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VOICE-LEADING PATTERNS IN THE FUGAL EXPOSITIONS OF J. S. BACH'S
"WELL-TEMPERED CLAVIER"

City University of New York

PH.D. 1987

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VOICE-LEADING PATTERNS IN THE FUGAL EXPOSITIONS OF
J. S. BACH'S WELL-TEMPERED CLAVIER

by

William Jonathan Michael Renwick

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.

1987

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

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Abstract

VOICE-LEADING PATTERNS IN THE FUGAL EXPOSITIONS OF J. S. BACH'S WELL-TEMPERED CLAVIER

by

William Jonathan Michael Renwick

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Although Heinrich Schenker's theory of tonal music goes very far towards uniting the traditionally independent domains of counterpoint and harmony, it does not deal directly or deeply with the connective role which imitative texture often plays in this synthesis. The obligations inherent in a canonic or fugal texture may limit compositional choices, but they also provide an underpinning of control and direction to voice leading. This dissertation demonstrates the structural role of imitation in tonal music by comparative analysis of a selected body of imitative music: the fugues of J. S. Bach's Well-Tempered Clavier.

A consistent and close interrelationship exists between voice leading and imitation in the fugues of the WTC--a relationship in which the type of imitative material adopted for a subject, the underlying linear motion, affects the basic format and the voice-leading details of fugal exposition in specific ways. Principles of voice-leading funda-

mental to tonality control the types of subjects used by Bach and the ways in which they are employed. The 43 non-modulating subjects in the WTC represent six structural types, and 36 of the subjects fall into three primary structural paradigms.

By systematically exploring the various subject types in the WTC and comparing the various exposition patterns which recur through consistent use of similar subject types, common structural features are shown to be related directly to imitative constraints, while unusual features are shown to arise through unique ornamental characteristics of the subjects themselves.

After discussing and comparing the voice-leading patterns of the fugue expositions in the WTC, I provide a broader perspective by reviewing previous analytical work on structural levels and tonal coherence in fugue, by analyzing and comparing three entire fugues, and by discussing the role of voice-leading patterns in Bach's non-fugal music. Finally, I provide a historical context for this analytical work by showing the close relationship between this voice-leading approach to imitative music and contemporaneous thoroughbass theory and practice.

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CONTENTS

ABSTRACT	Page iv
ACKNOWLEDGEMENTS	vi
TABLE OF EXAMPLES	x
TABLE OF FIGURES	xviii
Chapter	
I. INTRODUCTION	1
II. SUBJECTS PARADIGMS	13
Linear Structure in Fugue Subjects	16
Paradigm 1: 5-4-3 Linear Progression	20
Paradigm 2: 1-2-3 Linear Progression	45
5-4-3 Versus 1-2-3	49
Paradigm 3: 5-4-3-2-1 Linear Progression	54
Paradigm 4: 3-2-1 Linear Progression	59
Paradigm 5: 5-6-7-8 Linear Progression	62
Paradigm 6: 1-2-3-4-5 Linear Progression	63
Paradigm 7: Neighbor-motion Structures	66
Foreground Elaborations	67
Conclusion	70
III. EXPOSITIONS BASED ON 5-4-3 TYPE SUBJECTS	73
Exposition Terminology	73
Voice-leading Patterns	79
Pattern 1A: 5-4-3 Expositions, M-H-L	80
Pattern 1B: 5-4-3 Expositions, L-M-H	111
Pattern 1C: 5-4-3 Expositions, H-M-L	130
Summary	147

IV.	EXPOSITIONS BASED ON 1-2-3 TYPE SUBJECTS	149
	Answer for 1-2-3 Type Subjects . . .	149
	Pattern 2A: 1-2-3 Expositions, M-H-L	151
	Pattern 2B: 1-2-3 Expositions, H-M-L	163
	An Unusual Case: WTC II c#	174
	Comparison of WTC I C and II C Exposition Structures	176
V.	EXPOSITIONS BASED ON 5-4-3-2-1 TYPE SUBJECTS	182
	Answer for 5-4-3-2-1 Type Subjects	183
	Pattern 3A: 5-4-3-2-1 Expositions, M-H-L	184
	Pattern 3B: 5-4-3-2-1 Expositions, H-M-L	203
	5-4-3 and 5-4-3-2-1 Type Exposition Patterns	207
VI.	OTHER EXPOSITION PATTERNS	210
	Pattern 4: 3-2-1 Expositions, L-M-H	210
	Other Exposition Patterns	222
	1-2-3-4-5 Exposition	222
	5-6-7-8 Exposition	228
	Neighbor-motion Subjects and Expositions	231
	Unusual Cases	233
	Subject Paradigms and Exposition Patterns	244
VII.	MODULATING SUBJECTS AND EXPOSITIONS	247
VIII.	STRUCTURE IN THE FUGUE AS A WHOLE	266
	Subject Type and <u>Urlinie</u> Definition	268
	Subject Structure--Fugal Structure	271
	Harmonic Structure in Fugue	272
	Three Analyses:	276
	1) WTC II f	277
	2) WTC II C	286
	3) WTC I F#	291
IX.	VOICE-LEADING PATTERNS IN OTHER MUSIC OF BACH	300
X.	VOICE-LEADING PATTERNS AND THE COMPOSITIONAL PROCESS	311
	Bach's Teaching Methods	311
	The Role of Thoroughbass	314
	Improvisation	320

Partimento Fugue	324
Fugue Proper	333
The Compositional Process	339
Conclusion	343
BIBLIOGRAPHY	347
INDEX OF MUSICAL EXAMPLES AND ANALYSES	354

TABLE OF EXAMPLES

Example	Page
2.1 Paradigm 1: 5-4-3 Linear Progression and its Polyphonic Implications	21
2.2 Structural Analysis, WTC II c Subject	22
2.3 Structural Analysis, WTC II C Subject	23
2.4 Structural Analysis, WTC I F Subject	24
2.5 Background of WTC I F Subject	24
2.6 Subjects, WTC II b (transposed to facilitate comparison) and WTC I F fugues	25
2.7 Structural Analysis, WTC II b Subject	25
2.8a) Simplification 1 of WTC II b Subject	26
b) Simplification 2 of WTC II b Subject	26
2.9 Structural Analysis, WTC II g Subject	27
2.10 Structural Analysis, WTC II G Subject	28
2.11 Structural Analysis, WTC I F# Subject	28
2.12 Structural Forms of Formulaic Close	29
2.13 Structural Analysis, WTC I g Subject	30
2.14 Structural Analysis, WTC II a Subject	30
2.15 Structural Analysis, WTC II Eb Subject	32
2.16 Structural Analysis, WTC II F Subject	34
2.17 Structural Analysis, WTC II f Subject	34
2.18 Structural Analysis, WTC II Ab Subject	35
2.19 Structural Analysis, WTC I c Subject	36
2.20a) Simplified version of WTC I b-flat Subject	37
b) Structural Analysis, WTC I b-flat Subject	37
2.21 Structural Analysis, WTC II A Subject	38

2.22	Structural Analysis, WTC II b-flat Subject	39
2.23	Structural Analysis, WTC II d Subject	40
2.24	Structural Analysis, WTC II e Subject	40
2.25	Structural Analysis, WTC II C# Subject	42
2.26	Structural Analysis, WTC I D Subject	42
2.27	Structural Analysis, WTC II D Subject	43
2.28	Paradigm 2: 1-2-3 Linear Progression and its Polyphonic Implications	45
2.29	Structural Analysis, WTC II g# Subject	46
2.30	Structural Analysis, WTC II Bb Subject	47
2.31	Structural Analysis, WTC I Bb Subject	48
2.32	Structural Analysis, WTC I C Subject	48
2.33	5-4-3 and 1-2-3 Subject Paradigms	49
2.34a)	Fugue Subject, Mozart K. 394 . . .	50
b)	Structural Analysis, K. 394 Subject	50
2.35a)	Subject, Fugue from <u>Suite 2</u> in F by Handel	51
b)	Structural Analysis of Handel's Subject	51
2.36	Alternate Structures, WTC I C Subject	52
2.37	Structural Analysis, WTC II d# Subject	52
2.38	Structural Analysis, WTC II c# Subject	53
2.39	Structural Analysis, WTC I E Subject	53
2.40	Structural Analysis, WTC I f Subject	55
2.41	Structural Analysis, WTC I C# Subject	56
2.42	Structural Analysis, WTC II f# Subject	57
2.43	Structural Analysis, WTC I d# Subject	57
2.44	Structural Analysis, WTC I a Subject	58

2.45	Structural Analysis, WTC I f# Subject	59
2.46	Structural Analysis, WTC I c# Subject	60
2.47	Structural Analysis, WTC II E Subject	61
2.48	Structural Analysis, WTC I B Subject	61
2.49	Structural Analysis, WTC II B Subject, from Schenker's <u>Jahrbuch</u> I, p. 97	62
2.50	Structural Analysis, WTC I d Subject	64
2.51	Structural Analysis, WTC I G Subject	65
2.52	Structural Analysis, WTC I Ab Subject	67
3.1a)	Pattern 1A: 5-4-3 Subject, M-H-L	81
b)	Background of Pattern 1A	81
c)	Pattern 1A: 5-6-5-4-3 Subject . .	81
3.2	Structural Analysis, WTC II C Fugue Exposition	86
3.3	Structural Analysis, WTC I F Fugue Exposition	90
3.4	Structural Analysis, WTC II Ab Fugue Exposition	93
3.5	Structural Analysis, WTC II c Fugue Exposition	96
3.6	Structural Analysis, WTC I g Fugue Exposition	99
3.7	Structural Analysis, WTC I c Fugue Exposition	103
3.8	Structural Analysis, WTC II b Fugue Exposition	107
3.9	Exposition Pattern 1B: 5-4-3 Subject: Answer Above, Third Entry Above	112
3.10	Structural Analysis, WTC II g Fugue Exposition	114

3.11	Structural Analysis, WTC II a Fugue Exposition	116
3.12	Structural Analysis, WTC I D Fugue Exposition	119
3.13	Structural Analysis, WTC II D Fugue Exposition	121
3.14	Structural Analysis, WTC II Eb Fugue Exposition	126
3.15	Structural Analysis, WTC II A Fugue Exposition	129
3.16	Exposition Pattern 1C: 5-4-3 Subject: Answer Below, Third Entry Below	131
3.17	Structural Analysis, WTC I F# Fugue Exposition	132
3.18	Structural Analysis, WTC II F Fugue Exposition	135
3.19	Structural Analysis, WTC I b-flat Fugue Exposition	139
3.20	Structural Analysis, WTC II f Fugue Exposition	142
3.21	Structural Analysis, WTC II e Fugue Exposition	143
3.22	Structural Analysis, WTC II G Fugue Exposition	146
4.1	Hypothetical 1-2-3 Subject and Answer Structure	150
4.2	Pattern 2A: 1-2-3 Subject, M-H-L	152
4.3	Reachings-over in Subject and Answer	152
4.4	Structural Analysis, WTC II Bb Fugue Exposition	155
4.5	Structural Analysis, WTC I E Fugue Exposition	158

4.6	Structural Analysis, WTC I C Fugue Exposition	160
4.7	Pattern 2B: 1-2-3 Subject, H-M-L	164
4.8	Structural Analysis, WTC II g# Fugue Exposition	166
4.9	Structural Analysis, WTC II d# Fugue Exposition	169
4.10	Structural Analysis, WTC I Bb Fugue Exposition	171
4.11	Structural Analysis, WTC II c# Fugue Exposition	175
4.12	Comparison of WTC I C and WTC II C Expositions	178
5.1	Pattern 3A: 5-4-3-2-1 Exposition, M-H-L	185
5.2	Background of Pattern 3A	186
5.3	Alternate Upper-voice Structure 1	187
5.4	Alternate Upper-voice Structure 2	188
5.5	Structural Analysis, WTC I f Fugue Exposition	190
5.6	Structural Analysis, WTC II f# Fugue Exposition	194
5.7	Structural Analysis, WTC I d# Fugue Exposition	197
5.8	Structural Analysis, WTC I f# Fugue Exposition	199
5.9	Structural Analysis, WTC I a Fugue Exposition	201
5.10	Pattern 3B: 5-4-3-2-1 Exposition, H-M-L	203
5.11	Structural Analysis, WTC I C# Fugue Exposition	205

5.12	Comparison of 5-4-3 and 5-4-3-2-1 Exposition Patterns	208
6.1	Conceptual Exposition Pattern 1 of 3-2-1 Subject: Answer Above, Third Entry Below	212
6.2	Conceptual Exposition Pattern 2 of 3-2-1 Subject: Answer Above, Third Entry Above	212
6.3	Exposition Pattern 4A: 3-2-1 Subject: Answer Above, Third Entry Below	213
6.4	Structural Analysis, WTC II E Fugue Exposition	215
6.5	Structural Analysis, WTC I B Fugue Exposition	217
6.6	Structural Analysis, WTC I c# Fugue Exposition	219
6.7	Structural Analysis, WTC I d Fugue Exposition	224
6.8	Structural Analysis, WTC I G Fugue Exposition	227
6.9	Structural Analysis, WTC II B Fugue Exposition	229
6.10	Structural Analysis, WTC I Ab Fugue Exposition	232
6.11	Structural Analysis, WTC II d Fugue Exposition	235
6.12	Structural Analysis, WTC II b-flat Fugue Exposition	239
6.13	Structural Analysis, WTC II F# Subject	241
6.14	Structural Analysis, WTC II F# Fugue Exposition	243
6.15	Structural Analysis, WTC II C# Fugue Exposition	245

7.1	Structural Analysis, WTC I g# Subject	249
7.2	Structural Analysis, WTC I g# Fugue Exposition	250
7.3	Structural Analysis, WTC I b Subject	252
7.4	Structural Analysis, WTC I b Fugue Exposition	255
7.5	Structural Analysis, WTC I Eb Subject	257
7.6	Structural Analysis, WTC I Eb Fugue Exposition	258
7.7	Structural Analysis, WTC I A Fugue Exposition	263
7.8	Structural Analysis, WTC I e Fugue Exposition	264
7.9	Contrapuntal Basis of Example 7.8	264
8.1	Foreground Analysis, WTC II f Fugue	278
8.2	Middleground Analysis, WTC II f Fugue	283
8.3	Foreground Analysis, WTC II C Fugue	287
8.4	Middleground Analysis, WTC II C Fugue	289
8.5	Foreground Analysis, WTC I F# Fugue	293
8.6	Middleground Analysis, WTC I f# Fugue	296
9.1	Structural Analysis, WTC I d Prelude, Measures 1-2	302
9.2	Structural Analysis, WTC II Eb Prelude, Measures 1-4	303
9.3	Structural Analysis, WTC I Ab Prelude, Measures 1-9	303
9.4	Middleground Analysis, WTC I C Prelude	306
9.5	Middleground Analysis, WTC I c Prelude	307

9.6	Middleground Analysis, WTC I D Prelude	309
9.7	Middleground Analysis, WTC I e Prelude	310
10.1	"Rules for Playing En Quatre," Example 13, with my realization	317
10.2	Examples 3, 3a, and 3b from Niedt's <u>Musicalische Handleitung</u> , Part I, Chapter 8	319
10.3	Partimento Fugue 1 from the Bach/Thieme Manuscript	329
10.4	Example from Kittel's <u>Der angehende praktische Organist</u> , III, 5-9	335

TABLE OF FIGURES

Figure	Page
6.1 Common Subject Paradigms And Exposition Forms	246
7.1 Motivic Elements in the WTC I b Exposition	253
8.1 Subject Paradigms and Suggested <u>Kopftöne</u>	269
9.1 Paradigm 1 (5-4-3 Linear Progression) in the WTC Preludes	301

Chapter 1

INTRODUCTION

Although Heinrich Schenker's theory of tonal music goes very far towards uniting the traditionally independent domains of counterpoint and harmony, it does not deal directly or deeply with the connective role which imitative texture often plays in this synthesis. The obligations inherent in a canonic or fugal texture may limit compositional choices, but they also provide an underpinning of control and direction to voice leading. This dissertation demonstrates the structural role of imitation in tonal music by comparative analysis of a selected body of imitative music: the fugues of J. S. Bach's Well-Tempered Clavier (WTC).

My purpose here is not merely to reexplain the wonders of the WTC--the astonishing number of books about the structure of the fugues makes a further analytical contribution redundant unless it claims to offer different and fruitful insights--but to use its familiar music as the basis of a broader, speculative study on the complex relationship between voice leading and imitative counterpoint--a relationship in which the type of imitative material adopted for a subject affects the voice leading of the

fugue exposition in specific ways, and in which certain principles of voice leading control both the types of subjects and the ways in which they are employed. Thus I deal with fugal counterpoint not as the "combination of melodies,"¹ but, rather, in its relation to tonal structure. In this context the WTC fugues--familiar, accessible, often discussed, and, most importantly, fugues of the highest quality--are a convenient collection.²

At present many studies exist which deal with aspects of voice leading in tonal music. Salzer and Schachter's Counterpoint in Composition, for example, discusses in great detail the role which species counterpoint plays in the organization of tonal music.³ Two recent textbooks on

1. Frederick A. G. Ouseley, cited in Donald Francis Tovey, Forty-eight Preludes and Fugues by J. S. Bach, 2 Vols (London: The Associated Board of the Royal Schools of Music, 1924): ix.

2. "Undoubtedly he was the greatest master of fugue that ever lived. And fugue was not just a type of piece, but a whole technique that permeated the entire body of early eighteenth-century music--a technique of which a fugue represents only the most comprehensive and consistent application. . . . Assayed for its contrapuntal content, Bach's music is richer than any other music based on functional harmony, and thus in this respect, too, it is the climax of a long ascent." Hans T. David and Arthur Mendel, The Bach Reader 2nd. Edition (New York: Norton, 1966): 30.

3. Felix Salzer and Carl Schachter, Counterpoint in Composition (New York: McGraw Hill Book Company, 1969.)

eighteenth-century counterpoint also focus on this area, but stop short of dealing comprehensively with voice leading in fugal contexts; at the point where imitation becomes prominent, the focus switches from tonal counterpoint to contrapuntal imitation.⁴ Likewise a great many studies deal strictly with imitative procedures in music. For example, Prout's Fugue, a well organized and clearly presented treatise on imitative procedures, has endured remarkably.⁵

This dissertation attempts to bridge the gap between the two disciplines, which have remained to a large extent separate. It contributes in a new way both to the study of voice leading and to the study of fugue, by addressing the interrelationship between voice leading and imitative counterpoint in tonal music; an interrelationship which has not been examined to any great extent for two reasons: first, because only in the last few decades has the necessary analytical method with which to undertake such a study been available to theorists, and second, because it is a highly complex interrelationship.

4. Richard S. Parks, Eighteenth-Century Counterpoint and Tonal Structure (Englewood Cliffs N.J.: Prentice-Hall, 1983), pursues voice leading only as far as an analysis of Bach's Invention I in C major (imitation at the octave), and Thomas Benjamin, Counterpoint in the Style of J. S. Bach (New York: Schirmer, 1986), includes only one voice-leading graph of a fugal exposition.

5. Ebenezer Prout, Fugue (London: Augener, 1891).

Historically, fugue has been taught and analyzed as a specific type of counterpoint--that type which involves imitation. That is, traditional fugal analysis investigates the various occurrences of the subject in different arrangements and the manipulation of motivic material to form counterpoints, sequences, and so on. Traditional fugal analysis generally focuses on the contrapuntal rather than the harmonic aspect of the music. Eighteenth-century fugal treatises, exemplified by Marpurg's Abhandlung von der Fuge,⁶ and even the major nineteenth-century treatises, by Cherubini, Prout, Richter, and Riemann, are primarily concerned not with the harmonic aspect of fugal organization, but rather with providing rules for the construction of fugal answer and invertible counterpoint, and with the disposition of the subject and subordinate themes throughout a fugue. In this regard, Kirnberger's (actually Schulz's) harmonic analysis of the WTC I b fugue, although limited to

6. Friedrich Wilhelm Marpurg, Abhandlung von der Fuge (Berlin, 1753-1754). Parts appear in translation in Alfred Mann, The Study of Fugue (New Brunswick, N.J.: Rutgers University Press, 1958): 139-212.

surface events, and not entirely accurate, is an exception.⁷ Even where traditional theory has dealt exhaustively with a formal aspect of fugue, it has been unsatisfactory. For example, although theorists have for centuries attempted to make adequate generalizations regarding the fugal answer, Naldin's exhaustive study serves to show the virtual impossibility of establishing fixed rules for constructing tonal answers.⁸ Heinrich Schenker summarizes traditional fugal analysis this way:

The textbooks and analyses always describe the organization of a fugue in terms of an exposition, restatement, episodes, as well as all imaginable maneuvers such as contrary motion, retrograde, augmentation, diminution, stretto, etc.--but they do not speak about that which is most important: of that utterly secret connection which alone makes a fugue an organic whole, a work of art as such.⁹

7. Johann Philipp Kirnberger, The True Principles for the Practice of Harmony (Berlin, 1773), trans. by David Beach and Jurgen Thym, in Journal of Music Theory, XXIII/2 (Fall, 1979): 210-222. This treatise was actually written under Kirnberger's supervision by Johann Abraham Peter Schulz.

8. Charles Naldin, Fugal Answer (London: Oxford University Press, 1969).

9. Heinrich Schenker, "The Organic Aspect of the Fugue," trans. in Sylvan Kalib "Thirteen Essays from the Three Yearbooks Das Meisterwerk in der Musik by Heinrich Schenker" 3 vols, (Ph.D. diss., Northwestern University, 1973) II: 283.

As Carl Schachter puts it, "A study of the enormous literature on fugue will show how infrequently the fugal theorists have been able to reassemble into some kind of connected whole the disiecta membra produced by their analyses."¹⁰

Early in this century Marc-André Souchay attempted to classify Bach's fugue subjects according to melodic characteristics.¹¹ His effort to categorize them on the basis of underlying melodic progression was hampered, however, and thus the value of his conclusions severely limited, by his failure to distinguish the various structural levels. Some of his analyses do reflect primary underlying structures, but rather than finding a clearly limited number of well defined subject types, Souchay discovered a very great variety and diversity, on account of the great diversity of surface features in Bach's subjects. Further, he not infrequently assigned a single subject to more than one category, on the basis of varying analytical

10. Carl Schachter, "Bach's Fugue in Bb Major, Well-Tempered Clavier, Book I, No. XXI," The Music Forum III: 239-40.

11. Marc André Souchay, "Das Thema in der Fuge Bachs," Bach-Jahrbuch XXIV (1927): 1-102, and XXVII (1930): 1-48.

criteria, making any summary of underlying principles virtually impossible.

The analytical system developed by Heinrich Schenker in the first decades of this century, and which culminated in his posthumous work Free Composition, provides the necessary tools with which the theorist can adequately discuss the complex relationships of tonal music, imitative and otherwise.¹² Schenker has shown for example that many apparent harmonic events are the result of more fundamental contrapuntal motions. Schenker's landmark study of the WTC I c fugue focuses on many of the difficulties of traditional analytical techniques, and points the way to a deeper and clearer understanding of the voice-leading structure of fugue as a whole. For example he clearly isolates the problem of fugal answer:

Tonal answer . . . requires that the tonic-tone and the fifth-tone of the subject be replied to by the fifth-tone and the tonic-tone in the answer, respectively. Since this rule overlooks the core of the question--that is, the necessity of leading the tonic chord of the subject to the dominant chord of the answer--it was unable to progress beyond mere superficially descriptive words, and was forced to admit one exception after another.¹³

12. Heinrich Schenker, Free Composition (1935) 2 vols. trans. Ernst Oster (New York: Longman, 1979).

13. Schenker, "The Organic Aspect of the Fugue," trans. by Kalib in "Thirteen Essays," II: 246-320, quoted from p. 259.

Following Schenker, structural analyses of entire fugues have been published by Sylvan Kalib (WTC II g), Felix Salzer (WTC I D), and Carl Schachter (WTC I Bb).¹⁴ In addition, Schenker provides a middleground graph of the WTC I d fugue in Free Composition,¹⁵ and Oswald Jonas gives a background graph of the WTC I F fugue in his Introduction to the Theories of Heinrich Schenker.¹⁶ Careful study of all these analyses sheds light on some of the main structural facets of fugue.

14. Sylvan Kalib, "Thirteen Essays from the Yearbooks Das Meisterwerk in der Musik", I: 290-301; Felix Salzer, Structural Hearing, 2 vols, 2nd. edition (New York: Dover, 1962), Vol 2, Example 474 (pp. 240-242); Schachter, The Music Forum, III (1973): 239-267.

15. Figure 156.1. Heinrich Schenker has also analysed a fugue of Brahms in great detail in "Brahms: Variations und Fuge über ein Thema um Händel, op. 24," Der Tonwille, IV Jahrgang, Heft 2/3 (April/Sept. 1924), (Vienna: A. Gutmann Verlag.): 3-46. Further analytical insights appear in his analyses of Beethoven's last piano sonatas, of which opp. 101 and 110 include fugal movements and fugato sections. See Heinrich Schenker Erläuterungsausgaben der letzten fünf Sonaten Beethovens 4 vols. (Vienna: Universal Edition, 1913-1920). Vol. II [Op. 110] (1914): 80ff, and Vol. IV [Op. 101] (1920): 78ff.

16. Oswald Jonas, Introduction to the Theories of Heinrich Schenker trans. by John Rothgeb (New York: Longman, 1982), Fig. 144 (p. 94).

Schenker's theory does not deal with the relationship between imitation and voice leading per se. However, the constraints of imitative writing, in conjunction with voice-leading principles, limit tonal possibilities and provide direction and unity. In such an elementary question as the form of a fugal answer, it is not just that the imitation may need adjustment for the sake of harmony, but rather that counterpoint, harmony, and imitation must all be reconciled and intertwined in a balanced relationship. My aim therefore is (1) to show that a direct relationship exists between voice-leading and imitation, and (2) to show the most common voice-leading patterns in the fugal expositions of Bach's WTC.

This topic may be approached from a theoretical or analytical perspective. The theoretical approach seeks out the various contrapuntal possibilities--based on the combination of species counterpoint and imitation--available within a tonal context, and demonstrates the functioning of the resultant patterns in the literature of imitative music. For example, it is well known that a scale segment can combine with itself at the fifth (or unison or octave) after two notes, and in fact this pattern forms the contrapuntal

basis of many stretto combinations.¹⁷ The analytical approach is to examine imitative voice-leading structures in existing music and to show their theoretical basis in counterpoint and harmony. This approach begins with the music and extracts recurring patterns, which are then subjected to analysis, to determine their functioning in a given context. The former approach is speculative, and the latter is empirical. My approach, which maintains a more direct relation to actual music, is primarily the latter. However, it is reflexive in that it begins with the relatively empirical data of analysis, extracting the most common patterns, and then uses the abstract patterns as the basis of comparison and extrapolation.

In the chapters that follow, I explain the various principles of voice-leading which relate to imitative counterpoint in fugue. (Access to the music of the WTC is necessary for readers, since excerpts have been omitted in the interests of brevity.) Chapter 2 presents a series of subject paradigms which are the structural basis of Bach's non-modulating fugue subjects. It enumerates and considers

17. The "Amen" of Handel's Messiah and the "Dona nobis pacem" of Bach's B-minor Mass are two familiar examples.

this strictly limited number of linear progressions which underlie the fugue subjects in the WTC. Chapters 3, 4, and 5 discuss and compare the voice-leading patterns of WTC fugue expositions whose subjects are based respectively on the following paradigms: the descending third-progression 5-4-3, the ascending third-progression 1-2-3, and the descending fifth-progression 5-4-3-2-1; the most common subject paradigms in the WTC.¹⁸ Chapter 6 discusses those expositions of a quite different nature in which the subject paradigm is the descending third-progression 3-2-1, as well as expositions which have unique or unusual voice-leading patterns.

