nos. 99-104.

Joseph Haydn, String Quartet in F [facsimile of the autograph of Opus 77 No. 2], ed. László Somfai. Budapest: Editio Musica; New York: Belwin-Mills, 1972.

Books and Articles

Adrian, Jack. "The Ternary-Sonata Form." *Journal of Music Theory* 34/1 (Spring 1990): 57-80.

_____. "The Function of the Apparent Tonic at the Beginning of Development Sections." *Intégral* 5 (1991): 1-53.

Agawu, V. Kofi. *Playing with Signs: A Semiotic Interpretation of Classic Music*. Princeton: Princeton University Press, 1991.

_____. "Ambiguity in Tonal Music: A Preliminary Study." In *Theory, Analysis and Meaning in Music*, ed. Anthony Pople. Cambridge: Cambridge University Press, 1994, pp. 86-107.

- Aldwell, Edward, and Schachter, Carl. *Harmony and Voice Leading*. 2nd ed. San Diego: Harcourt Brace Jovanovich, 1989.
- Andrews, Harold L. "The Submediant in Haydn's Development Sections." In *Haydn Studies: Proceedings of the International Haydn Conference, Washington, D.C., 1975*, ed. Jens Peter Larsen, Howard Serwer, and James Webster. New York: W. W. Norton, 1981, pp. 265-71.
- Anson-Cartwright, Mark. "Chord as Motive: The Augmented-Triad Matrix in Wagner's *Siegfried Idyll*." *Music Analysis* 15/1 (March 1996): 57-71.
- Bach, Carl Philipp Emanuel. *Versuch über die wahre Art das Clavier zu spielen*. 2 vols. Berlin: the author, 1753 and 1762; facs. ed. Kassel: Bärenreiter, 1994.
--Trans. *Essay on the True Art of Playing Keyboard Instruments*, trans. and ed. William J. Mitchell. New York: W. W. Norton, 1949.
- Beach, David. "A Recurring Pattern in Mozart's Music." *Journal of Music Theory* 27/1 (Spring 1983): 1-29.
- _____. "Schubert's Experiments with Sonata Form: Formal-Tonal Design versus Underlying Structure." *Music Theory Spectrum* 15/1 (Spring 1993): 1-18.
- Benary, Peter. "Die langsamen Einleitungen in Joseph Haydns Londoner Sinfonien." In *Studien zur Instrumentalmusik: Festschrift Lothar Hoffmann-Erbrecht zum 60. Geburtstag*, ed. Anke Bingmann et al. Frankfurter Beiträge zur Musikwissenschaft, 20. Tutzing: Schneider, 1988, pp. 239-51.
- Bent, Ian. *Analysis*. New York: W. W. Norton, 1987.
- _____, ed. *Music Analysis in the Nineteenth Century*. 2 vols. Cambridge: Cambridge University Press, 1994.
- Blume, Friedrich. *Classic and Romantic Music*. Trans. M. D. Herter Norton. New York: W. W. Norton, 1970.
- Bonds, Mark Evan. "Haydn's False Recapitulations and the Perception of Sonata Form in the Eighteenth Century." Ph.D. diss., Harvard University, 1988.
- _____. *Wordless Rhetoric: Musical Form and the Metaphor of the Oration*. Studies in the History of Music, 4. Cambridge, Mass.: Harvard University Press, 1991.
- Brown, A. Peter. "Joseph Haydn and C. P. E. Bach: The Question of Influence." In *Haydn Studies: Proceedings of the International Haydn Conference, Washington, D.C., 1975*, ed. Jens Peter Larsen, Howard Serwer, and James Webster. New York: W. W. Norton, 1981, pp. 158-65.
- Brown, Matthew; Dempster, Douglas; and Headlam, Dave. "The #IV(bV) Hypothesis: Testing the Limits of Schenker's Theory of Tonality." *Music Theory Spectrum* 19/2 (Fall 1997): 155-83.
- Burkhart, Charles. "Schenker's 'Motivic Parallelisms.'" *Journal of Music Theory* 22/2 (Fall 1978): 145-75.

- Burstein, L. Poundie. "The Non-Tonic Opening in Classical and Romantic Music." Ph.D. diss., City University of New York, 1988.
- _____. "Lyricism, Structure, and Gender in Schubert's G Major String Quartet." *Musical Quarterly* 81/1 (Spring 1997): 51-63.
- _____. "Surprising Returns: The VIIth in Beethoven's Op. 18, No. 3 and its Antecedents in Haydn." *Music Analysis*, forthcoming.
- Cadwallader, Allen. "Prolegomena to a General Description of Motivic Relationships in Tonal Music." *Intégral* 2 (1988): 1-35.
- Cohn, Richard. "The Autonomy of Motives in Schenkerian Accounts of Tonal Music." *Music Theory Spectrum* 14/2 (Fall 1992): 150-70.
- Cole, Malcolm S. "Mornigny's Analysis of Haydn's Symphony no. 103." *Music Review* 30/4 (1969): 261-84.
- Czerny, Carl. *School of Practical Composition*, 3 vols. Trans. John Bishop. London: Robert Cooks, ca. 1848; repr. New York: Da Capo, 1979.
- Dahlhaus, Carl. "Der rhetorische Formbegriff H. Chr. Kochs und die Theorie der Sonatenform." *Archiv für Musikwissenschaft* 35/3 (1978): 155-77.
- David, Hans T. "Mozartean Modulations." In *The Creative World of Mozart*, ed. Paul Henry Lang. New York: W. W. Norton, 1963, pp. 56-75.
- Gagné, David. "'Symphonic Breadth': Structural Style in Mozart's Symphonies." In *Schenker Studies* 2, ed. Carl Schachter and Hedi Siegel. Cambridge: Cambridge University Press, forthcoming.
- Gwilt, Richard. "Sonata-Allegro Revisited." *In Theory Only* 7/5-6 (1984): 3-33.
- Haar, James. "False Relations and Chromaticism in Sixteenth-Century Music." *Journal of the American Musicological Society* 30/3 (Fall 1977): 391-415.
- Haimo, Ethan. "Haydn's Altered Reprise." *Journal of Music Theory* 32/2 (Fall 1988): 335-51.
- _____. *Haydn's Symphonic Forms: Essays in Compositional Logic*. Oxford: Oxford University Press, 1995.
- Harrison, Daniel. "Supplement to the Theory of Augmented-Sixth Chords." *Music Theory Spectrum* 17/2 (Fall 1995): 170-95.
- Hatten, Robert S. *Musical Meaning in Beethoven: Markedness, Correlation, and Interpretation*. Bloomington and Indianapolis: Indiana University Press, 1994.
- Hinrichsen, Hans-Joachim. *Untersuchungen zur Entwicklung der Sonatenform in der Instrumentalmusik Franz Schuberts*. Tutzing: Schneider, 1994.
- Hoyt, Peter A. "The 'False Recapitulation' and the Conventions of Sonata Form." Ph.D. diss., University of Pennsylvania, 1996.

- _____. "The Concept of *Développement* in the Early Nineteenth Century." In *Music Theory in the Age of Romanticism*, ed. Ian Bent. Cambridge: Cambridge University Press, 1996, pp. 141-62.
- Hur, Mi-Sook Han. "Irregular Recapitulation in Schubert's Instrumental Works." Ph.D. diss., City University of New York, 1992.
- Irving, John. *Mozart's Piano Sonatas: Contexts, Sources, Style*. Cambridge: Cambridge University Press, 1997.
- Josephson, Nors S. "Modulatory Patterns in Haydn's Late Development Sections." *Haydn Yearbook* 17 (1992): 181-91.
- Kamien, Roger. "Subtle Enharmonic Relationships in Mozart's Music." *Journal of Music Theory* 30/2 (Fall 1986): 169-83.
- _____, and Wagner, Naphtali. "Bridge Themes within a Chromaticized Voice Exchange in Mozart Expositions." *Music Theory Spectrum* 19/1 (Spring 1997): 1-12.
- Koch, Heinrich Christoph. *Versuch einer Anleitung zur Composition*. 3 vols. Rudolstadt and Leipzig, 1782-93; facs. ed. Hildesheim: Olms, 1969.
--Partial trans. *Introductory Essay on Composition*, trans. Nancy Kovaleff Baker. New Haven: Yale University Press, 1983.
- Kraus, Joseph. "Mozart's Chromatic Third Relations: Evidence from the Late Quartets and Quintets." *Journal of Musicological Research* 9/4 (1990): 229-54.
- _____. "Chromatic Third Relations in Mozart's Late Instrumental Works." *Mozart-Jahrbuch* (1991): 1056-65.
- Kurth, Ernst. *Romantische Harmonik und ihre Krise in Wagners "Tristan."* Bern: P. Haupt, 1923; facs. ed. Hildesheim: Olms, 1968. Originally publ. 1920.
- Landon, H. C. Robbins. *The Symphonies of Joseph Haydn*. London: Barrie and Rockliff, 1955.
- Larsen, Jens Peter. "Sonatenformprobleme." In *Festschrift Friedrich Blume zum 70. Geburtstag*, ed. Anna Amalie Abert and Wilhelm Pfannkuch. Kassel: Bärenreiter.
--Trans. "Sonata Form Problems." In *Handel, Haydn, and the Viennese Classical Style*, trans. Ulrich Kramer. Ann Arbor: UMI Research Press, 1988, pp. 269-79.
- _____. *The New Grove Haydn*. New York: W. W. Norton, 1982.
- LaRue, Jan. "Bifocal Tonality: An Explanation for Ambiguous Baroque Cadences." In *Essays on Music in Honor of Archibald Thompson Davison by his Associates*, Cambridge, Mass.: Department of Music, Harvard University, 1957, pp. 173-84.
- _____. "Bifocal Tonality in Haydn Symphonies." In *Convention in Eighteenth- and Nineteenth-Century Music: Essays in Honor of Leonard G. Ratner*, ed. Wye J. Allanbrook et al. Stuyvesant, N.Y.: Pendragon Press, 1992, pp. 59-73.

- Laufer, Edward. "Voice-Leading Procedures in Development Sections." *Studies in Music from the University of Western Ontario* 13 (1991): 69-120.
- Lester, Joel. *Compositional Theory in the Eighteenth Century*. Cambridge, Mass.: Harvard University Press, 1992.
- MacIntyre, Bruce. *Haydn: The Creation*. New York: Schirmer, 1998.
- Marx, Adolf Bernhard. *Die Lehre von der musikalischen Komposition, praktisch-theoretisch*. 4 vols. 5th (unaltered) edn. Leipzig: Breitkopf & Härtel, 1879. Originally publ. 1837-47.
- McCreless, Patrick. "Syntagmatics and Paradigmatics: Some Implications for the Analysis of Chromaticism in Tonal Music." *Music Theory Spectrum* 13/2 (Fall 1991): 147-78.
- Mitchell, William J. "Giuseppe Sarti and Mozart's Quartet K. 421." *Current Musicology* 9 (1969): 147-53.
- Momigny, Jérôme-Joseph de. *Cours complet d'harmonie et de composition*. 3 vols. Paris: the author and Bailleul, 1803-6.
- Petty, Wayne. "Cyclic Integration in Haydn's E $\flat$ Piano Sonata Hob.XVI:38." *Theory and Practice* 19 (1994): 31-55.
- _____. "Compositional Techniques in the Keyboard Sonatas of Carl Philipp Emanuel Bach: Reimagining the Foundations of a Musical Style." Ph.D. diss., Yale University, 1995.
- Proctor, Gregory Michael. "Technical Bases of Nineteenth-Century Chromatic Tonality: A Study in Chromaticism." Ph.D. diss., Princeton University, 1978.
- Ratner, Leonard G. "Harmonic Aspects of Classic Form." *Journal of the American Musicological Society* 2/3 (Fall 1949): 159-68.
- _____. *Classic Music: Expression, Form, and Style*. New York: Schirmer, 1980.
- Reicha, Antoine-Joseph. *Traité de haute composition musicale*. 2 vols. Paris: Zetter, 1824-26.
- Rosen, Charles. *The Classical Style: Haydn, Mozart, Beethoven*. New York: Viking, 1971.
- _____. "Influence: Plagiarism and Inspiration." *19th-Century Music* 4/2 (Fall 1980): 87-100.
- _____. *Sonata Forms*. Rev. ed. New York: W. W. Norton, 1988. Originally publ. 1980.
- Rothgeb, John. "Thematic Content: A Schenkerian View." In *Aspects of Schenkerian Theory*, ed. David Beach. New Haven and London: Yale University Press, 1983, pp. 39-60.

- Rothstein, William. *Phrase Rhythm in Tonal Music*. New York: Schirmer, 1989.
- Salzer, Felix. *Structural Hearing: Tonal Coherence in Music*. 2 vols. New York: Dover, 1962. Originally publ. 1952.
- Schachter, Carl. "Analysis by Key: Another Look at Modulation." *Music Analysis* 6/3 (October 1987): 289-318.
- _____. "Mozart's Last and Beethoven's First." In *Mozart Studies*, ed. Cliff Eisen. Oxford: Clarendon Press, 1991, pp. 227-51.
- Schenker, Heinrich. *Harmonielehre*. Vienna: Universal, 1906; facs. ed. 1978.
--Trans. *Harmony*, ed. Oswald Jonas, trans. Elisabeth Mann Borgese. Chicago: University of Chicago Press, 1954.
- _____. "Haydn: Sonata Es-Dur." *Der Tonwille* 3 (1922): 3-21.
--Trans. "Haydn: Sonata in E-flat Major." Trans. Wayne Petty, in *Theoria* 3 (1988): 105-60.
- _____. *Das Meisterwerk in der Musik*. 3 vols. Munich: Drei Masken, 1925-1930; facs. ed. Hildesheim: Olms, 1974.
--Trans. *The Masterwork in Music*. 3 vols., ed. William Drabkin. Cambridge: Cambridge University Press, 1994-97.
- _____. *Five Graphic Music Analyses (Fünf Umlinie Tafeln)*. New York: Dover, 1969. Originally publ. 1933.
- _____. *Free Composition (Der freie Satz)*, trans. and ed. Ernst Oster. 2 vols. New York: Longman, 1979. Originally publ. 1935.
- Schoenberg, Arnold. *Fundamentals of Musical Composition*, ed. Gerald Strang and Leonard Stein. London: Faber and Faber, 1967.
- Schroeder, David. *Haydn and the Enlightenment: The Late Symphonies and their Audience*. New York: Oxford University Press, 1990.
- Schwarting, Heino. "Ungewöhnliche Repriseneintritte in Haydns späterer Instrumentalmusik." *Archiv für Musikwissenschaft* 17/2-3 (1960): 168-82.
- Shamgar, Beth. "The Retransition in the Piano Sonatas of Haydn, Mozart, and Beethoven." Ph.D. diss., New York University, 1978.
- _____. "On Locating the Retransition in Classic Sonata Form." *Music Review* 42 (1981): 130-43.
- Sisman, Elaine. *Haydn and the Classical Variation*. Studies in the History of Music, 5. Cambridge, Mass.: Harvard University Press, 1993.
- _____. "Haydn's Solo Keyboard Music." In *Eighteenth-Century Keyboard Music*, ed. Robert L. Marshall. New York: Schirmer, 1994, pp. 270-307.
- _____, ed. *Haydn and His World*. Princeton: Princeton University Press, 1997.
- Smith, Charles J. "The Functional Extravagance of Chromatic Chords." *Music Theory Spectrum* 8 (1986): 94-139.

- _____. "Musical Form and Fundamental Structure: An Investigation of Schenker's *Formenlehre*," *Music Analysis* 15/2-3 (July/October 1996): 191-297.
- Smith, Peter H. "Brahms and Schenker: A Mutual Response to Sonata Form," *Music Theory Spectrum* 16/1 (Spring 1994): 77-103.
- Somfai, László. *The Keyboard Sonatas of Joseph Haydn: Instruments and Performance Practice, Genres and Styles*. Translated by the author in collaboration with Charlotte Greenspan. Chicago: University of Chicago Press, 1995. Originally publ. (in Hungarian) 1979.
- Strunk, Oliver. "Haydn's Divertimenti for Baryton, Viola, and Bass." *Musical Quarterly* 32 (1932): 216-51. Reprinted in *Essays on Music in the Western World*. New York: W. W. Norton, 1974, pp. 126-70.
- Tovey, Donald Francis. *Essays in Musical Analysis*. 6 vols. London: Oxford University Press, 1935-39.
- _____. *The Forms of Music*. London: Oxford University Press, 1944; reprint, New York: Meridian, 1956.
- Webster, James. "Binary Variants of Sonata Form in Early Haydn Instrumental Music." In *Joseph Haydn: Proceedings of the International Joseph Haydn Congress Wien, Hofburg, 5.-12. September 1982*, ed. Eva Badura-Skoda. Munich: Henle, 1986, pp. 127-35.
- _____. *Haydn's "Farewell" Symphony and the Idea of Classical Style: Through-Composition and Cyclic Integration in his Instrumental Music*. Cambridge Studies in Music Theory and Analysis, 1. Cambridge: Cambridge University Press, 1991.
- Wheelock, Gretchen. *Haydn's Ingenious Jestings with Art: Contexts of Musical Wit and Humor*. New York: Schirmer, 1992.
- Willner, Channan. "Chromaticism and the Mediant in Four Late Haydn Works." *Theory and Practice* 13 (1988): 79-114.
- Winter, Robert S. "The Bifocal Close and the Evolution of the Viennese Classical Style." *Journal of the American Musicological Society* 42/2 (Summer 1989): 275-337.

THE DEVELOPMENT SECTION IN HAYDN'S LATE INSTRUMENTAL WORKS

by

MARK ANSON-CARTWRIGHT

**VOLUME 2
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
1998

Example 1.1 Schenker, *Free Composition*, Figs. 21 and 23

21

a) $\hat{3} \quad \hat{2} \parallel \hat{3} \quad \hat{2} \quad \hat{1}$

b) $\hat{3} \quad \hat{2} \parallel (\hat{3} \quad \hat{2}) \quad \hat{1}$

23

a) $\hat{3} \quad (\hat{2}) - \hat{2} \parallel \hat{3} \quad \hat{2} \quad \hat{1}$

b) $\hat{3} \quad (\hat{2}) - \hat{2} \parallel \hat{3} \quad \hat{2} \quad \hat{1}$

(=n.n.)

(=n.n.)

10-()-H, (8-47)

I - II $\sharp$ - V $\parallel$ I V I

(8' - 47)

V —

(8 - 47)

V —

From Heinrich Schenker, *Free Composition (Der freie Satz)*, trans. and ed. Ernst Oster (New York: Longman, 1979). Copyright 1935 by Universal Edition A.G., Vienna and the Estate of Ernst Oster. Used by permission.

Example 1.2 Plans for development sections

Handwritten musical notation showing eight plans for development sections, labeled I a, I b, I c, II a, II b, III, and IV. Each plan is written on a single staff with a bass clef and a repeat sign. The notation includes notes, rests, and chord symbols.

I a. I V V⁽⁷⁾

I b. I V N^bVI V⁽⁷⁾

I c. I V N VI

II a. I V N^bIV V⁽⁷⁾

II b. I V N[#]IV[#] V⁽⁷⁾

III. I V VI V⁶₅ (VII[#])

IV. I V III[#] V⁴₃

Example 1.2 Plans for development sections, continued.

Handwritten musical notation for development section plans, labeled Va. through IX. Each staff shows a sequence of chords (I, V, II, V⁷, etc.) and melodic lines in a single staff.