In my study of the WTC fugues, I have chosen to concentrate on those with non-modulating subjects, since they constitute the great majority. Modulating subjects, as will be seen, contain fundamentally different structural patterns. Nevertheless, in the interests of completeness, I present a short discussion on the nature of the modulating subject in its relation to voice-leading and exposition structure in Chapter 7. (It would no doubt be possible to develop a comparable thesis on the relationship of modulating subjects and their expositions to voice leading.)

18. Arabic numerals refer to notes of the scale, counting up from the tonic (1). Unless otherwise indicated, they identify notes of the original key, not the local key.

Chapter 8 introduces to the reader the relationships of subject structure and ornament to the structure of entire fugues, particularly in their larger aspects. Further, Chapter 8 discusses the important differences between fugal structure and other tonal structures, on the basis of fugal tradition and practice. Chapter 9 explores the relationship of the patterns described in the previous chapters to the patterns commonly found in Bach's non-fugal music, in order to demonstrate the wider applicability of common voice-leading patterns in Bach's music in general. The final chapter attempts to relate the analytical conclusions of this study to the compositional method of Bach and his contemporaries, as understood through thoroughbass, fugal instruction of the period, improvisation, and our present knowledge of Bach's teaching and compositional methods.

Chapter 2

SUBJECT PARADIGMS

The beginning of this inquiry into the voice-leading basis of imitative music is the structural basis of the imitative motive itself; the subject, the starting point of fugal composition and the seed from which a fugue grows and develops. This chapter examines the structural basis of Bach's WTC fugue subjects, and demonstrates that most are based on a small number of structural paradigms. The following chapters go on to show how these underlying structures give rise to a small number of voice-leading patterns which govern the tonal structures of fugue expositions.

For these purposes, we can regard a fugue subject as the initial music (usually unaccompanied) that recurs in exact or modified form as the primary motivic material of a fugue. Its beginning is defined by the silence that precedes the fugue, and its ending is usually--but not always--well defined by tonal motion and rhythm. Indeed, a recurring difficulty in fugal analysis, which illustrates the underlying weaknesses of traditional analytical methods, is the establishment of the precise ending point of a subject. The WTC I E subject is probably the most intractable case in

the WTC: Higgs, Norden, Von Bruyck, and Verrall suggest 10 notes. Prout and Iliffe, the latter probably following the view of the former, propose 14 notes. Czackzes concurs. Keller, on the other hand, conjectures 22 notes, and considers it a modulating subject. Tovey skirts the issue: "it is not worth settling where the subject ends and where the countersubject begins," and Knorr states categorically that "it is impossible to determine absolutely where the subject ends."¹

All of this disagreement and confusion results from failure to distinguish the various aspects which comprise a subject. Many texts focus on the melodic aspect, and de-

1. James Higgs, Fugue (London: Novello [1878]): 16; Hugo Norden, Foundation Studies in Fugue (New York: Crescendo Publishing, 1957): 3; Carl Von Bruyck Technische und ästhetische Analysen des Wohltemperierte Clavier, 2nd. ed. (Leipzig: Breitkopf & Härtel, 1899): 180; John W. Verrall Fugue in Theory and Practice (Palo Alto, California: Pacific Books, 1966): 66; Ebenezer Prout, Fugue (London: Augener, 1891): 19; Frederick Iliffe, The Forty-Eight Preludes and Fugues of Johann Sebastian Bach Analysed for the use of Students (London: Novello [1897]): 33; L. Czackzes, Analyse des WTC: Form und Aufbau der Fuge bei Bach 2 vols. (Wien and München: Österreichischen Bundesverlag, 1965): 135; Hermann Keller, The Well-Tempered Clavier by Johann Sebastian Bach trans. Leigh Gerdine (New York: Norton, 1976): 85; Donald Francis Tovey, Forty-eight Preludes and Fugues by J. S. Bach 2 vols. (London: The Associated Board of the Royal Schools of Music, 1924): 15; and Iwan Knorr, Die Fugen des Wohltemperierte Clavier in bildischen Darstellung 2nd. ed. (Leipzig: Breitkopf & Härtel, 1926): 9.

clare that the length of a subject is determined by the largest segment that is consistently repeated, regardless of cadential gesture or harmonic implication. This view guides those who maintain that the WTC I E subject ends at the 14th note, since the following D# is not strictly imitated by the corresponding A-natural in the second voice. Keller's analysis, along the same lines of reasoning, disregards the exact intervallic imitation, and thus extends the subject a further eight notes. Others, focussing on the rhythmic aspect, declare that the subject should end on the accented part of the beat, at the beginning of the answer or on the nearest accented beat before, hence, in this instance on the second beat of measure 2, giving 10 notes. Usually, analysts also take into account cadential implications. But a further factor, perhaps the most important, is generally overlooked. That is the completion of structural units of voice leading--linear progressions and neighboring motions.

In problematic cases, what the analyst needs is greater precision. In stating that a given subject ends at a certain point, does an analyst mean that a cadence occurs, or that a melodic segment ends, or that a particular point in the metrical plan has been reached, or that a voice-leading motion is completed, or some combination of factors--if so, which--or something else entirely? In the great many in-

stances where all or most of these factors coincide, the analyst is not called on to defend his position, but it is in more complex cases that difficulties arise.

Although adding the factor of voice leading to the established rhythmic, melodic, and cadential factors makes the issue more complex, it also clarifies the problem, by distinguishing the various contributing factors. And the WTC I E subject? As shown below (Example 2.39), a focus on the voice-leading structure leads to the first conclusion: 10 notes.

Linear Structure in Fugue Subjects.

The French theorist Guillaume Gabriel Nivers described in 1667 the main characteristics of a good fugue subject:

To construct a fugue [subject], three things must be considered, its beginning, its continuation, and its ending.

It should commence on the degree of the final, or on the dominant, rarely on the mediant of the key in which one is writing.

It should proceed through the essential notes of the key directly or indirectly. Directly, for example, if it begins on the final, it should proceed by ascending a third or a fifth, or by descending a fourth. If it begins on the dominant, it should proceed, if ascending, by a fourth and if descending, by a third or fifth. Indirectly, for example, when it proceeds by conjunct degrees with the intention nevertheless of

passing directly through the essential notes of the key.²

This description is brief but highly perceptive in comparison to the more common descriptions which deal at great length with such elements as range, length, style, meter, and rhythm, but do not touch on that which is peculiar and special about fugue subjects. Nivers suggests that the proper basis for a subject is a stepwise motion filling an interval of the tonic chord, and normally beginning on 1 or 5. Nivers is in fact describing one form of what Schenker two hundred and fifty years later was to name a Zug (in English translation linear progression). In Schenker's wider usage, a linear progression is a stepwise diatonic motion filling in two harmonic notes separated by an interval of a third or more. The notes that frame the linear progression can almost always be understood as members of a single triad, though they may appear as parts of different triads.³ Further, and of major importance, linear progressions need not occur note by note in immediate succession in the foreground; that is, the notes of a linear pro-

2. Guillaume Gabriel Nivers, Traité de la composition de musique, (Paris, 1667): 49-51, trans. by Charles Naldin in Fugal Answer: 6.

3. See Heinrich Schenker, Free Composition: 43-45.

gression may occur amidst other motions and elaborations (but they will occur in immediate succession on some pre-foreground level). The notes of an underlying linear progression will usually be prominent because of factors such as rhythm, contour, and harmonic implication.

The forms which for Nivers are literal subject patterns, become in the fugue subjects of Bach underlying structures, overlaid with elaboration. Indeed, Nivers apparently touches on elaborated linear patterns in the last sentence of the above quotation. Such linear progressions provide the structural basis of virtually all the fugue subjects of Bach's WTC. The linear progressions occur in a variety of ways, but in all non-modulating fugue subjects both the beginning and ending notes of the underlying linear progression are members of the tonic chord, giving a sure sense of tonal orientation to the subject. The underlying structures account for the unity, in terms of structural cohesion and musical purpose; their manifold elaborations account for the great variety, of Bach's subjects. Schenker's description of Bach's fugue subjects supports this view: "The fugue subjects of J. S. Bach, with only few exceptions, convey self-substantiation within themselves as they reveal a strictly compact course of action."⁴ The

4. Schenker, "The Organic Aspect," trans. by Sylvan Kalib in "Thirteen Essays," II: 25.

"compact course of action" must mean the underlying linear progression which gives direction and motion to a subject. Sylvan Kalib elaborates this idea, leaning, however, in the direction of a harmonic rather than a linear foundation:

"Most of the subjects in the WTC of J. S. Bach reveal self-contained polyphonic structures with a chord-idea as their basis."⁵

Whether in the formulations of Nivers, Schenker, or Kalib, the primary idea is that of a simple and direct underlying linear basis for good fugue subjects. However, seven WTC fugue subjects do not contain an underlying linear progression: WTC I Eb, e, Ab, A, g#, b, and WTC II F#. Of these, the WTC I Ab subject uses a neighboring motion rather than a linear progression. The WTC II F# subject is unique in using not a single linear progression but a combination of partial linear progressions (see chapter 6). The WTC I Eb, e, g#, A and b fugues, containing modulating subjects which operate according to different principles than those of non-modulating subjects, are considered in Chapter 8. All other subjects in both volumes of the WTC are based structurally on linear progressions connecting notes of the tonic triad. The following six linear progressions appear: 1-2-3-4-5, 5-4-3-2-1, 5-4-3, 1-2-3, 3-2-1, and 5-6-7-8.

5. Kalib, "Thirteen Essays," I: 282-283.

Beginning with the more common subject structures and proceeding to the more unusual ones, this chapter discusses the various forms in which these structural models appear in the WTC fugue-subjects, and serves as a preparation for the study of voice-leading patterns in fugal exposition. Within each structural type the discussion proceeds from simple to complex examples. The classification of subjects presented here could have been oriented further towards the background level, resulting in fewer but more general patterns, or further towards the foreground level, resulting in more patterns of greater specificity. The level which I have chosen is the most workable and comprehensive one for the present discussion.

Paradigm 1: 5-4-3 Linear Progression.

5-4-3 is the single most frequently used structural basis for fugue subjects in the WTC, occurring in fully half of all WTC fugues: WTC I c, D, F, F#, g, b-flat, WTC II C, c, C#, D, d, d#, Eb, E, F, f, F#, G, g, Ab, A, a, b-flat, b.

The 5-4-3 linear progression gives a strong harmonic and melodic drive to a fugue subject. As a linear progression the subject is not static, but moves from one place to another (from 5 to 3). It implies an authentic cadence,

but by closing on the mediant rather than the tonic it allows momentum to continue.

The 5-4-3 linear progression implies a full polyphonic structure: an underlying harmony of I-V-I, and two subordinate contrapuntal lines, 3-2-1 and 8-7-8 (see Example 2.1). In many subjects some of the subordinate contrapuntal lines are actually present as secondary voices, giving a true polyphonic melody, not merely a melody with polyphonic implications. The subordinate polyphonic voices, implied or actual, bear directly on the voice leading of the exposition as a whole, as will be seen in the following chapters.

Example 2.1

Paradigm 1: 5-4-3 Linear Progression and its Polyphonic Implications.



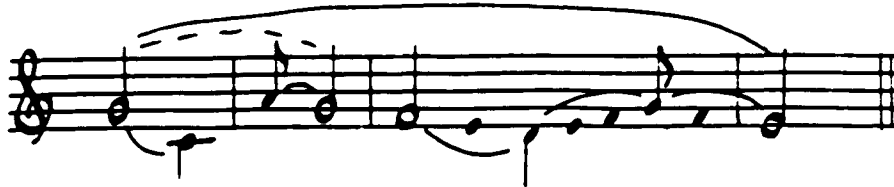
WTC II c The short subject of the WTC II c fugue is based on Paradigm 1, 5-4-3, as shown in Example 2.2. The Eb and C of the first measure are arpeggiations within the tonic chord. The 4, F, is decorated by a turn figure, signaling the end of the subject on the following Eb.

Example 2.2
Structural Analysis, WTC II c Subject.



WTC II C The subject of the WTC II C fugue also has Paradigm 1 as its basis (see Example 2.3). In this case there is an arpeggiation to the tonic at the beginning of the subject, and an upper-neighbor elaboration of the 5 as well. The upper-neighbor motion 5-6-5 is repeated and elaborated as an incomplete neighbor, 4-5, and the 4 of the main linear progression is further embellished by a third-motion F-E-D, comparable to the third-motion at the end of the WTC II c subject. The upper neighbor A expands 5-4-3 to 5-6-5-4-3, creating the most widely used form in Bach's WTC fugue subjects, fundamental not simply because of its common occurrence, but because of its crucial structural role in a great many fugue expositions, indeed in entire fugues, as shall be seen.

Example 2.3
Structural Analysis, WTC II C Subject.



WTC I F In the WTC I F subject, the main ornamental note D, the upper neighbor of 5, again expands the 5-4-3 linear progression to 5-6-5-4-3. This neighbor-note appears on the strong beat, while the main note (C) is a pickup. Descending thirds ornament 6, 4, and 3 (D-Bb, Bb-G and A-F), and reflect the overall descending third C-A of the subject. The prominent low E of measure 2 is part of an implied 8-7-8 bass voice (F-E-F), in which the initial tonic is not present, as shown in Example 2.4.⁶

The main notes of the upper voice and the bass form a simple counterpoint, shown in Example 2.5. A partially implied middle voice ((3)-2-1) completes the harmony, giving a total of three voices: a guiding linear progression and two harmony voices, as in Paradigm 1 (Example 2.1).

6. Parenthetical notes after the end of the main linear progression of a subject indicate notes which are not properly part of the subject, but which complete linear or tonal motions nonetheless.

Example 2.4
Structural Analysis, WTC I F Subject.



Example 2.5
Background of WTC I F Subject.



WTC II b The WTC II b subject is remarkably similar to the WTC I F subject. Example 2.6, in which the two subjects are vertically aligned for comparison, shows that many surface details are similar or identical.

Example 2.6
Subjects, WTC II b (transposed to facilitate
comparison) and WTC I F fugues.



The structural backgrounds of the two subjects are also similar, but in the WTC II b subject the initial 5 of the main linear progression is prolonged by an arpeggiation of the tonic triad by which means the subordinate voices are expressed in their proper registers (measures 1 and 2). As in the WTC I F subject, accompanying lower thirds to 4 and 3 (E and D) of the main line, give a secondary inner voice, shown in Example 2.7.

Example 2.7
Structural Analysis, WTC II b Subject.



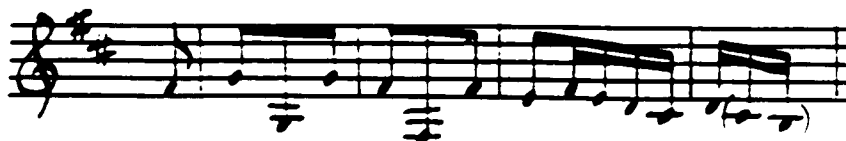
The combination of two types of prolongation gives this subject an unusual duration of six measures. Example 2.8 shows two simplifications of the subject to a four-measure group, the first omitting the upper neighbor and the second omitting the arpeggiation of the tonic triad. The second of these is virtually identical with the WTC I F subject, both in structure and in style. Again the neighbor comes on the strong beat rather than the weak beat (compare Example 2.5 above).

Example 2.8

a) Simplification 1 of WTC II b Subject

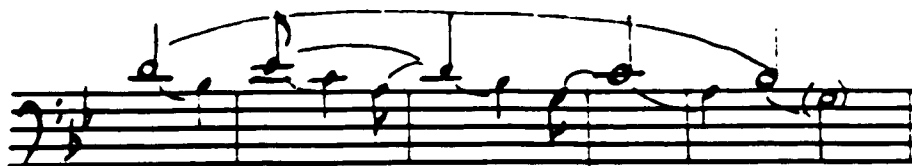


b) Simplification 2 of WTC II b Subject



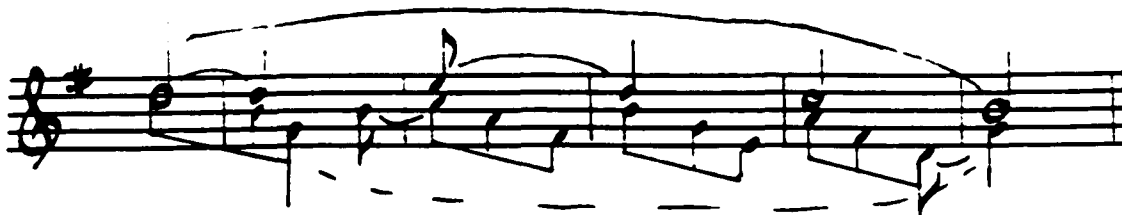
WTC II g As Example 2.9 shows, the WTC II g subject also uses an upper neighbor to 5 as the primary means of prolonging the 5-4-3 linear progression. Further, lower thirds ornament each main note. G, the first note following the end of the subject and the lower third to Bb, completes a secondary voice in parallel thirds to the primary voice, as in the WTC I F subject.

Example 2.9
Structural Analysis, WTC II g Subject.



WTC II G Even the subject of the WTC II G fugue, which consists almost entirely of leaps, has an underlying step-wise linear progression. As Example 2.10 shows, the main linear progression is a descending third, 5-4-3, expanded by an upper neighbor to 5-6-5-4-3.

Example 2.10
Structural Analysis, WTC II G Subject.



WTC I F# The WTC I F# subject has an arpeggiation up to the tonic above the main 5-4-3 linear progression, as shown in Example 2.11. In this case incomplete upper neighbors ornament both 5 and 4 of the main linear progression.

Example 2.11
Structural Analysis, WTC I F# Subject.



Decoration of 4 with a lower third and upper incomplete-neighbor in this manner gives an important formulaic close, 4-(3-2-5)-3, found also in the WTC II d, Ab and a subjects and in a modified form in the WTC II c# subject. The motion beginning 4-3-2-5- can be concluded convincingly by either 3, completing a 5-4-3 progression--as here--or by

lower voice to the tonic (7-8). The secondary, bass voice implied by G in measure 1, is completed by the G which follows the end of the subject.

Example 2.13
Structural Analysis, WTC I g Subject.



WTC II a The fascinating WTC II a subject, in which the second part is a diminution of the first, also has an incomplete neighbor as the main ornamental note of the 5-4-3 linear progression. Since the #7 of measure 2 does not return directly to 8 as in the WTC I g subject, this incomplete neighbor does not have the same requirement of immediate return to an implied 5. It stands as an incomplete neighbor, as illustrated in Example 2.14, and suggests, with the G#, VII⁷.

Example 2.14
Structural Analysis, WTC II a Subject.



WTC II Eb Analysts disagree as to the extent of this subject. Those that favor the melodic and rhythmic focus judge the end to be Eb in measure 7.⁸ Exceptionally, Roger Bullivant includes a further measure, ignoring the rhythmic point of measure 7 in favor of a purely motivic view.⁹ Those that see the end of the subject at measure 6 favor a cadential-harmonic approach, which coincides with completion of the main linear progression.¹⁰ Von Bruyck, suggesting 6 or 7 measures, recognizes the different possibilities, but does not clarify the reasoning which supports of each.¹¹ These conflicting views illustrate the very common occurrence in which the end of the main linear progression, here 5-4-3, is followed by further music which completes other implied voices, here the implied bass. Since the motion from 3 to 1 uses music similar to that of the preceding

8. They include Prout, Fugue: 7; Higgs, Fugue: 5; Salomon Jadassohn, Erläuterungen zu ausgewählten Fugen aus J. S. Bachs Wohltemperierte Clavier (Leipzig: F. E. C. Leuckart, c.1887): 88; Iliffe, The Forty-Eight: 114, and Knorr, Die Fugen des WTC: 28.

9. Roger Bullivant, Fugue (London: Hutchinson University Library, 1971): 45.

10. Norden, Foundation Studies: 4; Keller, The WTC: 153; and Czackzes, Analyse des WTC, II: 73.

11. Von Bruyck, Technische und ästhetische Analysen: 184.

measure, it is easily heard as part of the subject, while in fact it is a link to the succeeding entry.¹²

The WTC II Eb subject resembles the WTC II C subject in its overall shape, with a sequence of neighbors (but here incomplete ones) to 5 and 4, shown in Example 2.15. Unlike the WTC II C subject, but similar to many other subjects by Bach, it expresses an emphatic tonic before the first note of the main linear progression. This tonic is the beginning of the above mentioned implied bass line which is completed by the Eb following the end of the main linear progression.

Example 2.15
Structural Analysis, WTC II Eb Subject.



For convenience, I will term a prominent tonic in the immediate vicinity of the initial note of a linear progression such as this an initial tonic. It may appear prior

12. Compare Examples 2.2 (WTC II c), 2.4 (I F), 2.7 (II b), 2.9 (II g), 2.10 (II G), 2.13 (I g), and 2.14 (II a) above, and Examples 2.17 (II f), 2.18 (II Ab), and 2.19 (I c) below.

to the main structural note, as here, or after, as in the WTC I F# and g, and WTC II C and b subjects. As well as expressing the beginning of a lower (occasionally an upper) contrapuntal voice, an initial tonic is often important in the further structure of fugal expositions.

In traditional fugal theory the initial tonic is generally understood as one of the two coaxial subject elements which determine to a large degree the form which the answer will take, the other element being of course the dominant. Theories of fugal answer usually express the opposition of tonic and dominant pitches, such that the tonic in the subject will become the dominant in the answer and vice versa. While it is generally true that these two notes have great importance for answer structure, I attempt in this study to make finer distinctions regarding the precise roles of these pitches than have previously been made. The following examples also have initial tonics.

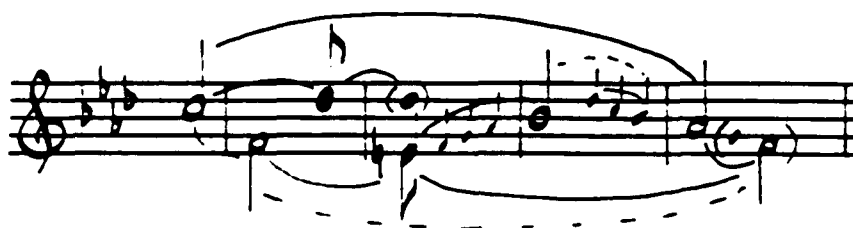
WTC II F An initial tonic and an upper neighbor, as well as an ascent to the F above the upper voice all delay the progress of the main linear progression of the WTC II F subject. The initial tonic implies a bass line which is completed by the F following the end of the subject (measure 4). See Example 2.16.

Example 2.16
Structural Analysis, WTC II F Subject.



WTC II f In addition to the main linear progression, the WTC II f subject has a complete bass voice, 8-7-8. It is a truly polyphonic subject. An incomplete upper neighbor prolongs the initial 5, as in the WTC II a subject, and again suggests a prolonged VII⁷. Comparison of Example 2.17 with Example 2.14 shows the structural similarity of the WTC II f and a subjects.

Example 2.17
Structural Analysis, WTC II f Subject.



WTC II Ab The subject of the WTC II Ab fugue, although full of variety in pitch and rhythm, nevertheless follows Paradigm 1. Secondary voices are hinted at, as Example 2.18

shows, but no secondary voice is fully stated. A stepwise bass (8-7-6-5) can be inferred, but none of its tones is actually present. Again, lower thirds ornament the main notes 5 and 4 (Eb-C, and Db-Bb), and the 4 has an incomplete neighbor, as in the WTC I F#, and WTC II a and Eb subjects.

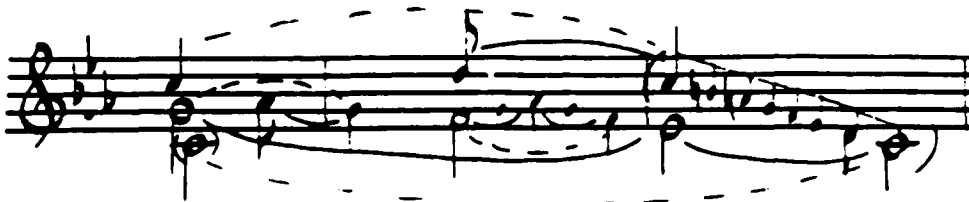
Example 2.18
Structural Analysis, WTC II Ab Subject.



WTC I c The WTC I c subject has a prominent high C above the main linear progression, which functions as an upper-voice pedal note. Example 2.19 shows the structure of the WTC I c subject. Again an upper neighbor to 5 expands the main linear progression. Schenker mentions that the sixteenth-note scale following the end of the subject completes the implied upper voice as well as the implied bass motion. Schenker's comment regarding this subject, "the lower voices . . . follow along secretly as the only possible ones," is applicable not only to this subject, but to many others, and has been demonstrated in a number of

examples already.¹³ To restate, a Bach subject implies a full contrapuntal structure.

Example 2.19
Structural Analysis, WTC I c Subject.



WTC I b-flat The 5-4-3 progression of the WTC I b-flat subject is masked by octave displacement of the initial 5. Example 2.20a shows a simplified version of the subject, in which the expressive minor-ninth leap is omitted, but which makes clear the stepwise basis of the subject.¹⁴ Example 2.20b shows the relationship of the other notes to the main line: Gb, upper neighbor of 5, produces the 5-6-5-4-3 pattern, and the initial Bb is an arpeggiation and simple statement of the tonic.

13. See Schenker, "The Organic Aspect," trans. in Kalib "Thirteen Essays," II: 252-55, 258, and 261-262. My analysis of this subject differs in detail, but not in general conception, from Schenker's.

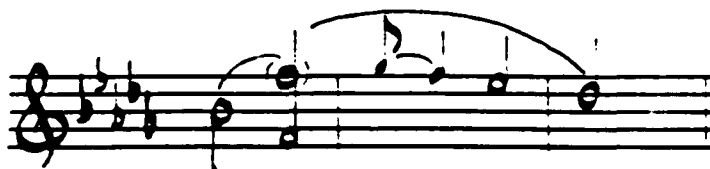
14. Schenker gives the same reading, including the octave displacement, in his discussion of measures 29-31 of this fugue. See Heinrich Schenker, Das Meisterwerk in der Musik (München: Drei Masken Verlag, 1926), II, Fig. 28, p. 33.

Example 2.20

a) Simplified Version of WTC I b-flat Subject.

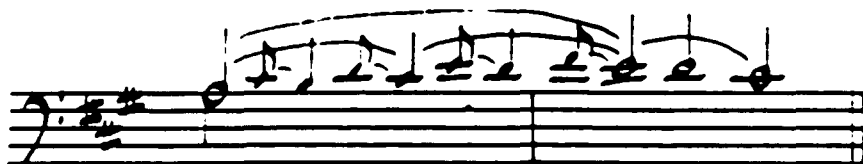


b) Structural Analysis, WTC I b-flat Subject.



WTC II A An ascending fifth-progression (1-2-3-4-5) links the initial tonic to the 5-4-3 linear progression in the WTC II A subject. The rising fifth, using reaching-over, occupies the greater part of the subject, so that the main linear progression itself receives very little elaboration (see Example 2.21).

Example 2.21
Structural Analysis, WTC II A Subject.



Linear progressions such as this, which link the initial tonic with the first note of the main linear progression, occur in many WTC fugue subjects. I call such linear progressions melodic ascents for convenience. Reaching-over for each successive note is a common elaborative procedure in melodic ascent, as in this subject, but it is not structurally necessary. The following three examples also exhibit melodic ascent.

WTC II b-flat The WTC II b-flat subject is structurally very similar to the WTC II A subject. A melodic ascent occupies most of its length, but it occurs in two successive stages. The Eb of measure 2 leads to the Db of measure 3 as a reaching-over, bridging the quarter-rest in measure 2, which divides the first two parts of the subject (see Example 2.22).¹⁵

15. Carl Schachter provides an illuminating motivic analysis of this subject in "Rhythm and Linear Analysis: A Preliminary Study," The Music Forum, Vol. IV (1976): 329.