Va. Chords: I, V, II, V⁷. Melody: I, V, II, V⁷.

Vb. Chords: I, V, II, V⁷. Melody: I, V, II, V⁷.

VI. Chords: I, V, $\flat$ VII, V⁷. Melody: I, V, $\flat$ VII, V⁷.

VII. Chords: I, V, III^(#)(IV), V⁷. Melody: I, V, III^(#)(IV), V⁷.

VIIIa. Chords: I, V, III⁶, V⁷. Melody: I, V, III⁶, V⁷.

VIIIb. Chords: I, V, III[#], V⁷. Melody: I, V, III[#], V⁷.

IX. Chords: I, V, III[#], I. Melody: I, V, III[#], I.

Example 1.2 Plans for development sections, *continued*.

Xa.

Xb.

XI

XII

XIII

Recap.

Detailed description: The image displays five musical staves, each representing a different development section plan. Each staff begins with a treble clef and a key signature of two flats (B-flat and E-flat). The notes are half notes, and the staves are connected by a brace on the left. Staff Xa: Notes are on lines 1, 3, 4, and 5, corresponding to chords I, III, IV (or bII6), and V7. Staff Xb: Notes are on lines 1, 3, 4, and 5, corresponding to chords I, III, II#, and V7. Staff XI: Notes are on lines 1, 3, and 5, corresponding to chords I, Vb, and V7. Staff XII: Notes are on lines 1, 3, 4, 5, and 1, corresponding to chords I, V, I, V, and I. Staff XIII: Notes are on lines 1, 3, 4, 5, 4, 3, and 1, corresponding to chords I, V, I, III# (Ib), IV, V, and I. The 'Recap.' label is placed above the staff.

Example 1.3 Plans for development sections, elaborations with upper voice.

The image displays five systems of handwritten musical notation, each consisting of a bass line and an upper voice line. The systems are labeled as follows:

- Ia/i**: The first system, showing a progression of chords (V, N^bVI, V⁷) with an upper voice line featuring a melodic line and a fermata.
- Ia/ii**: The second system, showing a progression of chords (V, N^bVI, V) with an upper voice line featuring a melodic line and a fermata.
- Ia/iii**: The third system, showing a progression of chords (V, N^bVI, V) with an upper voice line featuring a melodic line and a fermata.
- Ib/i**: The fourth system, showing a progression of chords (V, N^bVI, V) with an upper voice line featuring a melodic line and a fermata.
- Ib/ii**: The fifth system, showing a progression of chords (V, N^bVI, V) with an upper voice line featuring a melodic line and a fermata.

The notation includes various musical symbols such as notes, rests, accidentals, and dynamic markings, all written in a stylized, handwritten format.

Example 1.3 Plans for development sections, elaborations with upper voice, continued.

IIa/i IIa/ii IIa/iii

IIb (Haydn, Op. 77 No. 1)

III/i III/ii III/iii

Example 1.3 Plans for development sections, elaborations with upper voice, continued.

IV

$\{ \frac{V_a}{V_b} / i \}$
 $\{ \frac{V_a}{V_b} / ii \}$

V V^{#3} V⁴ V V

VI (Haydn, Symphony No. 99)

V bVII V

Example 1.3 Plans for development sections, elaborations with upper voice, continued.

VIII/i (Haydn, Op. 50 No. 2) VII/ii (Mozart, K. 576)

VIII/a (Haydn, Symphony No. 97) VIII b (Haydn, Op. 64 No. 1) IX

Example 1.3 Plans for development sections, elaborations with upper voice, continued.

The image displays two musical staves, each representing a development section with upper voice elaborations. The top staff is in G major (one sharp) and the bottom staff is in D minor (two flats). Both staves show a sequence of chords and melodic lines with figured bass notation below them.

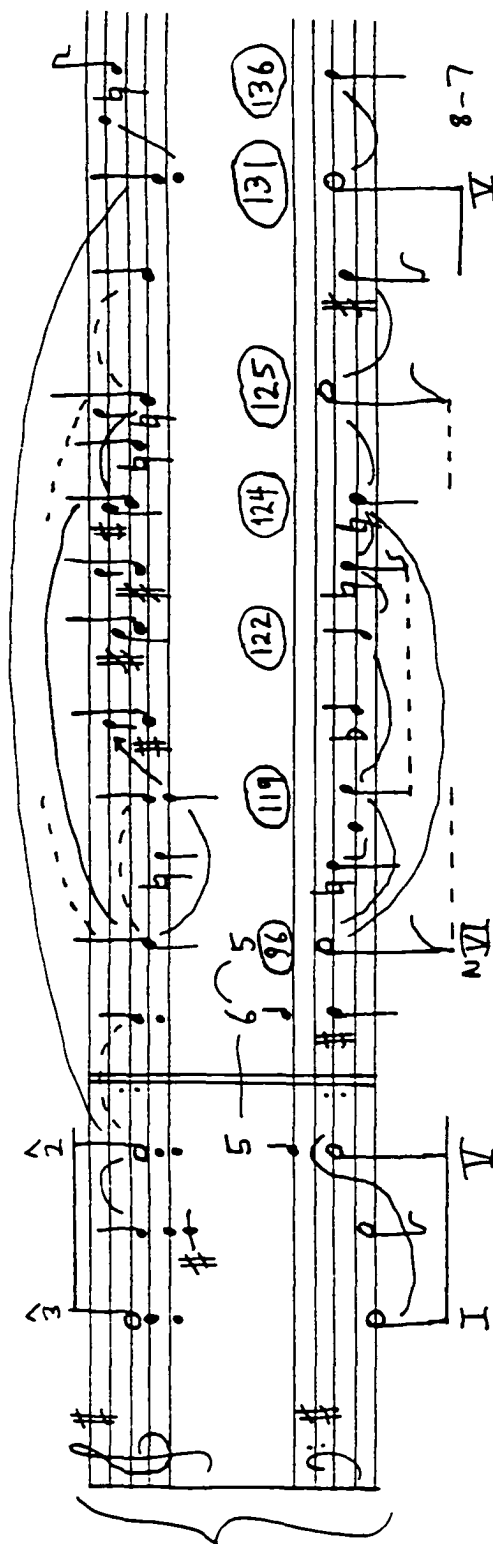
Top Staff (G major):

- Chord sequence: $\Sigma a/i$ (I), $\Sigma a/ii$ (I), $\Sigma a/iii$ (I), $\Sigma a/iv$ (I), $\Sigma a/v$ (I), $\Sigma a/vi$ (I), $\Sigma a/vii$ (I).
- Figured bass notation: $\hat{2}$, $\hat{2}$, $\hat{2}$, $\hat{2}$, $\hat{2}$, $\hat{2}$, $\hat{2}$.
- Melodic lines: The upper voice (treble clef) and lower voice (bass clef) are shown with various intervals and accidentals. The upper voice has a melodic line with a trill and a grace note. The lower voice has a melodic line with a trill and a grace note.
- Figured bass notation: $\hat{2}$, $\hat{2}$, $\hat{2}$, $\hat{2}$, $\hat{2}$, $\hat{2}$, $\hat{2}$.

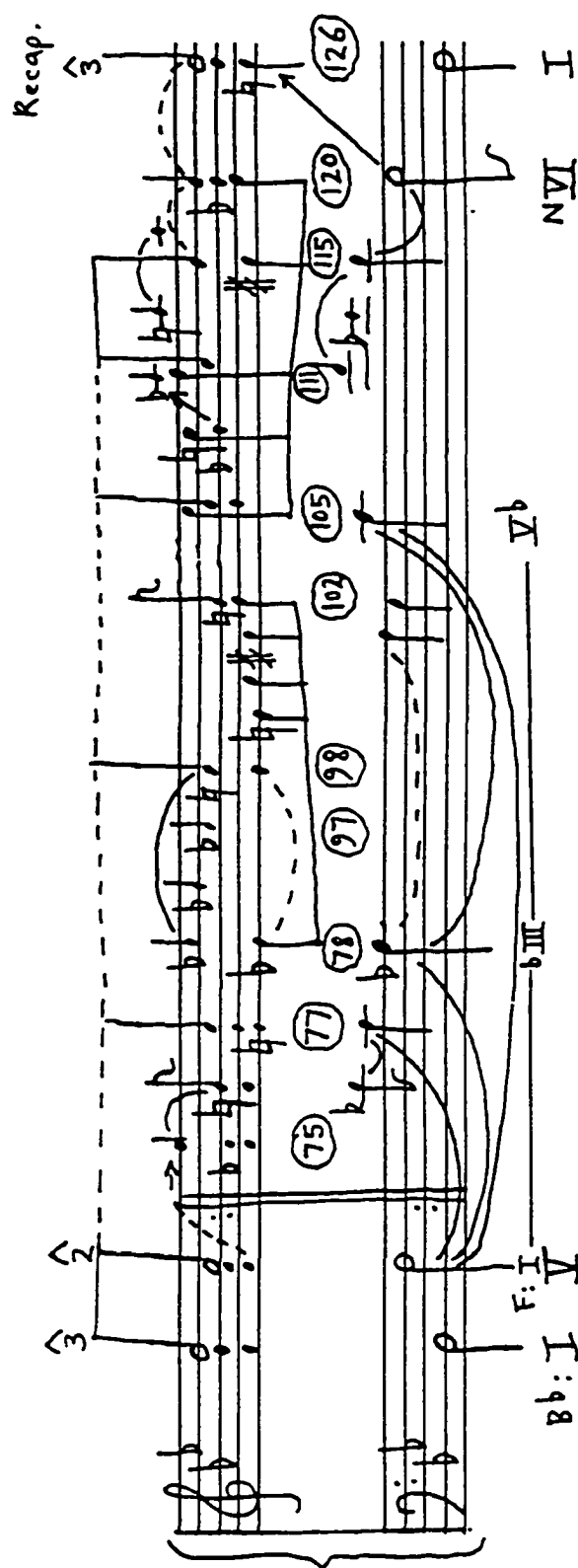
Bottom Staff (D minor):

- Chord sequence: $\Sigma b/i$ (I), $\Sigma b/ii$ (I), $\Sigma b/iii$ (I), $\Sigma b/iv$ (I), $\Sigma b/v$ (I), $\Sigma b/vi$ (I), $\Sigma b/vii$ (I).
- Figured bass notation: $\hat{2}$, $\hat{2}$, $\hat{2}$, $\hat{2}$, $\hat{2}$, $\hat{2}$, $\hat{2}$.
- Melodic lines: The upper voice (treble clef) and lower voice (bass clef) are shown with various intervals and accidentals. The upper voice has a melodic line with a trill and a grace note. The lower voice has a melodic line with a trill and a grace note.
- Figured bass notation: $\hat{2}$, $\hat{2}$, $\hat{2}$, $\hat{2}$, $\hat{2}$, $\hat{2}$, $\hat{2}$.

Example 1.4 Graph of Haydn, String Quartet in G, Op. 76 No. 1, I, development,
mm. 89-136.



Example 1.6 Graph of Haydn, String Quartet in B $\flat$, Op. 64 No. 3, I, development, mm. 75-126.



Example 1.7 Graphs of Haydn, Symphony No. 104 in D, I, development

The image displays three musical graphs (a, b, c) illustrating harmonic analysis of Haydn's Symphony No. 104 in D, I, development. Each graph shows a melodic line with notes circled and labeled with measure numbers, and a corresponding harmonic structure with Roman numerals and a dashed line indicating a sequence.

Graph a) shows a melodic line starting with a circled note at measure 137, followed by a sequence of notes labeled 137, 155, 157, 166, 174, 179, 185/189. The harmonic structure below the line shows a sequence of Roman numerals: I, II#, V, N, VI, V. A dashed line connects the notes to the Roman numerals, indicating a sequence of chords.

Graph b) shows a melodic line starting with a circled note at measure 166, followed by a sequence of notes labeled 166, 174, 179, 185/189. The harmonic structure below the line shows a sequence of Roman numerals: I, II#, V, N, VI, V. A dashed line connects the notes to the Roman numerals, indicating a sequence of chords.

Graph c) shows a melodic line starting with a circled note at measure 137, followed by a sequence of notes labeled 137, 155, 157, 166, 174, 179, 185/189. The harmonic structure below the line shows a sequence of Roman numerals: I, II#, V, N, VI, V. A dashed line connects the notes to the Roman numerals, indicating a sequence of chords. The word "unfolding" is written above the sequence, indicating a process of harmonic unfolding.

Example 1.8 Graphs of Haydn, Symphony No. 101 in D, I, development, (a) deep middleground plan; (b) bass unfoldings; (c) a later middleground level.

The image displays three musical graphs, labeled a), b), and c), representing different levels of harmonic and melodic analysis for a section of Haydn's Symphony No. 101, I, development.

- Graph a)** shows a deep middleground plan. It features a treble clef staff with a key signature of two sharps (F# and C#). The melody is marked with a '5' and a '6' above it, indicating a specific harmonic structure. The graph is divided into two main sections by a double bar line. The first section contains a sequence of notes, and the second section contains a sequence of notes with a '5' and a '6' above them. The graph is labeled with Roman numerals I, V, VI, and V⁶ at the bottom.
- Graph b)** shows bass unfoldings. It features a bass clef staff with a key signature of two sharps. The melody is marked with a '5' and a '6' above it. The graph is divided into two main sections by a double bar line. The first section contains a sequence of notes, and the second section contains a sequence of notes with a '5' and a '6' above them. The graph is labeled with Roman numerals I, V, VI, and V⁶ at the bottom.
- Graph c)** shows a later middleground level. It features a treble clef staff with a key signature of two sharps. The melody is marked with a '5' and a '6' above it. The graph is divided into two main sections by a double bar line. The first section contains a sequence of notes, and the second section contains a sequence of notes with a '5' and a '6' above them. The graph is labeled with Roman numerals I, V, VI, and V⁶ at the bottom.

Example 1.9 Graphs of Haydn, String Quartet in F, Op. 74 No. 2, I, development,
(a) deep middleground plan; (b) a later middleground level.

The image displays two musical score excerpts, (a) and (b), from Haydn's String Quartet in F, Op. 74 No. 2, I, development. Each excerpt features a graph overlaid on the musical notation, which consists of two staves (treble and bass clef) with a brace on the left. The graph is a line plot with a horizontal axis representing time and a vertical axis representing pitch. The graph is divided into two main sections by a vertical line. The first section is labeled 'V' and the second section is labeled 'VI (V⁶) I'. The graph shows a series of notes and rests, with some notes marked with a '2' above them. The notes are connected by lines, and some are marked with a '2' above them. The graph is a line plot with a horizontal axis representing time and a vertical axis representing pitch. The graph is divided into two main sections by a vertical line. The first section is labeled 'V' and the second section is labeled 'VI (V⁶) I'. The graph shows a series of notes and rests, with some notes marked with a '2' above them. The notes are connected by lines, and some are marked with a '2' above them.

(a) deep middleground plan: The graph shows a series of notes and rests, with some notes marked with a '2' above them. The notes are connected by lines, and some are marked with a '2' above them. The graph is a line plot with a horizontal axis representing time and a vertical axis representing pitch. The graph is divided into two main sections by a vertical line. The first section is labeled 'V' and the second section is labeled 'VI (V⁶) I'. The graph shows a series of notes and rests, with some notes marked with a '2' above them. The notes are connected by lines, and some are marked with a '2' above them.

(b) a later middleground level: The graph shows a series of notes and rests, with some notes marked with a '2' above them. The notes are connected by lines, and some are marked with a '2' above them. The graph is a line plot with a horizontal axis representing time and a vertical axis representing pitch. The graph is divided into two main sections by a vertical line. The first section is labeled 'V' and the second section is labeled 'VI (V⁶) I'. The graph shows a series of notes and rests, with some notes marked with a '2' above them. The notes are connected by lines, and some are marked with a '2' above them.

Example 1.10 Graphs of Haydn, Symphony No. 89 in F, I, development, (a) deep middleground plan; (b) a later middleground level.

a)

90 91 92 93 110

V VI

b)

59 62 63 77 83 87 88 90 92 (etc.)

(divider)

V VI

Example 2.1 Haydn, Piano Trio in A $\flat$, Hob.XV:14, I, mm. 80-101

[Allegro moderato]

83

88

90

97

From *Joseph Haydn Werke*, series XVII, vol. 2. *Klaviertrios*, 2. Folge, ed. Wolfgang Stockmeier. Copyright 1974 by G. Henle Verlag, München. Used by permission.

Example 2.2 Graphs of Haydn. Piano Trio in A $\flat$, Hob.XV:14, I, mm. 83-98
 (a) middleground; (b) foreground

The image displays two staves of handwritten musical notation, labeled (a) and (b), representing different levels of analysis for a passage from Haydn's Piano Trio in A $\flat$, Hob.XV:14, I, mm. 83-98.

Staff (a) is labeled "middleground". It shows a treble and bass clef staff with a key signature of two flats. The notation includes a first ending bracket with a "2" above it. Circled numbers 83/85, 88, and 97/98 are present. Fingerings "5", "6", and "5" are indicated above the treble staff. A Roman numeral "V" is written below the first measure.

Staff (b) is labeled "foreground". It shows the same musical material with additional annotations. Circled numbers 83, 85, 88, and 97/98 are present. Roman numerals "V", "V/VII", and "V/II" are written below the staff. A bracket labeled "(added root)" spans measures 83 and 85. A dashed line connects the end of the first ending in (a) to the beginning of the first ending in (b).

Example 2.3 Haydn, String Quartet in B $\flat$, Op. 71 No. 1, I, mm. 70-79

[Allegro]

The musical score consists of two systems of four staves each. The first system covers measures 70 to 76, and the second system covers measures 77 to 79. The key signature has two flats (B-flat major). The tempo is marked [Allegro]. The score includes various musical notations such as notes, rests, and slurs. Dynamic markings include 'mezzo voce' in measures 70-71, 'fz' (forzando) in measures 72 and 78, and 'p' (piano) in measures 77-79. A circled '77' is placed above the second staff in the second system. The score ends with a double bar line and the Roman numeral 'IV' below it.

From *Joseph Haydn Werke*, series XII, vol. 5. *Streichquartette "Opus 64" und "Opus 71/74"*, ed. Georg Feder and Isidor Saslav in collaboration with Warren Kirkendale. Copyright 1978 by G. Henle Verlag, München. Used by permission.

Example 2.4 Haydn, Symphony No. 103 in E $\flat$, I, mm. 94-107

[Allegro con spirito]

(IV) (II) V/II

Example 2.4 Haydn, Symphony No. 103 in E $\flat$, I, mm. 94-107, continued.

The image displays a musical score for the first movement of Haydn's Symphony No. 103, measures 94 through 107. The score is written for a full orchestra, with staves for strings, woodwinds, and brass. The key signature is one flat (E $\flat$), and the time signature is common time (C). The notation includes various musical symbols such as notes, rests, and dynamic markings like 'pp' (pianissimo) and 'ff' (fortissimo). The score is presented in a standard musical notation format, with measures numbered 94 through 107.

From *Joseph Haydn Werke*, series I, vol. 18. *Londoner Sinfonien*, 4. Folge, ed. Hubert Unverricht. Copyright 1963 by G. Henle Verlag, München-Duisburg. Used by permission.

Example 2.5 Haydn, Piano Sonata in E $\flat$, Hob.XVI:49, I, mm. 65-83

65 [Allegro]

70

75

V/Vi

80

VI

From *Joseph Haydn Werke*, series XVIII, vol. 3. *Klaviersonaten*, 3. Folge, ed. Georg Feder. Copyright 1966 by G. Henle Verlag, München-Duisburg. Used by permission.

Example 2.6 Haydn, Piano Sonata in C, Hob.XVI:50, I, mm. 54-74

[Allegro]

54 *p*

57

60 *tr* *tr* *tr*

63 *tr* *tr*

66 *ff*

69 *p*

72 *pp* *open Pedal*

73

From *Joseph Haydn Werke*, series XVIII, vol. 3.
Klaviersonaten, 3. Folge, ed. Georg Feder. Copyright
 1966 by G. Henle Verlag, München-Duisburg.
 Used by permission.

Example 2.8 Haydn, String Quartet in F, Op. 74 No. 2, I, mm. 93-104

[Allegro spiritoso]

" III# "

Example 2.9 Haydn, String Quartet in F, Op. 74 No. 2, I, mm. 169-176 (end of development and beginning of recapitulation)

From *Joseph Haydn Werke*, series XII, vol. 5. *Streichquartette "Opus 64" und "Opus 71/74"*, ed. Georg Feder and Isidor Saslav in collaboration with Warren Kirkendale. Copyright 1978 by G. Henle Verlag, München. Used by permission.

Example 2.11 Haydn, Symphony No. 102 in B $\flat$, I, mm. 81-92

[Allegro vivace]

This musical score excerpt shows measures 81 through 92 of the first movement of Haydn's Symphony No. 102 in B-flat major. The tempo is marked [Allegro vivace]. The score is arranged in two systems. The first system includes staves for woodwinds (flute, oboe, clarinet, bassoon) and strings (violins, violas, cellos, double basses). The second system includes staves for the piano (grand piano and left hand). The music features a lively, rhythmic character with various dynamic markings such as *f* (forte) and *p* (piano).

Example 2.12 Haydn, Symphony No. 102 in B $\flat$, I, mm. 111-118

This musical score excerpt shows measures 111 through 118 of the first movement of Haydn's Symphony No. 102 in B-flat major. The tempo is marked [Allegro vivace]. The score is arranged in two systems. The first system includes staves for woodwinds (flute, oboe, clarinet, bassoon) and strings (violins, violas, cellos, double basses). The second system includes staves for the piano (grand piano and left hand). The music features a lively, rhythmic character with various dynamic markings such as *f* (forte) and *p* (piano).

From *Joseph Haydn. Critical Edition of the Complete Symphonies*, vol. 12, ed. H. C. Robbins Landon. Copyright 1967 by Haydn-Mozart Presse, Salzburg. Copyright renewed. All rights reserved. Used by permission of European American Music Distributors Corporation, sole U.S. and Canadian Agent for Haydn-Mozart Presse, Salzburg.

Example 2.13 Haydn, String Quartet in G, Op. 77 No. 1, I, mm. 101-128

101 [Allegro moderato]

106 110

117 120

128

Example 2.14 Haydn, Symphony No. 91 in E $\flat$, I, mm. 120-153

[Allegro assai]

120 129 130 153

VI V

The image displays a musical score for the song "The Rose Tree." The score is written for a four-part vocal ensemble (Soprano, Alto, Tenor, Bass) and a piano accompaniment. The music is in 2/4 time and features a key signature of one flat (B-flat). The score is divided into two systems, each labeled with the number 147 in a box. The first system shows the vocal parts and piano accompaniment. The second system continues the vocal parts and piano accompaniment. The piano accompaniment consists of a right hand playing a melody with chords and a left hand playing a bass line. The vocal parts are written in four staves, each with a different clef (Soprano: C1, Alto: C2, Tenor: C3, Bass: C4). The lyrics "The Rose Tree" are written below the vocal parts.

Canadian Agent for Haydn-Mozart Presse, Salzburg.

Example 2.15 Haydn, Symphony No. 97 in C, I, mm. 137-149

[Vivace]

apparent tonic
143 ↓

137

138

139

140

From *Joseph Haydn. Critical Edition of the Complete Symphonies*, vol. 11, ed. H. C. Robbins Landon. Copyright 1965 by Haydn-Mozart Presse, Salzburg. Copyright renewed. All rights reserved. Used by permission of European American Music Distributors Corporation, sole U.S. and Canadian Agent for Haydn-Mozart Presse, Salzburg.

Example 2.16 Haydn, Symphony No. 103 in E $\flat$, I, mm. 108-118

[Allegro con spirito]

114

"I"

From *Joseph Haydn Werke*, series I, vol. 18. *Londoner Sinfonien*, 4. Folge, ed. Hubert Unverricht. Copyright 1963 by G. Henle Verlag, München-Duisburg. Used by permission.

Example 2.17 Haydn, Symphony No. 103 in E $\flat$, I, mm. 130-141

[Allegro con spirito]

The musical score is presented in a standard format with multiple staves. The woodwind section (flutes, oboes, and bassoons) is at the top, and the string section is at the bottom. The woodwinds play a melodic line with various ornaments and slurs. The strings provide a rhythmic accompaniment. The score is marked with 'Allegro con spirito' and includes measure numbers 130, 140, and 141. There are also some performance markings like 'Solo' and 'P'.

From *Joseph Haydn Werke*, series I, vol. 18. *Londoner Sinfonien*, 4. Folge, ed. Hubert Unverricht. Copyright 1963 by G. Henle Verlag, München-Duisburg. Used by permission.

[Allegro]

Example 2.19 Haydn, Symphony No. 96 in D, I, mm. 120-135

↑
False recap. on IV

From *Joseph Haydn. Critical Edition of the Complete Symphonies*,

vol. 11, ed. H. C. Robbins Landon.

Copyright 1962 by Haydn-Mozart Presse, Salzburg.

Copyright renewed. All rights reserved. Used by
permission of European American Music Distributors Corporation,
sole U.S. and Canadian Agent for Haydn-Mozart Presse, Salzburg.

Example 2.20 Haydn, String Quartet in E $\flat$, Op. 71 No. 3, I, development (mm. 110-86)

(a) score; (b) deep middleground graph; (c) a later middleground level

a) [Vivace]

110

120

130

140

150

Example 2.20 (a) continued

False recapitulation

150

170

IV'

173

Recapitulation

180

I

Example 2.20 (b) deep middleground graph of Op. 71 No. 3, I, development

5 (5-2)
5
6 5-7
(173) (181)
I V nVI V'

(c) a later middleground level

5 (5-2)
5
6 5-7
(124) (136) (142) (143) (146) (150) (170) (173) (179) (181)
I V "IV" V/V' V'

Example 2.21 Haydn, Symphony No. 102 in B $\flat$, I, mm. 176-188

[Allegro Vivace]

II 4 (false recapitulation)

From *Joseph Haydn. Critical Edition of the Complete Symphonies*, vol. 12, ed. H. C. Robbins Landon. Copyright 1967 by Haydn-Mozart Presse, Salzburg. Copyright renewed. All rights reserved. Used by permission of European American Music Distributors Corporation, sole U.S. and Canadian Agent for Haydn-Mozart Presse, Salzburg.

Example 2.22 Haydn, Symphony No. 92 in G, I, mm. 83-110

[Allegro spiritoso]

Handwritten musical score for Haydn's Symphony No. 92, measures 83-110. The score is written on four systems of staves, each system containing a grand staff (treble and bass clefs). The tempo is marked [Allegro spiritoso]. Measure numbers 83, 88, 90, and 95 are indicated at the beginning of their respective systems. A handwritten '88' is placed above the first system. A handwritten 'V/V' is placed above the second system. A handwritten 'Poli' is placed above the third system. A handwritten 'Parenthesis until m. 108' is written below the fourth system, with a line connecting it to the end of the score. The notation includes various musical symbols such as notes, rests, and accidentals.

Parenthesis until m. 108

Example 2.22 Haydn, Symphony No. 92 in G, I, mm. 83-110, continued

[Allegro spiritoso]

104 108 110 112

VI

From *Joseph Haydn. Critical Edition of the Complete Symphonies*, vol. 10, ed. H. C. Robbins Landon. Copyright 1962 by Haydn-Mozart Presse, Salzburg. Copyright renewed. All rights reserved. Used by permission of European American Music Distributors Corporation, sole U.S. and Canadian Agent for Haydn-Mozart Presse, Salzburg.

Example 2.23 Haydn, Symphony No. 104 in D, I, mm. 124–158

[Allegro]

139

Sole

Sole

140

Tutti

Tutti

141

$$V/II$$

(resolves in m.155)

Example 2.23 Haydn, Symphony No. 104 in D, I, mm. 124-158, continued

↓ Parenthesis until m. 155 ---->

C# minor

G# minor

Example 2.23 Haydn, Symphony No. 104 in D, I, mm. 124-158, continued

155

F# minor

(resolution of dominant in m. 140)

From *Joseph Haydn. Critical Edition of the Complete Symphonies*, vol. 12, ed. H. C. Robbins Landon. Copyright 1967 by Haydn-Mozart Presse, Salzburg. Copyright renewed. All rights reserved. Used by permission of European American Music Distributors Corporation, sole U.S. and Canadian Agent for Haydn-Mozart Presse, Salzburg.

Example 2.24 Haydn, Symphony No. 104 in D, I, mm. 102-112

[Allegro]

107

102

103

104

105

106

107

108

109

110

111

112

113

114

115

116

117

118

119

120

121

122

123

124

125

126

127

128

129

130

131

132

133

134

135

136

137

138

139

140

141

142

143

144

145

146

147

148

149

150

151

152

153

154

155

156

157

158

159

160

161

162

163

164

165

166

167

168

169

170

171

172

173

174

175

176

177

178

179

180

181

182

183

184

185

186

187

188

189

190

191

192

193

194

195

196

197

198

199

200

201

202

203

204

205

206

207

208

209

210

211

212

213

214

215

216

217

218

219

220

221

222

223

224

225

226

227

228

229

230

231

232

233

234

235

236

237

238

239

240

241

242

243

244

245

246

247

248

249

250

251

252

253

254

255

256

257

258

259

260

261

262

263

264

265

266

267

268

269

270

271

272

273

274

275

276

277

278

279

280

281

282

283

284

285

286

287

288

289

290

291

292

293

294

295

296

297

298

299

300

301

302

303

304

305

306

307

308

309

310

311

312

313

314

315

316

317

318

319

320

321

322

323

324

325

326

327

328

329

330

331

332

333

334

335

336

337

338

339

340

341

342

343

344

345

346

347

348

349

350

351

352

353

354

355

356

357

358

359

360

361

362

363

364

365

366

367

368

369

370

371

372

373

374

375

376

377

378

379

380

381

382

383

384

385

386

387

388

389

390

391

392

393

394

395

396

397

398

399

400

401

402

403

404

405

406

407

408

409

410

411

412

413

414

415

416

417

418

419

420

421

422

423

424

425

426

427

428

429

430

431

432

433

434

435

436

437

438

439

440

441

442

443

444

445

446

447

448

449

450

451

452

453

454

455

456

457

458

459

460

461

462

463

464

465

466

467

468

469

470

471

472

473

474

475

476

477

478

479

480

481

482

483

484

485

486

487

488

489

490

491

492

493

494

495

496

497

498

499

500

501

502

503

504

505

506

507

508

509

510

511

512

513

514

515

516

517

518

519

520

521

522

523

524

525

526

527

528

529

530

531

532

533

534

535

536

537

538

539

540

541

542

543

544

545

546

547

548

549

550

551

552

553

554

555

556

557

558

559

560

561

562

563

564

565

566

567

568

569

570

571

572

573

574

575

576

577

578

579

580

581

582

583

584

585

586

587

588

589

590

591

592

593

594

595

596

597

598

599

600

601

602

603

604

605

606

607

608

609

610

611

612

613

614

615

616

617

618

619

620

621

622

623

624

625

626

627

628

629

630

631

632

633

634

635

636

637

638

639

640

641

642

643

644

645

646

647

648

649

650

651

652

653

654

655

656

657

658

659

660

661

662

663

664

665

666

667

668

669

670

671

672

673

674

675

676

677

678

679

680

681

682

683

684

685

686

687

688

689

690

691

692

693

694

695

696

697

698

699

700

701

702

703

704

705

706

707

708

709

710

711

712

713

714

715

716

717

718

719

720

721

722

723

724

725

726

727

728

729

730

731

732

733

734

735

736

737

738

739

740

741

742

743

744

745

746

747

748

749

750

751

752

753

754

755

756

757

758

759

760

761

762

763

764

765

766

767

768

769

770

771

772

773

774

775

776

777

778

779

780

781

782

783

784

785

786

787

788

789

790

791

792

793

794

795

796

797

798

799

800

801

802

803

804

805

806

807

808

809

810

811

812

813

814

815

816

817

818

819

820

821

822

823

824

825

826

827

828

829

830

831

832

833

834

835

836

837

838

839

840

841

842

843

844

845

846

847

848

849

850

851

852

853

854

855

856

857

858

859

860

861

862

863

864

865

866

867

868

869

870

871

872

873

874

875

876

877

878

879

880

881

882

883

884

885

886

887

888

889

890

891

892

893

894

895

896

897

898

899

900

901

902

903

904

905

906

907

908

909

910

911

912

913

914

915

916

917

918

919

920

921

922

923

924

925

926

927

928

929

930

931

932

933

934

935

936

937

938

939

940

941

942

943

944

945

946

947

948

949

950

951

952

953

954

955

956

957

958

959

960

961

962

963

964

965

966

967

968

969

970

971

972

973

974

975

976

977

978

979

980

981

982

983

984

985

986

987

988

989

990

991

992

993

994

995

996

997

998

999

1000

From *Joseph Haydn. Critical Edition of the Complete Symphonies*, vol. 12, ed. H. C. Robbins Landon. Copyright 1967 by Haydn-Mozart Presse, Salzburg. Copyright renewed. All rights reserved. Used by permission of European American Music Distributors Corporation, sole U.S. and Canadian Agent for Haydn-Mozart Presse, Salzburg.

Example 2.25 Haydn, Symphony No. 91 in E $\flat$, I, mm. 175-193

Retransition
↓
180

175 [Allegro assai]

176

177

178

179

180

181

182

183

184

185

186

187

188

189

190

191

192

193

Example 2.25 Haydn, Symphony No. 91 in E $\flat$, I, mm. 175-193, continued

187 *Recap.*

From *Joseph Haydn. Critical Edition of the Complete Symphonies*, vol. 10, ed. H. C. Robbins Landon. Copyright 1964 by Haydn-Mozart Presse, Salzburg. Copyright renewed. All rights reserved. Used by permission of European American Music Distributors Corporation, sole U.S. and Canadian Agent for Haydn-Mozart Presse, Salzburg.

Example 2.26 Haydn, Symphony No. 103 in E $\flat$, I, mm. 150-9

[Allegro con spirito]

154

From *Joseph Haydn Werke*, series I, vol. 18. *Londoner Sinfonien*, 4. Folge, ed. Hubert Unverricht. Copyright 1963 by G. Henle Verlag, München-Duisburg. Used by permission.

Example 2.27 Haydn, Symphony No. 100 in G, I, mm. 170-211

[Allegro]

The image displays a musical score for Haydn's Symphony No. 100, measures 170-211. The tempo is marked [Allegro]. The score is written for a full orchestra, including strings, woodwinds, and brass. The key signature is one sharp (F#), and the time signature is 3/4. The score is divided into three systems, each containing staves for different instruments. The first system (measures 170-177) features a solo section for the first violin, marked 'Solo' and '177'. The second system (measures 178-184) includes a section marked '178' and 'I'. The third system (measures 185-211) includes a section marked '185' and 'Tutti'. The score is written in a standard musical notation style, with notes, rests, and other musical symbols clearly visible.

Example 2.27 Symphony No. 100, I, continued

164 (Tutti)

165

166

V 6/5

Example 2.27 Symphony No. 100, I, continued

The musical score is presented in three systems of staves. The first system, measures 194-198, includes a 'Solo' marking above the first staff. The second system, measures 199-203, includes a '[Recap.]' marking above the first staff. The third system, measures 204-208, continues the musical notation. The score includes various musical notations such as notes, rests, and dynamic markings.

From *Joseph Haydn. Critical Edition of the Complete Symphonies*, vol. 12, ed. H. C. Robbins Landon. Copyright 1967 by Haydn-Mozart Presse, Salzburg. Copyright renewed. All rights reserved. Used by permission of European American Music Distributors Corporation, sole U.S. and Canadian Agent for Haydn-Mozart Presse, Salzburg.

Example 2.28 Haydn, String Quartet in G, Op. 54 No. 1, I, mm. 78-88

[Allegro con brio]

Retransition

VI (descending fifths...)

85

Recap.

V⁷ I

The musical score is written for a string quartet in G major, Op. 54 No. 1, I, mm. 78-88. It consists of three systems of four staves each. The first system (mm. 78-81) is marked [Allegro con brio] and features a retransition. The second system (mm. 82-85) is marked VI (descending fifths...). The third system (mm. 86-88) is marked Recap. and features a V⁷ chord and a I chord.

Example 2.29 Haydn, String Quartet in B $\flat$, Op. 71 No. 1, I, mm. 96-106

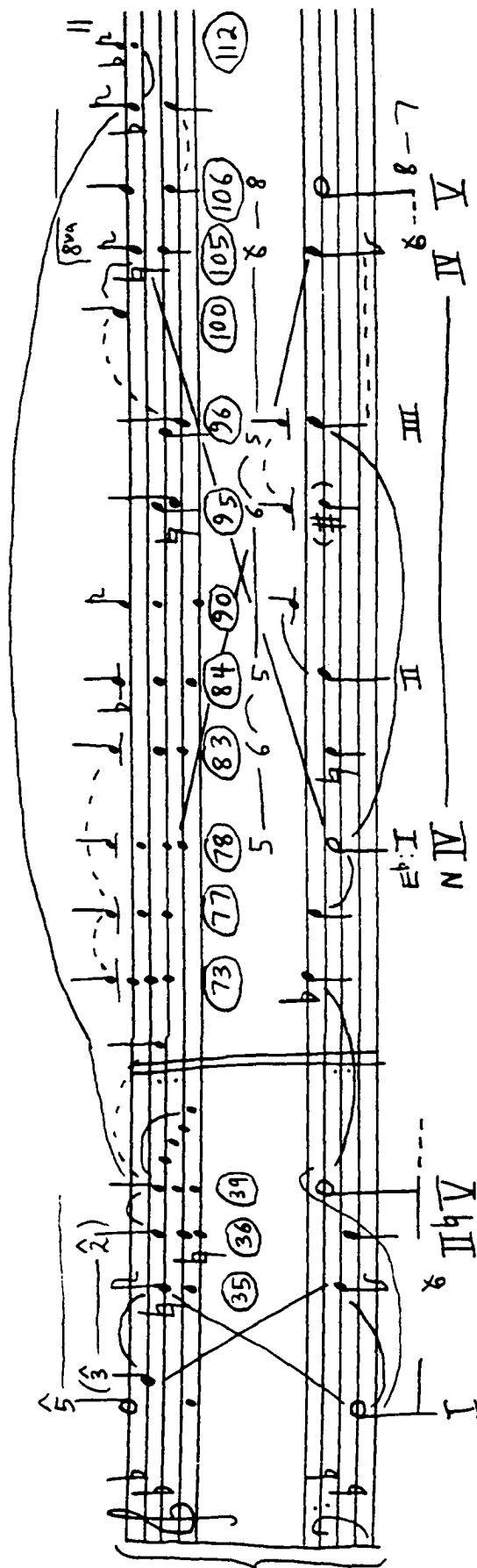
[Allegro]

Die Urfassung von Takt 103-106 und die Variante der Erstausgabe im Anhang

106

From *Joseph Haydn Werke*, series XII, vol. 5. *Streichquartette "Opus 64" und "Opus 71/74"*, ed. Georg Feder and Isidor Saslav in collaboration with Warren Kirkendale. Copyright 1978 by G. Henle Verlag, München. Used by permission.