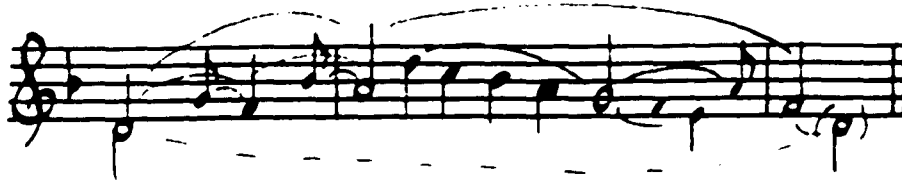
Example 2.22
Structural Analysis, WTC II b-flat Subject.



WTC II d The WTC II d subject begins with a melodic ascent in which 4 and 6 (G and Bb) function as reachings-over to 3 and 5 (F and A) and as substitutes for E and G (see Example 2.23). The 5 is prolonged by a motion from the superimposed inner voice note D, after which a closing 4-3 motion appears, including an appended lower third G-E and an incomplete neighbor--the 4-3-2-5-3 formulaic close mentioned above. The structural bass note D, first note of the subject, reappears immediately following the end of the subject, completing an implied bass voice.¹⁶

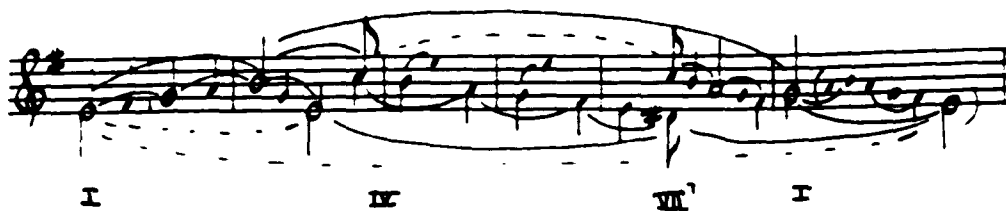
16. This feature has already been shown in several examples: WTC I F, WTC II Eb, F, f, g, and a.

Example 2.23
Structural Analysis, WTC II d Subject.



WTC II e The unusually long and rhythmically fascinating WTC II e subject presents two characteristics in common with the previous example: a rising-fifth melodic ascent and a superposition of the tonic above the main linear progression. But here the main expansion of the subject occurs by a prolongation of the incomplete neighbor through a complete linear motion to the lower voice, 8-7-8, as shown in Example 2.24. This pattern prolongs IV-VII⁷, unfolding a diminished seventh as in the WTC II f subject.

Example 2.24
Structural Analysis, WTC II e Subject.



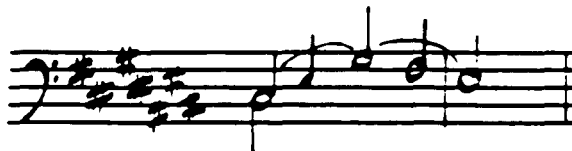
WTC II C# Commentators disagree as to the extent of the subject of the WTC II C# fugue. Four, six, and eight

notes are all suggested.¹⁷ The frequent occurrence of the first four notes as a motive throughout the fugue justifies interpreting only those as the extent of the subject. But Tovey reckons on one and a half measures. Another view is that of eight beats, the largest recurring element in the exposition itself. As for the four-beat interpretation, this is explained by the dictum that a subject should end on a strong beat.¹⁸ Because this fugue has a stretto exposition (overlapping entries) the question is complex. I consider the length of the subject to be 4 beats, giving 5-4-3 as the main linear progression, as shown in Example 2.25. This linear progression is preceded by an arpeggiated tonic chord which connects the initial tonic to the initial note of the main linear progression. The following two beats, which complete Tovey's version of the subject, serve to conclude the implied bass voice, 8-7-8, as in many subjects discussed above.

17. Iliffe, The Forty-Eight, II: 94, gives 4 notes; Hans Brandt-Buys, Het Wohltemperierte Klavier (Arnheim: L. Slaterus, 1944) cited in Keller, The WTC, gives 4 notes; Tovey, Forty-eight, II: 4, gives one and a half measures; Czackzes, Analyse des WTC, II: 34, gives 6 notes; Knorr, Die Fugen des WTC: 25, gives 6 notes; Keller, The WTC: 142, gives 8 notes.

18. Tovey, Forty-eight, II: 5.

Example 2.25
Structural Analysis, WTC II C# Subject.



WTC I D The forceful high note, B, of the WTC I D subject is an appoggiatura to the following 5, from which point a 5-4-3 linear progression quickly proceeds. The thirty-second note flourish of the initial tonic connects the implied bass voice with the upper voice through F#, as shown in Example 2.26.

Example 2.26
Structural Analysis, WTC I D Subject.



WTC II D Curiously, the fugue subject in the same key in Book II has virtually the same structure as the WTC I D subject. But contradictions arise here through the heavily accented subdominant. In attempting to explain the voice-

leading basis of the subdominant implications of the WTC II D subject, I invoke the idea that a single tonic note--like the first note of this subject--implies in the tonal context an entire tonic chord. The origin of the 4 is thus understood as an implied 3, and that of the 6 as an implied 5, giving a main linear progression of (5)-6-5-4-3. See Example 2.27.

If this view is not accepted, the prominent 6 must then be understood as an incomplete neighbor to the following 5, but the voice-leading role of the heavily accented G remains problematic. Of course, it is precisely this characteristic of the subject which becomes a primary factor in the development of the fugue, as will be shown in Chapter 3.

Example 2.27
Structural Analysis, WTC II D Subject.



The foregoing discussion shows not only that Paradigm 1, especially in its 5-6-5-4-3 form, pervades the WTC but also that subjects with radically different outward appearances in rhythm, length, range, and style, can have the same

linear progression as their structural basis. To take two cases, the subjects of the WTC II c and G fugues are based on the same linear progression, 5-4-3, yet they are in different modes (major and minor) and different styles. The WTC II c fugue subject has mostly conjunct motion, the range of a fifth, only nine notes, and occupies one measure, whereas the WTC II G subject has disjunct motion throughout, range of an eleventh, thirty notes, and occupies five measures. 5-4-3 linear progressions occur in a variety of styles, they occur in 3-, 4-, and 5-voice fugues, and they operate equally well in both major and minor keys. The main types of elaboration for Paradigm 1 are upper neighbor to 5, initial tonic, and melodic ascent. Many examples are very clear, while some are somewhat ambiguous in their presentation of the main linear progression.

Although the linear progressions may be hidden from the immediate perception of the listener, awareness of them reveals the underlying constant in otherwise contrasting subjects.

Paradigm 2: 1-2-3 Linear Progression.

Like the 5-4-3 linear progression, the 1-2-3 linear progression outlines an interval of the tonic harmony and ends on the mediant. It relates to Schenker's idea of Anstieg, or initial ascent.¹⁹ Like 5-4-3, 1-2-3 suggests a I-V-I harmonic progression, but not the same richness of implied polyphony. Only an 8-7-8 contrapuntal line and the harmonic roots, 1-5-1 are implied (see Example 2.28).

Example 2.28
Paradigm 2: 1-2-3 Linear Progression and its Polyphonic Implications.



The WTC contains five subjects based on Paradigm 2: WTC I C, E and Bb, and WTC II g# and Bb. (In addition, the WTC II B subject may be understood as a 1-2-3 linear progression, if the lower contrapuntal voice is taken as the main linear progression.)

19. See Schenker, Free Composition: 45-46.

WTC II g# The WTC II g# subject expresses a 1-2-3 third progression with great clarity, as shown in Example 2.29. Reaching-over is the main elaborative technique applied to the basic linear progression. As in other subjects discussed previously, arpeggiation to notes not directly connected with the main progression does not contradict the essential linear progression.

Example 2.29
Structural Analysis, WTC II g# Subject.



WTC II Bb The initial structural note (Bb) of the WTC II Bb fugue subject is prolonged by a descending arpeggiation of the tonic chord. (Beginning with an upper neighbor--C--is atypical.) Again, as in the WTC II g# subject, reaching-over elaborates each structural note and facilitates the upward motion of the main linear progression as shown in Example 2.30. Both linear progressions are sequential.

Example 2.31
Structural Analysis, WTC I Bb Subject.



WTC I C Example 2.32 shows that the main structure of the WTC I C subject as a 1-2-3 linear progression. Reaching-over again occurs, and the higher stratum of A and G, a secondary voice, obscures the motion of the main linear progression. The complexity of this subject permits great variety of structural interpretation, a distinct asset in this particular fugue, since the subject appears throughout in many different contrapuntal contexts, including many stretto combinations.

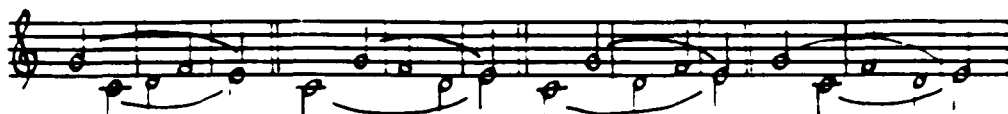
Example 2.32
Structural Analysis, WTC I C Subject.



5-4-3 Versus 1-2-3

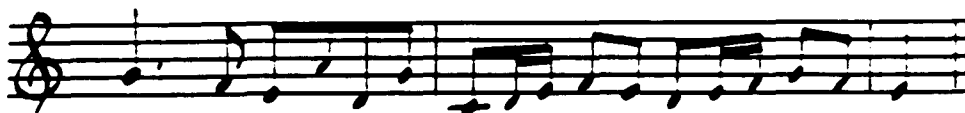
In some fugue subjects which end on 3 it is difficult to be sure whether the main linear progression is 5-4-3 or 1-2-3. The WTC I C subject is such a case. For comparison, example 2.33 presents hypothetical subjects in which both progressions are almost equal in strength. The reaching-over of the ascending linear progression also acts as the structural 4 of the descending linear progression. Likewise, a lower third to 4, which often occurs in the 5-4-3 progression, can act as 2 of the 1-2-3 progression.

Example 2.33
Hypothetical 5-4-3 and 1-2-3 Subject Structures.



The subject from Mozart's Preambulum et Fuga for piano, K. 394, shown in Example 2.34, is a clear example of this dual structural design. It contains two complete linear progressions, 5-4-3 and 1-2-3, of which the descending motion predominates, but in which the ascending progression could assume a primary structural role, particularly in a bass entry of the subject.

Example 2.34
a) Fugue Subject, Mozart K. 394.



b) Structural Analysis, K. 394 Subject.



Another example of a subject with two complete linear progressions is found in Handel's Suite 2 in F for harpsichord (Example 2.35). Schenker's analysis shows two linear progressions, 5-4-3 and 1-2-3 (5-4-3 predominating), converging on the final note of the subject.²¹

Bearing the preceding discussion in mind, it is possible to understand the structure of the WTC I C subject as primarily a 5-4-3 linear progression rather than a 1-2-3 linear progression. Example 2.36 shows both structural possibilities. However, I retain the initial analysis, as a

21. Schenker, Free Composition, Figure 92.

Example 2.35

a) Subject, Fugue from Suite 2 in F by Handel.b) Structural Analysis of Handel's Subject.
(Based on Schenker's Analysis.)

1-2-3 linear progression, shown in Example 2.32, because it bears a more direct relation to the strong beats and it reflects the overall ascending motion of the acting upper-voice for the first two entries. Nevertheless, the descending motion plays a role in some entries in the upper voice, even in the answer itself (see Chapter 4).

Example 2.36
Alternate Structure, WTC I C Subject.



WTC II d# The 1-2-3 linear progression of the WTC II d# subject includes a very prominent reaching-over, giving an overall form of 1-2-4-3, the same shape as the well known subject from the finale of Mozart's "Jupiter" symphony. The implied bass line 8-7- is completed by the notes which immediately follow the end of the subject (see Example 2.37).

Example 2.37
Structural Analysis, WTC II d# Subject.



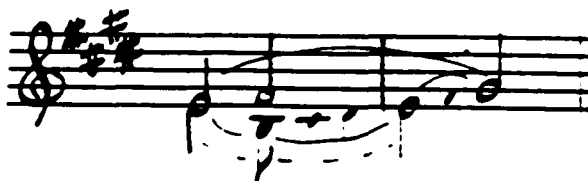
WTC II c# The WTC II c# subject is structurally almost identical with the WTC II d# subject; it too uses the "Jupiter" shape, but the implied bass voice is 1-5-1 rather than 8-7-8, as shown in Example 2.38.

Example 2.38
Structural Analysis, WTC II c# Subject.



WTC I E As noted above, settling on where the end of this subject occurs is very difficult. Indeed the subject apparently continues directly into an accompaniment of the answer in canonic style. But if we take the length of the subject as one full measure, justified in this instance by the entrance of the answer a full measure after the subject, we can trace an underlying 1-2-3 linear progression as its structural basis. The full contrapuntal structure is shown in Example 2.39.

Example 2.39
Structural Analysis, WTC I E Subject.



Paradigm 3: 5-4-3-2-1 Linear Progression

Paradigm 3, the descending fifth linear progression 5-4-3-2-1, is a common basis for fugue subjects in the WTC, second in frequency only to Paradigm 1. It is fundamentally different from Paradigms 1 and 2 since it ends on the tonic rather than the mediant. The fifth-progression itself unfolds a complete tonic chord, and implies a I-V-I harmonic motion. Schenker shows the descending fifth as the basis of the subject of Bach's Chromatic Fantasy and Fugue. He comments: "It is as if we heard only the composed-out chord itself! What inspired construction!!"²² The main implied contrapuntal voice to 5-4-3-2-1 is 8-7-8. But since the subject contains five structural notes, rather than only three, a number of implied harmony patterns are possible.²³ Five WTC subjects are based on the Paradigm 3: WTC I C#, d#, f, f# and a and WTC II f#.

22. Heinrich Schenker, J. S. Bach's Chromatic Fantasy and Fugue, trans. and ed. by Hedi Siegel (New York: Longman, 1984), Example 33, p. 45.

23. Schenker demonstrates the various "structural consequences" in Free Composition, Figure 16.

WTC I f The subject of the WTC I f fugue presents a descending fifth linear progression quite clearly, but the elaborations that Bach includes are in fact complex. The chromatic descent is elaborated by an unfolding, shown in Example 2.40, which incorporates the tonic in the higher octave. Note the upper neighbor to 5, which is commonly used for Paradigm 3, as it is for Paradigm 1. It expands 5-4-3-2-1 to 5-6-5-4-3-2-1, and plays an important role in the structure of fugal exposition.

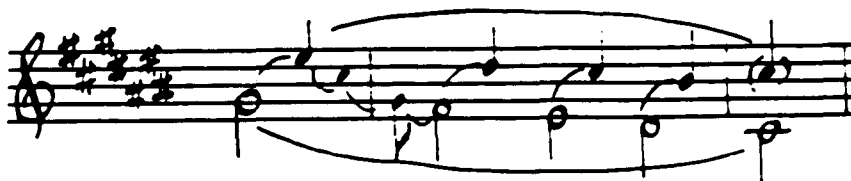
Example 2.40
Structural Analysis, WTC I f Subject.



WTC I C# A 5-4-3-2-1 linear progression is readily apparent in the lowest notes of the WTC I C# subject. Upper sixths form a secondary line, as shown in Example 2.41. The accompanying upper sixths (E#-D#-C#-B#-C#) form a complete melodic line; therefore this is a fully polyphonic subject. The subject properly ends on the low C#, the first note of measure 3, at the completion of the fifth-progression, but the following high C# completes the upper melodic line,

linking the end of the subject with the beginning of the countersubject.²⁴

Example 2.41
Structural Analysis, WTC I C# Subject.



WTC II f# Like the WTC I f subject, this subject has an upper neighbor to 5 and an arpeggiation to the upper tonic. Also, there are lower thirds to the main notes 4 and 3, giving a partial secondary voice (See Example 2.42). The notes of the main linear progression plus the upper neighbor give the subject an underlying rhythm of half-notes.

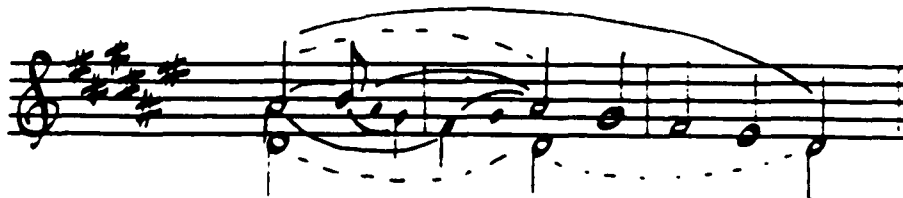
24. Schenker's analysis of this subject focuses on the upper voice rather than the lower voice. Consequently he infers 3-2-1 as the main structural basis. See Schenker, Free Composition, Figure 133.1. As Example 5.11 shows, the E#, a note of great importance, indeed represents the upper voice at the beginning of the exposition. Nevertheless, since the fifth-progression in the lower voice is the clearest and most direct linear progression, I consider it to be the main linear progression of the subject alone.

Example 2.42
Structural Analysis, WTC II f# Subject.



WTC I d# An initial tonic precedes the main linear progression of the WTC I d# subject. The 5 is prolonged by an upper neighbor and by motion to the inner voice through a subordinate 5-4-3 progression, as shown in Example 2.43, but the final 4-3-2-1 motion is unadorned.²⁵

Example 2.43
Structural Analysis, WTC I d# Subject.



WTC I a The 5-4-3-2-1 linear progression of the WTC I a fugue subject is embellished by a melodic ascent, and by a complete lower voice, 8-7-8, shown in Example 2.44. The two

25. Schenker, Free Composition, Figure 109, e-5, shows a similar analysis, but includes an implied harmonic context.

phrases of the subject, separated by a rest, are bridged beautifully by a secondary linear progression, an ascending fifth which links the lower voice G# to the upper voice D, and echoes the opening melodic ascent. The incomplete neighbor F (which remains unresolved at the rest) can be understood to resolve to an implied E over the bass G#, in the middle of measure 2, or to continue as a true incomplete neighbor, implying a prolonged VII⁷ for the central part of the subject. (Compare WTC II e, f, and a.) The final 4-3-2-1 descent is simply adorned by the cadence formula mentioned above.

Example 2.44
Structural Analysis, WTC I a Subject.



WTC I f# A melodic ascent to 5 also occupies a large part of the WTC I f# subject. This is followed by a subordinate 5-4-3 progression, shown in Example 2.45, after which the remainder of the main linear progression (4-3-2-1) is unadorned, as in the WTC I d# subject.

Example 2.45
Structural Analysis, WTC I f# Subject.



As for Paradigm 1 subjects, the main elaborations of Paradigm 3 subjects are upper neighbor to 5, initial tonic, and melodic ascent.

Paradigm 4: 3-2-1 Linear Progression

Only three WTC fugue subjects are based on a 3-2-1 linear progression: WTC I c# and B, and WTC II E. An initial tonic is always necessary here, to define the key adequately, and to allow for a smooth connection with the answer, as will be shown in Chapter 6. As in other types of subject, a I-V-I harmonic motion and a subordinate 8-7-8 voice are implied.

WTC I c# The characteristic diminished-fourth, B#-E, which lends such deep expression to the WTC I c# subject, also creates an ambiguous harmony in the second measure. I understand the second measure to be primarily V, and link B#

directly with the following D#. Thus I interpret the E as an unfolding from the initial C#, giving a main linear progression of 3-2-1. Example 2.46 illustrates the unfolding, which implies two contrapuntal voices.²⁶

Example 2.46
Structural Analysis, WTC I c# Subject.



WTC II E The subject of the WTC II E fugue is also based on Paradigm 4. Here a rising third-progression using reaching-over links the initial tonic to the first note of the main linear progression, as shown in Example 2.47. The similarity of structure to the WTC I c# subject complements the close stylistic relationship between the fugues: both are in allabreve time, both begin with the bass voice and unfold a rising series of entries, and both imitate vocal style.

26. Schenker's analysis, Free Composition, Fig. 103,3a), shows a similar interpretation.

Example 2.47
Structural Analysis, WTC II E Subject.



WTC I B The WTC I B subject is also based on Paradigm 4, and it too has an initial tonic. As in the WTC II E fugue, a melodic ascent connects the initial tonic to the initial note of the main linear progression. The tonal structure, shown in Example 2.48, is very similar to that of the WTC II E subject discussed above, but the elaboration is remarkably similar to that of the WTC II c# subject. Again, an upper neighbor to 3 appears as a reaching-over.

Example 2.48
Structural Analysis, WTC I B Subject.



All three of the subjects that follow Paradigm 4 have very similar structures, although the WTC I B subject is in a distinctly different style.

Paradigm 5: 5-6-7-8 Linear Progression

WTC II B 5-6-7-8 is a rare structural basis for fugue subjects. The WTC II B fugue contains the only case in the WTC. The ascending fourth begins with an implied F# over the opening tonic B. Schenker's analysis of this subject as a harmonic prolongation (given here as Example 2.49)²⁷ shows also an accompanying rising-third linear progression of secondary structural importance in the lower voice, which accounts for the descending scale at the end of the subject--an integral part of the subject throughout the exposition. The cadential implication of measure 3 and

Example 2.49
Structural Analysis, WTC II B Subject, from Schenker's
Jahrbuch I, 97.



27. Heinrich Schenker, Das Meisterwerk, Jahrbuch I, Figure 3, p. 97.

resolution of the leading tone in measure 4 make it very difficult not to hear the high B as the main goal of the subject.²⁸ A third linear progression, 3-4-5 in the middle voice, is even more subordinate.

Paradigm 6: 1-2-3-4-5 Linear Progression

Like the descending fifth, the rising fifth 1-2-3-4-5 unfolds the tonic chord directly and completely. However, since 4 rises to 5, the subject cannot be harmonized by, and does not imply a I-V-I progression. Rather, the implied harmony is some form of half-cadence, such as IV-V. Paradigm 6 forms the basis of only two subjects in the WTC, I d and I G.²⁹

WTC I d Although a rising linear progression of a fifth 1-5 is the basis of the subject of the WTC I d fugue, 2 and 4 are represented not directly, but through reachings-

28. Schenker and Ernst Kurth agree on this point, but for different reasons. See Jonas, Introduction: 83.

29. Schenker, "Brahms: Variations," Der Tonwille IV, Urlinientafel, shows a further example of a rising fifth-progression as the basis of a fugue subject.

over, that is by 4 and 6, as shown in Example 2.50.³⁰ (In this light it is possible to debate the relative structural weight of 2 and 4 in the "Jupiter" subject, 1-2-4-3.) Each of the reachings-over is itself decorated by the lower third--the note which it replaces.³¹

Example 2.50
Structural Analysis of WTC I d Subject.



WTC I G The interpretation of this subject as essentially a 1-2-3-4-5 linear progression depends on understanding the primary motion to be complete at the high D in measure 4. As in the WTC I d subject, reaching-over aids in the ascent to 5 (see Example 2.51). The following descend-

30. Schenker shows the underlying linear progression as 1-2-3-4-5. See Free Composition, Figures 53.5 and 156.1. He also discusses this fugue in Harmony, trans by Elizabeth M. Borgese, ed. by Oswald Jonas (Chicago: University of Chicago Press, 1954), Examples 46 and 51 among others.

31. Johann Nepomuk David has noted the striking similarity of this subject to the opening of the WTC II subject in the same key. Das wohltemperierte Clavier: Der Versuch einer Synopsis (Göttingen: Vandenhoeck and Ruprecht, 1962): 32.

Paradigm 7: Neighbor-motion Structures (5-6-5).

Besides the six linear progressions used by Bach as the basis of non-modulating subjects in the WTC, neighbor-note motion sometimes occurs. The neighbor-note motions which can form the structural basis of fugue subjects are based on the tonic and the dominant notes: 1-2-1, 8-7-8 and 5-6-5. (They are not linear progressions, since they begin and end on the same note.) In each case a simple tonic harmony is implied, but except in 5-6-5 dominant harmony may also be implied or stated in secondary voices. The 5-6-5 neighboring motion is melodically similar to 1-2-1, but is not as suggestive of harmonic motion since 6 harmonizes naturally with IV rather than V. Although 5-4-5 is theoretically possible, the almost gravitational pull of 4 down to 3 when preceded by 5 makes this form practically impossible. If 5 were regained through reaching-over to 6, the upper neighbor would be considered more important, giving 5-6-5 as the main motion. 5-#4-5, however, is a viable alternative, but it implies a modulation to V (see Chapter 7). Only the 5-6-5 neighbor motion appears as the structural basis of a fugue subject in the WTC.

WTC I Ab The WTC I Ab fugue contains the only example in the WTC of a non-modulating subject based on 5-6-5. The main structure is elaborated through arpeggiation of notes of the suggested harmonies, I and IV. The initial A flat suggests a secondary bass-line, perhaps a tonic pedal, while the C and D flat suggest an inner voice in parallel thirds with the upper voice, as shown in Example 2.52.

Example 2.52
Structural Analysis, WTC I Ab Subject.



Foreground Elaborations

It will have been observed that similar procedures of elaboration occur very often in the WTC fugue subjects, sometimes associated with certain subject types. The main types of elaboration are (1) upper neighbors, used in descending progressions, (2) reachings-over, used in ascending progressions, (3) initial tonic, (4) melodic ascent, and (5) secondary voices.

In descending linear progressions the upper neighbor is the most common elaboration of the basic design, as in 5-6-5-4-3, 5-6-5-4-3-2-1 and 3-4-3-2-1.

Reachings-over naturally occur in ascending melodic segments, as we have seen. In all 1-2-3, 1-2-3-4-5 and 5-6-7-8 subjects except WTC II B, reaching-over is the main ornamental event.

We have seen that very often the tonic appears in close proximity to the initial note of the main linear progression in cases where that initial note is the mediant or dominant. It occurs in the WTC I c, c#, D, d#, f#, g, Ab, A, a, b-flat, and B, and WTC II C, C#, c#, D, d, Eb, d#, E, e, F, f, f#, G, A, b-flat, B, and b subjects. The initial tonic appears with 5-4-3, 5-4-3-2-1, 3-2-1, 5-6-7-8, and 5-6-5 subject types, since for the others 1 is already present as the initial structural note. The initial tonic is structurally a bass note, root of the tonic harmony.

Melodic ascent (used only with an initial tonic, which it links to the initial note of the main linear progression) is a common elaboration of WTC fugue subjects.

Many subjects include a combination of the above possibilities. For example, the WTC I c subject contains an initial tonic and a neighbor, and the WTC II b-flat subject contains melodic ascent and upper neighbor, with reachings-over.

Bach's fugue subjects are remarkable for the way in which they present a convincing harmonic and melodic unit with great clarity and force. Tovey states that "when Bach combined melodies, the combination forms full harmony as soon as two parts are present. (Even a solitary part will be a melody which is its own bass.)"³³ Indeed, Bach is undoubtedly the greatest master at giving the illusion of polyphony in outwardly monophonic music.³⁴

The polyphony of many of Bach's fugue subjects arises from the notes which suggest real or implied secondary melodic motions. The usual secondary melodic motions, as we have seen, are parallel motions in thirds and sixths, and neighbor motions around the tonic. The secondary voices are often partially implied, but sometimes fully stated. Although the main melodic motion governs the tonal organization of a subject, such actual or implied secondary voices may assume a primary structural role in later parts of the fugue where contrapuntal context is a factor.

33. Tovey, Forty-eight: x.

34. See especially the music for unaccompanied violin, violoncello and flute. The analyses by Schenker are illuminating in this regard.

Each of these elaborative techniques can have, and often does have importance for the structural design of Bach's fugal expositions, as will be shown in the following chapters.

Conclusion

The most useful classification of subjects, after the essential categories of modulating and non-modulating subjects, is on the basis of the final note of the main linear motion, because the final note is the goal and resolution of the neighbor motion or linear progression, and the link to the next fugal entry. Paradigms 1 and 2 end on 3, Paradigms 3, 4, and 5 end on 1, and Paradigms 6 and 7 end on 5. By far the majority of fugue subjects in the WTC (29 out of 48) end on 3. Such subjects strongly imply a I-V-I harmonic motion, giving a harmonic drive and providing a springboard for the music to follow. Within this classification, as we have seen, the major category, again by a large majority, is Paradigm 1, 5-4-3.

Uriel Ittenberg mentions that most of the subjects in WTC II end on 3. He also says that WTC II subjects are more tonally rooted than those in WTC I, and notes later that all three of Bach's fugue subjects for unaccompanied violin

begin on 5 and end on 3.³⁵ He calls this "certainly a curious coincidence," but it is not at all a coincidence. In light of the evidence shown above, in which half of all WTC fugue subjects are based on 5-4-3, it is the most natural thing for Bach to do, particularly under the registral and polyphonic constraints of the solo violin.

Eleven subjects end on the tonic. These generally imply some form of I-V-I harmonic motion, giving a forward (in time) drive to the music, which in turn gives momentum to the whole fugue. Bach uses three paradigms within this classification: 5-4-3-2-1, 3-2-1, and 5-6-7-8.

Only three non-modulating WTC subjects end on 5, partly because of the lack of harmonic drive possible in this conclusion. They belong to two paradigms, 1-2-3-4-5 and 5-6-5.

Walter Schenkman notes that Bach's fugue subjects are often founded on the descending sixth, 6-5-4-3-2-1 (eg. WTC I D, F, and WTC II f#).³⁶ He notes that many subjects based

35. Uriel Ittenberg, "The Fugues of J. S. Bach: A Study of their Structure, Style and Texture" (Ph.D. diss., University of California at Los Angeles, 1956): 175-76 and 231.

36. Walter Schenkman, "The Influence of Hexachordal Thinking in the Organization of Bach's Fugue Subjects," Bach VII (1976): 10-11.

on this pattern descend only to the mediant, and suggests that this melodic pattern is also prevalent in many Bach preludes (see Chapter 9). He further connects this pattern with the ancient tradition of solmization subjects, where compositions were based on ut re mi fa sol la and its various permutations, a tradition still practiced in the mid-seventeenth century, as can be seen in the keyboard works of Frescobaldi, some of which were probably known by Bach.³⁷ These observations relate closely to the structural basis of subjects in 5-4-3 and 5-4-3-2-1 linear progressions, elaborated frequently by the addition of an upper neighbor to 5, giving the pervasive forms 5-6-5-4-3 and 5-6-5-4-3-2-1. The 6-5-4-3-2-1 and 6-5-4-3 patterns identified by Schenkman are thus surface results of the essential backgrounds 5-4-3 and 5-4-3-2-1. Schenkman is correct in his observation of commonly used notes in Bach WTC subjects, but he does not make the connection with their structural basis in underlying linear progressions.

The paradigms outlined in this chapter lend themselves to certain exposition patterns--the topic of the next chapter.

37. Ibid.: 12-13 and 15.

Chapter 3

EXPOSITIONS BASED ON 5-4-3 TYPE SUBJECTS

Chapter 2 has shown that Bach's WTC fugue-subjects share a small repertoire of structural bases, and that 5-4-3 (Paradigm 1) is the most common structural basis for fugue subjects in the WTC. This chapter explores the similarities in fugue expositions based on 5-4-3 type subjects. It demonstrates the various ways in which the parts combine into a contrapuntal whole, leading the music in strictly controlled and limited voice-leading patterns through the exposition. Not all 5-4-3 type expositions have identical structures, but many have certain structural elements in common. Since those expositions which differ greatly from the usual patterns will be more easily understood after the common types have been presented, they will be taken up in Chapter 6.

Exposition Terminology

Before discussing the music itself I shall briefly review some of the basic terms of fugue exposition, to provide a firm basis for the analytical work which follows. The following definitions focus on the structural aspects of fugal exposition.

1) Answer

An answer is a transposition of the subject to the fifth above or fourth below during the exposition. An exact transposition, or one which does not affect the underlying structure, is known as a real answer. In cases where substantive, not simply decorative, alterations of the exact transposition are made it is called a tonal answer. Sometimes, however, even in a real answer the structural meaning changes, so the usual distinction is not as profound as it appears. In any case, the theory presented here minimizes the distinction. Subject and answer most often appear in alternation in fugal expositions. In the WTC the second part always states the answer.¹ In an exposition of three to five parts, the third and fifth parts usually state the subject and the fourth part usually states the answer. Exploring why Bach's fugues sometimes diverge from this pattern is a fascinating study, and it is pursued in the following chapters.

1. For clarity, I distinguish "part" and "voice" in the following discussion. "Part" refers to the individual melodic line represented by the notated music: the WTC I C fugue has four parts or independent melodies. "Voice" refers to a single abstract strand in the underlying voice leading: the WTC I C# subject has two complete voices.

The underlying structure of an answer can be quite different from that of its subject. Often the differences are significant to the structure of fugal exposition, but sometimes they are negligible. In comparing answers to subjects, a prominent aspect is that ornamental notes in the subject often take on crucial structural functions in the answer.

2) Exposition

The exposition is the initial portion of a fugue, during which each of the parts enters by stating the subject or answer. Expositions in the WTC range from 2 to 5 entries. Normally each part states the theme in turn, in close but not necessarily immediate succession, and then continues with other music which forms a counterpoint to the succeeding entries. In the few cases, such as WTC I f# and II c fugues, where the last part enters much later than the previous part, one must judge whether the exposition encompasses the entry of the final part or whether the final entry belongs to a subsequent section. In the WTC I f# and II c fugues I consider the final entry not to belong to the exposition. As the following analyses will show, the endings of Bach's fugal expositions are often marked by cadential gestures, which articulate the exposition as a unit.

3) Counterpoint

The counterpoint is any music which accompanies the second and subsequent entries. It can be motivically related or unrelated to the subject. Initially the counterpoint follows the subject statement in the first part, accompanying the second entry (the answer). The final note of the subject and the initial note of the counterpoint are often the same, as, for instance, in the WTC II C fugue (the note E). Such a pivot note is at once the end of the linear progression of the subject and the beginning of the linear progression or motion of the counterpoint.²

4) Countersubject

A countersubject is an optional feature in fugue, a specific type of counterpoint which accompanies the second and subsequent entries in a fugal exposition with some consistency. Statements of the countersubject may be transposed like answers, and need not be exact replicas. A countersubject is normally invertible with the subject and answer. This and the subsequent chapters show how the presence of a countersubject can restrict severely the voice

2. Schenker, "The Organic Aspect" in Kalib, "Thirteen Essays," II: 260.

leading of the exposition. Some fugues contain a second countersubject, and a few fugues also have a third countersubject. A second countersubject is like an ordinary countersubject, except that it first occurs in the first part as an accompaniment to the third entry. A third countersubject occurs in the first part as an accompaniment to the fourth entry, and is therefore restricted to fugues of four or more parts.

5) Harmonic structure

A passage in Schenker's brief discussion of fugue in Free Composition provides a useful focus for the understanding of harmonic structure in fugal exposition: "The fifth relation between the first three entries (subject, answer, subject) provided the form [fugue] with direction and stability."³ By "provided . . . with direction" I understand Schenker to mean giving an initial sense of harmonic and voice-leading drive; motion away from the tonic. By "provided . . . with . . . stability" I understand Schenker to mean establishment of an initial tonic

3. Schenker, Free Composition: 143. This description does not apply to expositions based on modulating subjects, where the subject-answer pair is the basis of a I-V-I progression. See Chapter 7.

section which prolongs the tonic and returns to the tonic at the end of the third entry. Thus the first three entries of the subject (subject-answer-subject) normally encompass a three-element harmonic structure, I-V-I, expressed in two harmonic motions, a departure from and a return to the tonic. At the same time the initial motivic idea of the composition (the subject) is presented, and registral levels are exposed.⁴

In the WTC, where there are more three-part expositions than any other kind, the third entry (normally subject, not answer) is often the concluding entry of the exposition, and in such cases its conclusion usually marks a decisive structural point, the end of the exposition. In expositions with more than three parts the simple balance described by Schenker (subject-answer-subject) is to some extent modified or expanded. Variations of the basic structure occur, and the problem of voice-leading coherence and direction is handled variously in different cases, as will be seen. Likewise, the overall structure of the exposition can be altered by so-called "redundant" entries--additional statements of the subject or answer beyond the basic number of one for each part.

4. Also, long-range voice-leading goals can be prepared, goals which the remainder of the fugue can fulfill. See Chapter 8.

6) Bridge

In many expositions music referred to here as bridge material occurs between successive thematic statements. This music often but not always has a structural role in fugue expositions, as will be seen in individual examples discussed below. The most frequent occurrences of, and longest, bridges are generally those between the second and third entries. A bridge is more often necessary in minor because the tonicized V (natural-7) must be altered to V with dominant function (sharp-7).

Voice-leading Patterns

Hypothetical voice-leading patterns that demonstrate the main structural elements can be constructed for all types of expositions. Six arrangements of entries are possible for expositions in three parts: high, middle, and low (h, m, and l): h-m-l, h-l-m, m-h-l, m-l-h, l-h-m, and l-m-h. But only four arrangements express a gradual range expansion--a growing wedge of sound: h-m-l, m-h-l, m-l-h, and l-m-h. In the WTC, Bach generally favors only three forms--those which allow a compact arrangement of parts, and in which the two upper parts enter in immediate succession: m-h-l, h-m-l, and l-m-h.⁵

5. The WTC II C# and c# fugues are the only exceptions:

Pattern 1A: 5-4-3 Expositions, M-H-L.

Fugues in this category (ordered according to the discussion which follows):

- 1) WTC II C
- 2) WTC I F
- 3) WTC II Ab
- 4) WTC II c
- 5) WTC I g
- 6) WTC I c
- 7) WTC II b

Example 3.1 shows a hypothetical voice-leading pattern for a three-part exposition of a 5-4-3 type subject. Pattern 1A conforms in outline with Schenker's description. In Example 3.1 the second part (answer) enters above the first, and the third part (subject) enters below the first, giving a registral expansion above and below the initial part as the exposition proceeds. This is the most common arrangement in 5-4-3 type fugues in the WTC. The first entrance is represented by the 5-4-3 linear progression and by the implied tonic in the bass--Paradigm 1. (As shown in

their third entries are in inner rather than an outer parts. (The third entry of the WTC II C# fugue is also inverted, in the context of a stretto exposition.) More often the fourth entry (in four-part fugues), which has less structural importance for fugal exposition, will be in an inner part. In such cases it will of necessity be the tenor, as in the WTC I a and II b-flat fugues. Schenker's observation that the answer never appears in the bass in the WTC I c fugue suggests the possibility of other, more complex, principles also at work. See Schenker, "The Organic Aspect," in Kalib, "Thirteen Essays," II: 251.

Chapter 2, the subject expresses or implies all three members of the tonic chord: tonic, mediant, and dominant.)

Example 3.1

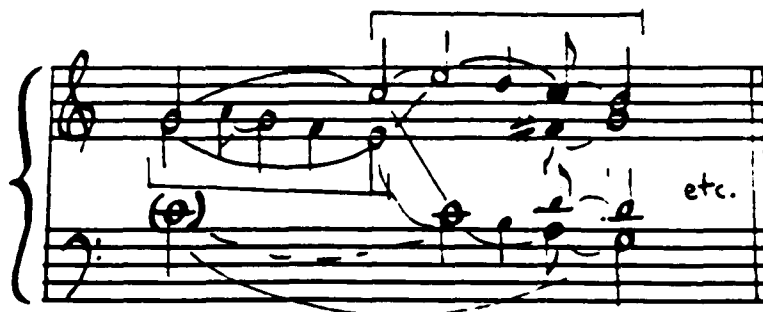
a) Pattern 1A: 5-4-3 Subject, M-H-L.



b) Background of Pattern 1a.



c) Pattern 1A: 5-6-5-4-3 Subject.



After the initial subject entrance the answer appears above the end of the subject. In transforming a 5-4-3 type subject to an answer, the main linear progression is usually modified to a motion of only a second, 8-8-7, a tonal answer, where the initial structural note of the answer can be heard as part of the initial tonic prolongation and the final note marks a temporary modulation to V. At a deeper level, the whole answer acts as part of a larger tonic-prolongation.⁶ The 5 of the subject will be 8 in the answer. The 4 will be 8 in the answer, heard as 4 in the key of V, and the 3 of the subject will be 7 in the answer, heard as 3 of the dominant, the resolution of the previous note. Thus the two successive 8's, have different functions, the first as the tonic in I, and the second as 4 of V. The 8-8-7 motion is not a linear progression, but an incomplete motion. It usually operates in a larger context as the beginning of a neighbor motion: 8-7-8. Thus the answer is not a full statement in the dominant key, but an

6. In some cases outside the WTC (e.g. the G minor violin fugue, which also exists as an organ fugue in D minor, and the C major organ fugue, BWV 531) a real, but subdominant answer (8-b7-6) appears instead. The melodic direction of the theme takes precedence over the usual harmonic plan, and a bridge is usually used to prepare for the third entry. It is in fact the simplicity and directness of these subjects that prevents the usual tonal modification.

expression of V within a tonic-prolonging exposition.⁷

A crucial role is played by the upper neighbor (6 in 5-6-5-4-3) in the answer: it expresses 3 of the tonality, thus providing the basis for a true linear progression in the answer itself (see Example 3.1c). Among the 5-4-3 type subjects, WTC II c is the only one without an upper neighbor to 5.

The counterpoint to the answer is structurally a continuation of the music of the subject's three implied voices: two inner-voice lines and a bass line. The inner-voice lines are 5-#4-5 (8-7-8 of V), which continues the initial note of the subject's main linear progression, and 3-2-2, which continues the final note of the subject's main linear progression, shown as alto and tenor respectively in Example 3.1. Since the answer enters above the first part in Example 3.1, the continuing first part functions as a bass, as well as inner voices, until the third entry. As the following examples show, in each case some of the four-voice harmony is expressed directly, and some is omitted: it is implied but not actually stated. In fugue, the subject, answer and counterpoint are each complete in them-

7. This point is clarified in Schenker, "The Organic Aspect," in Kalib, "Thirteen Essays," II: 259 and 264.

selves, but also invite other parts to join them by omitting some of the complete voice leading.

As the tonal function of structural notes of the subject changes in the answer, so tonal function of notes in the third entry may also differ from that of the first statement of the subject. In its simplest form, as in Example 3.1, the initial 5 of the third entry functions locally not as 5 of I, but as a tonic in V, and in a larger context as the root of V in the overall I-V-I harmonic plan of the exposition. 5-4-3 in this third entry fills in a linear span over the progression V-I, whereas in the original statement of the subject 5-4-3 fills in a tonic prolongation. The actual chords will therefore be V_3^5 , V_2^4 , I^6 (as in Example 3.1).

In harmonizing the third entry, the first part (now in the middle) can continue with 5 as a common tone, and also use 2-1, the continuation of 3-2. Notice however that the second part (the soprano) beginning 8-7, continues with 7-8, completing a large neighbor-motion. Whereas the first entry implies three voices and a single harmony, i.e. 5, 3, and 1 of I, the second part implies only a single voice, 8 moving to 7 and back, but two harmonies. The third entry, 5-4-3, also suggests only a single voice, not two as in the first statement of the subject, since at this level 5 and 3 represent notes of different harmonies, not the same harmony.

The three entries of the subject, indicated by brackets in Example 3.1, express a I-V-I harmonic progression. By showing some chords in four or five simultaneous voices, I do not mean to contradict the 3-part nature of this music, but to show that a 5-part polyphony underlies the three-part texture. The five voices comprise four harmony voices (stepwise voice-leading connections) and a bass line which merely sounds the roots I-V-I, and the incomplete neighbor, 6-5, of the applied dominant to V.

As we examine specific examples, the theoretical framework will sometimes appear clearly and at other times in complex and difficult arrangements.

1) WTC II C (subject analysis: Example 2.3)

The WTC II C fugue presents very clearly the three-part exposition structure described above. The main structural elements of the exposition are shown in Example 3.2, and may be compared with the Pattern 1A. The subject expresses the initial tonic chord. The harmonic motion of measures 7-9 leads to a resting point on V at the end of the answer, and the complementary harmonic motion of measures 11-13 leads the music of the third entry back to a cadence on I, conforming to Example 3.1. The motion away from the tonic

Example 3.2
Structural Analysis, WTC II C Fugue Exposition

① ②

a)

10 10 10 10 10 6 6

I - - II - - II

b)

c)

The image displays three musical staves, labeled a), b), and c), representing different structural analyses of the WTC II C Fugue Exposition. Each staff is written in treble and bass clef. Staff a) includes numerical annotations (10, 10, 10, 10, 10, 6, 6) and Roman numeral indicators (I, II, II) below the notes. Staff b) and c) show alternative phrasing or structural groupings of the same musical material.

occurs during the answer, leading to V through an applied dominant. The return to the tonic takes place during the third entry of the subject. Completion of the harmonic motion coincides with completion of the imitative plan at measure 13.

The structure of the answer conforms generally to the description above. But, because of the requirement of a tonic harmony in measure 5, the neighbor-note motion of the subject (G-A--) is here expressed as a leap from the initial C to E, and the answer continues with a 3-2-1 third-progression which returns to C (measure 6), but this C acts as an inner- rather than an upper-voice note in terms of the whole exposition. By this means the main upper voice rises above the hypothetical 8-7-8 motion, and in this, as well in most other instances, the 8-7-8 motion becomes in fact an inner voice, subordinate to a superimposed arpeggiation and to an implied 3-2-1 linear progression.

The counterpoint to the answer begins with the implied tenor voice, 3-2-2. It then passes through the bass notes C and A in descending stepwise motion (8-6), after which it leaps to the alto voice #4-5 (F# and G), leading to the cadence. All three of the counterpoint voices Pattern 1A are at least partially present in their proper registers, as Level c of Example 3.2 shows.

The entry of the third part completes the bass motion to G begun by the counterpoint, and continues the descent which began with the first statement of the subject. In measures 10 to 13 the upper parts are free, since there is no countersubject. The soprano line essentially prolongs 7 (B), through a double-neighbor motion (7-6-8-7), and resolves to 8 (C) to complete the neighbor-motion begun by the answer: 8-7 . . . 7-8. The soprano neighbor note A allows the bass F to enter as a consonance. In the rhythmic structure of the cadence the reaching-over forms a syncopation,

A further organizational aspect of this exposition, typical in Bach, is the arpeggiation of the upper voice, culminating in measure 13 at the high G, which acts as the main structural note of the upper voice for the entire fugue (see Chapter 8).

2) WTC I F (subject analysis: Examples 2.4, 2.5, 2.6)

As Example 3.3 shows, the exposition of the WTC I F fugue also follows Pattern 1A very closely. As in the WTC II C fugue, the neighbor note of the subject becomes an upper third in the answer, giving a 3-2-1 third-progression within the answer itself, (A-G-F). Since the subject includes a 2-1 secondary voice in its cadence, the answer correspondingly has a 6-5 voice in its cadence. According to Example 3.1, the note D should be in the bass voice in measure 7, but, as mentioned in the discussion of counter-subject at the beginning of this chapter, a countersubject often restricts the voice leading of the exposition. Here the countersubject avoids D, and instead focuses on the upper of its implied voices, B-natural. The alto note B is the only voice in the counterpoint to the answer which, when transposed, will conform to the upper voice note E above the third entry. This then enables the countersubject at the third entry to conform to the hypothetical upper voice mo-

Example 3.3
Structural Analysis, WTC I F Fugue Exposition.

⑤ ①⑨

a)

I - - - I - - - I

b)

c)

tion, 7-8. See measures 12-13. The countersubject uses only the structural notes which are in common between the two strata of voice leading.

Since the countersubject to the answer is restricted to the higher stratum of the alto voice, it does not form a smooth registral connection to the third entry as does the corresponding counterpoint in the WTC II C exposition. Instead, the third part enters as an octave transfer of the end of the countersubject. The small bridge between the second and third entries, based motivically on the invertible counterpoint of measure 5, provides a smooth connection between the end of the answer and the beginning of the next countersubject statement.

The third entry itself functions according to Pattern 1A. The middle part, in free counterpoint, uses primarily the common-tone C. The countersubject, in the upper part at the third entry, is simply a transposition of the essential voice leading of the first statement of the countersubject (as discussed above), but its flurry of sixteenth notes allows reinterpretation of the structural notes to fit the new context, as an upper rather than a lower voice.

Although the background of this exposition is similar to that of the WTC II C fugue, there is no comparable unifying structure in descending sixths and tenths.

Instead, completion of a major tonal unit is signaled at the end of the third entry by the completion of an overall octave arpeggiation F-C-F in the bass at measure 13. Notice, however, that the upper voice in larger terms is 3-4-3, where the initial 3 is an arpeggiation in the answer, and where the following 4 and 3 follow the underlying 5-4-3 motion of the third entry through voice exchange, as shown in Example 3.3a. The A here is part of a larger arpeggiation to a later C, the main upper voice note of the entire fugue.⁸

3) WTC II Ab (subject analysis: Example 2.18)

The WTC II Ab fugue also follows the basic voice-leading structure of Pattern 1A. Again the answer uses the neighbor note of the subject as a structural note, giving a rising-third arpeggiation followed by a descending third-progression (measures 1-4). Once again, the hypothetical 8-7 motion of the answer is covered by the high 3 (C), which moves through unfolding to Bb in measure 5.

Like that of the previous example, the countersubject of this fugue avoids the hypothetical descending motion to 5, and instead leaps to Eb, from which point it accompanies

8. See Jonas, Introduction to the Theory of Heinrich Schenker, Example 144, p. 94.

Example 3.4
Structural Analysis, WTC II Ab Fugue Exposition.
(First three entrances.)

a)

b)

c)

the answer in sixths rather than tenths, moving through #4 to 5. The Eb and C move to Bb and D in an unfolding of the first part, leading to the Eb, shown in Example 3.4a. The main linear motion of the countersubject is 5-#4-5, the alto voice of Example 3.1. As in the WTC I F exposition the countersubject focuses on the notes which can be reused as part of the 7-8 motion of the upper voice as countersubject to the third entry.

The short bridge to the third entry begins a prolongation of V through stepwise descent, allowing the C of the third entry to sound as a consonance within the V prolongation. The upper voice (countersubject) is a descending third-progression, Bb-Ab-G, linking the main upper-voice note Bb with the leading-tone, G, and converging on the tonic at measure 8, as shown in Example 3.4b. Notice how the countersubject unfolds thirds in its first instance but is part of a descending third-progression in its second statement. The "S" shaped slur in the inner voices of Example 3.4a shows how important notes of the third entry are incorporated within the V prolongation as part of a descending sixth linear progression (Eb-G), within an underlying succession of $\frac{5}{b}$ chords, shown in Example 3.4b.

Although the upper voice conforms to the pattern of Example 3.1 by completing the neighboring motion 8-7-8, Bach gives a more important 3-2-1 linear progression above, which contributes greatly to the unity of the exposition.

The fourth entry, in the bass at measure 8, completes the structural bass line, and leads on to the dominant in measure 10, where the first episode begins. The fourth entry acts structurally as a bridge or modulation to the dominant, and not as part of the initial tonic prolongation.

4) WTC II c (subject analysis: Example 2.2)

In contrast to the three fugues discussed above, the subject of the WTC II c fugue has no upper neighbor. The answer thus does not arpeggiate up to 3, but instead makes use of the lower arpeggiation to Eb in the subject to form a tonal answer (see Example 3.5). The simple 8-8-7 motion of the hypothetical answer (Example 3.1) is elaborated here by a neighbor motion to D, avoiding a direct repetition of 8.

This fugue also has a countersubject, a simple descending motion from the end of the subject, first to the tonic, then to natural-6, and then to 5, essentially following the bass voice of Example 3.1, rather than the #4-5 of the alto voice, seen in other countersubjects. The #4, leading-tone to the dominant, seen so often in other examples, is not

Example 3.5
Structural Analysis, WTC II c Fugue Exposition.

(5)

a)



I II I

b)



c)



present, but is implied by the voice-leading context, since F# is the implied resolution of the initial G of the subject when the bass reaches A. Although the voice leading of this part of the exposition is essentially the same as those discussed above, less is stated explicitly and more is implied.

The third entry functions like the others discussed so far. The end of the third entry is followed immediately by a motion to the low C, completing the bass voice of the exposition, as in the WTC I F fugue. Since the countersubject to the answer is essentially a bass progression (it follows the bass voice of Example 3.1), the countersubject to the third entry presents a profile very different from the other countersubjects seen thus far. It uses notes of the inner voices of Example 3.1, rather than of the upper voice; notes which are properly a continuation of the first part, not the second. Consequently the first part uses the contrapuntal voice which is properly that of the second part, i.e. 7-8, giving an exchange of voices (inversion) in the two upper parts, and a resultant downward registral shift. The structural role of the bridge can now be understood. It effects this change of register, connecting the end of the answer to the beginning of the countersubject, while at the same time converting the minor dominant to

major; B-flat to B-natural. The "obligatory register" of the theoretical upper voice (8-7-8) is restored by the upward octave transfer C-C in measure 5. Thus, the use of an unusual countersubject structure (one which acts not as a countersubject but as a plain counterpoint) causes structural modifications to the voice leading of the accompaniment to the third entry, and necessitates the bridge. Example 3.5b shows the structural changes (compared to Pattern 1A), and Example 3.5c shows the voice-leading background in which the exchange of upper voices is omitted.

5) WTC I g (subject analysis: Example 2.13)⁹

As in other examples, the 5-6 neighbor motion within the subject recurs as a 1-3 upper-third in the answer. But the implied return to 5 in the subject is replaced by an implied passing note (A) in the answer, shown in Example 3.6. However, this passage nevertheless contains the series of parallel tenths and the voice-exchange between answer and countersubject as in the WTC II C fugue.

Unlike the countersubject of the WTC I F fugue, this countersubject uses two voices, each resolving to D. The lower voice is like the bass and the upper voice is like the

9. This fugue is analyzed by Sylvan Kalib in "Thirteen Essays," I: 290-301.

Example 3.6
Structural Analysis, WTC I g Fugue Exposition
(first three entrances).

The image displays three staves of handwritten musical notation, labeled a), b), and c), representing the first three entrances of the WTC I g Fugue Exposition. Each staff is written on a grand staff (treble and bass clefs) and includes various musical notations such as notes, rests, and accidentals. Above each staff, there are handwritten annotations: a) includes a bracketed section and a circled '5'; b) includes a circled '5'; and c) includes a circled '5'. The notation is dense and appears to be a working draft or a detailed analysis of the original score.

alto of Example 3.1. The lower of the two voices prepares the register of the soon-to-enter third part, as in the WTC II C exposition.

This polyphonic counterpoint structure, based on a 3-1-6-#4-5 melodic framework, is very common in Bach's fugal writing, as well as in his non-fugal music. It is essentially an unfolding of the bass and alto voices of Pattern 1A, and is clearly seen in Examples 3.2b and 3.6b. It occurs, in a more-or-less complete form, in the WTC II C and c fugue expositions already discussed.¹⁰ Further occurrences are mentioned below.

The third entry itself follows the usual structural plan. The prominent low G gives a low level tonic in measure 5, but the true return to I occurs at the cadence in measure 6. In measure 5 occurs a very unusual diminished third, Eb-C# in the inner voices, suggesting an inverted form of the augmented sixth. Indeed, this apparent anomaly foreshadows the true augmented sixth in measure 27 which leads to the concluding stretto passage of the fugue.

10. Other examples include the second half of the subject of the "Great" C major organ fugue, the end of the subject of the "Sicut locutus est" chorus in the Magnificat, and measure 5 of the WTC I D prelude (See Chapter 9).