Example 2.30 Graph of Haydn, String Quartet in B $\flat$, Op. 71 No. 1, I, development



Example 2.31 Haydn, Piano Sonata in E $\flat$, Hob.XVI:49, I, mm. 105-134

[All e^{ro}]

105

Retransition

109

110

113

118

120

122

124

126

128

130

132

134

136

138

140

142

144

146

148

150

152

154

156

158

160

162

164

166

168

170

172

174

176

178

180

182

184

186

188

190

192

194

196

198

200

202

204

206

208

210

212

214

216

218

220

222

224

226

228

230

232

234

236

238

240

242

244

246

248

250

252

254

256

258

260

262

264

266

268

270

272

274

276

278

280

282

284

286

288

290

292

294

296

298

300

302

304

306

308

310

312

314

316

318

320

322

324

326

328

330

332

334

336

338

340

342

344

346

348

350

352

354

356

358

360

362

364

366

368

370

372

374

376

378

380

382

384

386

388

390

392

394

396

398

400

402

404

406

408

410

412

414

416

418

420

422

424

426

428

430

432

434

436

438

440

442

444

446

448

450

452

454

456

458

460

462

464

466

468

470

472

474

476

478

480

482

484

486

488

490

492

494

496

498

500

502

504

506

508

510

512

514

516

518

520

522

524

526

528

530

532

534

536

538

540

542

544

546

548

550

552

554

556

558

560

562

564

566

568

570

572

574

576

578

580

582

584

586

588

590

592

594

596

598

600

602

604

606

608

610

612

614

616

618

620

622

624

626

628

630

632

634

636

638

640

642

644

646

648

650

652

654

656

658

660

662

664

666

668

670

672

674

676

678

680

682

684

686

688

690

692

694

696

698

700

702

704

706

708

710

712

714

716

718

720

722

724

726

728

730

732

734

736

738

740

742

744

746

748

750

752

754

756

758

760

762

764

766

768

770

772

774

776

778

780

782

784

786

788

790

792

794

796

798

800

802

804

806

808

810

812

814

816

818

820

822

824

826

828

830

832

834

836

838

840

842

844

846

848

850

852

854

856

858

860

862

864

866

868

870

872

874

876

878

880

882

884

886

888

890

892

894

896

898

900

902

904

906

908

910

912

914

916

918

920

922

924

926

928

930

932

934

936

938

940

942

944

946

948

950

952

954

956

958

960

962

964

966

968

970

972

974

976

978

980

982

984

986

988

990

992

994

996

998

1000

1002

1004

1006

1008

1010

1012

1014

1016

1018

1020

1022

1024

1026

1028

1030

1032

1034

1036

1038

1040

1042

1044

1046

1048

1050

1052

1054

1056

1058

1060

1062

1064

1066

1068

1070

1072

1074

1076

1078

1080

1082

1084

1086

1088

1090

1092

1094

1096

1098

1100

1102

1104

1106

1108

1110

1112

1114

1116

1118

1120

1122

1124

1126

1128

1130

1132

1134

1136

1138

1140

1142

1144

1146

1148

1150

1152

1154

1156

1158

1160

1162

1164

1166

1168

1170

1172

1174

1176

1178

1180

1182

1184

1186

1188

1190

1192

1194

1196

1198

1200

1202

1204

1206

1208

1210

1212

1214

1216

1218

1220

1222

1224

1226

1228

1230

1232

1234

1236

1238

1240

1242

1244

1246

1248

1250

1252

1254

1256

1258

1260

1262

1264

1266

1268

1270

1272

1274

1276

1278

1280

1282

1284

1286

1288

1290

1292

1294

1296

1298

1300

1302

1304

1306

1308

1310

1312

1314

1316

1318

1320

1322

1324

1326

1328

1330

1332

1334

1336

1338

1340

1342

1344

1346

1348

1350

1352

1354

1356

1358

1360

1362

1364

1366

1368

1370

1372

1374

1376

1378

1380

1382

1384

1386

1388

1390

1392

1394

1396

1398

1400

1402

1404

1406

1408

1410

1412

1414

1416

1418

1420

1422

1424

1426

1428

1430

1432

1434

1436

1438

1440

1442

1444

1446

1448

1450

1452

1454

1456

1458

1460

1462

1464

1466

1468

1470

1472

1474

1476

1478

1480

1482

1484

1486

1488

1490

1492

1494

1496

1498

1500

1502

1504

1506

1508

1510

1512

1514

1516

1518

1520

1522

1524

1526

1528

1530

1532

1534

1536

1538

1540

1542

1544

1546

1548

1550

1552

1554

1556

1558

1560

1562

1564

1566

1568

1570

1572

1574

1576

1578

1580

1582

1584

1586

1588

1590

1592

1594

1596

1598

1600

1602

1604

1606

1608

1610

1612

1614

1616

1618

1620

1622

1624

1626

1628

1630

1632

1634

1636

1638

1640

1642

1644

1646

1648

1650

1652

1654

1656

1658

1660

1662

1664

1666

1668

1670

1672

1674

1676

1678

1680

1682

1684

1686

1688

1690

1692

1694

1696

1698

1700

1702

1704

1706

1708

1710

1712

1714

1716

1718

1720

1722

1724

1726

1728

1730

1732

1734

1736

1738

1740

1742

1744

1746

1748

1750

1752

1754

1756

1758

1760

1762

1764

1766

1768

1770

1772

1774

1776

1778

1780

1782

1784

1786

1788

1790

1792

1794

1796

1798

1800

1802

1804

1806

1808

1810

1812

1814

1816

1818

1820

1822

1824

1826

1828

1830

1832

1834

1836

1838

1840

1842

1844

1846

1848

1850

1852

1854

1856

1858

1860

1862

1864

1866

1868

1870

1872

1874

1876

1878

1880

1882

1884

1886

1888

1890

1892

1894

1896

1898

1900

1902

1904

1906

1908

1910

1912

1914

1916

1918

1920

1922

1924

1926

1928

1930

1932

1934

1936

1938

1940

1942

1944

1946

1948

1950

1952

1954

1956

1958

1960

1962

1964

1966

1968

1970

1972

1974

1976

1978

1980

1982

1984

1986

1988

1990

1992

1994

1996

1998

2000

2002

2004

2006

2008

2010

2012

2014

2016

2018

2020

2022

2024

2026

2028

2030

2032

2034

2036

2038

2040

2042

2044

2046

2048

2050

2052

2054

2056

2058

2060

2062

2064

2066

2068

2070

2072

2074

2076

2078

2080

2082

2084

2086

2088

2090

2092

2094

2096

2098

2100

2102

2104

2106

2108

2110

2112

2114

2116

2118

2120

2122

2124

2126

2128

2130

2132

2134

2136

2138

2140

2142

2144

2146

2148

2150

2152

2154

2156

2158

2160

2162

2164

2166

2168

2170

2172

2174

2176

2178

2180

2182

2184

2186

2188

2190

2192

2194

2196

2198

2200

2202

2204

2206

2208

2210

2212

2214

2216

2218

2220

2222

2224

2226

2228

2230

2232

2234

2236

2238

2240

2242

2244

2246

2248

2250

2252

2254

2256

2258

2260

2262

2264

2266

2268

2270

2272

2274

2276

2278

2280

2282

2284

2286

2288

2290

2292

2294

2296

2298

2300

2302

2304

2306

2308

2310

2312

2314

2316

2318

2320

2322

2324

2326

2328

2330

2332

2334

2336

2338

2340

2342

2344

2346

2348

2350

2352

2354

2356

2358

2360

2362

2364

2366

2368

2370

2372

2374

2376

2378

2380

2382

2384

2386

2388

2390

2392

2394

2396

2398

2400

2402

2404

2406

2408

2410

2412

2414

2416

2418

2420

2422

2424

2426

2428

2430

2432

2434

2436

2438

2440

2442

2444

2446

2448

2450

2452

2454

2456

2458

2460

2462

2464

2466

2468

2470

2472

2474

2476

2478

2480

2482

2484

2486

2488

2490

2492

2494

2496

2498

2500

2502

2504

2506

2508

2510

2512

2514

2516

2518

2520

2522

2524

2526

2528

2530

2532

2534

2536

2538

2540

2542

2544

2546

2548

2550

2552

2554

2556

2558

2560

2562

2564

2566

2568

2570

2572

2574

2576

2578

2580

2582

2584

2586

2588

2590

2592

2594

2596

2598

2600

2602

2604

2606

2608

2610

2612

2614

2616

2618

2620

2622

2624

2626

2628

2630

2632

2634

2636

2638

2640

Example 2.31 Piano Sonata Hob.XVI:49, I, continued

126

130

a suo piacere

f

Recapitulation
a tempo

134

fz

From *Joseph Haydn Werke*, series XVIII, vol. 3. *Klaviersonaten*, 3. Folge, ed. Georg Feder. Copyright 1966 by G. Henle Verlag, München-Duisburg. Used by permission.

Example 2.32 Haydn, Symphony No. 94 in G, I, mm.146-158

[Vivace assai]

140

145

Recapitulation

152

158

159

160

64

From *Joseph Haydn. Critical Edition of the Complete Symphonies*, vol. 11, ed. H. C. Robbins Landon. Copyright 1965 by Haydn-Mozart Presse, Salzburg. Copyright renewed. All rights reserved. Used by permission of European American Music Distributors Corporation, sole U.S. and Canadian Agent for Haydn-Mozart Presse, Salzburg.

Example 2.33 Haydn, Symphony No. 94 in G, IV, mm. 131-149

[Allegro molto]

Handwritten annotation: VII#
(V/III on foreground)

Example 2.33 Symphony No. 94, IV, continued

The musical score is arranged in four systems, each with two staves. The first system (Violin I and Violin II) includes a measure number '143' in a box at the beginning. Above the first staff, the word 'Sole' is written. The second system (Viola and Cello/Double Bass) also includes a measure number '143' in a box at the beginning. Above the first staff of this system, the word 'Sole' is written. The third system is a continuation of the previous staves. The fourth system is labeled 'Recapitulation' in the center. It begins with a measure number '143' in a box. Below the fourth system, the letter 'I' is written.

From *Joseph Haydn. Critical Edition of the Complete Symphonies*, vol. 11, ed. H. C. Robbins Landon. Copyright 1965 by Haydn-Mozart Presse, Salzburg. Copyright renewed. All rights reserved. Used by permission of European American Music Distributors Corporation, sole U.S. and Canadian Agent for Haydn-Mozart Presse, Salzburg.

Example 3.1 Haydn, Symphony No. 104 in D, III, Trio (retransition), mm. 95-104

The musical score is presented in two systems. The top system covers measures 95 to 100, and the bottom system covers measures 101 to 104. The instrumentation includes Violin I, Violin II, Viola, Cello/Double Bass, and Piano. A [Solo] marking is placed above the Cello/Double Bass staff in measure 98. The piano part is marked 'Meno mosso da capo' at the end of measure 104.

From *Joseph Haydn. Critical Edition of the Complete Symphonies*, vol. 12, ed. H. C. Robbins Landon. Copyright 1967 by Haydn-Mozart Presse, Salzburg. Copyright renewed. All rights reserved. Used by permission of European American Music Distributors Corporation, sole U.S. and Canadian Agent for Haydn-Mozart Presse, Salzburg.

Example 3.2 Graph of Haydn, Symphony No. 104 in D, III

a)

Minuet Trio (8) - 8 - 8 Minuet da capo

b)

95 98 99

Example 3.3 Graph of Beethoven, Sonata in C, Op. 53 ("Waldstein"), I, mm. 14-35 (transition)

14 20 22 23 35

C: I⁵ - - 6 - 8 V/III III[#]
 E: bVI 8 V I

Example 3.4 Schubert, Waltz in A♭, Op. 9 No. 2

N^o 2.

(1416.)

1. 2.

I

-7
-5
-3

V 4 =

b^p.

b^{VI}

b⁵

(12)

Example 3.5 Heinrich Schenker, *Free Composition*, Fig. 300a

Schubert, Waltz op. 9 no. 2

b)

From Heinrich Schenker, *Free Composition (Der freie Satz)*, trans. and ed. Ernst Oster (New York: Longman, 1979). Copyright 1935 by Universal Edition A.G., Vienna and the Estate of Ernst Oster. Used by permission.

Example 3.6 Major-mode expositions: Ways of modulating to V

a)

I II# V

b)

I II# V

c)

I⁵—⁶ II# V

d)

I⁵—⁶ II# V

e)

I⁶₄₃ II# V

f)

I⁵—⁰₇ II# V

g)

I⁵—⁶₅ II# V

h)

I⁵—⁰₇_b II# V

i)

I⁵—⁶₅ II# V

Example 3.7 Voice-leading contexts for augmented sixths that resolve to V/VI or III#

a)

out of: or: 5—6

b)

c)

Example 3.7 (continued)

The musical score consists of four systems, each with a piano (p) part on a grand staff and an organ (o) part on a single staff. The organ part includes figured bass and Roman numeral harmonization.

- System d):** The piano part features a melodic line with a dashed line indicating a continuation. The organ part has figures 2 and 2, and Roman numerals V, II, III#, IV, V, and 7.
- System e):** The piano part continues the melodic line. The organ part has figures 2 and 2, and Roman numerals V, III# (or V/II), and V.
- System f):** The piano part includes a section labeled "Recap." with figures 5-6 and 5-6. The organ part has figures 3 and 2, and Roman numerals I, II#, III#, IV, and V.
- System g):** The piano part continues the melodic line. The organ part has figures 2 and 2, and Roman numerals V and VI.

Example 3.7 (continued)

Handwritten musical score for a piano exercise, showing two systems of chords. The first system has a treble clef and a key signature of one sharp (F#). The second system has a bass clef and a key signature of one sharp (F#). Both systems show a sequence of chords: C major (C-E-G), D minor (D-F-A), E minor (E-G-B), and F# minor (F#-A-C). The chords are connected by a melodic line in the right hand. The exercise is labeled 'i)' and '2)'.

Example 3.8 (continued)

(c) **Symphony No. 97 in C, I**

Handwritten musical score for "The Rose Tree" on two staves. The score includes various musical notations such as notes, rests, and accidentals. It features several corrections and annotations:

- Measure 108: A circled "Eb" with an arrow pointing to a note.
- Measure 114: A circled "D#" with an arrow pointing to a note.
- Measure 144: A circled "D#" with an arrow pointing to a note.
- Measure 151: A circled "D#" with an arrow pointing to a note.
- Measure 158: A circled "D#" with an arrow pointing to a note.
- Measure 160: A circled "D#" with an arrow pointing to a note.
- Measure 161: A circled "D#" with an arrow pointing to a note.
- Measure 162: A circled "D#" with an arrow pointing to a note.
- Measure 163: A circled "D#" with an arrow pointing to a note.
- Measure 164: A circled "D#" with an arrow pointing to a note.
- Measure 165: A circled "D#" with an arrow pointing to a note.
- Measure 166: A circled "D#" with an arrow pointing to a note.
- Measure 167: A circled "D#" with an arrow pointing to a note.
- Measure 168: A circled "D#" with an arrow pointing to a note.
- Measure 169: A circled "D#" with an arrow pointing to a note.
- Measure 170: A circled "D#" with an arrow pointing to a note.
- Measure 171: A circled "D#" with an arrow pointing to a note.
- Measure 172: A circled "D#" with an arrow pointing to a note.
- Measure 173: A circled "D#" with an arrow pointing to a note.
- Measure 174: A circled "D#" with an arrow pointing to a note.
- Measure 175: A circled "D#" with an arrow pointing to a note.
- Measure 176: A circled "D#" with an arrow pointing to a note.
- Measure 177: A circled "D#" with an arrow pointing to a note.
- Measure 178: A circled "D#" with an arrow pointing to a note.
- Measure 179: A circled "D#" with an arrow pointing to a note.
- Measure 180: A circled "D#" with an arrow pointing to a note.
- Measure 181: A circled "D#" with an arrow pointing to a note.
- Measure 182: A circled "D#" with an arrow pointing to a note.
- Measure 183: A circled "D#" with an arrow pointing to a note.
- Measure 184: A circled "D#" with an arrow pointing to a note.
- Measure 185: A circled "D#" with an arrow pointing to a note.
- Measure 186: A circled "D#" with an arrow pointing to a note.
- Measure 187: A circled "D#" with an arrow pointing to a note.
- Measure 188: A circled "D#" with an arrow pointing to a note.
- Measure 189: A circled "D#" with an arrow pointing to a note.
- Measure 190: A circled "D#" with an arrow pointing to a note.
- Measure 191: A circled "D#" with an arrow pointing to a note.
- Measure 192: A circled "D#" with an arrow pointing to a note.
- Measure 193: A circled "D#" with an arrow pointing to a note.
- Measure 194: A circled "D#" with an arrow pointing to a note.
- Measure 195: A circled "D#" with an arrow pointing to a note.
- Measure 196: A circled "D#" with an arrow pointing to a note.
- Measure 197: A circled "D#" with an arrow pointing to a note.
- Measure 198: A circled "D#" with an arrow pointing to a note.
- Measure 199: A circled "D#" with an arrow pointing to a note.
- Measure 200: A circled "D#" with an arrow pointing to a note.

(d) String Quartet in Eb, Op. 64 No. 6, I

Example 3.10 Graphs of three related Haydn developments

(a) String Quartet in B $\flat$, Op. 64 No. 3

8 $\flat$: I V (V/V) (bIII/V) (V/V) II V/V N VI I

(b) String Quartet in F, Op. 74 No. 2

V (V/V) (bIII/V) (V/V) II V/V VI I

* The events in mm. 99-124, not shown, lie on a lower structural level.

(c) Symphony No. 89 in F

V (V/V) (bIII/V) (V/V) II II⁶ - (V/V)

Example 3.11 Haydn, String Quartet in C, Op. 74 No. 1, II, mm. 58-95 (development)

[Andantino grazioso]

The musical score is presented in four systems, each containing four staves. The first system shows the beginning of the development section with various rhythmic patterns and dynamic markings. The second system continues the development with more complex rhythmic figures. The third system features a series of chords and arpeggios. The fourth system concludes the development with a final chord and a 'Recap.' marking.

From *Joseph Haydn Werke*, series XII, vol. 5. *Streichquartette "Opus 64" und "Opus 71/74"*, ed. Georg Feder and Isidor Saslav in collaboration with Warren Kirkendale. Copyright 1978 by G. Henle Verlag, München. Used by permission.

Example 3.12 Graphs of Haydn, String Quartet in C, Op. 74 No. 1, II, development

The image displays handwritten musical notation for the development section of Haydn's String Quartet in C, Op. 74 No. 1, II. The notation is organized into four parts, labeled (a) through (d), each showing a staff with notes, accidentals, and various annotations.

Part (a): The first staff begins with a treble clef and a key signature of one sharp (F#). The notes are G, A, B, C, D, E, F#, G. Below the staff, the numbers 8 8 8 7 are written. The second staff shows a bass clef and the notes G, F#, E, D, C, B, A, G. Below the staff, the numbers 8 10 8 8 5 8 7 are written, along with a bracketed sequence 5-6 6-5 4-3. The section concludes with a double bar line and a Roman numeral V.

Part (b): The first staff begins with a treble clef and a key signature of one sharp (F#). The notes are G, A, B, C, D, E, F#, G. Below the staff, the numbers 8 8 8 7 are written. The second staff shows a bass clef and the notes G, F#, E, D, C, B, A, G. Below the staff, the numbers 8 10 8 8 5 8 7 are written, along with a bracketed sequence 5-6 6-5 4-3. The section concludes with a double bar line and a Roman numeral V.

Part (c): The first staff begins with a treble clef and a key signature of one sharp (F#). The notes are G, A, B, C, D, E, F#, G. Below the staff, the numbers 8 10 8 8 5 8 7 are written, along with a bracketed sequence 5-6 6-5 4-3. The second staff shows a bass clef and the notes G, F#, E, D, C, B, A, G. Below the staff, the numbers 8 10 8 8 5 8 7 are written, along with a bracketed sequence 5-6 6-5 4-3. The section concludes with a double bar line and a Roman numeral V.

Part (d): The first staff begins with a treble clef and a key signature of one sharp (F#). The notes are G, A, B, C, D, E, F#, G. Below the staff, the numbers 8 10 8 8 5 8 7 are written, along with a bracketed sequence 5-6 6-5 4-3. The second staff shows a bass clef and the notes G, F#, E, D, C, B, A, G. Below the staff, the numbers 8 10 8 8 5 8 7 are written, along with a bracketed sequence 5-6 6-5 4-3. The section concludes with a double bar line and a Roman numeral V.

Example 3.13 Haydn, String Quartet in F, Op. 50 No. 5, I, mm. 66-103 (development)

[Allegro moderato]

66 70

73 77

80

85

Example 3.13 Haydn, Op. 50 No. 5, I (continued)

87

90

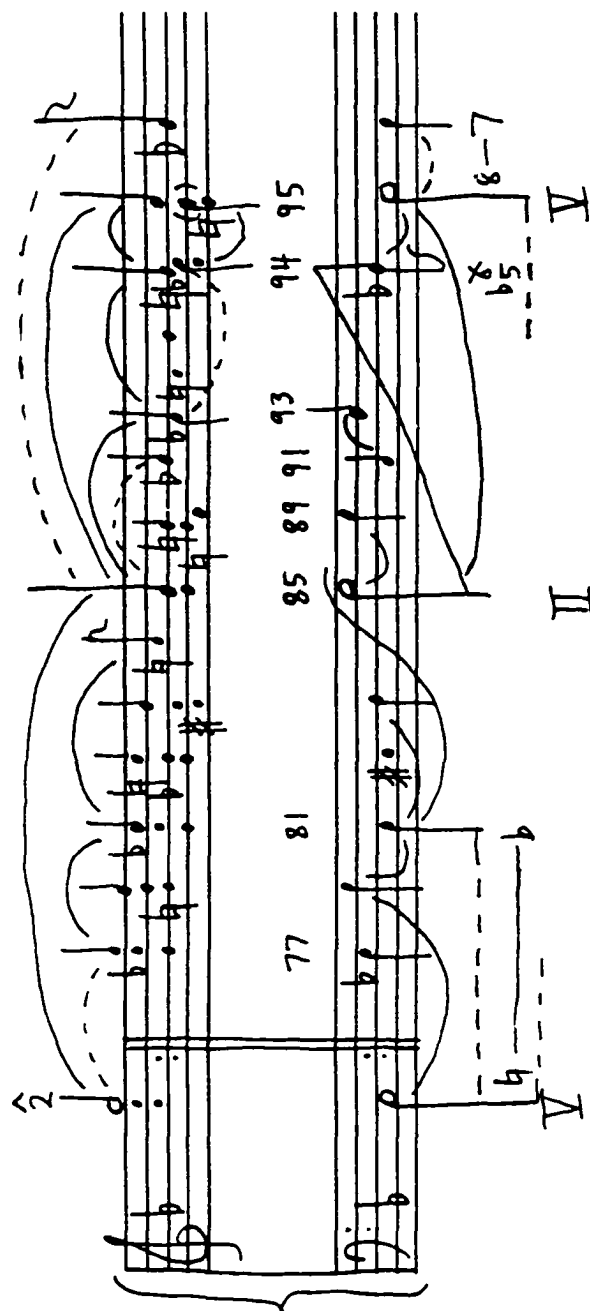
94

95

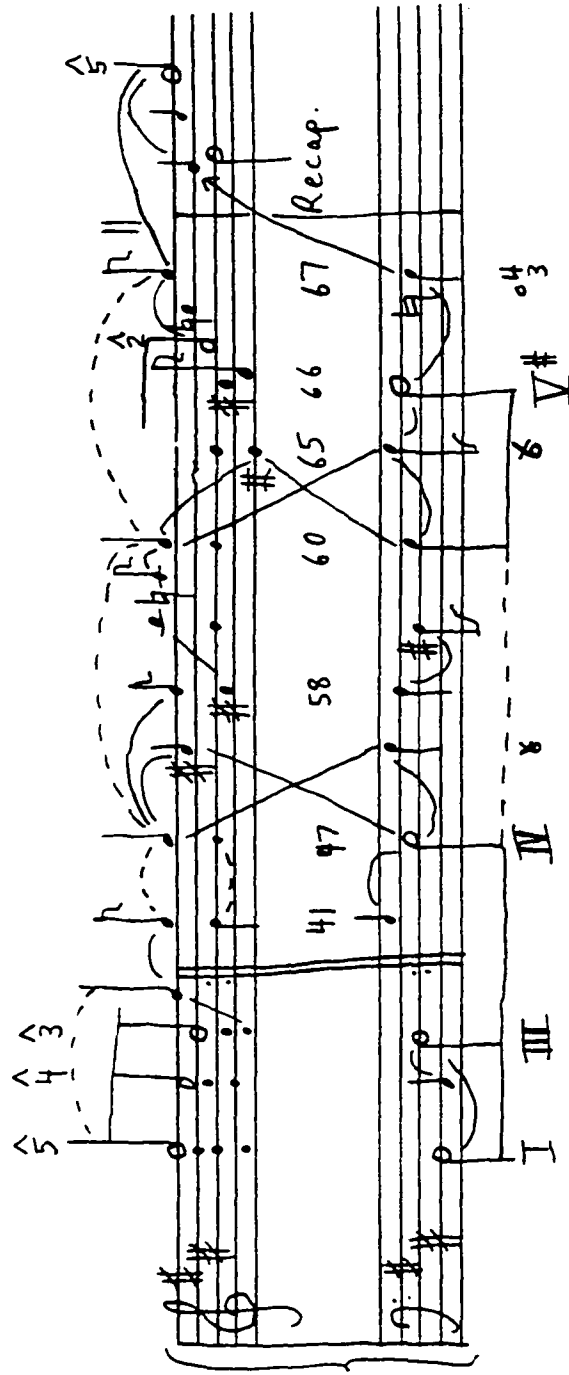
fp *cresc.*

100 *Recap.*

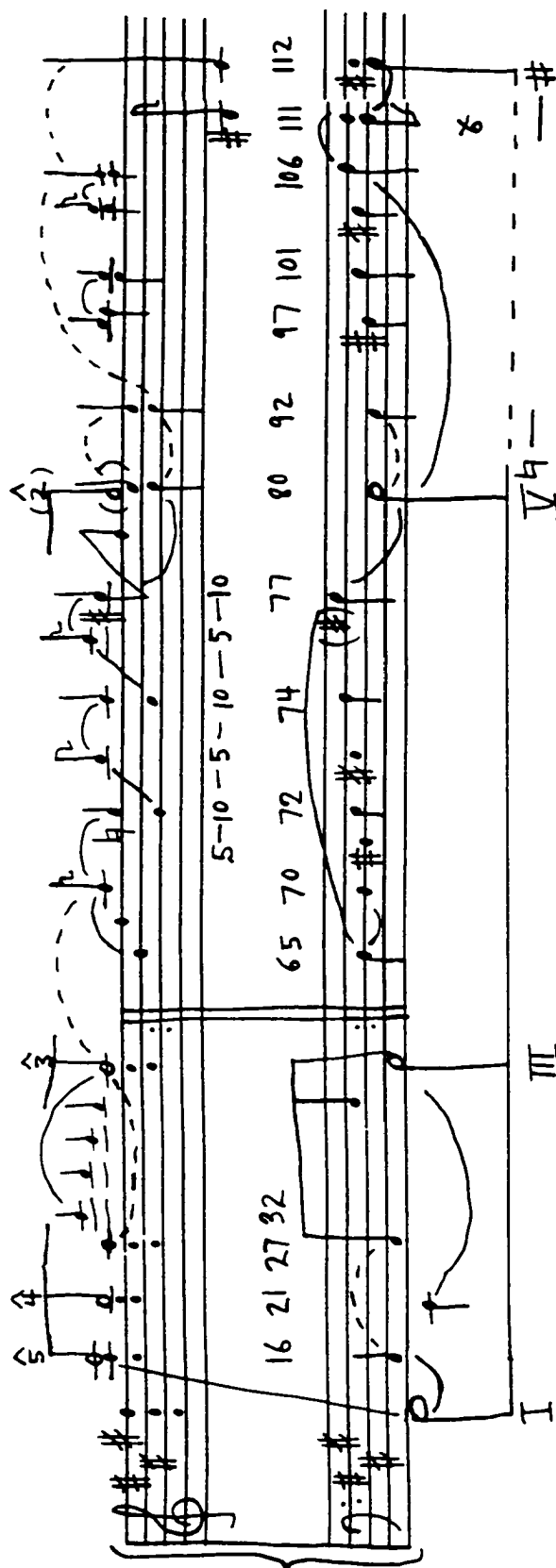
Example 3.14 Graph of Haydn, String Quartet in F, Op. 50 No. 5, I, development



Example 3.15 Graph of Haydn, String Quartet in B minor, Op. 64 No. 2, I, development



Example 3.16 Graph of Haydn, String Quartet in F# minor, Op. 50 No. 4, I, development



Example 3.17 Graph of Haydn, String Quartet in D, Op. 64 No. 5, I, development

a)

61 76 (top) 104
96 (bass)

b)

59 61 63 73 76 84/85 87 88 95 96 104

8 (V/III)

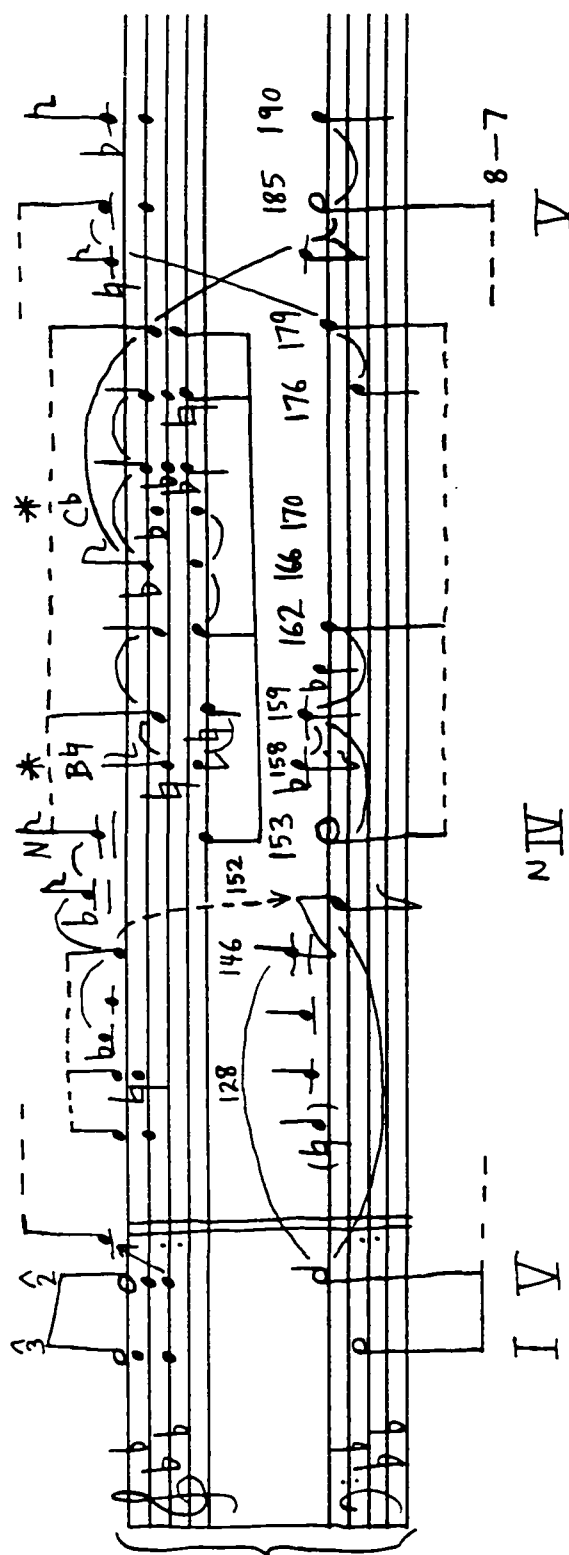
NVI

V

Example 3.19 Graph of Haydn, String Quartet in G minor, Op. 74 No. 3, I, development

The image shows a handwritten musical score for the development section of Haydn's String Quartet in G minor, Op. 74 No. 3, I. The score is written on two staves (treble and bass clef) and includes various musical notations such as notes, rests, and accidentals. It is divided into measures numbered 20 through 137. The score includes a key signature of one flat (F major/D minor) and a time signature of 3/4. The development section is marked with 'I' at the beginning and end, and 'Recap.' at the end. The score also includes a section marked 'III' and a section marked 'V#'. The score is written in a handwritten style with various annotations and markings.

Example 3.21 Graph of Haydn, Symphony No. 91 in E $\flat$, I, development



Example 3.22 Haydn, Symphony No. 93 in D, I, mm. 149-76

[Allegro assai] 152

161

F_b
(= E[#])
see m. 168 →

Example 3.22 Haydn, Symphony No. 93 in D, I, mm. 149-76, continued

Handwritten annotations in the score:

- 168 (above the woodwind staves)
- E# III# (below the string staves, circled)
- IV (V/V) V⁷ (below the string staves at the bottom)

From *Joseph Haydn. Critical Edition of the Complete Symphonies*, vol. 11, ed. H. C. Robbins Landon. Copyright 1965 by Haydn-Mozart Presse, Salzburg. Copyright renewed. All rights reserved. Used by permission of European American Music Distributors Corporation, sole U.S. and Canadian Agent for Haydn-Mozart Presse, Salzburg.

Example 3.23 Haydn, Symphony No. 101 in D, I, mm. 172-217

[Presto]



Example 3.23 Haydn, Symphony No. 101 in D, I, mm. 172-217, continued

184

The image displays a musical score for a symphony, specifically Example 3.23 from Haydn's Symphony No. 101 in D, I, mm. 172-217, continued. The score is written for a full orchestra, with multiple staves for each instrument. The notation includes various musical symbols such as notes, rests, and dynamic markings. Handwritten annotations are present: the number '184' is written above the first system of staves; the chord 'E# / F#4' is written below the bottom staff of the second system; and the Roman numeral 'VI' is written below the bottom staff of the third system. The score is presented in a clear, legible format, suitable for study or performance.

Example 3.23 Haydn, Symphony No. 101 in D, I, mm. 172-217, continued

The musical score is presented in two systems. The first system (measures 172-180) includes a 'Solo' section for the first violin. The second system (measures 181-190) includes a 'Tutti' section for the rest of the orchestra. The score is written for a full orchestra, including strings, woodwinds, and brass. The bottom system includes a large 'V' and 'V5' marking.

From *Joseph Haydn. Critical Edition of the Complete Symphonies*, vol. 12, ed. H. C. Robbins Landon. Copyright 1967 by Haydn-Mozart Presse, Salzburg. Copyright renewed. All rights reserved. Used by permission of European American Music Distributors Corporation, sole U.S. and Canadian Agent for Haydn-Mozart Presse, Salzburg.

Example 3.24 Haydn, Symphony No. 94 in G, I, mm. 131-41

[Vivace assai]

The musical score is presented in four systems. The first system (measures 131-136) shows the first violin part with a melodic line and the second violin part with a more rhythmic accompaniment. The second system (measures 137-142) continues the first violin part with a melodic line and the second violin part with a more rhythmic accompaniment. The third system (measures 143-148) shows the first violin part with a melodic line and the second violin part with a more rhythmic accompaniment. The fourth system (measures 149-154) shows the first violin part with a melodic line and the second violin part with a more rhythmic accompaniment. The tempo is marked 'Vivace assai'.

From *Joseph Haydn. Critical Edition of the Complete Symphonies*, vol. 11, ed. H. C. Robbins Landon. Copyright 1965 by Haydn-Mozart Presse, Salzburg. Copyright renewed. All rights reserved. Used by permission of European American Music Distributors Corporation, sole U.S. and Canadian Agent for Haydn-Mozart Presse, Salzburg.

Example 3.25 L. Poundie Burstein, graphs of Haydn, Symphony No. 94 in G, I,
development

c

108 125 131 148 155 158

see mm. 56-59

d

133 141

e

A - B (=A#) - B# A#

(F = E#)

From "The Non-Tonic Opening in Classical and Romantic Music," pp. 92-93.
Copyright 1988 by L. Poundie Burstein. Used by permission.

Example 3.26 Haydn, Piano Sonata in E $\flat$, Hob.XVI:49, I, mm. 120-31

[Allegro]

120

126

132

a suo piacere

From *Joseph Haydn Werke*, series XVIII, vol. 3. *Klaversonaten*, 3. Folge, ed. Georg Feder. Copyright 1966 by G. Henle Verlag, München-Duisburg. Used by permission.

Example 3.27 Haydn, String Quartet in E $\flat$, Op. 33 No. 2, I, mm. 59-66

[Allegro moderato, cantabile]

B 4 → B $\flat$ Recap.

Example 3.28 Haydn, Trio in E $\flat$, Hob.XV:30, I

(a) mm. 128-36

(b) graph of development

a) [Allegro moderato]

128 133 136

(p)

From *Joseph Haydn Werke*, series XVII, vol. 3. *Klaviertrios*, 3. Folge, ed. Irmgard Becker-Glauch. Copyright 1986 by G. Henle Verlag, München. Used by permission.

b)

96 103 105 111 121 122 129 135

$G\flat^*$ $F\sharp^*$

V (bVI) I $\flat$ bVII

II $^6-8$ III ^{4} V ^{3}

Example 3.29 Haydn, Piano Sonata in E $\flat$, Hob.XVI:52, I, mm. 72-9

[Allegro]

A $\sharp$ — B — A $\sharp$

Recap.

B $\flat$ — C $\flat$ — B $\flat$

From *Joseph Haydn Werke*, series XVIII, vol. 3. *Klaviersonaten*, 3. Folge, ed. Georg Feder. Copyright 1966 by G. Henle Verlag, München-Duisburg. Used by permission.

Example 3.30 Mozart, Sonata for Violin and Piano in E $\flat$, K. 302, I, mm. 95-107

[Allegro]

95

100

105

Recap.

vii° 5

vii° 6

vii° 7

III

I

Example 3.31 Mozart, Trio in E $\flat$, K. 498, I, mm. 65-76

[Andante]

65

71

Recap.