At the third entry the countersubject appears in the soprano voice. As discussed above, the hypothetical counterpoint of the upper voice is 7-8, but the polyphonic countersubject used here contains at least two implied voices. Nevertheless, the final motion of the countersubject is #7-8, but in a higher octave. Because of the wide range of the countersubject, it is given an octave higher than its theoretical location. This gives added shape to the exposition by creating a gradual range expansion above, as well as below, the middle register.

Since the upper part is highly polyphonic at the third entry, the middle part mainly repeats the pitch-classes of the upper voice through voice-exchanges. The short bridge has a design function, but not a tonal function. It provides for the upward registral shift in the upper voice, to prepare for the countersubject, in contrast to the downward registral shift in the bridge of the WTC II c fugue.

The fourth entry (answer) again leads to the dominant, after which an episode leads the music back to I (measure 10). The entire opening tonic prolongation (measures 1-10) encompasses two harmonic motions, I-V-I-V-I. Since the subject and countersubject together express a very full harmony (as in the WTC II Ab fugue), the fourth entry is accompanied by only two parts. The balance of this fugue

remains mostly in three parts, except in the episodes, where the music is not so restricted contrapuntally.

6) WTC I c (subject analysis: Example 2.19)¹¹

The harmonic organization in each of the five expositions discussed above follows closely that Pattern 1A. The various arrangements of the upper voice contour arise from the exploitation of specific characteristics in the given subject or countersubject. The WTC I c exposition has a different harmonic arrangement: the beginning of the third entry, not the end of the third entry, marks the return of the tonic. This ultimately stems from the strong initial tonic of the subject itself.

The structure of the answer and countersubject conforms to Pattern 1A. As Example 3.7 shows, when the initial tonic appears in the answer, it provides the Kopfton at an earlier stage than usual. The countersubject uses notes of the bass as well as the middle voices, with the voices inverted. Again the answer has a leap of a third (C-Eb, measure 3), while the counterpoint below moves from Eb down to C, giving a voice-exchange. The answer has a third-motion 3-2-1

11. The entire fugue is analysed in great detail by Schenker in "The Organic Aspect," trans. in Kalib, "Thirteen Essays," II: 246-298.

Example 3.7
Structural Analysis, WTC I c Fugue Exposition.

②

a)

Part a) shows the first system of the fugue exposition. It features a treble and bass staff with complex melodic lines and harmonic support. A bracket above the treble staff indicates a phrase, and a circled '2' is positioned above it. Below the staff, there are Roman numerals I, II, and I, and a series of rhythmic markings: 10 10 (10) 10.

b)

Part b) shows the second system of the fugue exposition. It continues the melodic and harmonic development from the first system, with similar notation and structural markings.

c)

Part c) shows the third system of the fugue exposition. It concludes the section with further melodic and harmonic details, maintaining the same notation style as the previous systems.

(Eb-D-C) prolonging 1, again supported by parallel tenths (or thirds) in the lower part. In measure 4 is an applied VII to the V in measure 5, giving an auxiliary cadence at this point, and the lower part uses #4 and natural-6 as the main notes in the approach to the dominant. But in this instance the resolution of the #4 and natural-6 is to a unison rather than an octave. The major structural difference in the countersubject is the inversion of the counterpoint notes in the applied-VII chord of measure 4, giving a third (F#-A) resolving to a unison in this case, but a sixth (A-F#) resolving to an octave in Pattern 1A.

The arrangement of this auxiliary cadence can be accounted for by the music of the following measures: in the Pattern 1A the bass part enters immediately, giving a stepwise resolution to the low A of measure 7, while in this example the third entry is delayed, allowing the minor dominant (I in V) to be transformed to a major dominant (V⁷ in I) through a short episode (measures 5-7). The upward transfer of the counterpoint in measure 3 of the WTC I c fugue keeps the lower part above middle C so that the entrance of the subject in the bass (measure 7) can occur in a new register. Further, it avoids a potentially thin texture by keeping the answer and countersubject in close proximity.

The bridge, then, not the third entry, provides the harmonic motion which leads to the return of the tonic. The basic upper voice motion of the bridge, like the subject, is 5-4-3, and the end of the lower part again uses the typical arpeggiation pattern mentioned above, 3-1-6-#4-5 (here Ab-F-D-B-C), where D provides a stepwise connection to the initial tonic of the third entry (C).¹² The bridge also allows the upper part to regain the higher register in preparation for the countersubject, as in the WTC I g fugue. In general terms the bridge is a voice-exchange, Bb-B-natural, and G-F.

As shown in Example 3.7c, The initial tonic necessitates a return to I at the beginning of the third entry, so the third entry, like the first entry, prolongs I.

Continuation of the third entry by the descending scale in measure 9 allows the root position tonic to appear, completing the overall downward arpeggiation of the bass voice. Since the subject and countersubject make a full harmony together, the second countersubject contains mainly common tones and doublings of notes of other voices, again rather like the WTC I g fugue. The scale which begins the countersubject is structurally reinterpreted at the third

12. Schenker, Free Composition, Fig. 102.5, shows the structure of this bridge.

entry. It is not a prolongation of F, but an arpeggiation of C minor. The remainder of the countersubject is also reinterpreted. The third-progression C-Bb-A (4-3-2 in V) moving to 1 (G) at the end of the answer, is reinterpreted as a neighbor 4 (F) moving to the third-progression Eb-D-C, a prolongation of I.

The main upper voice, a descending fifth-progression G-C, gives an overall unity to the exposition. Although the main harmonic motion of the exposition has occurred by measure 7, completion of the exposition is marked by the arrival at C in the upper part and by the tonic in the lower octave of the bass, coinciding with the end of the third entry at measure 9.¹³ Complete interrelation of subject structure and exposition design is achieved through masterly control of register and large scale voice-leading structure.

7) WTC II b (subject analysis: Examples 2.6, 2.7, 2.8)

Arpeggiation through the tonic chord in the WTC II b subject results in an unusually early start to the dominant prolongation in the answer, in measures 8 and 9. The bulk of the answer is thus a prolongation of the tonicized V rather than a motion leading to V (see Example 3.8).

13. This reading is essentially the same as Schenker's.

Example 3.8
Structural Analysis, WTC II b Fugue Exposition.

(5) (6) (7) (8)

a)

b)

c)

Because of this tonal change, the upper neighbor of the subject is also heard in the answer as an upper neighbor (D in measure 9), rather than as part of a tonic arpeggiation.

Beginning with a stretto-like imitation of the answer, which solidifies the motion to the dominant, the countersubject has a structure very different from those already discussed. Since it is part of a dominant prolongation rather than a motion to the dominant, it expresses primarily the root of V, filled out by sequential motion.

As in other cases with an initial tonic, a bridge is necessary here to lead the music back to I for the third entry. Here the bridge simply elaborates the closing material of the answer and countersubject in descending sequential motion, converting the minor dominant into a dominant seventh.

The third entry begins a prolongation of I in the usual way for subjects with initial tonics. But here the countersubject appears again in the first part, rather than in the second part. Range is the main factor: since the first statement of the countersubject occupies the tonal space a fifth below the subject (due to the imitation of the answer at the octave), the second statement of the countersubject should occupy the space a fifth below the answer. It is given to the middle part since the range is extremely low

for the upper part. The alternative is to begin the countersubject an octave higher, in the upper part. Although this is a possible arrangement (cf. WTC I g), the plans of both the bridge, as a descending motion, and the first episode (measures 21-26), as an ascending sequence, work against it. The upper part instead has free counterpoint centering on the prolonged 5, and as such takes a less active role in the structure here.

The structure of this exposition is more segmented than the others discussed thus far, mainly because of the harmonic demands of the tonic arpeggiation in the subject. Indeed, the tonic arpeggiation shifts the focus of harmonic movement from the end to the beginning of each thematic statement, coordinating prolongations with entries.

In six of the expositions discussed above (I do not include WTC II b) the voice-leading patterns are remarkably similar, particularly in the registral precision of structural notes. Details of voice leading are also often very much alike. Variations from the Pattern 1A can be traced to details of the imitative material used, particularly to the structural effect of the countersubject.

Pattern 1A shows the theoretical upper voice of this type of exposition as 8-7-8. But, as we have seen, Bach often supplants this upper voice with a more directed linear progression of some kind.

It is not usually possible to determine the Kopfton of a fugue on the basis of the exposition alone. In most of the cases examined thus far, the main function of the exposition in terms of the upper voice is arpeggiation. Most of the examples have a prominent 3 near the beginning of the answer, the result of a tonal modification of the 5-6 neighbor motion of the subject. Although such a 3 may be the main upper voice of the exposition, and has the potential to be the Kopfton of the fugue, a determination cannot be made on this basis alone; such a conclusion can never be based merely on the study of an exposition isolated from an entire fugue. More often, subsequent entries of the subject in a high register can easily project a prominent 5 as the Kopfton, preceded by a large arpeggiation.¹⁴ But in instances where 3 is indeed the Kopfton, it is the upper-neighbor 6, transposed to 3 in the answer, that provides the crucial upper-voice note of the composition.¹⁵

14. Oswald Jonas shows this structure in his background graph of the WTC I F fugue. Jonas, Introduction to the Theory of Heinrich Schenker, Example 144, p. 94.

15. John Rothgeb shows this structure in his analysis of Bach's F major Invention. See "Thematic Content: a Schenkerian View" in David Beach, Aspects of Schenkerian

Pattern 1B: 5-4-3 Expositions, L-M-H.

Fugues in this category include:

- 1) WTC II g
- 2) WTC II a
- 3) WTC I D
- 4) WTC II D
- 5) WTC II Eb
- 6) WTC II A

The hypothetical background voice-leading structure for expositions based on a rising series of entries, Pattern 1B, is shown in Example 3.9. Since the answer still enters above the end of the subject, the second entry and counterpoint are structurally no different, but the voice-leading structure at the third entry is different. (Compare Example 3.9 with Example 3.1.) The third entry itself opens a new, higher register, and provides a strong 5 with good potential to represent the Kopfton of the entire composition. The basic upper-voice motion of the exposition is 5-4-3, the linear progression of the subject itself. Notice that the relationship of the two polyphonic lines of the first part accompanying the answer and third entry is the same in each fugue, i.e. 5-#4-5 directly above 3-2, since the relationship is established by the 5-3 third of the subject itself. Thus the two lines appear together and work as a pair in the

Analysis, (New Haven: Yale University Press, 1983): 49. The WTC II Ab fugue is probably such a case also.

countersubject or counterpoint to the answer. In addition, since the first part remains the lowest at the third entry, a root motion, 5-1, suggesting a V-I cadence, can appear in conjunction with the counterpoint lines of the first part. If this bass voice is used, and it is used in all six cases, a very firm cadence will occur at the end of the third entry.

Example 3.9
Pattern 1B: Exposition of 5-4-3 Subject, L-M-H.



1) WTC II g (subject analysis: Example 2.9)

The WTC II g exposition is typical: the answer and countersubject follow Pattern 1B. Again the neighbor motion of the subject is converted into a third-progression in the answer. The countersubject uses mainly notes of the bass voice. Here again the countersubject is polyphonic, expressing two main voices, the bass motion from 1 down

(eventually) to #4, leading-tone to 5, and the inner voice 3-2 motion shown by rising stems in the tenor of Example 3.10. The third-progression 3-2-1 of the answer is harmonized by parallel tenths in the bass. Using a form of the arpeggiated counterpoint motive described above, the countersubject leads from Bb to C# through a diminished seventh, avoiding the awkward rising augmented-second b3-#4.

The third entry begins directly at the end of the answer and, as Example 3.10 shows, follows Pattern 1B, leading the music back to the tonic at measure 13. As suggested above, the third entry establishes the Kopfton of the entire fugue. The countersubject here uses notes of the answer line, F#-G, as well as moving through notes belonging properly to the first part. The continuation of the first part uses mainly notes of the bass line, as well as notes which are theoretically continuations of its implied polyphony. The third entry ends with a root position tonic chord, completing the initial tonic prolongation.

The fourth entry, in the bass, begins a second tonic prolongation (measures 13-24), comprising an answer and subject plus episodic material. Although the exposition of this fugue is in four parts, the tonal prolongations segment it into two groups, subject-answer-subject, and answer-subject.

Example 3.10
Structural Analysis, WTC II g Fugue Exposition.
(First three entrances.)

⑤ ⑩

a)

I V I

b)

c)

The image displays a musical score for the first three entrances of the g Fugue Exposition from the Well-Tempered Clavier, Book II. The score is organized into three systems, labeled a), b), and c). Above the first system, there are circled numbers 5 and 10, indicating specific measures. The notation includes treble and bass staves with various musical symbols such as notes, rests, and accidentals. Structural analysis is indicated by Roman numerals I, V, and I placed below the staves, and by horizontal lines with dots above the staves. The score is written in a single system, with the first system (a) spanning measures 1 to 10, the second system (b) spanning measures 11 to 20, and the third system (c) spanning measures 21 to 30.

2) II a (subject analysis: Example 2.14)

Like that of the WTC II g fugue, the WTC II a exposition closely follows Pattern 1B. Again the answer arpeggiates from the initial note, A to the upper third. But since the neighbor of the subject is incomplete, a third-arpeggiation follows. The theoretical 8-7 motion at the end of the answer is "covered" in larger terms by the ascending arpeggiation to E.

The arpeggio pattern of the countersubject descends as far as 2, so that the stepwise root motion from I to the applied dominant is expressed as a seventh-progression. The 6-5 motion, F#-E, seen in many counterpoints, appears here as an inner-voice in the implied polyphony of the answer.

Unlike the WTC II g fugue, this exposition has a short bridge. A descending fourth in the bass, E-B, governs the structure of the bridge and, as in the WTC II Ab exposition for example, permits harmonization of the beginning of the third entry as part of a larger prolongation of V.

Since the countersubject expresses a very full harmony in conjunction with the subject, the remaining part, a second countersubject, consists largely of voice-exchanges and doublings of the countersubject. Compare with the WTC I c and g expositions.

Example 3.11
Structural Analysis, WTC II a Fugue Exposition.

③

a)

Part a) shows the first system of the fugue exposition. It features a treble and bass staff with complex melodic lines and harmonic support. A bracket above the staff spans the first two measures. Below the staff, the Roman numerals I, II, and III are positioned under the first, second, and third measures respectively. The notation includes various note values, rests, and dynamic markings.

b)

Part b) shows the second system of the fugue exposition. It continues the melodic and harmonic development from the first system. The notation includes various note values, rests, and dynamic markings.

c)

Part c) shows the third system of the fugue exposition. It continues the melodic and harmonic development from the second system. The notation includes various note values, rests, and dynamic markings.

3) WTC I D (subject analysis: Example 2.26)

A subtle detail of reinterpretation occurs in the answer of the WTC I D fugue. The thirty-second-note flourish expresses a fourth, A-D, prolonging the tonic, whereas in the subject it expresses only a third, D-F#. ¹⁶ As in many of the expositions described above, the upper neighbor of the subject becomes an upper third in the answer, within a tonic prolongation. The counterpoint to the answer is connected by stepwise motion to the end of the subject. Rather than a stepwise bass-motion to the dominant as in Example 3.9, Bach gives here a root movement, D-E-A. Compare this to the WTC II C, c, and g expositions, where the dominant is approached by step, from above, from below, or from both directions. The counterpoint to the answer uses root motion rather than inner-voice motion, as in the WTC II c fugue, and the #4 is implied by the contrapuntal context.

16. As has been reported to me by Mark Holland, this detail was noted by Ernst Oster. I disagree with Felix Salzer's analysis here. Salzer, Structural Hearing, II: 240-243, Ex. 474. The 4 as upper neighbor of 3 in the subject becomes 8 as structural note in the answer, to which an ornamental 7 is attached. C# of the upper part must be considered a lower neighbor of the preceding D. The bass E is a passing note.

The small bridge allows the initial tonic of the third part to enter as a neighbor note (C#-D-C#) while remaining within the prolongation of V, as in the WTC II a fugue. The F# which appears in the bass at the entry of the third part provides consonant support for this entry, as shown in Example 3.12b.

The third entry continues in the usual manner, returning the music to I at the cadence in measure 5. The second part also continues the usual pattern, and the first part continues a simple bass progression.

The fourth and fifth entries plus the intervening bridge constitute a second prolongation of the tonic, and a continuation of the upward expansion which culminates in the Kopfton A in measure 6.¹⁷ The relationship of the outer voices is the same at the second and fourth entries, measures 2 and 5: measure 5 has a fuller texture, but a similar harmony. Also notice in the third and fourth entries that the alto part has the syncopated cadential rhythm mentioned above in the discussion of the WTC II C fugue. Since the fifth entry begins with a restatement of the tonic, its conclusion is able to initiate a motion away

17. Salzer, Structural Hearing II, Example 474, indicates a Kopfton of F# for this fugue.

Example 3.12
Structural Analysis, WTC I D Fugue Exposition.

⑥

a)

b)

c)

The image displays three staves of musical notation, labeled a), b), and c), which represent different structural analyses of the WTC I D Fugue Exposition. The notation is written on grand staves (treble and bass clefs) and includes various musical symbols such as notes, rests, and dynamic markings (f, p). The analysis is divided into five sections labeled I, II, III, IV, and V. The notation is complex, with many notes and rests, and includes various musical symbols such as notes, rests, and dynamic markings (f, p). The analysis is divided into five sections labeled I, II, III, IV, and V.

from the tonic, as in the WTC I b-flat exposition (see Example 3.19 below).

As in the WTC II g exposition there is a conflict between the schematic pairing subject-answer, subject-answer and the tonal plan I-V-I-V-I, which implies a subject-answer-subject---answer grouping. This conflict aids in the forward momentum of the fugue since the fourth entry, which is a completion of the motivic design and is thus end-oriented, is also the beginning of the second prolongation of the tonic (answer and bridge) and is therefore beginning-oriented.

4) WTC II D (subject analysis: Example 2.27)

The voice-leading structure of the WTC II D exposition is remarkably similar to that of the WTC I D exposition, and it also follows the Pattern 1B very closely. The upper initial tonic gives a different profile to the primary upper voice. The Kopfton A covers the third-progression, F#-E-D, of the answer, as shown in Example 3.13.

The essential motion of the counterpoint (possibly considered a countersubject, but occurring in the same part at the next entry of the subject) is 3-#4-5 (F#-G#-A), where the second 3-#4 is filled out through thirds (3-1-6-#4) very beautifully, using the counterpoint pattern mentioned

Example 3.13
Structural Analysis, WTC II D Fugue Exposition.

The image displays three staves of musical notation, labeled a), b), and c), which are part of a structural analysis of the WTC II D Fugue Exposition. Each staff is written in treble and bass clef with a key signature of one sharp (F#). Above each staff, there are handwritten annotations: a dashed line with a '5' above it, and a circled '5' with a bracket. Staff a) shows a complex melodic line with many slurs and ties. Staff b) shows a similar melodic line with some notes marked 'p'. Staff c) shows a simpler melodic line with fewer slurs and ties. The staves are connected by a vertical dashed line on the left side.

previously. The basic #4-5 motion of the counterpoint derives theoretically from the structural 5 of the subject as Example 3.13c shows.

The initial tonic D of the third entry is essentially a passing tone to E, reminiscent of the upper neighbor in the WTC I D fugue, but the harmonic support is different. Passing motions within V are used in both instances, but here they result in a passing IV6 rather than I6. The neighbor D occurs in a high register while its resolution is in the alto (E), as shown in Example 3.13b. In the harmonization of the third entry the first part continues primarily as a bass voice, and the second part continues the 8-7-8 motion begun by the answer.

The fourth entry, in the bass, overlaps the third entry slightly, bridging the cadence at the end of the third entry. It begins as part of the initial tonic prolongation, but serves to lead the music towards the dominant in measure 10. The fourth entry is also the first of many instances in this fugue of a reinterpretation of the opening fifth of the subject, 8-4, as a cadential fifth, 5-1 (V-I).

5) WTC II Eb (subject analysis: Example 2.15)

The WTC II Eb exposition has the same scheme as those discussed above--a rising series of entries and a 5-4-3 type subject--but the tonal design is different. This is due primarily to the strong initial tonic of the subject: a whole measure of Eb.

In all cases discussed so far "elision" has occurred at the point where the end of the subject and the beginning of the answer coincide. That is, the last note of the main linear progression of the subject and the first note of the main linear progression (or initial tonic) of the answer occur within the same rhythmic unit. This is not to say that these notes always occur at exactly the same moment, but rather that they usually occur in close proximity, within the same main metrical group. Many of Bach's subjects end on a strong beat, but the answer often begins on an upbeat or afterbeat, so that although the two notes coincide in the underlying voice leading, they may not actually be simultaneous on the surface of the music. Such a case can be seen in the WTC II a fugue. But there is no elision between the end of the subject and the beginning of the answer in the WTC II Eb exposition. The subject ends at the beginning of measure 6, and the answer enters at the beginning of measure 7. Possibly the lack of elision here

is merely a feature of the alla breve, choral style, or, more likely, it is introduced to allow the regular sequential motion of the motive which follows the end of the subject in the first part.

The answer takes the usual form of a rising third-arpeggiation (1-3) followed by a descending third-progression (3-2-1), essentially prolonging the tonic, followed by a motion to 7. As in the WTC II C fugue, the counterpoint is a sequence of descending thirds, here G-Eb-C-A, leading to Bb, 5, in measure 12, but in this case the final third is filled with a passing Bb, which serves, through octave transfer, to bring the bass line up to a higher register. This Bb also introduces the cadential syncopation mentioned before, albeit prolonged for an extra measure.

At the end of the answer a short bridge moves the music directly back to I (measure 14), again using the descending sequence mentioned above. But this tonic chord marks a structural return to the tonic at the point of entry of the third part, to accommodate the initial tonic, as in the WTC I c fugue, where the beginning of the third entry also marks the return of I. The third entry, then, functions as a harmonized repetition of the first entry. The first part continues the root movement of the bass line, and the middle voices fill in the harmony, essentially prolonging the tonic as 8-7-8.

The most important deviation from the hypothetical voice-leading structure of Example 3.9 can be attributed to the strong initial tonic, which causes the return to I at the beginning of the third entry.

As Example 3.14 shows, the fourth entry is not harmonized identically to the second entry. The Eb of measure 22 is not a stable tonic but an incomplete neighbor to D, which is itself part of a motion to the Eb of measure 24. Although V is reached in measure 26, the incomplete upper voice descent allows for the following four measures, that lead to a perfect authentic cadence on V and complete a third-descent in the upper part (see Example 3.14c).

Although the outward scheme of this exposition appears as paired entries of subject-answer, subject-answer, the tonal plan is again three entries prolonging an initial area of tonic stability, followed by a fourth entry which signals the beginning of the first important motion away from the tonic, as in the WTC II g fugue.

Example 3.14
Structural Analysis, WTC II Eb Fugue Exposition.

(5) (10) (15)

a)

b)

c)

I II I - -I

The image displays a handwritten musical score for the exposition of the E-flat major Fugue from the Well-Tempered Clavier, Book II. The score is divided into three systems, labeled a), b), and c). Above the systems are circled numbers 5, 10, and 15, indicating measure numbers. System (a) shows the first system of the fugue with a large slur over the first two staves. System (b) shows the second system with a slur over the first staff. System (c) shows the third system with a slur over the first staff. Below the systems are the Roman numerals I, II, I, -, and -I, indicating the harmonic structure. A dashed line with a '5' above it is present at the end of each system.

Handwritten musical notation on three systems, labeled a), b), and c). Each system consists of two staves (treble and bass clef) joined by a brace on the left. Above each system are circled numbers: 25, 25, and 3 respectively. The notation includes various notes, rests, and slurs. System a) features a large slur spanning the first two staves. System b) features a large slur spanning the first two staves. System c) features a large slur spanning the first two staves. The notation is handwritten and appears to be a sketch or a study.

6) WTC II A (subject analysis: Example 2.21)

The WTC II A subject contains a melodic ascent, giving a real rather than tonal answer. But the harmony still follows the Pattern 1B. The dominant prolongation, preceded by a strong applied dominant, does not begin until the end of the answer, and the fifth ascent 1-5 of the subject is reinterpreted as only a fourth ascent 5-8 (with ornamentation), as in the WTC I D fugue (see Example 3.15a). The bridge returns the music to I, allowing the initial tonic of the third entry to appear in the context of a tonic prolongation. The upper voice of the answer and bridge is thus 8-7-8 as in Pattern 1B, but the third entry carries the upper part of the exposition higher, to the C# in measure 5, and to the E in measure 6. As Example 3.15c shows, each of the voices maintains its theoretical register and voice leading very closely through the course of the exposition.

Example 3.15
Structural Analysis, WTC II A Fugue Exposition.

a)

Part a) shows the first system of the fugue exposition. It features a treble and bass staff with complex melodic lines and harmonic support. A circled 'G' is placed above the staff, indicating a specific note or measure. Below the staff, there are three Roman numerals: 'I', 'I', and 'I -', which likely represent harmonic analysis or structural markers.

b)

Part b) shows the second system of the fugue exposition. It continues the melodic and harmonic development from the first system, with similar complexity in the notation.

c)

Part c) shows the third system of the fugue exposition. It concludes the section with further melodic and harmonic development.

Pattern 1C: 5-4-3 Expositions, H-M-L.

Fugues in this category include:

- 1) I F#
- 2) II F
- 3) I b-flat
- 4) II f
- 5) II e
- 6) II G

Example 3.16 shows the hypothetical voice-leading basis for fugue expositions based on a 5-4-3 type subject in a descending series of entries (Pattern 1C). Notice that the answer makes a smooth connection with the implied or stated tonic note of the subject, and that, since the answer enters below the first part, it has two hypothetical voices, 8-8-7 and 8-6-5 (the hypothetical bass line), rather than a single voice as in Examples 3.1 and 3.9. The third entry is structurally no different from that in Example 3.1, but the upper voices are different. Each entry connects directly with the end of the previous one. Notice that in contrast to Examples 3.1 and 3.9, which have registral expansion above and below the initial subject entrance, Example 3.16 shows only descending registral expansion. The theoretical melody line, basically a prolongation of 5, is very limited, and Bach uses a variety of techniques to vary and give direction to the upper register. This exposition plan also has a closer position of voices, which restricts the freedom of

individual parts in comparison to expositions based on Patterns 1A and 1B.

Example 3.16
Pattern 1C: 5-4-3 Subject, H-M-L.



1) WTC I F# (subject analysis: Example 2.11)

In the WTC I F# exposition the neighbor of the subject is again reinterpreted in the answer as an upper third to the main note, F#, after which the overall answer motion is a second, 8-7, leading to the dominant, as in many other answers already described. In conformity with Pattern 1C, the subject leads directly into the first structural note of the answer (see Example 3.17). The antepenultimate note of the subject, G#, gives a smooth stepwise connection to the initial note of the answer. Since the subject leads by stepwise motion directly to the beginning of the answer, the countersubject begins with a leap away from the end of the subject. The F# which begins the countersubject connects

Example 3.17
Structural Analysis, WTC I F# Fugue Exposition.

③

a)

b)

c)

I V I

with the exposed F# of beginning of the subject. Nevertheless, the essential #4-5 structural motion still appears at the end of the countersubject. The potential melodic poverty of the upper part in the hypothetical structure mentioned above is avoided by arpeggiation through the tonic chord.

The third entry occurs an octave below its hypothetical position. Discounting this octave separation, the answer leads in a stepwise manner to the beginning of the third entry. Although in this case the third entry could be played an octave higher without crossing parts, the octave separation gives a greater registral space to the exposition, and emphasizes the trio-like style of the composition: two upper voices opposed to an independent bass. (The trio texture is also evident in the episodes, particularly in mm. 9-10, 18-20, and 23-25. Further, the lower voice remains for the most part at least an octave below the upper voices.)

In the third entry the subject is altered so that it ends on 1 not 3, giving a root position cadence on I, and a stronger sense of closure to the exposition. This alteration can be understood structurally as an exchange of roles between outer voices, so that the soprano takes the third-progression 5-4-3 which properly belongs to the subject, and the lower part takes a simple bass motion, as Example 3.17

shows. In this way the upper voice, which is hypothetically a prolonged dominant with no directional force, expresses a linear progression. The upper voice assumes a dynamic role in the overall shape of the exposition, and the problem of upper-voice direction in the hypothetical exposition structure is solved.

2) II F (subject analysis: Example 2.16)

The WTC II F fugue exposition also follows Pattern 1C, but it includes a bridge, in contrast to the WTC I F# fugue. The answer prolongs the essential tonic note through arpeggiation which involves reinterpretation of details of the subject. For instance the prominent neighbor D of measure 3 operates as a harmonic note in the tonic chord when it appears as A in the answer, while the C of measure 3, resolution of the upper neighbor, operates as an applied dominant, G, in the answer, shown in Example 3.18a.

The counterpoint to the answer (not a countersubject as in the WTC I F# fugue) also arpeggiates through the tonic chord, but its main motion is B-natural-C, a continuation of the initial C of the subject as 5-#4-5.

The bridge does not function as a return to the tonic as might be expected, particularly in the case of a subject with an initial tonic-projecting leap (1-5) and a third

Example 3.18
Structural Analysis, WTC II F Fugue Exposition.

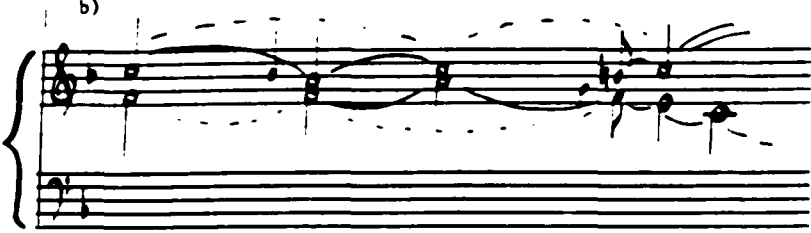
(5)

a)

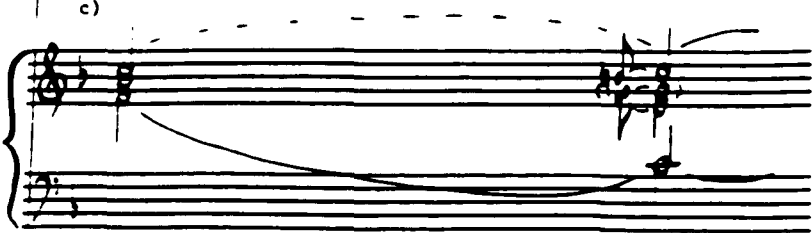


I

b)



c)



I

3 9

a)

b)

c)

Y I

The image displays three musical staves, labeled a), b), and c), each containing a piano (p) and violin (v) part. Staff a) features a complex piano part with many sixteenth and thirty-second notes, and a violin part with a long, flowing melodic line. Staff b) shows a simpler piano part with fewer notes and a violin part with a more melodic, arpeggiated texture. Staff c) has a very sparse piano part with long rests and a violin part with a few notes and a long slur. Above the staves, the numbers '3' and '9' are written. Below staff a), the letters 'Y' and 'I' are positioned. The notation includes various musical symbols such as notes, rests, slurs, and dynamic markings like 'p' and 'f'.

entry in the bass. Instead it expands the upper register for the upper voices, and provides a consonant harmony for the initial tonic of the third entry, shown in Example 3.18a. The rising seventh C-Bb of the upper part in the bridge, measures 8-12, suggests the addition of a seventh to V, but in this case the Bb acts only as part of a larger passing motion which further arpeggiates the dominant chord as far as measure 16. The initial tonic of the third entry is thus harmonized by I as a neighboring harmony of V. Harmonization of an initial tonic in this way usually occurs in cases where the initial tonic is an upbeat, as here, or an afterbeat, but not a downbeat. Other such cases already discussed are WTC I D and WTC II D and Ab. The third entry then, conforms entirely to Pattern 1C, prolonging V but leading to I. But the range expansion of the bridge allows the upper voice to express a conclusive motion to the upper tonic at measure 18, again alleviating the potential static quality of the hypothetical upper voice, and opening up needed space (cf. WTC I F#).

A further entry of the answer follows the third entry, and acts like the entry of a fourth part below the third entry. This redundant entry, as in other fourth entries, acts as a harmonic transition, leading to the strong cadence in the dominant at measure 29.

3) I b-flat (subject analysis: Example 2.20)

The WTC I b-flat fugue exposition begins with the same structure as those discussed above. The first two entries follow Pattern 1C closely, but the strong D-flat of the answer suggests a #IV⁷ rather than II#⁷ applied chord to the dominant. The return to the tonic at the beginning of the third entry is due to the metrically strong initial tonic, as in the WTC II Eb fugue. Thus the bridge, rather than the third entry, brings the music back to I at measure 10. This is similar to the function of the bridge in the WTC I c fugue, and in contrast to that in the WTC II F fugue just discussed. As in both, however, the bridge uses a voice-exchange to gain a higher register in preparation for the third entry.

Since this fugue has five parts, the fourth and fifth entries can form a further I-V-I progression, answer-subject. This harmonic motion is expressed in a more compact form than occurred in the second and third entries, since no bridge passage occurs. The fourth entry ends on A-natural, not Ab (the harmony here is V in Bb, not I in F), allowing the music to move directly back to I for the beginning of the fifth entry. Since the fifth entry already expresses the tonic through its initial tonic, the end of the fifth entry can begin the modulation to III, which is

Example 3.19
Structural Analysis, WTC I b-flat Fugue Exposition.

⑬ ⑭ ⑮

a)

b)

c)

completed at measure 25. As Example 3.19 shows, the end of the fifth entry, D-natural, is part of an applied dominant to IV, and is already moving away from the tonic key. The fifth entry acts as a link between the tonic prolongation of the exposition and the modulation to the relative major, in the same way the fourth entry in other examples discussed begins a modulation to the dominant.

In two WTC fugues based on 5-4-3 subjects with a descending series of entries--WTC II f and G--the voice leading is rather different: the V prolongation begins at or near the beginning of the answer, and lasts until the beginning of the third entry. Likewise, the tonic returns at or near the beginning of the third entry rather than at its end (cf. WTC II b fugue discussed above). In both cases elision is omitted between successive thematic entries, enabling the tonal prolongation to switch from I to V for the beginning of the answer, and back again for the beginning of the third entry.

4) WTC II f (subject analysis: Example 2.17)

Since no elision exists between the subject and the answer, the answer (except for its first note) can lie wholly within the dominant. (The lack of elision promotes

the metrical regularity of this fugue. See Chapter 8.) Because the subject is fully polyphonic (containing two complete voices, 5-4-3 and 8-7-8), the counterpoint to the answer uses the remaining contrapuntal voice, 3-2-1 in V, essentially prolonging the initial 5 of the subject, as shown in Example 3.20.

The bridge accomplishes the return to I, as usual, but again Bach creatively avoids a static upper-voice line (5-5), giving instead a descending fifth 5-4-3-2-1, but leading to a higher register through an upward octave transfer of C (measure 8). The third entry then follows the usual tonic prolongation plan for subjects with initial tonics, and the upper voice returns to its main register. The "incompletion" of the upper neighbor Db in the subject is resolved here by the repeated Db-C motive in the upper part.

5) WTC II e (subject analysis: Example 2.24)

Like the WTC II f subject, the WTC II e subject implies two complete voices, 5-4-3 and 8-7-8, and again the harmonic prolongations are tied directly to the entries of the subject and answer (see Example 3.21). Thus each fresh entry begins a new prolongation, and a more or less distinct upper voice shape, a rise and fall from 5 in each case. Before

Example 3.20
Structural Analysis, WTC II f Fugue Exposition.

The image displays three staves of musical notation, labeled a), b), and c), representing a structural analysis of the WTC II f Fugue Exposition. Each staff consists of a treble and bass clef, a key signature of one flat, and various musical notations including notes, rests, and dynamic markings. Above the staves are circled numbers 1, 2, and 3, and below them are Roman numerals I, II, and III, indicating structural divisions. The notation is complex, with many notes and rests, and includes various musical symbols such as slurs, ties, and dynamic markings.

Example 3.21
Structural Analysis, WTC II e Fugue Exposition.

The image shows a handwritten musical score for three systems, labeled a), b), and c). Each system consists of a piano part (left hand) and a violin part (right hand).

- System a):** The piano part is in 2/4 time, starting with a treble clef and a key signature of one sharp (F#). The violin part is in 2/4 time, starting with a treble clef and a key signature of one sharp (F#). The piano part has a melodic line with many slurs and ties, and the violin part has a more complex, rhythmic line with many slurs and ties.
- System b):** The piano part is in 2/4 time, starting with a treble clef and a key signature of one sharp (F#). The violin part is in 2/4 time, starting with a treble clef and a key signature of one sharp (F#). The piano part has a melodic line with many slurs and ties, and the violin part has a more complex, rhythmic line with many slurs and ties.
- System c):** The piano part is in 2/4 time, starting with a treble clef and a key signature of one sharp (F#). The violin part is in 2/4 time, starting with a treble clef and a key signature of one sharp (F#). The piano part has a melodic line with many slurs and ties, and the violin part has a more complex, rhythmic line with many slurs and ties.

(15)

a)

Handwritten musical notation for exercise a) on a grand staff. The piece is in 2/4 time, indicated by a '2' below the staff. It features a complex melody with many sixteenth and thirty-second notes, often beamed together. The right hand has a more active line with frequent sixteenth notes, while the left hand provides a steady accompaniment with eighth and sixteenth notes. A bracket under the first few measures of the left hand indicates a specific rhythmic pattern.

b)

Handwritten musical notation for exercise b) on a grand staff. The melody is characterized by a series of eighth and sixteenth notes, with some longer intervals. The right hand has a more active line with frequent sixteenth notes, while the left hand provides a steady accompaniment with eighth and sixteenth notes. A bracket under the first few measures of the left hand indicates a specific rhythmic pattern.

c)

Handwritten musical notation for exercise c) on a grand staff. The melody is characterized by a series of eighth and sixteenth notes, with some longer intervals. The right hand has a more active line with frequent sixteenth notes, while the left hand provides a steady accompaniment with eighth and sixteenth notes. A bracket under the first few measures of the left hand indicates a specific rhythmic pattern.

each new entry, a short passage occurs which leads very simply to the new prolongation.

6) WTC II G (subject analysis: Example 2.10)

Like the WTC II e and f subjects, the WTC II G subject contains two complete contrapuntal voices. Likewise, the answer begins a prolongation of V. A short bridge implying an applied dominant links the end of the subject to the beginning of the answer. Again, as in the WTC II b fugue, arpeggiation of the full tonic triad at the beginning of the subject requires an expression of dominant harmony at the beginning of the answer. The counterpoint accompanies the answer in parallel sixths.

The bridge, which returns the music to I for the third entry, is very short but structurally normal. Since the tonic returns at the beginning of the third entry, a full cadence to I at the end of the third entry is not as crucial as in other expositions. Instead, the upper voice (in free counterpoint) moves to E (5-6), preparing for a modulation and full cadence to the dominant. Since, as in the WTC II e, f, and b fugues, the harmonic emphasis is thrown on to the beginning of each statement, the end of each statement is freer to modulate elsewhere.

Example 3.22
Structural Analysis, WTC II G Fugue Exposition.

⑤ ⑥ ⑦ ⑧

The image shows a musical score for the exposition of the G Fugue from the Well-Tempered Clavier, Book II. The score is divided into three systems, labeled a), b), and c). System a) includes Roman numeral chord analysis below the staff: I, V, I, and II: V. The score features complex melodic lines with many accidentals and ties, and is heavily annotated with handwritten musical analysis, including brackets, circles, and arrows, indicating structural elements and voice leading.

Summary

All of the expositions discussed in the this chapter follow the hypothetical voice-leading patterns through the end of the second entry, and many of them continue to follow the structures to the end of the third entry. Those that do not, usually have a strong initial tonic which affects the placement of the return to the tonic. In some cases the bridge has a tonal function in the voice-leading structure--leading to a return of the tonic, while in other cases it merely has a registral or textural function, altering the voice ranges or giving a smooth connection to the third entry or the beginning of the countersubject in fugues with a countersubject. Of course the bridge also affects the proportions of the exposition, providing variety within the opening and giving a heightened sense of forward drive by delaying the return of the tonic during the third entry. The careful way in which Bach produces directed upper-voice motion by a variety of means, as has been shown above, demonstrates tangibly why Bach's fugues have such a sense not only of full counterpoint, but also of musical life and motion.

In this chapter analyses of expositions have been based on three-entry models regardless of the number of entries the expositions actually contain. I have demonstrated the

way in which the initial tonal prolongation encompasses the first three entries of a 5-4-3 type fugue as a group.¹⁸

Chapter 4 discusses the voice-leading patterns of fugue expositions based on 1-2-3 type subjects and compares these structures with those of 5-4-3 type subjects.

18. Although the following idea is beyond the scope of this essay, I suggest further that to a large extent Bach's four-voiced fugal polyphony--at least that of his keyboard fugues--is largely based on a three-part arrangement. In two of the four-part expositions discussed above (WTC II Ab and WTC I g) the uppermost part is dropped at the fourth entry, so that three parts remain. (In these fugues less than a quarter of the music is in four parts.) The WTC II D, Eb, and g fugues can be considered genuine four part fugues, but they rely on stretto designs to enable the four parts to operate. Likewise, the WTC I b-flat fugue is genuinely in five parts, but it also uses stretto a good deal. The WTC I D fugue is exceptional because of its very loose use of the subject in the later parts of the fugue.

Chapter 4

EXPOSITIONS BASED ON 1-2-3 TYPE SUBJECTS

Not surprisingly, considering the affinity of these subject types shown in Chapter 2, many of the principles of exposition structure demonstrated in the discussion of fugues based on 5-4-3 type subjects also apply to fugues based on 1-2-3 type subjects. But 1-2-3 type expositions also have their own unique structural characteristics. This chapter discusses the principal features of exposition structure for WTC fugues based on 1-2-3 type subjects--WTC I C, E, and Bb, and WTC II c#, d#, g#, and Bb--and compares these structures to 5-4-3 type fugue expositions.

Answer for 1-2-3 Type Subjects

In converting a 1-2-3 type subject to an answer no tonal alterations are necessary for the main linear progression, unlike the case of 5-4-3 type subjects; 1-2-3 becomes 5-6-7. But the functions of the notes change in the answer. The 5 of the answer is treated as 5 of I, not 1 of V, and the 7 (3 of the subject) sounds locally as 3 of V. As in 5-4-3 type fugues, the subject prolongs I, but the answer moves from I to V.

Chapter 2 showed that most 1-2-3 type subjects use reaching-over as the primary method of aiding the ascending motion of the main linear progression. Reaching-over often occurs in 1-2-3 type subjects, especially in the 2-3 motion, which is frequently elaborated as 2-4-3. While 4 acts as an incomplete neighbor to 3 in the subject, the 8 of the comparable reaching-over in the answer, 8-7, is often part of the initial tonic prolongation, resulting in a primary answer motion of 8-7, as shown in Example 4.1. Thus both 5-4-3 and 1-2-3 type subjects can give rise to identical underlying answer motions.

Example 4.1
Hypothetical 1-2-3 Subject and Answer Structure.



Pattern 2A: 1-2-3 Expositions, M-H-L.

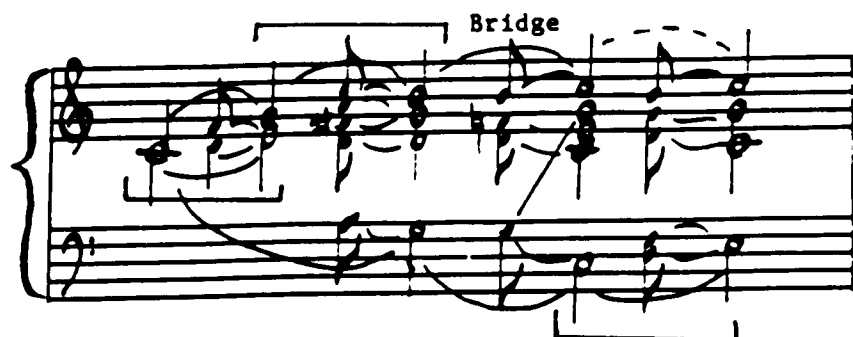
Fugues in this category include:

- 1) WTC II Bb
- 2) WTC I E
- 3) WTC I C

Example 4.2 shows the hypothetical voice-leading structure for fugue expositions based on 1-2-3 type subjects in which the second part enters above the first and the third part enters below the first. In Example 4.2 the subject prolongs the tonic triad through 1 and 3, but 5 does not occur in the subject itself. The answer, beginning on 5, continues the ascent initiated by the first part. Example 4.3 shows that the structural basis of the first two entries is a series of reachings-over, in which overlapping upward leaps and downward steps gives a resultant ascending motion. The resolution of the reaching-over note in the answer is down a second (8-7), and the resolution of the middle note of the answer's main linear progression is also a descending second, 6-5.

In expositions with the answer above, the similarities of voice leading go beyond the features noted above. The counterpoint to the answer again consists of two harmony voices and a bass voice. The smoothest continuation of the final note of the subject is 3-2, but the resultant ξ implication at the end of the answer makes this unsatis-

Example 4.2
Pattern 2A: 1-2-3 Subject, M-H-L.



Example 4.3
Reachings-over in Subject and Answer.



factory as a bass line. In the higher harmony line, 3-#4-5 (an excellent counterpoint to the answer), #4 is a continuation of the first note of the answer, (5-#4-5). An 8-6-5 bass line is also possible, as in the 5-4-3 type exposition, although problems of doubling the 6 with the answer, and parallels in the resolution can easily arise. As in counterpoints to 5-4-3 type answers, some combination of portions of these hypothetical lines normally forms the counterpoint to the answer.

The necessity of a bridge is one of the main structural differences between expositions based of a 5-4-3 type subject and those based on a 1-2-3 type subject. Since the third entry begins with 1 not 5, a bridge is essential in order to return to I. The bridge acts to resolve the leading-tone in the upper voice, and to add a passing seventh in the lower voice, thus producing a V^7 chord. (In minor keys 7 must be raised as well to form a leading-tone.) In Pattern 2A the passing 7th normally occurs as part of the third entry. Other voices continue the existing or implied voices as shown in Example 4.2. Notice that as far as the beginning of the third entry, the hypothetical upper-voice motion is identical for 1-2-3 and 5-4-3 type fugues: an 8-7-8 neighboring motion.

The third entry functions as a prolongation of I, where the essential prolongation technique is a third-progression in the bass. Like the first entry, the third entry normally uses a 4-3 reaching-over in its conclusion. The simplest continuation of the upper voices is shown in Example 4.2. The top part repeats the preceding 8-7-8 motion, and the middle part simply fills in the harmony after the bridge. A weakness of this hypothetical pattern is that from the end of the answer to the end of the exposition the upper voice does not have any goal-oriented motion or change of regis-

ter. Bach deals with the problem of upper-voice direction and continuity through voice-exchange and arpeggiation in the two expositions of this type. The third is a special case.

1) WTC II Bb (subject analysis: Example 2.30)

The WTC II Bb fugue clearly demonstrates the main structural features of Pattern 2A. Notice that the first part of the answer includes a tonal modification (Bb rather than C at the end of measure 5), but that this detail involves the arpeggiation rather than the main linear progression. The dominant of the succeeding measure operates within a larger tonic prolongation, as shown in Example 4.4, so the third-progression of the answer, which begins in measure 7, originates in a I chord, not a V chord. The answer continues sequentially, and the counterpoint uses primarily the 3-#4-5 motion discussed above, giving a series of parallel thirds.

The bridge functions harmonically as in Pattern 2A, but the ingenious exchange of parts shown in Example 4.4 gives greater continuity and shape to the exposition. The 7th of V is introduced not in the lower voice as suggested in Example 4.2, but in the higher voice, by which means the high F of the beginning of the answer is brought into

Example 4.4
Structural Analysis, WTC II Bb Fugue Exposition.

Handwritten musical score for the B-flat major Fugue, Part II, from the Notebook for Anna Bach, BWV 1014. The score is divided into three systems, labeled a), b), and c). Above the first system, circled numbers 9, 12, and 13 are placed over measures 9, 12, and 13 respectively. The notation includes treble and bass staves with various musical symbols such as notes, rests, and accidentals. The first system (a) shows measures 1 through 13, with a bracket indicating a phrase from measure 9 to 13. The second system (b) shows measures 14 through 21, with a bracket indicating a phrase from measure 14 to 21. The third system (c) shows measures 22 through 29, with a bracket indicating a phrase from measure 22 to 29. The Roman numerals I, II, and I are written below the first system, indicating the key signature changes. The score is written in B-flat major, with a key signature of two flats (B-flat and E-flat).

relationship with the rest of the exposition as the beginning of a 5-4-3 third-progression in the highest voice. The A which ends the answer continues at the end of the bridge in the lower voice, giving a stepwise preparation for the third entry in the bass. Thus the structure of the bridge closely resembles that of the WTC I c fugue discussed in the Chapter 3 (see Example 3.7). The bridge itself is expanded through stepwise descent as shown in Example 4.4b.

The third entry follows Pattern 2A--a rising third-progression prolonging I. However, the voice-exchange in the bridge allows a more interesting upper voice at the third entry than that given in Example 4.2. A descending 3-2-1 third-progression in the soprano (see level c) accompanies the rising third of the bass, giving direction to the upper voice during this tonic prolongation, and, by gesture, preparing for the expected tonic cadence which is elided by suspending the leading-tone in measure 19. (This elided cadence provides for a completion of the bass motion initiated by the rising third of the subject: 1-2-3 expands to 1-2-3-4-5-1. It articulates without sectionalizing the form and gives a smooth connection to the succeeding part of the fugue.) The descending third-progression links the actual upper-voice note D with the hypothetical upper-voice Bb; that is, the final cadential motion in the upper voice would

have conformed to the hypothetical 7-8 motion, had the cadential resolution not been elided.

The restatement of the initial tonic as a high F in the answer gives rise to the extended 5-4-3-2-(1) fifth-progression in the upper voice. Thus the opening upper tonic acts structurally like the initial tonic in the WTC I c fugue, which also gives rise to a descending fifth over the course of the exposition.

2) WTC I E (subject analysis: Example 2.39)

In the WTC I E fugue, Bach provides the stepwise connection between 3 and 5 which is missing in the hypothetical model (Pattern 2A). See Example 4.5a, measure 2. Although the answer is a complete ascending third 5-6-7, the 7 does not lead up to E until a further entry occurs at the end of measure 6. This modification of Pattern 2A is due to the use of a countersubject based on a descending motion.

Although Pattern 2A suggests the beginning of the third entry as the point of return to the tonic, in this case the dominant can be prolonged as far as the end of the third entry since the first note of the entry, E, occurs within the neighboring $\frac{5}{4}$ of V as shown in the graph.

Example 4.5
Structural Analysis, WTC I E Fugue Exposition.

⑤

a)

I V 4 7 I II

b)

c)

3) WTC I C (subject analysis: Example 2.32)

The special characteristic of this fugue, unique in the WTC, is that it contains no episodes and no bridge. Thus it needs a special type of exposition and a flexible subject which is capable of reinterpretation in a variety of contrapuntal contexts. The flexibility of structural interpretation of this subject, discussed in Chapter 2, allows great freedom in its contrapuntal use, evidenced in the exposition itself, as well as in the various strettii which make up the rest of the fugue. Its characteristic anacrustic rhythm, in which the first three notes seem to lead to the fourth, accounts for some unusual structural features. Example 4.6 shows how the answer, although real, functions differently from the subject. The first notes of the answer reinterpret the initial ascending motion of the subject as a structural progression, leading to 8 (C) as a primary upper-voice note. Thus the A, which corresponds to the main passing-note of the subject, is only an inner-voice note in the answer. The main motion of the answer is therefore an incomplete 8-7 neighbor-motion rather than a 5-6-7 ascending third-progression. (cf. Example 4.1 above.)

Although the structure of the answer is 5-8-7 rather than 5-6-7, the counterpoint needs no resultant alteration, since the same contrapuntal strands operate for counter-

Example 4.6
Structural Analysis, WTC I C Fugue Exposition.

3

a)

I I I

b)

c)

points in 5-4-3 and 1-2-3 types. Compare Pattern 2A (Example 4.2) with Pattern 1A (Example 3.1). Here the counterpoint to the answer uses notes of various voices in Pattern 2A, forming the counterpoint motive 3-1-6-#4-5 discussed in the previous chapter. The prominent A of the counterpoint, which gives a stepwise connection to the third entry, is possible here because the answer is an 8-7 motion rather than a 5-6-7 motion. The counterpoint also uses the cadential syncopation mentioned in the previous chapter.

An unusual and often noted characteristic of this exposition is that the third entry is an answer, not a subject. The third entry acts structurally as a transposed subject (5-6-7), prolonging a single harmony, V in this case. From the standpoint of tonal motion the third entry may seem redundant, but in fact it functions as a bridge. Notice that in contrast to Pattern 2A, this fugue has no bridge. The third entry provides a registral link between the second and fourth entries (alto and bass), giving a smooth downward range expansion, and partitioning the octave into a fourth and fifth.

The fourth entry (subject) appears directly at the end of the third entry. In relationship to Pattern 2A, there is an unusual aspect to this fourth entry: it begins as a continuation of a dominant prolongation, not as part of a

tonic prolongation, so that the arrival at the tonic is delayed until the end of the fourth entry. Thus the fourth entry operates like the third entry of Pattern 1A. By delaying the return of the tonic until the end of the fourth entry, completion of the final fugal entry can coincide with completion of the first large harmonic motion, unifying the exposition: the fourth entry sounds like the end of the exposition rather than the beginning of a new section. At the conclusion of the fourth entry all the voices resolve in their proper registers according to Pattern 2A. The upper voice has the syncopated motive mentioned in connection with numerous expositions already. The 8-7 neighbor motion begun at the end of the answer is completed at the end of the exposition, measure 7, giving an overall 8-7-8 upper voice, shown in Example 4.6c. By concluding the 8-7-8 upper-voice motion with the beginning of a further entry in the soprano part, Bach bridges the cadence and leads the music directly into the first stretto.

In this unusual but highly successful scheme Bach incorporates four entries within the tonal scheme which normally contains only three. Subject-answer-subject is expanded to subject-answer-answer-subject, embraced in a single tonal motion, I-V-I. This exposition shows that the hypothetical voice-leading patterns based on subject

paradigms are not inflexible, but must be regarded only as general voice-leading patterns. Where an ambiguity, or potential reinterpretation exists in the subject itself, as here, modification of the hypothetical pattern or combination of different patterns, can result. Nevertheless, the flexibility and variety of Bach's fugal expositions can be understood as divergence from and elaboration of basic voice-leading patterns.

Pattern 2B: 1-2-3 Expositions, H-M-L

Fugues in this category include:

- 1) WTC II g#
- 2) WTC II d#
- 3) WTC I Bb

Example 4.7 shows the hypothetical voice-leading pattern for a three-part exposition where the parts enter in descending order. The first statement of the subject prolongs the tonic, but at the point of entry of the answer 5 appears as the lowest note. The parenthetical I below the entry of the answer in Example 4.7 shows that a tonic in root position is implied at this point, not a $\bar{6}$ with dominant function.