$Bb \rightarrow Bb (Cb \rightarrow Bb)$

Example 3.32 Mozart, Symphony No. 39 in E $\flat$, K. 543, I, mm. 179-86 (short score)

[Allegro] (B $\flat$) (cb) *tutti* *cl.* *fl.* *Recap.*

(179) (183) *etc.*

III $\flat$ (V $\sharp$ /II) (V $\sharp$ /V) V $\sharp$ I

Example 3.33 Mozart, Symphony No. 39 in E $\flat$, K. 543, IV, mm. 134-52 (reduction)

[Allegro] (B $\flat$) (cb) *Recap.*

(134) (138) (140) (144) (152)

III $\flat$ - $\flat$ V $\sharp$ - I

Example 3.34 Mozart, Symphony No. 40 in G minor, K. 550, II, mm 69-74 (short score)

Violin I: B^b C^b

Violin II: B^b C^b

Cello/Double Bass: B^b C^b

Tempo: *Andante*

Measure 69: B^b C^b

Measure 70: B^b C^b

Measure 71: B^b C^b

Measure 72: B^b C^b

Measure 73: B^b C^b

Measure 74: B^b C^b

Harmony: (V^7/II) (V^7/V) I

Accap.

Example 3.35 Haydn, Quartet in F, Op. 77 No. 2, I, mm. 91-119

[Allegro moderato]

95

p

[l'istesso tono]

98

100

Example 3.35 Haydn, Quartet in F, Op. 77 No. 2, I, mm. 91-119, continued

The musical score is presented in three systems, each with four staves (treble and bass clefs). The key signature is one flat (F major). The time signature is 3/4. The first system concludes with a V^5 chord. The second system begins at measure 110 and ends with a V^7 chord. The third system begins at measure 115, marked 'Recap.', and ends with a I chord. Dynamics include *f*, *pp*, and *p*. The notation includes various musical symbols such as notes, rests, and accidentals.

Example 3.36 Haydn, Symphony No. 102 in B $\flat$, II, mm. 32-45

[Adagio]

Handwritten musical score for Haydn's Symphony No. 102, II, mm. 32-45. The score is written on three systems of staves. The first system (mm. 32-35) shows a complex texture with many notes and rests. The second system (mm. 36-39) features a prominent melodic line in the upper voice, with a handwritten annotation "[the same tone]" above it. The third system (mm. 40-45) continues the melodic development. The score is marked with various dynamics and articulation marks.

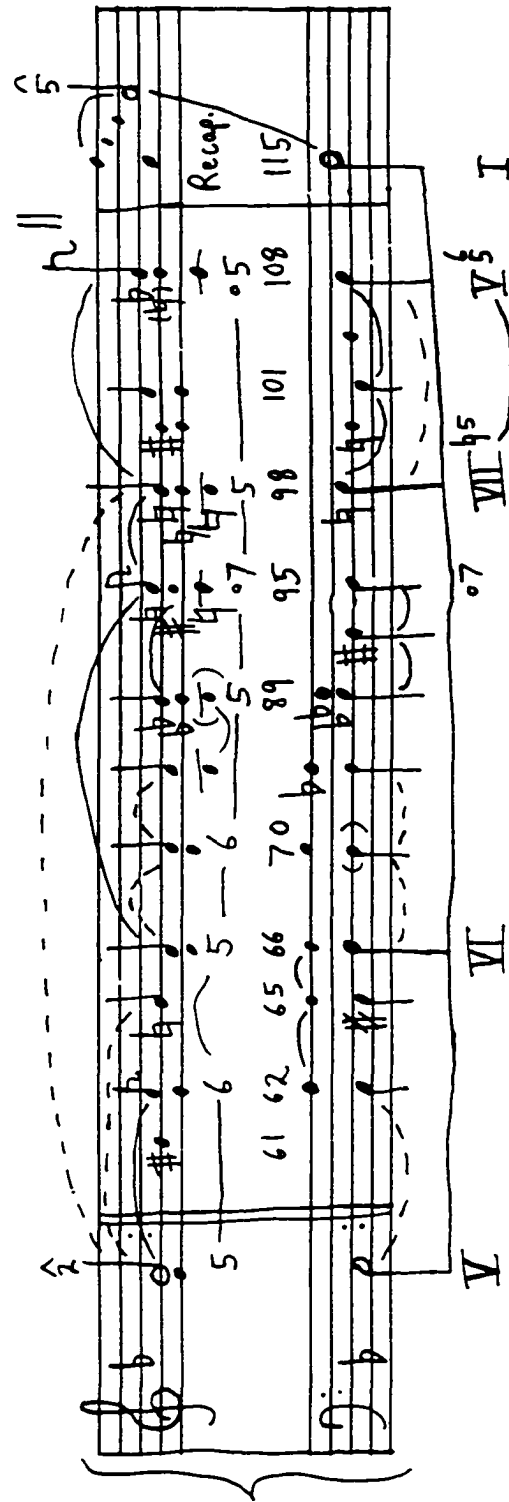
"Bach's '1001' - 45 'Solo'"

Example 3.36 Haydn, Symphony No. 102 in B $\flat$, II, mm. 32-45, continued

The musical score is presented in three systems, each with four staves. The first system (mm. 32-35) shows a transition from a previous section. The second system (mm. 36-39) features a more active melodic line in the first violin. The third system (mm. 40-45) is characterized by dense, rapid sixteenth-note passages in the first violin and first cello, with other instruments providing harmonic support. Dynamic markings such as *f* (forte) and *p* (piano) are used throughout to indicate volume changes.

From *Joseph Haydn. Critical Edition of the Complete Symphonies*, vol. 12, ed. H. C. Robbins Landon. Copyright 1967 by Haydn-Mozart Presse, Salzburg. Copyright renewed. All rights reserved. Used by permission of European American Music Distributors Corporation, sole U.S. and Canadian Agent for Haydn-Mozart Presse, Salzburg.

Example 3.37 Graph of Haydn, Quartet in F, Op. 77 No. 2, I, development



Example 4.1 Graphs of Haydn, Symphony No. 93 in D, I, mm. 1-21/39

a)

b)

Example 4.2 Graph of Haydn, Symphony No. 93 in D, I, exposition and development

The image displays a musical score for the first movement of Haydn's Symphony No. 93 in D major. The score is written for a string quartet (Violin I, Violin II, Viola, and Cello/Double Bass). The key signature is one sharp (F#), and the time signature is 3/4. The score is divided into two main sections: the Exposition (measures 1-107) and the Development (measures 110-179). The Exposition is further divided into five measures (I, II, III, IV, V) and the Development into five measures (I, II, III, IV, V). The graph overlay consists of a series of horizontal lines with dots and arrows, indicating the melodic and harmonic structure of the music. The graph is divided into two main sections: the Exposition (measures 1-107) and the Development (measures 110-179). The graph is further divided into five measures (I, II, III, IV, V) and the Development into five measures (I, II, III, IV, V). The graph is a series of horizontal lines with dots and arrows, indicating the melodic and harmonic structure of the music. The graph is divided into two main sections: the Exposition (measures 1-107) and the Development (measures 110-179). The graph is further divided into five measures (I, II, III, IV, V) and the Development into five measures (I, II, III, IV, V). The graph is a series of horizontal lines with dots and arrows, indicating the melodic and harmonic structure of the music.

Example 4.3 Graph of Haydn, Symphony No. 93 in D, I, mm. 21-107 (exposition)

3

21 28 29 33 36 39 47

I IV⁶ V I I II V I I V (divider)

6

(cons.) (cons.)

Example 4.3 Symphony No. 93, I, exposition continued

motion into inner voice

54 55 66 71 73 74

6-5 5-6 6-5

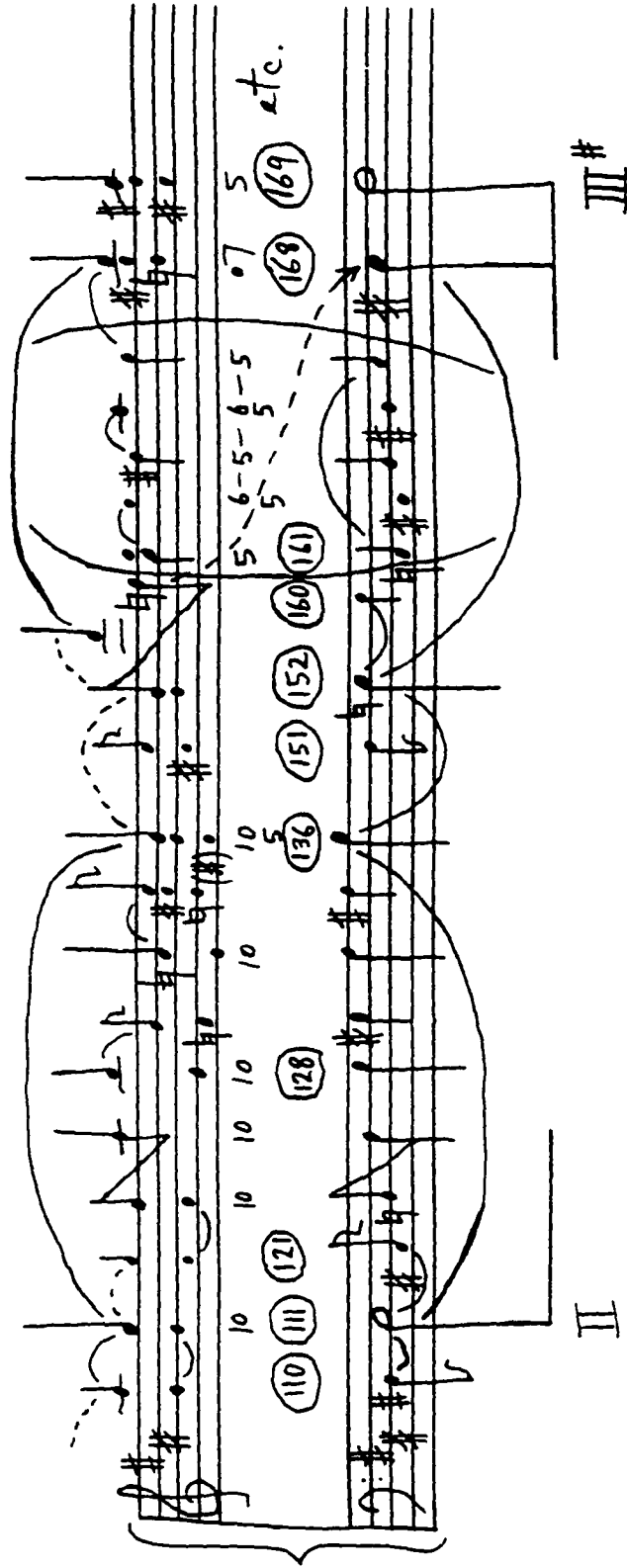
aux. cadence II# I V⁴-3 I

76 89 95 107 108 112

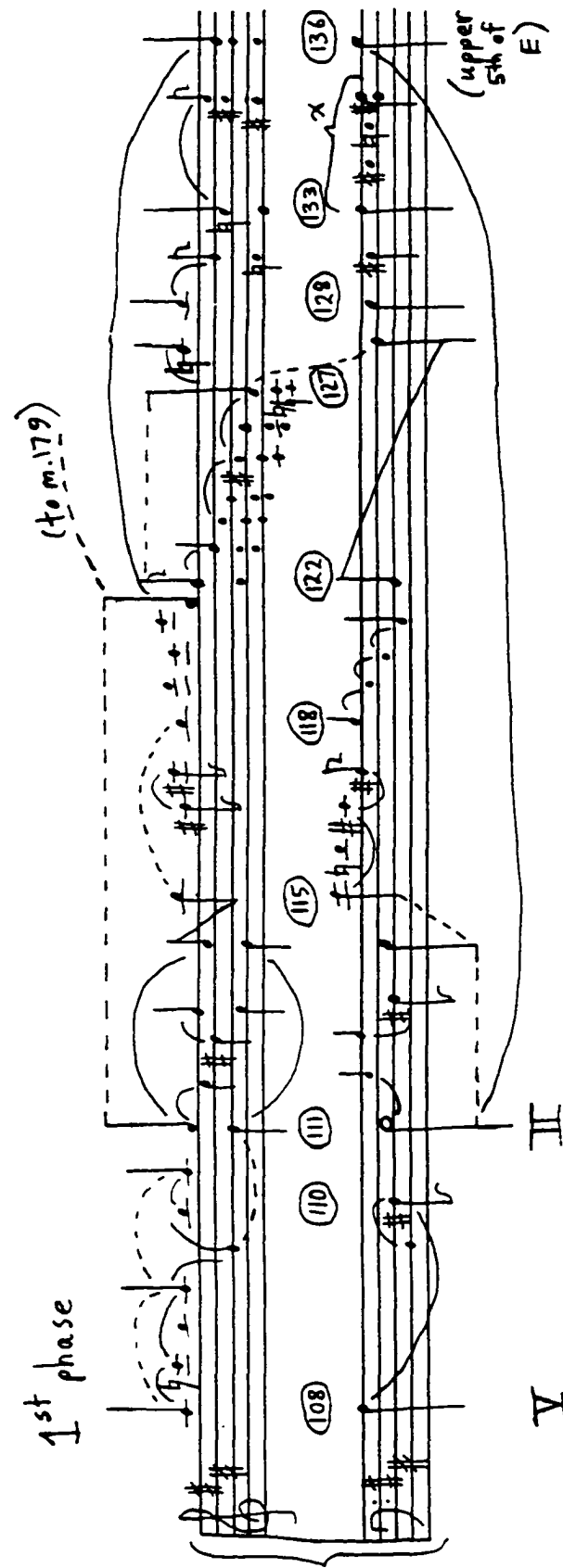
First ending

6-5 D: V

Example 4.4 Graph of Haydn, Symphony No. 93 in D, I, mm. 110-69



Example 4.5 Graph of Haydn, Symphony No. 93 in D, I, mm. 108-81 (detailed view)



Example 4.5 Graph of Haydn, Symphony No. 93 in D, I, mm. 108-81, continued

Handwritten musical score for a piece in D major, showing measures 136 to 181. The score is divided into three phases: 2nd phase (measures 136-147), 3rd phase (measures 148-168), and a section retained from measure 111 (measures 169-181). The notation includes treble and bass staves with various musical symbols, including notes, rests, and dynamic markings like 'unfolding' and 'strengthening'. The key signature changes from D major to B major in measure 168. The score is annotated with circled measure numbers and Roman numerals (III, IV, V) indicating harmonic structure.

Example 4.6 Haydn, Symphony No. 93 in D, I, mm. 109-12 and 178-81 compared

Exposition, first
ending
[Allegro assai]



End of development

178



From *Joseph Haydn. Critical Edition of the Complete Symphonies*, vol. 11, ed. H. C. Robbins Landon. Copyright 1965 by Haydn-Mozart Presse, Salzburg. Copyright renewed. All rights reserved. Used by permission of European American Music Distributors Corporation, sole U.S. and Canadian Agent for Haydn-Mozart Presse, Salzburg.

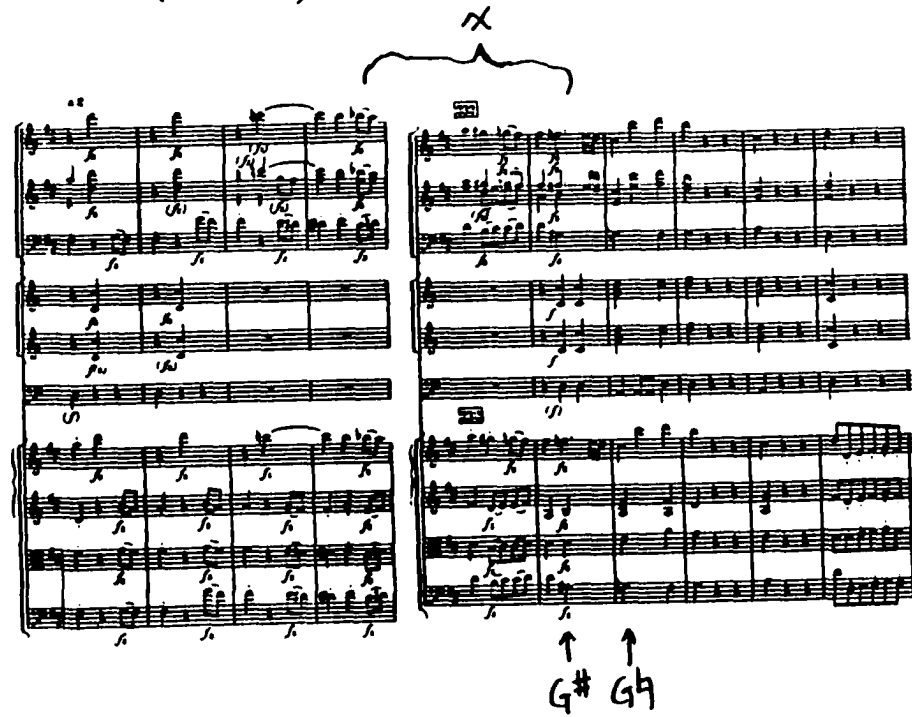
Example 4.8 Haydn, Symphony No. 93 in D, I, mm. 89-96 and 228-37 compared

(Exposition)

[Allegro assai]



(Recapitulation)



From *Joseph Haydn. Critical Edition of the Complete Symphonies*, vol. 11, ed. H. C. Robbins Landon. Copyright 1965 by Haydn-Mozart Presse, Salzburg. Copyright renewed. All rights reserved. Used by permission of European American Music Distributors Corporation, sole U.S. and Canadian Agent for Haydn-Mozart Presse, Salzburg.