Example 4.7
 Pattern 2B: Exposition of 1-2-3 Subject, H-M-L.
 Bridge



As in Pattern 2A, the structure of the answer is real, not tonal, although the small details, particularly arpeggiations to secondary voices, may be tonally altered. Further, the answer includes an 8-7 motion, but since the answer enters below in Pattern 2B, this 8 continues the initial tonic of the subject in the same register, rather than opening a new upper-voice register. Thus the lowest of the implied contrapuntal voices of the subject is taken over in the answer. The continuation of the final note of the subject (3) is to 2, shown as the alto voice of Pattern 2B. In addition, the continuation of the first voice can make use of the #4-5 motion shown as the soprano voice. In such cases, reaching-over from 3 to 5 through #4 is implied or present, and is motivically a continuation of the reaching-over design with which the main linear progression of the subject ends. Thus in an exposition of this type the answer and counterpoint form an inversion of Pattern 2A. The

number of implied contrapuntal lines is the same, except for the doubled A-G line (bass and alto) of Pattern 2A, but the spacing is more compact. The bass of Pattern 2B is less clear than that of Pattern 2A since the final bass note of the answer is 7, not 5, and the root of the dominant is only implied.

As in Pattern 2A, the tonic beginning of the third entry necessitates a bridge connecting the end of the answer with the beginning of the third entry. In its simplest form this bridge inverts the structure of Pattern 2A.

The third entry prolongs I. Although various voice leadings are possible, that given as Pattern 2B, a voice-exchange between outer parts, is the simplest.

1) WTC II g# (subject analysis: Example 2.29)

The WTC II g# fugue provides a clear example of an exposition based on Pattern 2B. The subject, as discussed above, uses a regular reaching-over pattern to aid the ascending third-progression. The answer enters a sixth below the end of the subject, continuing the tonic as shown in Example 4.8, not functioning as a dominant with ξ above.

Example 4.8
Structural Analysis, WTC II g# Fugue Exposition.

⑤ ⑩ ⑮

a)

6 6 6 6 6 6 6

I V I

b)

c)

The sequential nature of the subject is replicated in the answer (5-6-7) and in the ascending motion of the counterpoint, which uses the 3-#4-5 motion mentioned as the hypothetical soprano voice. The rising third of the counterpoint is aided not through reaching-over, but through chromatic passing-tones, and it harmonizes the answer in parallel sixths, as shown in Example 4.8b.

As in Pattern 2B, the bridge is governed by a 5-4-3 descending-third in the upper voice, expanded through a sequence of descending-sixths which contrasts the preceding ascending-sixths and prepares the register of the third entry. The bridge also incorporates the cadential motive discussed in the previous chapter.

The third entry begins in the usual manner, with the root of a tonic chord and the beginning of a tonic prolongation. But the details of the continuation of this entry are not so simple. The upper voice, rather than continuing the descending motion begun by the bridge, makes an overall ascending motion through reaching-over, further decorated by arpeggiation through the tonic triad. In the conclusion of the third entry an elided cadence occurs. The natural seventh F# initiates a deceptive motion at the end of the third entry which gives a smooth connection to the following part of the fugue.

2) WTC II d# (subject analysis: Example 2.37)

The WTC II d# exposition essentially follows the structural lines of the WTC II g# exposition. A root position tonic is implied at the beginning of the answer, and the countersubject follows a chromatic ascent through #4 to 5. Again the upper voice of the bridge expresses a descending third-progression, 5-4-3, and the third entry prolongs the tonic, but the upper voice at the third entry continues the downward motion to 3-2-1, completing a fifth-descent at the end of the exposition.

Again, the fourth part leads the music away from the initial tonic prolongation.

3) WTC I Bb (subject analysis: Example 2.31)¹

The WTC I Bb fugue follows Pattern 2B, but has no bridge. This is possible because of a detail in the design of the subject itself. The initial dominant of the subject is very important to the structure of the exposition. Like an initial tonic, it is not part of the main linear progression, but it nevertheless has an important role in fugal

1. This analysis is based on Schachter's detailed analysis of the entire fugue. Schachter, "Bach's Fugue in Bb Major," The Music Forum, III: 239-267.

Example 4.9
Structural Analysis, WTC II d# Fugue Exposition.

⑤

a)

I V I

b)

c)

structure.² Since this subject begins with an initial dominant, the answer begins with an initial tonic, reversing the pattern often seen in 5-4-3 type fugues. Thus a prominent Bb rather than an F occurs at the beginning of the answer, clarifying the tonality at this point by giving an actual rather than an implied root position tonic (see Example 4.10). Compare the corresponding point in the WTC II g# fugue. The harmony is clearer in the WTC I Bb fugue, since the structural bass is stated, not just implied.

The high degree of arpeggiation in the subject allows reinterpretation of the main structural notes in the answer. (Tonal alteration--D not C in measure 5--does not affect the overall structure of the answer, but it is interesting that the altered note is the upper neighbor of 5, becoming an arpeggiation to 3, the exact tonal alteration which is so common in 5-4-3 type subjects.) Whereas the upper stratum is the guiding linear progression of the subject, and the lower stratum acts as an accompaniment, the lower notes of the answer, acting as a bass, are more structurally important than the upper notes, which are parts of inner voices. Thus the hypothetical answer form 5-6-7 or 5-8-7 does not

2. Initial dominants are much less common than initial tonics, partly because more subjects are based on linear progressions which originate on 5 than on 1.

Example 4.10
Structural Analysis, WTC I Bb Fugue Exposition.
(Based on Schachter's Analysis.)

The image displays three systems of handwritten musical notation for the WTC I Bb Fugue Exposition, labeled a), b), and c). Each system consists of a grand staff with a treble and bass clef. System a) includes a circled '3' above the first measure and a circled '10' above the eighth measure. System b) features a circled '3' above the first measure and Roman numerals 'I', 'V', and 'I' positioned below the first, fifth, and ninth measures respectively. System c) has a circled '3' above the first measure. The notation includes various musical symbols such as notes, rests, and beams, with some measures containing complex rhythmic patterns. The handwriting is in black ink on a white background.

have a prominent role in the voice-leading structure, due to the descending order of entries.

The rising motion of the countersubject, 3-#4-5 using reaching-over, conforms to Pattern 2B. Schachter's analysis shows the resolution of each reaching-over to the lower octave. But the main motion of the countersubject, also shown by Schachter, is a 3-2 descent (D-C), the simplest hypothetical continuation of the end of the subject, as in Pattern 2B. Thus the countersubject unfolds both of the implied contrapuntal lines of the upper voice.

The initial dominant of the subject allows a smooth connection of the end of the answer with the beginning of the third entry without the intervention of a bridge. This procedure is opposite to that found in certain 5-4-3 type fugues, such as WTC I c, where the presence of an initial tonic makes a bridge necessary. The subject is here reinterpreted as beginning with V not I, so the Bb, which was the first structural note at the first entry, is given a subordinate role to the initial dominant. Again, as in the answer, the upper 1-2-3 linear progression of the third entry is less structurally important than the lower notes, which form a bass line.

Since the countersubject is the middle part at the third entrance, and since it arpeggiates a good deal, it does not act as a guiding voice in the structure at this point. Nevertheless the hypothetical continuation of the end of the answer, A to Bb through reaching-over, can be traced.³ The second countersubject, appearing in the highest voice, begins as an ascent to F, before continuing the overall upper-voice descent C-Bb. The unfolding of the second countersubject thus imitates the unfolding of the first countersubject.

Schachter makes the important point that the subject and its two countersubjects combine to make a continuous melodic design in which the overall progression is a clearly articulated third-descent, 3-2-1 (D-C-Bb), where each of the principal notes is the goal of a contrapuntal element: ". . . they form both triple counterpoint when combined vertically and a large-scale melodic progression when heard one after another."⁴ Beyond the unified voice-leading structure of the subject itself and each of the countersubjects, this larger progression binds all three together,

3. Schachter's analysis (The Music Forum, III: 246) clearly illustrates this voice.

4. Ibid.: 245-246.

and the even distribution of the third-progression unifies and articulates the exposition.

An Unusual Case: WTC II c# (subject analysis: Example 2.38)

As mentioned in Chapter 3, the only fugue in the WTC in which the third entry is in a middle part is the WTC II c#. ⁵ Because the third entry is in an inner part, it has a weaker role as a structural determinant.

The first two entries follow Pattern 2A very clearly, and the counterpoint to the answer again incorporates the 6-#4 motive seen before. The accented tonic of the third entry is incorporated within the prolongation of the dominant, rather than as the beginning of a tonic prolongation. Its "tonic" potential is also contradicted by its role as the replacement of an expected E major chord. But the short bridge is necessary nevertheless, to accommodate the third entry. The underlying structure of the dominant prolongation is a series of descending tenths, but some of the actual bass notes substitute for the underlying theoretical ones--the parenthetical bass notes in measures 4 and 5--in order to accommodate specific details of surface imitation in the upper parts.

5. Not counting the inverted stretto exposition of WTC II C# fugue.

Example 4.11
Structural Analysis, WTC II c# Fugue Exposition.

5

a)

b)

c)

The concluding notes of the third entry rise above the descending sequence of the second part, by which means, together with the G# of the second part, they form a 5-4-3 linear progression for the entire exposition. In this context the 8-7 motion which concludes the answer appears as an inner voice transposed to a higher register.

The seven expositions analyzed above demonstrate many structural similarities. As in 5-4-3 type expositions, elaborative details of the subject account for differences in exposition structures.

Comparison of WTC I C and II C exposition structures

A comparison of the voice-leading structures of the WTC I C and II C fugue expositions reveals striking similarities of structure between expositions based on 5-4-3 type subjects and those based on 1-2-3 type subjects. Example 4.12 shows these expositions, and a composite voice-leading analysis, all vertically aligned for comparison. Notice that the most crucial structural notes occur in identical places and registers in both fugues, even though one is a three-part fugue and one is a four-part fugue, and even

though each subject is based on a different linear progression. (The potential for reinterpretation of the WTC I C subject as a 5-4-3 progression is important here.) A great many details of the surface are also similar or identical. Further, the voice-leading similarities continue as far as the important cadence to V (measure 16 in the WTC I C fugue, and measure 33 in the WTC II C fugue), which occurs nearly the same distance from the beginning in each piece: beat 39 in the WTC I C fugue, and beat 43 in the WTC II C fugue. Although the internal structure of the motion to V is different in each case, due to the different motivic material used, the important structural notes again fall in exactly the same places in both compositions. One wonders if Bach intended the first fugue of WTC II to refer in some way to that of WTC I, written twenty two years earlier.⁶

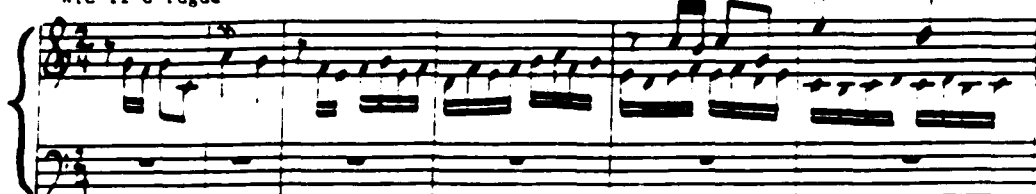
6. Johann Nepomuk David Das wohltemperierte Clavier. Versuch Einer Synopsis (Göttingen: Vandenhoeck and Ruprecht, 1962): 17, notes some aspects of similarity between these two fugues, such as the identical range of the subjects and the identical A-F# interval in the counterpoint to the answer. He compares the structure of the subject and counterpoint of the two fugues, and also draws attention to the similarity in the cadences to the dominant (measure 16 in WTC I and measure 33 in WTC II, but he fails to grasp the deeper relationship which is based on similarity of voice-leading structure.

Example 4.12
Comparison of WTC I C and II C Fugue Expositions.

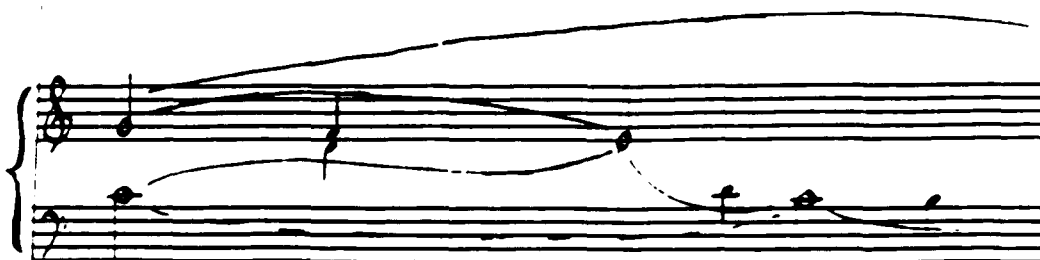
WTC 1 C fugue



WTC II C fugue



I



⑤



⑩

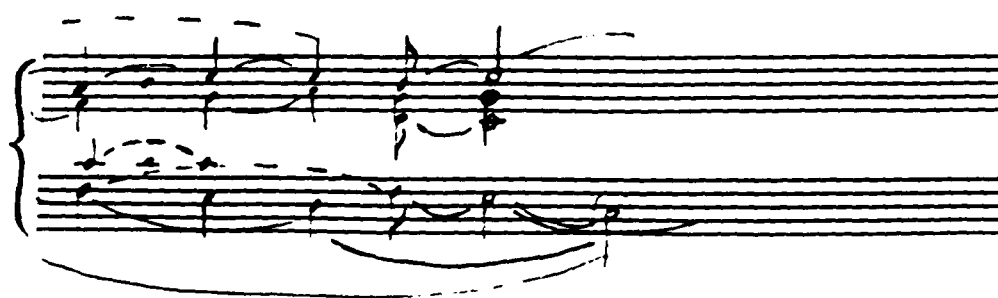


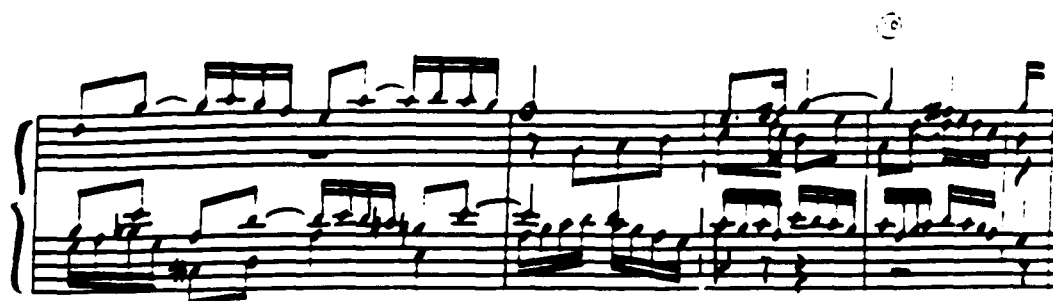
I





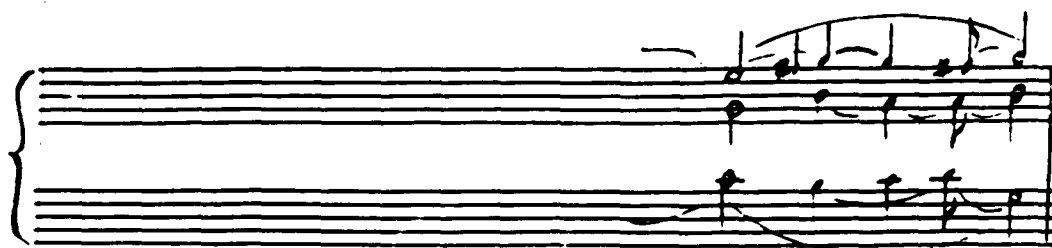
I -





- I

I - I



Chapter 5

EXPOSITIONS BASED ON 5-4-3-2-1 TYPE SUBJECTS

Crucial to the structure of 5-4-3 and 1-2-3 type expositions is the final note of the subject (3), which to a large extent determines the tonal structure of the exposition. Also, the disposition of 1 and 5 as structural notes at the beginning of the subject, whether as initiators of linear progressions, or as initial tonics or dominants, contributes strongly to the outlines of the voice-leading patterns. While initiating notes are no different for 5-4-3-2-1 type subjects than for those previously discussed, the different ending note (1 rather than 3) yields very different structural patterns, as will be seen. Concluding the subject on 1 also contributes greatly to the stylistic effect of fugal exposition: the series of cadences--actual or elided--which usually occurs, sectionalizes the exposition. Further, each statement of the subject or answer is a complete voice-leading unit, not dependent on subsequent closure.¹

1. This allows a final subject entry in the soprano as the conclusion of a fugue. See WTC I f# and WTC II f# fugues.

A major complication in harmonized settings of subjects and answers based on a 5-4-3-2-1 linear progression is the variety of possible voice-leading details. In 5-4-3 and 1-2-3 type fugues the three main harmonies I-V-I which support the subject are distributed evenly through the three notes of the main linear progression. But in 5-4-3-2-1 type subjects the same three main chords, which must support five notes, can be distributed in a variety of ways.² (In the answer, comparable variety can occur in the placement of the beginning of the applied dominant.) This variety does not affect the overall exposition structure, but gives many alternatives in surface detail for 5-4-3-2-1 type expositions, as will be seen.

Answer for 5-4-3-2-1 Type Subjects

The usual tonal modification of the 5-4-3-2-1 subject occurs at the beginning of the answer, as for 5-4-3 subjects: 5-4-3-2-1 becomes 8-8-7-6-5. But in contrast to the 5-4-3 type, the answer to a 5-4-3-2-1 type subject gives a

2. Schenker shows the various harmonizations of 5-4-3-2-1 in Free Composition, Figure 16.

greater sense of completion, since the descending fourth, linking the 1 of I with the 1 of V, forms a complete fourth-progression, not merely an incomplete neighbor-progression. Thus the end of the answer is usually a point of greater articulation in 5-4-3-2-1 type expositions. The commonly occurring upper neighbor of the subject gives 1-3-2-1-7-6-5 as the answer outline, of which 3 can assume a very important upper voice role in the exposition as a whole, while the subsequent notes constitute a descending sixth.

Pattern 3A: 5-4-3-2-1 Expositions, M-H-L.

Fugues in this category include:

- 1) I f
- 2) II f#
- 3) I d#
- 4) I f#
- 5) I a

Example 5.1 shows the hypothetical voice-leading pattern of a three-part exposition for a 5-4-3-2-1 type subject in which the second entry is above and the third entry is below. As in 5-4-3 type fugues, this is the most common plan for 5-4-3-2-1 type fugues in the WTC. In Example 5.1, the subject prolongs the tonic chord, expres-

sing 5, 3, and 1, the mediant only in passing.³ The answer, a descending fourth, 8-7-6-5, is counterpointed by two main

Example 5.1
Pattern 3A: 5-4-3-2-1 Exposition, M-H-L.



voices, a #4-5 motion to the upper-fifth, and an 8-7 motion in the lower voice. Another voice, which could continue the 3 of the subject as 3-2, is not as directed, and is therefore less structurally important. An implied bass-line consists of harmonic roots (1-5).⁴ Thus four potential counterpoint voices accompany the answer, of which parts may be used and parts may be implied in any actual exposition.

3. The mediant may be of no structural importance in 5-4-3-2-1 type subjects. Cases can occur in which 3 is a passing note between 5 and 2 or 4 and 2. See Schenker, Free Composition, Figures 16.2d, 16.3c, and 16.6.

4. 8-6-5 is impossible as a bass line here since it already occurs in a slightly expanded form (8-7-6-5) as the answer.

As in 5-4-3 type fugues, a bridge is not necessary unless the subject has a strong initial tonic. The third entry (in the bass) begins as part of the V prolongation, and returns the music to I at its conclusion. The main lines of the upper voices here are the descending third 5-4-3 shown in the soprano, and the 7-8 motion shown in the alto of Example 5.1. A third, less important voice, is the common tone 5.

The voice-leading pattern of the exposition as a whole is clear and simple: The upper voice is 5-4-3, the main middle voices are 8-7-8 and 3-2-1, and the essential bass is a root-progression I-V-I, as shown in Example 5.2.

Example 5.2
Background of Pattern 3A.



In Examples 5.1 and 5.2 the main upper-voice motion is 5-4-3, in which the main prolonged note is 5. But an exposed tonic--the first structural note of the answer--occurs as the highest note of Example 5.1. Often this prominent note has greater structural importance than 5

within the exposition. Example 5.3 shows how this can occur, giving 8-7-8 as the main upper-voice of the exposition. The upper voice occupies a higher register, but has a more static overall shape--a neighbor motion rather than a linear progression.

Example 5.3
Alternate Upper-voice Structure 1.



A further structural possibility for the upper voice arises from the prominent 3 of the answer in cases where the subject has an upper neighbor 6. Example 5.4 shows how this prominent 3 can initiate an overall 3-2-1 linear progression as the upper voice of an entire exposition. Notice that 2 of the upper voice must be connected indirectly to the

following 1 through a motion to 7, since the bass voice contains the direct motion 2-1 in the conclusion of the third entry.

Since each thematic entry concludes with a full cadence, there is less continuity of voice leading through the course of the exposition--less sense of motion carrying through from one thematic statement to the next, as compared to 5-4-3 and 1-2-3 type expositions. In some 5-4-3-2-1 type fugues, bridging and eliding of cadences minimizes this effect but adds greater structural complexity.

Example 5.4
Alternate Upper-voice Structure 2.



1) WTC I f (subject analysis: Example 2.40)

Chapter 2 shows that the underlying form of the WTC I f fugue subject is a descending fifth, ornamented by chromatic passing motion and an arpeggiation to the upper tonic. Example 5.5 shows how this upper tonic anticipates and links with the beginning of the answer. The upper neighbor of the subject gives rise to the prominent 3 of the answer, which is then followed by a descending sixth-progression, as in Example 5.4. Notice how the direct chromatic motion of the subject is reinterpreted in the answer. There is no unfolding here, but rather a subordinate progression to, and prolongation of, V6. F# of the answer does not lead directly to F-natural, but rather, acts as a local leading-tone to G. The F of the answer at the end of measure 5 acts as a passing note in the third-progression G-F-Eb.

The main motion of the countersubject is the root movement 1-2-5, and the secondary motion is the main inner-voice, 5-#4-5. As with other expositions, the presence of a countersubject here gives added restrictions to the voice leading at the third entry. The conclusion of the countersubject, #4-5, prepares for the reinterpretation of the end of the countersubject as 7-8 at the end of the third entry. As usual, a full cadence in V occurs at the end of the answer.

Example 5.5
Structural Analysis, WTC I f Fugue Exposition
(First three entrances).

a)

(6 5)

b)

(Consonant support)

c)

The third entry is structurally normal, concluding with a full cadence. Bach uses three countersubjects in this fugue, and all occur together with the subject at the fourth entry, and again at measures 27 ff. The countersubject's #4-5 motion demands a corresponding motion at the third entry in the upper voice, and 7-8 is incorporated within the overall upper-voice motion 3-2-1. The background structure closely resembles the most common 5-4-3 exposition model, Pattern 1A (Example 3.1). Since the countersubject leaps to a low register at the second entry, the countersubject at the third entry also leaps to a low register, causing a crossing of parts: the middle part for one measure sounds as the upper part. The 5 of the opening subject statement is carried through the entire exposition in its initial register, finally descending through 4 to 3 at measures 9-10 in the inner voice.

This exposition provides a good example of the effect of motive on structure. As shown in the discussion of the WTC I g exposition, an alternate solution to the problem of range in the second statement of the countersubject is an upward octave transfer. This would clarify the voice leading at the third entry by avoiding part crossings, but it would spoil the overall 3-2-1 upper-voice motion of the exposition, and would interfere with the fourth entry

(soprano, measure 13) by increasing the upward range expansion in advance of the introduction of the new part. (A fresh register is reserved for the fourth entry.) This problem does not occur in the WTC I g fugue, since the fourth entry is in the tenor.

A three-bar episode separates the fourth entry from the others. Although the fourth entry is formally part of the exposition, it is not part of the initial harmonic prolongation. It is structurally part of a second prolongation of the opening tonic (measures 13-18), within which it establishes 5 as the Kopftton of the entire composition in the obligatory register. The fourth entry is unusual since it states the subject, not the answer. This exposition is thus comparable to the exposition of the WTC I C fugue, where the third entry is an answer, not a subject. In both instances, considerations of gradual range expansion take precedence over thematic alternation.⁵ (After the soprano entrance in measure 13, the only other soprano subject-statement is a further range expansion, a transposition of measure 13 up a fifth, as a culmination and climax for the upper voice.)

5. In a four part exposition the vertical ordering of entries is usually symmetrical: subject-answer-subject-answer, reading down or up. But the bass is an exception, in that it can occur a fifth, a fourth, or an octave below the tenor.

Again Bach deals creatively with the basic problem of reconciling a tonal structure of three entries with a formal exposition of four parts.

2) WTC II f# (subject analysis: Example 2.42)

The answer in the WTC II f# fugue has the same basic form as the answer in the WTC I f fugue discussed above. The upper neighbor of the subject forms a third-arpeggiation in the answer. Here again arpeggiation to the upper tonic in the subject gives a corresponding arpeggiation to 5 in the answer, but this 5 acts as the upper voice of the exposition, rather than as a projection of an inner voice.

As in the previous example the counterpoint is based on a 1-2-5 root-progression in the lower implied voice, and a 5-#4-5 motion in the main inner voice, leading to a perfect cadence in the dominant at the end of the answer, shown in Example 5.6. Note that the connection of the end of the subject with the beginning of the counterpoint is through an ascending fifth-progression 1-2-3-4-5, which serves to regain the initial structural note of the subject (5). This motion, which also occurs at the corresponding points in the WTC I f fugue discussed above, and in the WTC I d# fugue discussed below, is a convenient way of regaining the 5 in preparation for the ensuing cadence to V.

Example 5.6
Structural Analysis, WTC II f# Fugue Exposition.

a)

b)

c)

Since a strong arpeggiation of the tonic chord begins this subject, the beginning of the third entry requires a tonic harmony: a bridge is necessary.⁶ As with bridges in 5-4-3 type expositions, this bridge takes the voice-leading structure of the third entry of Pattern 3A, leading to a cadence on I at the beginning of the actual third entry. A series of descending sixths expands the bridge, connecting the upper voice C# with F# through the leading-tone E# (measure 8).

Echoing the bridge, the music of the third entry also presents a series of descending sixths (compare WTC I f), here essentially prolonging I, not V.

The main upper voice for the exposition as a whole is 5 moving down to 1 through a descending sixth, C#-E#, and completing the initial tonic-prolongation as shown in Example 5.6c.

3) WTC I d# (subject analysis: Example 2.43)

The first two entries of the WTC I d# fugue are structurally similar to the corresponding parts of the two fugues discussed immediately above. The emphasized initial 5 of the subject (prolonged for nearly two measures), is answered

6. Compare the WTC II G and b fugues.

by an arpeggiation to 3, followed by a third-progression, 6-5-4 in V, measures 3 to 4 (see Example 5.7). Resolution of the main notes of the answer occurs through an unfolding of the dominant triad during the bridge, by which means the surface motion of the answer to 5 and the deeper motion F#-E# are both accommodated. As in the previous example, a bridge is necessary because of the initial tonic in the subject.

The third entry, in the bass, focuses on the root D#, while 5-4-3-2-1 acts as a subordinate inner voice. The upper voice at the third entry is 5-4-3-2-1, giving a directed motion to the overall exposition. Compare this with measure 9 in the WTC II f# fugue, as shown in Example 5.6b.

The overall shape of the upper voice in the exposition is thus a rising arpeggio, A#-D#-F#-A# (Example 5.7b), leading to the high A# Kopfton, which is restated at measures 24 and 58, and very powerfully at measure 78, in the culminating augmentation stretto of the fugue.

Example 5.7
Structural Analysis, WTC I d# Fugue Exposition.