Example 4.9 Graphs of Haydn, Symphony No. 100 in G, I, mm. 1-23
 (a) synoptic view
 (b) foreground

a)

Adagio

motion from inner voice

① ⑧ ⑩ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑱ ⑲ ⑳ ㉑ ㉒ ㉓

I (I^b) N IV⁶ — 8 V

Example 4.9 (continued)

b)

Adagio

① ⑤ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭

I V I I

⑭ ⑮ ⑯ ⑰ ⑱ ⑲ ~ 23

IV V

return from inner voice

Example 4.10 Graph of Haydn, Symphony No. 100 in G, I, Allegro (deep middleground)

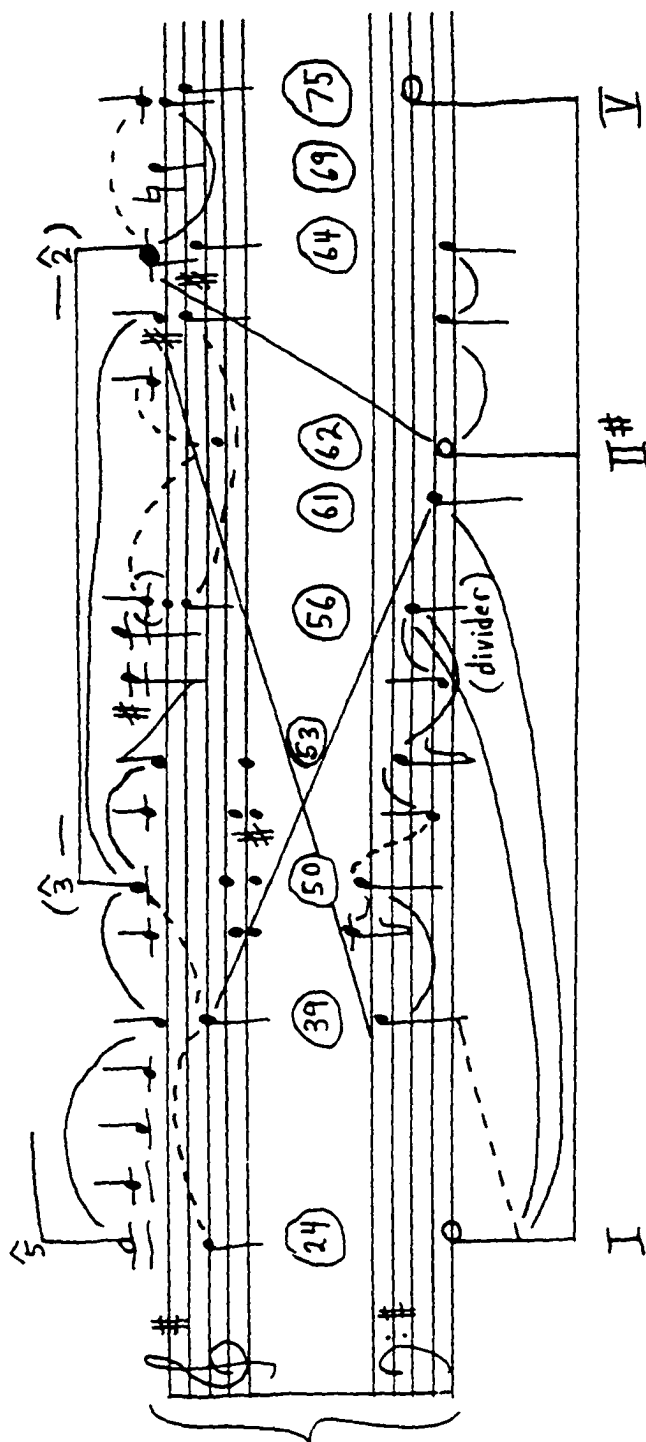
Allegro

Recap.

I II# V NVI V I V I I

(24) (50) (62) (75) (93) (108) (153) (170) (193) (195) (202) (209) (271) (273) (289)

Example 4.11 Graph of Haydn, Symphony No. 100 in G, I, mm. 24-124 (exposition)



Example 4.11 Graph of Symphony No. 100 in G, I (exposition continued)

The image displays two musical staves from a graph of the first movement of Beethoven's Symphony No. 100 in G major. The top staff covers measures 75 to 93, and the bottom staff covers measures 93 to 124. Both staves include melodic lines, figured bass, and chord symbols.

Top Staff (Measures 75-93):

- Measure 75: Chord symbol $D: I$.
- Measure 81: Chord symbol I_4 .
- Measure 87: Chord symbol IV^6 .
- Measure 93: Chord symbol $I^{\#}$.

Bottom Staff (Measures 93-124):

- Measure 93: Chord symbol $D: I$.
- Measure 102: Chord symbol $(divisor)$.
- Measure 103: Chord symbol IV .
- Measure 105: Chord symbol II^6 .
- Measure 108: Chord symbol V^7 .
- Measure 124: Chord symbol I .

Example 4.14 Graphs of Haydn, Symphony No. 102 in B $\flat$, I, mm. 1-23
(a) foreground

The image displays two staves of musical notation for Haydn's Symphony No. 102, I, mm. 1-23. The top staff is labeled 'a)' and 'Largo' with a circled 1. It features a 'descending 4th' annotation and a graph labeled '5-7-6-5' and '4-5-3'. The bottom staff is labeled 'Allegro vivace' with a circled 23. It includes an 'inner-voice descending 4th' annotation and a graph labeled '6-5-4-3'. Both staves have various musical notations, including notes, rests, and accidentals. The bottom staff also has a 'V' marking and a 'D $\flat$ ' marking. The overall layout is a complex musical score with multiple layers of notation and annotations.

Example 4.14 Graph of Symphony No. 102 in B $\flat$, I, mm. 1-23

(b) deep level

(c) intermediate level

Handwritten musical score for "Largo" in 3/4 time. The score is written on two staves. The first staff has a treble clef and a key signature of one flat (B-flat). The second staff has a bass clef and a key signature of one flat (B-flat). The tempo is marked "Largo". The score includes various musical notations such as notes, rests, and dynamic markings. There are handwritten annotations in German: "ex. 1er sch. 1er" and "N". The score is divided into measures numbered 2, 9, 10, 17, 18, 22, and 23. There are also handwritten markings "I" and "V" at the end of the staves.

Handwritten musical score for a piano piece, featuring two staves with various musical notations, including notes, rests, and dynamic markings like "Largo" and "Allegro vivace". The score is divided into sections marked with circled numbers 3, 9, 10, 17, 18, 22, and 23. The piece concludes with a final chord marked "I".

Example 4.15 Haydn, Symphony No. 102 in B $\flat$, I, mm. 2-5 and 23-6 compared

Largo
Stgs.

②

5-6-4-3-5-6-5-3-3-7-6-3-6-6-6-8-3-3-3-6-4-7-5-3

Allegro vivace ②③

②⑥

5-6-4-3-5-6-5-3-3-7-6-3-6-6-6-8-3-3-3-6-4-7-5-3

Example 4.16 (b) Graph of Haydn, Symphony No. 102 in B $\flat$, I, mm. 56-105 (conclusion of exposition)

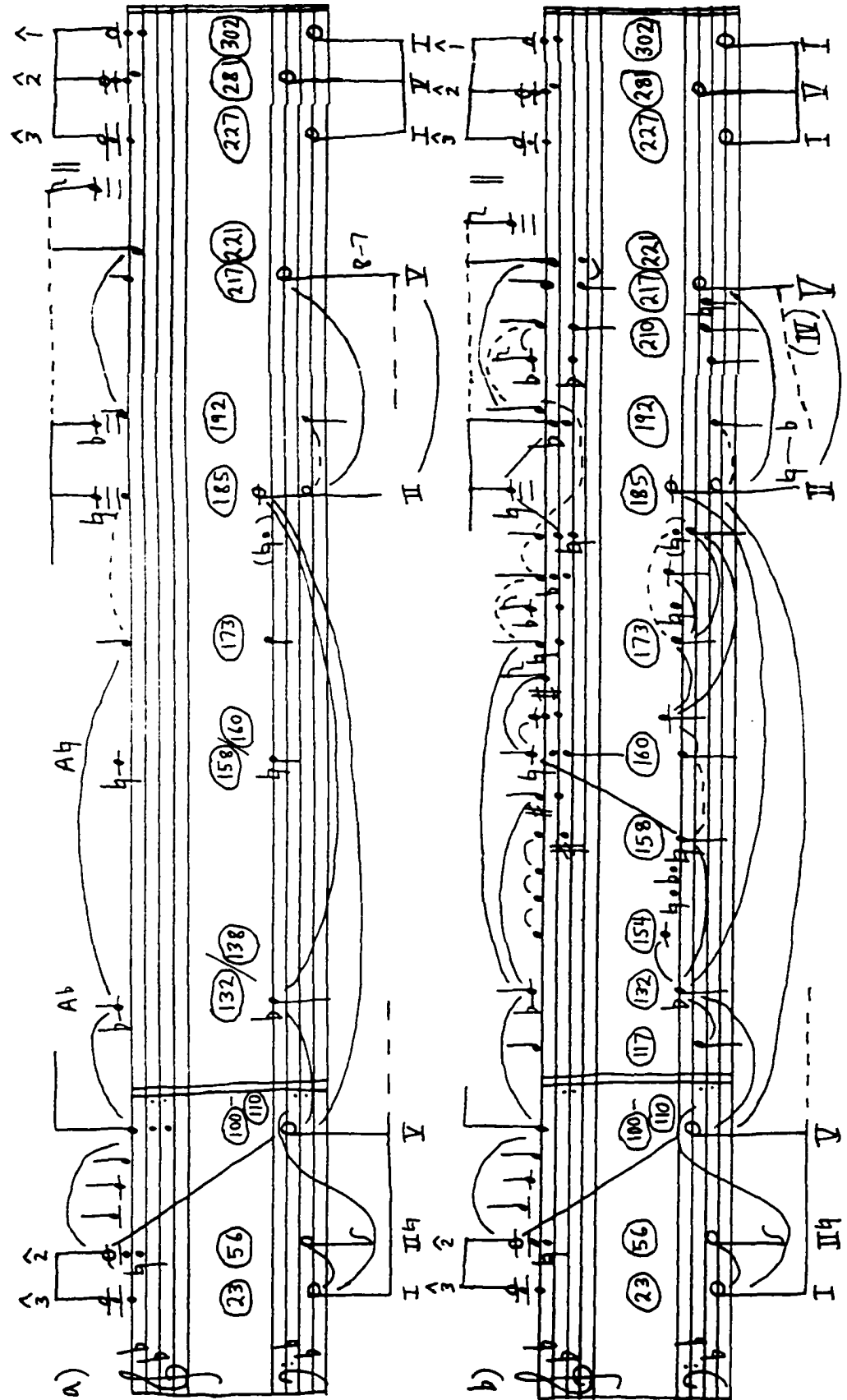
The musical score is written for a piano introduction and a first theme. The key signature is B $\flat$ major, and the time signature is 3/4. The score is divided into measures 56 through 110. The first theme is marked with a piano introduction and a first theme. The second theme is marked with a second theme. The development section is marked with a development. The score is annotated with various musical notations, including accidentals, dynamics, and performance instructions.

Key annotations and markings include:

- Measure 56:** *motion indiv.* (motion indivisible)
- Measure 63:** *rising* (rising)
- Measure 65:** *rising* (rising)
- Measure 68:** *rising* (rising)
- Measure 71:** *rising* (rising)
- Measure 72:** *rising* (rising)
- Measure 80:** *rising* (rising)
- Measure 87:** *action from first* (action from first)
- Measure 92:** *action from first* (action from first)
- Measure 93:** *action from first* (action from first)
- Measure 97:** *action from first* (action from first)
- Measure 100:** *action from first* (action from first)
- Measure 105:** *action from first* (action from first)
- Measure 110:** *action from first* (action from first)

The score is divided into measures 56 through 110. The first theme is marked with a piano introduction and a first theme. The second theme is marked with a second theme. The development section is marked with a development. The score is annotated with various musical notations, including accidentals, dynamics, and performance instructions.

Example 4.17 Graphs of Haydn, Symphony No. 102 in B $\flat$, I, development within overall structure: (a) synoptic view; (b) a later level



Example 4.18 Graphs of Haydn, Symphony No. 102 in B $\flat$, I, development (in detail)

Phase 1: mm. 110-60

Phase 2: mm. 160-192

Phase 1 g^2 to b^1/a^2 in 138-42

unfolding

unfolding

Phase 2

V

(110) (117) (120) (124) (132) (138) (142) (146) (150) (154) (158) (160)

(upper 3rd of A $\flat$)

(160) (173) (180) (185) (189) (192)

II $\flat$

Example 4.19 Graphs of Haydn, Symphony No. 102 in B $\flat$, I, development

(a) mm. 192-226 (registrally simplified)

(b) mm. 192-226 (showing actual registers)

a)

b)

Example 5.1 Haydn, Symphony No. 103 in E $\flat$, I, mm. 23–40

[Adagio]

The first system of the musical score, measures 23-40, is marked [Adagio]. It consists of three systems of staves. The first system has four staves (two for strings and two for woodwinds). The second system has four staves (two for strings and two for woodwinds). The third system has four staves (two for strings and two for woodwinds). The music is in E-flat major and 3/4 time. The tempo is Adagio.

Allegro con spirito

The second system of the musical score, measures 41-50, is marked Allegro con spirito. It consists of three systems of staves. The first system has four staves (two for strings and two for woodwinds). The second system has four staves (two for strings and two for woodwinds). The third system has four staves (two for strings and two for woodwinds). The music is in E-flat major and 3/4 time. The tempo is Allegro con spirito.

III $\frac{1}{2}$

From *Joseph Haydn Werke*, series I, vol. 18. *Londoner Sinfonien*, 4. Folge, ed. Hubert Unverricht. Copyright 1963 by G. Henle Verlag, München-Duisburg. Used by permission.

Example 5.2 Haydn. Symphony No. 103 in E $\flat$, I, mm. 108-116

[Allegro con spirito]

Y/V

"I"

From *Joseph Haydn Werke*, series I, vol. 18. *Londoner Sinfonien*, 4. Folge, ed. Hubert Unverricht. Copyright 1963 by G. Henle Verlag. München-Duisburg. Used by permission.

Example 5.3 Haydn, Symphony No. 103 in E $\flat$, IV, mm. 259-64

(Recap.)

259

III⁴ ————— (I⁶)

From *Joseph Haydn Werke*, series I, vol. 18. *Londoner Sinfonien*, 4. Folge, ed. Hubert Unverricht. Copyright 1963 by G. Henle Verlag, München-Duisburg. Used by permission.

Example 5.4 Haydn, Symphony No. 103 in E $\flat$, I, mm. 1-13

Adagio

Flauti

2 Oboi

2 Clarinetti (in B)

Fagotti

(1^{mo}) Solo

p e sostenuto

2 Corni in E $\flat$

2 Clarini in E $\flat$

Intrada

Timpani in E $\flat$ -B

Solo

Violino I

Violino II

Viola

Violoncelli

p e sostenuto

Contrabbassi

p e sostenuto

Db

From *Joseph Haydn Werke*, series I, vol. 18. *Londoner Sinfonien*, 4. Folge, ed. Hubert Unverricht. Copyright 1963 by G. Henle Verlag, München-Duisburg. Used by permission.

Example 5.5 Haydn, Symphony No. 103 in E $\flat$, I, mm. 40-48

Allegro con spirito

The musical score is arranged in two systems of staves. The first system includes staves for woodwinds (flute, oboe, clarinet, bassoon), strings (violin I, violin II, viola, cello, double bass), and keyboard. The second system continues the same instrumentation. The tempo is marked 'Allegro con spirito'. The key signature is E-flat major. The score shows measures 40 through 48, with a repeat sign at the beginning of measure 40. The woodwinds and strings play a rhythmic pattern of eighth and sixteenth notes. The keyboard part features a prominent melodic line with trills and ornaments.

From *Joseph Haydn Werke*, series I, vol. 18. *Londoner Sinfonien*, 4. Folge, ed. Hubert Unverricht. Copyright 1963 by G. Henle Verlag, München-Duisburg. Used by permission.

Example 5.6 Haydn, Symphony No. 103 in E $\flat$, IV, mm. 1-16

Finale
Allegro con spirito

Flauto

2 Oboi

2 Clarinetti (in B)

Fagotto

2 Corni (in E $\flat$)

2 Clarini (in E $\flat$)

Timpani (in E $\flat$ -B)

Violino I

Violino II

Viola

Violoncelli

Bassi

Soli

[p]

From *Joseph Haydn Werke*, series I, vol. 18. *Londoner Sinfonien*, 4. Folge, ed. Hubert Unverricht. Copyright 1963 by G. Henle Verlag, München-Duisburg. Used by permission.

Example 5.7 Haydn, Symphony No. 103 in E $\flat$, I, mm. 191-201

[Allegro con spirito]

From *Joseph Haydn Werke*, series I, vol. 18. *Londoner Sinfonien*, 4. Folge, ed. Hubert Unverricht. Copyright 1963 by G. Henle Verlag, München-Duisburg. Used by permission.

Example 5.8 Haydn, Symphony No. 103 in E $\flat$, III, Menuet and Trio (mm. 57-62)

Menuet

The musical score is arranged in two systems. The first system includes parts for Flauti, 2 Oboes, 2 Clarinets (in B), Fagotti, 2 Corni (in E $\flat$), 2 Clarini (in E $\flat$), Timpani (in E $\flat$ -B), Violino I, Violino II, Viola, Violoncello, and Bassi. The second system continues the orchestration. The Trio section begins at measure 63. Handwritten annotations include a large 'C' with a 'b' next to it, and several circles highlighting specific musical phrases in the woodwind and string parts.

Example 5.8 Haydn, Symphony No. 103 in E $\flat$, III (continued)

The musical score is presented in two systems. Each system contains five staves: four for the string quartet (Violin I, Violin II, Viola, and Cello/Double Bass) and one for the piano. The key signature is E $\flat$ major, indicated by three flats (B $\flat$, E $\flat$, A $\flat$). The first system shows the continuation of the musical piece, with various notes and rests across the staves. Handwritten annotations include 'cb' (cello/bass) written vertically on the left and right sides of the first system. The second system continues the piece, with similar notation and handwritten 'cb' annotations below the piano staff. Circled notes and slurs are used throughout the score to highlight specific musical elements or performance instructions. The piano part includes dynamic markings such as 'f' (forte) and 'p' (piano).

Example 5.8 Haydn, Symphony No. 103 in E $\flat$, III (continued)

48

Trio (mm. 57-62)

(B section)

From *Joseph Haydn Werke*, series I, vol. 18. *Londoner Sinfonien*, 4. Folge, ed. Hubert Unverricht. Copyright 1963 by G. Henle Verlag, München-Duisburg. Used by permission.

Example 5.9 Haydn, Symphony No. 103 in E $\flat$, IV, mm. 348-63

[Allegro con spirito]

COBA

Handwritten annotations in the first system include a circled Cb in the oboe part and a circled p in the bassoon part.

Handwritten annotations in the second system include a circled Bb in the oboe part and a circled Cb in the bassoon part.

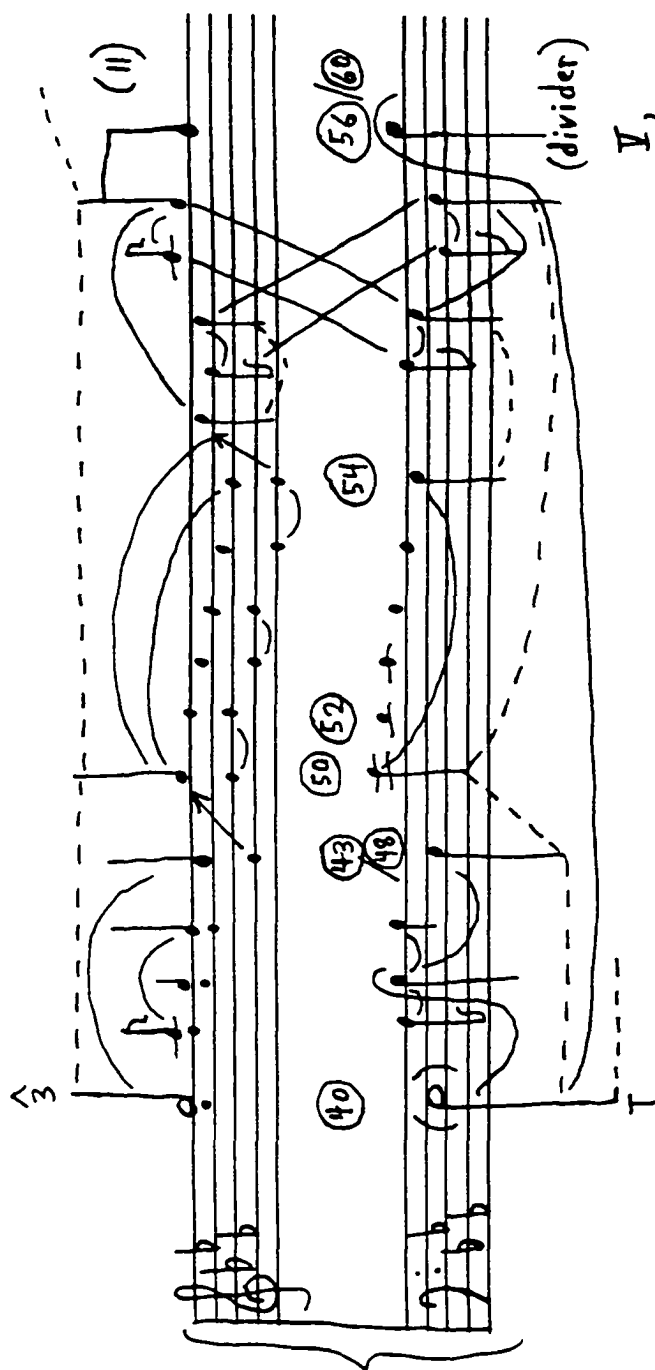
From *Joseph Haydn Werke*, series I, vol. 18. *Londoner Sinfonien*, 4. Folge, ed. Hubert Unverricht. Copyright 1963 by G. Henle Verlag, München-Duisburg. Used by permission.

Example 5.10 (continued)

Handwritten musical score for Example 5.10 (continued). The score is written on two staves, likely for piano and violin/viola. It includes various musical notations such as notes, rests, and fingerings. Key annotations include:

- (initial ascent)**: Annotated with an arrow pointing to a passage starting around measure 25.
- (3rd anticipated)**: Annotated with an arrow pointing to a passage starting around measure 30.
- Measure numbers**: 25, 30, 35, and 40 are circled.
- Tempo**: *Allegro* and *spinto* are indicated.
- Roman numerals**: I, II, III, and IV are used to denote different sections or techniques.
- Bracket**: A bracket labeled "8-7-8" is present near the bottom of the score.

Example 5.11 Graph of Haydn, Symphony No. 103, I, mm. 40-60



Example 5.12 Graphs of Haydn, Symphony No. 103, I, transition

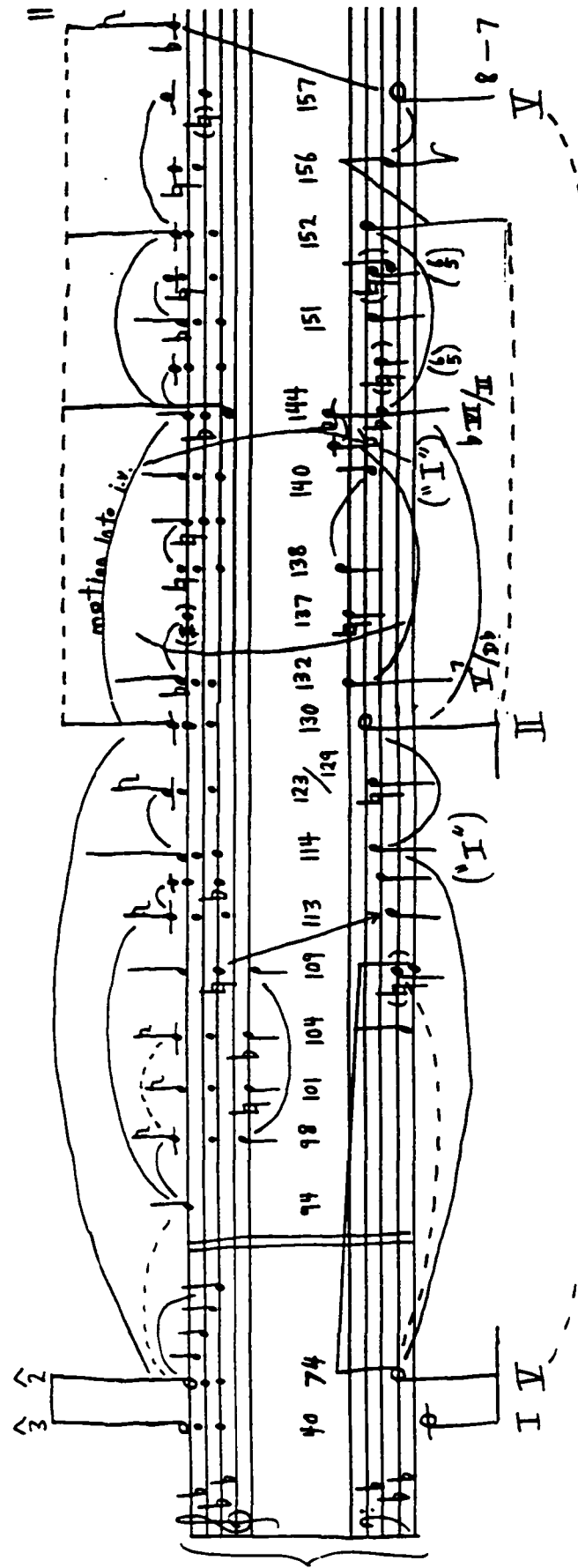
(a) mm. 40-75, middleground

(b) mm. 56-90, foreground

Example 5.12 (b) mm. 56-90, foreground (continued)

Musical score for Example 5.12 (b) mm. 56-90, foreground (continued). The score is written on two staves, Treble and Bass clef, with a key signature of two flats (B-flat and E-flat). The music is in 4/4 time. The score is divided into measures 56 through 90. Measures 56-58 are grouped by a dashed line and labeled (2). Measures 59-61 are grouped by a dashed line and labeled 74, 77, 79. Measures 62-64 are grouped by a dashed line and labeled 80, 81, 83. Measures 65-67 are grouped by a dashed line and labeled 84, 86, 88. Measures 68-70 are grouped by a dashed line and labeled 89, 90. A 'divider' is indicated between measures 71 and 72. The score ends with a double bar line and a repeat sign.

Example 5.13 Graph of Haydn, Symphony No. 103, I, development (middleground)



Example 5.14 Graph of Haydn, Symphony No. 103, I, development (foreground)

The image displays a musical score for the development section of Haydn's Symphony No. 103, I. The score is divided into three phases, each with specific annotations and measure numbers.

PHASE 1 (Measures 74-94): This phase is marked with a bracket and the annotation "PHASE 1". A note above the staff indicates "f² reaches over to ab² in m. 112" with an arrow pointing to measure 112. A bracket labeled "(nested reaching-over)" spans measures 74 to 94. The staff shows a melodic line with various intervals and a bass line with a chord labeled "I V".

PHASE 2 (Measures 98-105): This phase is marked with a bracket and the annotation "PHASE 2". A note above the staff indicates "f² (to g² in m. 111)" with an arrow pointing to measure 111. The staff shows a melodic line with various intervals and a bass line with a chord labeled "I V".

PHASE 3 (Measures 105-114): This phase is marked with a bracket and the annotation "PHASE 3". A note above the staff indicates "Adagio in diminution" with an arrow pointing to measure 112. The staff shows a melodic line with various intervals and a bass line with a chord labeled "(V/XI)".

The score includes various musical notations such as notes, rests, and chords, as well as measure numbers in circles (74, 94, 98, 101, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114).

Example 5.14 (continued)

(PHASE 3 cont'd.)

g^2 retained in m. 128 ---

(114) (117) (120) (121) (122) (123) (124) (126)

(g retained in 128)

(I'')

IV/II

PHASE 4

g^2 resolves to F in 144

PHASE 5

(126) (128) (130) (132) (138) (140) (141) (145)

5-7 5-7 5-7 5-7

II (retained m. 152)

(bVI/II)

Example 5.14 (continued)

(PHASE 5 cont'd.)

PHASE 6

(146) (148) (150) (152) (153) (157)

(bVII/II)

(divider)

II (retained)

V

Example 5.15 Graph of Haydn, Symphony No. 103, I, recapitulation

The image displays a musical score for the recapitulation of Haydn's Symphony No. 103, I. The score is divided into two systems. The first system (measures 159-180) shows a treble and bass staff with various annotations including '3 (goes to 2 in m. 213)', 'aux. cad.', and Roman numerals I, V, and I. The second system (measures 180-200) continues the melody with annotations like 'unfolding', 'divider', and Roman numerals I, V, I, IV, and I. The score includes measure numbers in circles and a brace indicating a section from measure 159 to 180.

Example 5.15 (continued)

Handwritten musical score for Example 5.15 (continued), measures 203-214. The score is written on a grand staff (treble and bass clefs). The tempo is marked "Adagio". Measure 203 starts with a treble clef and a key signature of two flats (B-flat and E-flat). The melody in the treble clef begins with a half note B-flat, followed by a quarter note A, and then a half note G. The bass clef has a whole note F. A slur labeled "rising 4th" covers measures 203 and 204. Measure 204 has a treble clef with a half note F and a bass clef with a whole note E. Measure 205 has a treble clef with a half note E and a bass clef with a whole note D. A slur labeled "descending 5th" covers measures 205 and 206. Measure 206 has a treble clef with a half note D and a bass clef with a whole note C. Measure 207 has a treble clef with a half note C and a bass clef with a whole note B. Measure 208 has a treble clef with a half note B and a bass clef with a whole note A. Measure 209 has a treble clef with a half note A and a bass clef with a whole note G. Measure 210 has a treble clef with a half note G and a bass clef with a whole note F. Measure 211 has a treble clef with a half note F and a bass clef with a whole note E. Measure 212 has a treble clef with a half note E and a bass clef with a whole note D. Measure 213 has a treble clef with a half note D and a bass clef with a whole note C. Measure 214 has a treble clef with a half note C and a bass clef with a whole note B. The score ends with a double bar line. Roman numerals are written below the staff: I, IV, II, V, I.

Handwritten musical score for Example 5.15 (continued), measures 214-229. The score is written on a grand staff (treble and bass clefs). The tempo is marked "Adagio". Measure 214 has a treble clef with a half note B-flat and a bass clef with a whole note F. Measure 215 has a treble clef with a half note A and a bass clef with a whole note E. Measure 216 has a treble clef with a half note G and a bass clef with a whole note D. Measure 217 has a treble clef with a half note F and a bass clef with a whole note C. Measure 218 has a treble clef with a half note E and a bass clef with a whole note B. Measure 219 has a treble clef with a half note D and a bass clef with a whole note A. Measure 220 has a treble clef with a half note C and a bass clef with a whole note G. Measure 221 has a treble clef with a half note B and a bass clef with a whole note F. Measure 222 has a treble clef with a half note A and a bass clef with a whole note E. Measure 223 has a treble clef with a half note G and a bass clef with a whole note D. Measure 224 has a treble clef with a half note F and a bass clef with a whole note C. Measure 225 has a treble clef with a half note E and a bass clef with a whole note B. Measure 226 has a treble clef with a half note D and a bass clef with a whole note A. Measure 227 has a treble clef with a half note C and a bass clef with a whole note G. Measure 228 has a treble clef with a half note B and a bass clef with a whole note F. Measure 229 has a treble clef with a half note A and a bass clef with a whole note E. The score ends with a double bar line. Roman numerals are written below the staff: I, V, I.

Example 5.18 (continued)

A¹ (cont'd)

Handwritten musical score for A¹ (cont'd). The score is written on two staves, Treble and Bass. It includes various musical notations such as notes, rests, and accidentals. There are several annotations and markings: a bracket labeled "from 1st" at the top left, a bracket labeled "3" at the top right, a bracket labeled "3 (retained)" at the bottom left, and a bracket labeled "3" at the bottom right. The score is divided into measures by vertical lines, with measure numbers 18, 28, 35, 45, and 53 indicated. The key signature has two flats (B-flat and E-flat). The time signature is not explicitly shown but appears to be 4/4 based on the note values.

Example 5.18 (continued)

(transition)

B^1

— $\hat{2}$ —

motion into 4th

(73) (76) (79) (82) (89) (91)

I II⁴ V⁷ I

5th prog.

motion into 4th

rising 4th

(97) (101) (107) (113) (117) (121) (126) (127) (132) (133)

beginning of 4th cadence

B^b : I II V⁶⁻⁵ IV V

6⁵ 4³

6⁵ 4³

Example 5.18 (continued)

A²

C

Example 5.18 (continued)

The image displays a handwritten musical score for Example 5.18 (continued), consisting of two systems of music. The notation is in a single staff with a key signature of two flats (B-flat and E-flat) and a common time signature (C). The score includes various musical notations such as notes, rests, and accidentals, along with handwritten annotations and measure numbers.

System 1 (Measures 190-214):

- Measure 190: A large bracket spans from measure 190 to measure 214, labeled "folding" with a dashed line.
- Measure 197: A measure rest is indicated by a large "7" with a "1" above it.
- Measure 208: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 214: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 215: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 216: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 217: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 218: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 219: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 220: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 221: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 222: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 223: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 224: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 225: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 226: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 227: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 228: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 229: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 230: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 231: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 232: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 233: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 234: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 235: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 236: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 237: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 238: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 239: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 240: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 241: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 242: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 243: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 244: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 245: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 246: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 247: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 248: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 249: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 250: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 251: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 252: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 253: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 254: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 255: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 256: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 257: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 258: A measure rest is indicated by a large "8" with a "1" above it.

System 2 (Measures 208-247):

- Measure 208: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 209: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 210: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 211: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 212: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 213: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 214: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 215: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 216: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 217: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 218: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 219: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 220: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 221: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 222: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 223: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 224: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 225: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 226: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 227: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 228: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 229: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 230: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 231: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 232: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 233: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 234: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 235: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 236: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 237: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 238: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 239: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 240: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 241: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 242: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 243: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 244: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 245: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 246: A measure rest is indicated by a large "8" with a "1" above it.
- Measure 247: A measure rest is indicated by a large "8" with a "1" above it.

Additional annotations include:

- "folding" (dashed line) and "unfolding" (solid line) markings.
- "(F to F# in 258)" at the end of the first system.
- "(bass A^b retained in 255)" and "(no return to II here.)" at the end of the second system.
- Measure numbers 190, 197, 208, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258.

Example 5.18 (continued)

(end of C section)

A^3

from F (214-247)

(247) (251) (255) (258) (259) (264) (267) (271)

Recap. (264)

($\hat{3}$)

($\hat{p}$ retained from 214)

II III $\hat{h}$ (I)

B^2

(267) (273) (274) (276) (285) (286) (287) (295) (300)

I $\hat{6}$

IV II V, I

Example 5.18 (continued)

Handwritten musical score for Example 5.18 (continued). The score is written on two staves (treble and bass clef) and includes various musical notations and annotations.

Annotations:

- CODA**: Located above the first staff, indicating the end of the piece.
- aux. cadence**: Located below the first staff, indicating an auxiliary cadence.
- Chords**: $B^b - C^b$ and $G^b / F^{\sharp} - G^b$ are written above the first staff.
- Measure Numbers**: Circled numbers 342, 349, 350, 351, 360, 365, 368, and 386 are placed below the staves.
- Figured Bass**: Roman numerals I , IV , and V are written below the staves, along with a figured bass notation $6-5$.

The score features complex melodic lines with many accidentals (sharps, flats, naturals) and a variety of note values (quarter, eighth, sixteenth notes, rests). A large bracket is drawn under the first staff, and a dashed line is drawn under the second staff.

Example 5.19 Haydn, Symphony No. 103, I, mm. 69-74

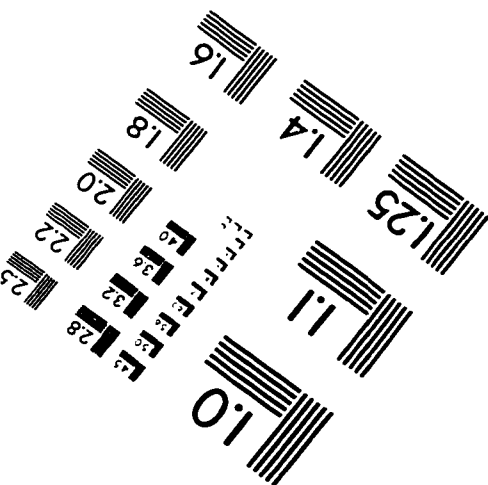
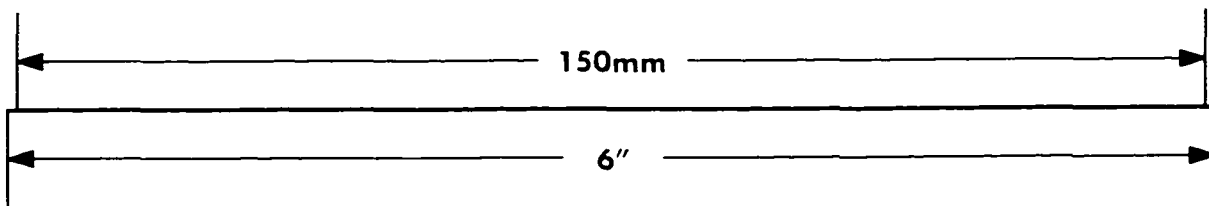
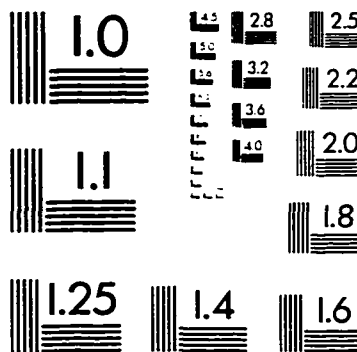
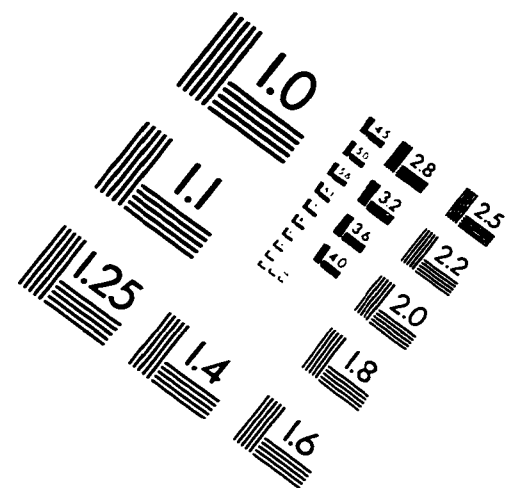
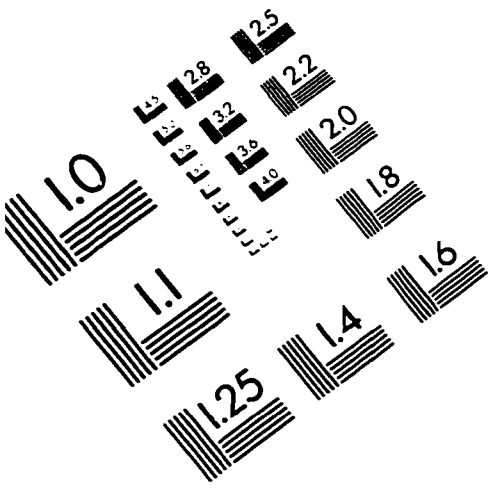
[Allegro con spirito]

Handwritten annotation: $D^b (= C^\sharp)$

Handwritten annotation: $D^b (= C^\sharp)$

From *Joseph Haydn Werke*, series I, vol. 18. *Londoner Sinfonien*, 4. Folge, ed. Hubert Unverricht. Copyright 1963 by G. Henle Verlag, München-Duisburg. Used by permission.

IMAGE EVALUATION TEST TARGET (QA-3)



APPLIED IMAGE, Inc.
1653 East Main Street
Rochester, NY 14609 USA
Phone: 716/482-0300
Fax: 716/288-5989

© 1993, Applied Image, Inc., All Rights Reserved