⑤

a)

I V II -

b)

c)

4) WTC I f# (subject analysis: Example 2.45)

In contrast to the WTC II f# and WTC I d# fugue subjects--which have initial tonics and tonal answers--the WTC I f# subject has a melodic ascent, which gives a real answer.⁷ Although the answer is real, it nevertheless differs structurally from the subject, since it operates in a different tonal context (see Example 5.8). The melodic ascent of the answer gives a rising motion, first to F# (5-6-7-8), then to G# (2), linked to the II# in the lower voices, from which point the cadence to V proceeds with a local fifth-descent--5-4-3-2-1 in V. The countersubject uses two main voices, again #4-5 and 2-5 as in the above fugues.

A bridge is again necessary to prepare for the initial tonic at the beginning of third entry. Through the unfolding of V, the bridge regains the upper voice G#, as in the WTC I d# bridge, giving the exposed G# of the answer a deeper role as a passing-note from the initial F# of the answer to the A above the third entry (1-2-3), assisted by the reaching-over to B in measure 7 (see Example 5.8).

7. Compare WTC II A, a 5-4-3 type subject with initial tonic and melodic ascent which also gives a real answer.

Example 5.8
Structural Analysis, WTC I f# Fugue Exposition.

The third entry follows the same pattern as the others already discussed in this chapter. The upper voice (countersubject) at the third entry forms a 3-2-1 third-progression, and 8-#7-8 appears as a secondary, inner voice. Each of the structural voices closes in its proper theoretical register at the end of the exposition. The overall upper voice shape, a rising third, 1-2-3, followed by a falling third, 3-2-1, provides unity and closure to the exposition as a whole.

5) WTC I a (subject analysis: Example 2.44)

As in the previous example, the initial tonic and melodic ascent of the subject largely determine the tonal structure of the exposition: the answer is real, and the tonic returns at the beginning of the third entry. Again, however, structural interpretation of the answer differs from that of the subject: the subject prolongs I and the answer moves to V. However, the beginning of the answer outlines V, not I, understood here as a consonant support for a passing G in the alto (see Example 5.9 c). Again, the main structural notes of the counterpoint to the answer are #4-5 and 2-5, leading to the cadence in measure 7--but the cadence to the dominant is elided. Instead of a perfect cadence (II#-V), a motion to V⁷ occurs, changing V from a

Example 5.9
Structural Analysis, WTC I a Fugue Exposition
(First three entrances).

a) 3 10

(V_b II') IV' I-

b)

c)

local tonic to a dominant seventh at the end of the answer rather than at the end of the bridge. Non-alignment of motive and harmony in this manner mitigates cadential points in fugal expositions whose subjects end on 1. Further examples appear in Chapter 6.

The structural function of this bridge is, therefore, not to change V as tonic into V as dominant seventh (since that has already occurred at the end of the answer), but to prepare the voice-leading registers for the third entry, as well as to separate in time the occurrence of V and I.

Example 5.9 shows that the upper voice regains a higher register, closing a third-progression 3-2-1, through the #7-8 motion of the bridge (see Example 5.9b), while the bass entry is prepared by the 2-1 motion in the lower part.

The third entry focuses not on the descending fifth-progression of the subject, but rather on its implied bass line. The upper-voice at the third entry leads to a high E (5), allowing a cadential motion 5-4-3 at the end of the third entry, thus corresponding to Example 5.1, but with an upward octave transfer in the upper-voice.

As in the WTC I g fugue, the fourth entry, in the tenor, leads to the first main cadence of the piece, V in measure 14, at which point the inverted subject is introduced.⁸

8. Perhaps the strong cadence to V here counterbalances

Pattern 3B: 5-4-3-2-1 Expositions, H-M-L.

The only fugue in this category is:
WTC I C#

Example 5.10 shows the hypothetical voice-leading pattern of a 5-4-3-2-1 type exposition with a descending order of entries. The three thematic entries provide a continual stepwise descent, of a fifth, 5-4-3-2-1, followed by a fourth and fifth, 8-7-6-5 and 5-4-3-2-1, the latter two forming a full octave-descent. The upper-voice continues the initial 5 of the subject, eventually falling a third at the end of the third entry. Thus the main upper-voice motion for this hypothetical exposition is again 5-4-3. The main inner-voice is 8-7-8, a continuation of the final note of the subject.

Example 5.10
Pattern 3B: 5-4-3-2-1 Exposition, H-M-L.



the elided cadence at measure 7.

1) WTC I C# (subject analysis: Example 2.41)

The tonal modification of the answer in the WTC I C# fugue clarifies the function of the first five notes of the subject--an ornamented reiteration of the main note, G#. Modification of the repeated G# in the subject as a second, C#-D#, in the answer, effectively deals with the re-expression of the fifth-progression of the subject as a fourth-progression in the answer, while the "turn" figure masks the tonal modification. The second G# of the subject, merely a reiteration in function, becomes in the answer a passing note, in the third-progression E#-D#-C#, shown in Example 5.11.

Since the answer enters below the first part, its main linear progression occurs in the lowest voice at the second entry. If the exposition had been arranged like those of the other 5-4-3-2-1 type fugues, with the second part above, this main line would have been an inner, hence less structural, voice. Thus the formal design of this exposition accommodates the special polyphonic characteristic of its subject.

Each of the polyphonic lines of the subject has a direct continuation in the succeeding music. The counterpoint to the answer continues the final note of the upper line (8), while the upper of the answer's two implied-voices

Example 5.11
Structural Analysis, WTC I C# Fugue Exposition.

(5)

a)

6 6 6 6 10 10 10 10 12 10 6 6 6 6

I II I

b)

c)

continues the opening 5 of the subject in the middle voices. The counterpoint accompanies the answer in parallel tenths.

The descending motion of the answer prepares the register for the third entry. The third entry itself functions according to Example 5.10, returning the music to I at its conclusion. At the beginning of the third entry the upper voice resumes its high register, introducing F#, and connecting the exposed G# of measure 3 with the music of the third entry. Thus the voices return here to the Pattern 3A (Example 5.1), but with the upper two maintaining the higher register began by the upper voice of the subject.

The descending order of entries allows the completion of a stepwise octave-descent in the lowest voice, unifying the exposition.⁹ The upper voice likewise completes a descending third-progression 5-4-3, in a similar manner to that of the WTC I c fugue. Further, as in the WTC II C exposition for example, parallel motion in descending tenths and sixths, shown in Example 5.11, gives a consistent foreground motion to this exposition.

9. Sylvan Kalib gives a similar reading of this exposition in "Thirteen Essays," I: 285.

5-4-3-2-1 and 5-4-3 Exposition Patterns

Examining Bach's fugal expositions from the perspective of subject structure demonstrates striking patterns of similarity. For example, the reason why all but one of the expositions based on 5-4-3-2-1 type subjects follow the m-h-1 format (WTC I C# is different), is revealed by systematic analysis of fugal types in terms of subject structure, not merely by noting surface characteristics.¹⁰ As shown above, m-h-1 is also the most common format in the 5-4-3 type fugues of the WTC. Also as in 5-4-3 type expositions, the main structural modification compared to the proposed hypothetical models is the return to I at the beginning of the third entry, the result of an initial tonic or melodic ascent.

The formal affinity of 5-4-3-2-1 and 5-4-3 exposition types (in which m-h-1 is the most common arrangement), suggests a further comparison of the contrapuntal lines of a typical 5-4-3-2-1 exposition structure with those of comparable 5-4-3 structures. Example 5.12 presents Patterns 1A

10. Arthur W. Marchant, Five Hundred Fugue Subjects and Answers London: Novello, 1892, systematically classifies subjects on the basis of starting and ending notes, but fails to notice deeper principles because he does not distinguish the structural basis of subjects.

and 3A together, to facilitate comparison. Naturally the subject structures themselves are not the same, although they each prolong a close-position tonic triad. However, striking relationships appear at the second and third entries: The answer line of Pattern 1A is identical to one of the counterpoint voices in Pattern 3A; 3-2 and #4-5 are counterpoint voices for both types, and the 8-7-6-5 linear

Example 5.12
Comparison of 5-4-3 and 5-4-3-2-1 Exposition Patterns.

The image displays two musical staves, each representing a different exposition pattern. The top staff is labeled '5-4-3' and the bottom staff is labeled '5-4-3-2-1'. Both staves are written in treble and bass clefs, with a key signature of one sharp (F#). The notation includes various musical symbols such as notes, rests, and accidentals. Brackets and lines are used to highlight specific intervals and voice leading between the two patterns, illustrating the relationships mentioned in the text. The top staff shows a sequence of notes in the treble clef, with a bracket indicating a specific interval. The bottom staff shows a similar sequence, but with additional notes and a different interval structure. The notation is complex, with many notes and accidentals, and the brackets and lines are used to compare the two patterns side-by-side.

progression of the answer in Pattern 3A is almost identical to the bass voice of Pattern 1A at the corresponding point.

At the third entry the 5-4-3 motion is in the second part in Pattern 3A, but in the bass in Pattern 1A. Further, the bass in Pattern 3A has both the root motion 5-1 and the stepwise motion 2-1, of which the 2-1 compares contrapuntally with a continuation of the first part in the Pattern 1A. The first part in Pattern 3A has primarily the 7-8 motion which occurs in the second part in Pattern 1A. The contrapuntal structures are the same, but individual lines are distributed differently among the imitative voices. At the third entry, the first part in Pattern 3A is like the the second part in Pattern 1A; the second part is like the third part in Pattern 1A; and the third part is like the first part in Pattern 1A.

Chapter 6

OTHER EXPOSITION PATTERNS

Chapters 3, 4, and 5 have shown the most common voice-leading patterns in the fugal expositions of Bach's WTC. These patterns relate closely to each other in numerous ways, and consistently reflect the main structural aspects of Bach's fugal expositions. But, as this chapter shows, not all the WTC fugue expositions follow these patterns precisely. Chapter 6 contains two sections: the first deals with three WTC expositions whose subjects are based on 3-2-1 linear progressions, expositions which form a recognizable group with qualities different from, yet related to, those already discussed, and the second discusses unusual WTC expositions which do not fall into recognizable categories.

Pattern 4: 3-2-1 Expositions, L-M-H.

Fugues in this category include:

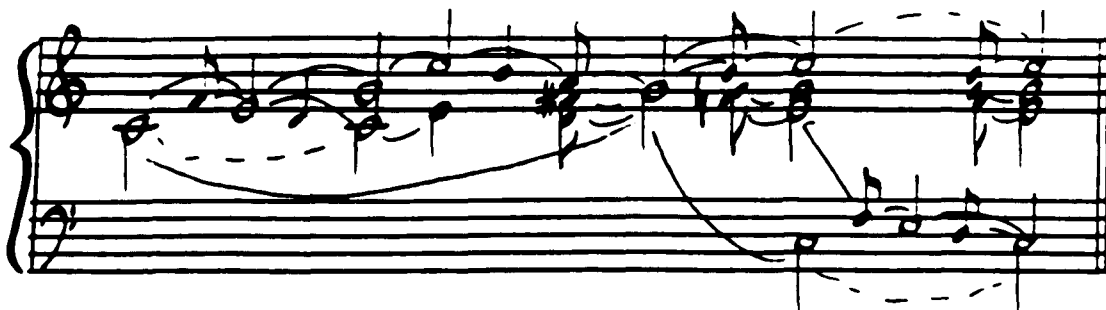
- 1) WTC II E
- 2) WTC I B
- 3) WTC I c#

As mentioned in Chapter 2, an initial tonic is necessary for 3-2-1 type subjects. In its transposition to the answer, the initial tonic assumes its most important structural role, that of linking the end of the subject to the

beginning of the answer through the common chord-tone 5. The initial tonic permits elision to occur at the end of the subject, where 5, not 7, enters over 1, giving a smooth connection between the end of the subject and the beginning of the answer (see Example 6.1). Since 1 and 5 sound together at the point of junction, the answer more naturally enters above the subject (avoiding the perfect fourth).

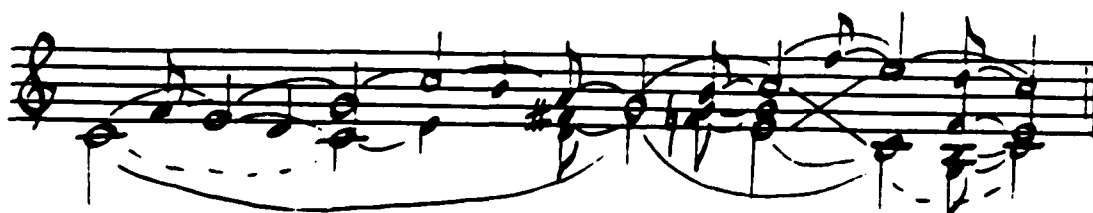
Example 6.1 presents a hypothetical pattern of a three-part exposition for a 3-2-1 type subject with the second entry above and the third entry below, following the most common arrangement in the expositions previously discussed. The subject clearly and simply expresses the tonic chord, and the answer enters above the end of the subject. But the answer uses the upper neighbor (4) and the 3-2-1 of the subject to form a fourth-progression, 8-7-6-5, a similar reinterpretation to those seen in 5-4-3-2-1 type subjects. This linear progression integrates the exposed 7 of the answer within a larger motion. In the two cases discussed below, whose subjects include scale-step 4 (WTC II E and WTC I B), Bach utilizes the structural potential of the neighboring 4 of the subject as 8 in the answer, giving an 8-7-6-5 descending fourth as the main linear progression of the answer. In the WTC I c# fugue, C# is strongly implied as the voice-leading origin of the natural-7, B in the answer,

Example 6.1
Hypothetical Exposition Pattern: 3-2-1 Subject, M-H-L.



but is not actually present (see Example 6.8 below). The concluding 6-5 motion of the answer is harmonized as an auxiliary cadence to V. As in previous examples, the role of the bridge is to change V as I of V to V^7 of I. Following the motion to V a bridge is necessary to return the music to I for the beginning of the third entry. In Bach's WTC fugues of this type, the third entry does not occur below, but above, as in Example 6.2, giving a much more satisfactory exposition with a rising series of entries.

Example 6.2
Hypothetical Exposition Pattern: 3-2-1 Subject, L-M-H.



Although Examples 6.1 and 6.2 follow the hypothetical patterns already proposed for other types of subjects, no WTC fugue expositions actually follow these models precisely. By using elision at the end of the answer, Bach is able to bring in the third entry without an intervening bridge. Example 6.3, the pattern which actually occurs in Bach's WTC fugues, shows the motion to V occurring at an earlier stage, when the answer reaches 7, followed by a return to I during the 6-5 motion of the answer, achieved through the introduction of natural-4 in the accompaniment.

Example 6.3
Pattern 4: 3-2-1 Subject, L-M-H.



In Bach's WTC fugues based on 3-2-1 type subjects, the 7 of the answer is supported by an inflection to the dominant, as shown in Pattern 4 (Example 6.3). This inflection causes the end of the answer to sound as a deceptive cadence, in which a resolution to V is avoided through substitution of natural-4 for sharp-4 in the counterpoint part. The opposition of sharp-4 and natural-4 gives a strong sense of tonal motion and conflict at a foreground

level, although the underlying voice-leading basis is comparatively static.

1) WTC II E (subject analysis: Example 2.47)

The simplest WTC exposition based on a 3-2-1 type subject is in the WTC II E fugue. The subject contains only one more note than that in Pattern 4. The countersubject to the answer inflects the dominant through #4 (A#), and elides the resolution to V through natural-4, as shown in Example 6.4. The third entry is unambiguous, but notice that here the countersubject (in the middle part) resolves upwards, as expected, to the tonic (measures 5-6). At the fourth entry the countersubject again avoids a confirmation of the dominant inflection, but in measure 8 (tenor voice) we finally hear the countersubject in its proper hypothetical form, leading to a cadence on V and fulfilling the modulatory implications of its preceding statements. (Compare measure 3 with measure 8.)

Example 6.4
Structural Analysis, WTC II E Fugue Exposition.

⑤

a)

I (I I) (II I) V

b)

I -

c)

I -

2) WTC I B (subject analysis: Example 2.48)

Although the WTC II E answer is real and the WTC I B answer is tonal, no difference in overall structural design is apparent. The WTC I B exposition is more elaborate, yet it expresses the same essential voice-leading pattern (exclusive of the fourth entry, of course, which is in the bass rather than the treble here). Again the upper neighbor of the subject (4) is treated as a structural note in the answer. The countersubject to the answer elides the suggested cadence to V, and the corresponding countersubject to the third entry leads to a cadence on the tonic (7-8), except that here as an inner voice it does double-duty, moving down to the harmonic F#, while the upper voice (subject) leads to the tonic resolution with a 9-8 suspension, as shown in Example 6.5. However, the fourth entry (in the bass) begins with a structural reinterpretation, suggested by the emphatic descending fifth, F#-B, which here takes the role of a root movement in a harmonic progression. But observe how the countersubject at the fourth entry leads to its expected dominant resolution, fulfilling the implications of its earlier statement at the entry of the answer.

Example 6.5
Structural Analysis, WTC I B Fugue Exposition.

②

a)

I V I (II V I)

b)

c)

3) WTC I c# (subject analysis: Example 2.46)

The fact that the WTC I c# fugue is in minor rather than major gives certain structural differences in the exposition, as compared to those just discussed. The 6-5 motion which closes the answer uses A#, not A-natural, unequivocally expressing a relationship to the dominant key rather than the tonic. (In major the sixth scale-degree makes no such distinction.) Also, the presence of the leading-tone within the subject points the answer more strongly to the dominant through #4. One further structural characteristic of this subject is the lack of an upper neighbor to 3, which results for the answer in an exposed 7, not part of an actual 8-7-6-5 linear progression, but part of an implied one, as shown in Example 6.6. Apart from these considerations, the voice-leading structure of the first three entries is virtually identical to those already discussed. The elision at the end of the answer and the evaded leading-tone, F# for F-double-sharp, allow the third entry to begin immediately. Nevertheless, the third entry is delayed for one beat (half a measure), possibly to avoid an exposed perfect fourth at the beginning of measure 7 (but compare WTC II E, measure 4), or to give a sharper dissonance in the second part of the measure, or simply to give rhythmic variety to the successive entries and to estab-

Example 6.6
Structural Analysis, WTC I c# Fugue Exposition.

⑤

⑩

a)

I V' I

b)

c)

a)

Handwritten musical score for piano, system a). The system consists of two staves. The right staff (treble clef) contains a complex melodic line with many sixteenth and thirty-second notes, including triplets and slurs. The left staff (bass clef) contains a more rhythmic accompaniment with eighth and sixteenth notes. There are several slurs and ties across both staves. Below the staves, there are two Roman numerals: 'I' on the left and 'II: II' on the right. A dashed line connects the two staves.

b)

Handwritten musical score for piano, system b). The system consists of two staves. The right staff (treble clef) contains a melodic line with slurs and ties. The left staff (bass clef) contains a rhythmic accompaniment. Below the staves, there is a handwritten note: $\frac{3}{3} = 6 = 3$. A dashed line connects the two staves.

c)

Handwritten musical score for piano, system c). The system consists of two staves. The right staff (treble clef) contains a melodic line with slurs and ties. The left staff (bass clef) contains a rhythmic accompaniment. A dashed line connects the two staves.

lish a precedent for later entries which have the varied rhythmic pattern--or a combination of the above. The fourth (subdominant) and fifth entries, separated from the first three by a short episode, occur in stretto (implying a developmental rather than expository character), and begin the motion to the first important cadence, on V at measure 22. Example 6.6 gives the voice-leading details of the entire passage.

The three expositions based on 3-2-1 type subjects show remarkable structural similarities, probably accountable by a systematic, if unconscious, compositional method on Bach's part. That all three 3-2-1 expositions begin with a rising order of at least three entries is more than coincidence: it suggests a deeper relationship between subject type and contrapuntal design than has hitherto been demonstrated, and suggests ways in which the superiority of Bach's fugal composition, which has always been acknowledged without tangible proof, can be practically demonstrated.

Other Exposition Structures

Although each of the fugues discussed below has unique structural characteristics they can best be understood in comparison to the common structural types presented in the previous chapters. Rather than unduly encumbering this essay by discussing each of the following expositions in great detail, I will simply illustrate the main structural aspects of each, and relate them to the exposition structures already discussed.

1-2-3-4-5 Exposition

Fugues in this category include:

- 1) WTC I d
- 2) WTC I G

The 1-2-3-4-5 linear progression, prolonging the tonic chord, contains no V-I cadential implication. A real answer, 5-6-7-1-2, will be heard as a fifth-progression in V, while a tonal answer 5-5-6-7-8, which gives a rising fourth-progression prolonging the I, can easily obliterate the motivic nature of the subject. (In both the WTC I d and G fugues, the exposition is based on a descending series of entries.)

1) WTC I d (subject analysis: Example 2.50)

The real answer in the WTC I d fugue is necessary because of the prominent flat-6-5 with which the subject ends. In minor a flat-6-5 such as this suggests only a neighbor motion within I, harmonized as I-IV-I or I-VII⁷-I. Natural-6-5 however, as in the answer in the WTC I c# fugue, suggests a motion to the dominant, V-I in V. However, in major, natural-6 to 5 can be understood within the tonic key (6-5) or the dominant key (2-1): Natural-6-5 can suggest an auxiliary cadence to V, which can then be reinterpreted as an authentic cadence in the tonic, giving a convincing return to I at the end of the answer.)¹ Had this fugue been in major, a tonal answer (A-B-C#-D-A!-/B-G-F#-G-E-C#-D) would have been possible.

Example 6.7 shows the voice-leading structure of this exposition.² Notice that harmonic prolongations correlate with the beginnings rather than with the endings ~~of thematic~~

1. The Fugue in A for harpsichord, BWV 949 (ascribed to Bach), shows this structural possibility. A plagal (subdominant) form of tonal answer (here A-B-(flat or natural)-C-D-A!-/Bb-G-F#!-G-Eb!-C-D) is also possible in minor, allowing the tonic to return at the end of the answer, heard locally as V in IV.

2. See Schenker, Free Composition, Figure 53.5. Figure 156.1 gives a middleground graph of the entire fugue. That Schenker should choose this particular piece as a representative example of tonal structure in fugue is curious, since the voice-leading structure, of the exposition at least, is atypical.

Example 6.7
Structural Analysis, WTC I d Fugue Exposition.

a)

I V I V I

b)

I V I V I

c)

statements. The dominant prolongation starts at the beginning of the answer, and the return to the tonic occurs at the beginning of the third entry. No auxiliary cadence to V occurs; instead, the dominant prolongation simply begins at the point where the subject ends and the answer begins. The subject thus expresses a 1-2-3-4-5 linear progression connecting two chords (I and V), rather than prolonging a single chord. Since the real answer ends on 2, within a V prolongation, the short bridge is necessary to return the music to I. Again, as in many examples already seen, the overall upper-voice motion for this exposition is a 5-4-3 linear progression.

2) WTC I G (subject analysis: Example 2.51)

The structure of the WTC I G subject is very similar to that of the WTC I d subject. However, the unresolved F# in the lower implied-voice of the subject (measure 3) suggests a return to I at measure 4 (8-7-8), in contrast to the WTC I d subject, whose end expresses V. Therefore a short bridge is necessary to provide for the harmonic change needed for the beginning of the answer. The scalar descent of the bridge implies a II⁶ chord, but not an auxiliary cadence. As in the WTC I d fugue, the answer begins together with a

dominant prolongation, and operates structurally as a direct transposition of the subject to the dominant key. A bridge is likewise necessary to prepare for the third entry. Both this bridge and the third entry follow the typical structural patterns already discussed, as shown in Example 6.8.

Curiously, both WTC expositions in G share many structural features, despite their radically different subject structures--compare Examples 3.22 and 6.8. Besides expressing similar affective characteristics--triple meter, fast tempo, and gigue-like texture--they share a descending series of entries and a bridge before each thematic entry. Comparison of the two expositions reveals a close connection between their structures which parallels their stylistic affinities. The initial tonic of the WTC I G subject controls the tonal prolongations of the exposition, as does the arpeggiation which opens the WTC II G subject. Each exposition prolongs 5 as the main upper-voice note and arpeggiates to the upper tonic at the third entry.

Example 6.8
Structural Analysis, WTC I G Fugue Exposition.

(5) (10) (15)

I (II₄) 1-

b)

c)

Only one example of each of the following types exists in the WTC. Although comparison within each type is thus precluded, comparisons will be made with the exposition types already described.

5-6-7-8 Exposition: WTC II B (subject analysis: Example 2.49)

Example 6.9 shows the voice-leading structure of the WTC II B exposition. The two main linear progressions which coexist in the WTC II B subject ((5-)6-7-8 and 1-2-3) were shown in Chapter 2.³ Evidently the avoidance of 5 at the beginning of the subject allows a smooth connection with the second entry, through structural reinterpretation in the real answer. Instead of a 2-3-4-5 linear progression, which would occur as a structural basis for the answer if the implied 5 of the subject were actually stated, there is a 1-(2)-3-#4-5 linear progression leading to an auxiliary

3. The descending scale which unfolds a sixth, B-D# at the end of the subject is similar in profile to the link passage which connects the end of the WTC I G subject with its answer, but has a different structural function. In the WTC I G fugue the sixth-progression connects notes of different harmonies (I and V), while in the WTC II B fugue it simply prolongs the tonic. For this reason I consider the descending sixth-progression to be an integral part of the subject in the WTC II B fugue, but only a link in the WTC I G fugue.

Example 6.9
Structural Analysis, WTC II B Fugue Exposition.

a)

b)

c)

I V I

V I

I V I

cadence on the dominant. As the beginning of the answer, 2 would form a dissonance with the end of the subject, and would require a link between the first and second entries.

Since this exposition consists of a rising series of entrances, the secondary linear progression of the subject, 1-2-3, is buried in the inner voices in subsequent entries, assuring the primacy of the 5-6-7-8 linear progression, which continues to rise through each entry, spanning the exposition in a gigantic arpeggiation of I. After the fourth entry, a partial redundant entry occurs in the bass, requiring a return from V to I at measure 20. (This fifth entry allows the upper voice to begin a 5-4-3 structural descent, measures 17-22, which rounds off the tonic prolongation of the exposition, and begins the descending upper-voice motion which leads to the cadence in V at measure 27.) This five-entry exposition, encompassing two I-V-I progressions, is unified by the upward arpeggiation and stepwise descent in the upper voice.

Neighbor-motion Subjects and Expositions: WTC I Ab

Neighbor motion subjects, essentially prolonging a single note, convert very simply to answers: the prolonged tonic becomes a prolonged dominant, and vice versa. Elision between subject and answer occurs easily if the dominant is above, but a consonant fourth, an implied ξ , occurs at this point if the dominant is below. (This principle also holds for 3-2-1 type subjects and for 5-4-3-2-1 type subjects with initial tonics, as shown above.) This factor controls the formal plan of the WTC I Ab exposition: the subject prolongs 5 and the answer prolongs 1, moving to 2. The answer is below and the third part enters above.

WTC I Ab (subject analysis: Example 2.52)

The 5-6-5 subject of the WTC I Ab fugue has a tonal answer, but one that nevertheless ends on 2 rather than 1, preserving the boundary fifth 1-5 of the subject as 1-5 of V in the answer (see Example 6.10).⁴ On this account the answer is comparable to that in the WTC I d exposition. As in the WTC I d exposition, a bridge is therefore necessary

4. Eb-Ab-G-Eb-Bb-G-Ab, prolonging Ab, is a possible answer for this subject.

Example 6.10
Structural Analysis, WTC I Ab Fugue Exposition.

(5)

a) (5)

I $\frac{6}{5}$ -7 I $\frac{5}{4}$ $\frac{1}{2}$ I

b)

c)

to prepare for the third entry, which, occurring above here, establishes the Kopfton in its obligatory register. The fourth entry, in an inner voice, has only a weak structural role, and it is in fact the succeeding measure (m. 7) which causes the move to V. The initial tonic-prolongation of the fugue ends with a cadence to I (m. 11), expressing a 5-4-3 descent in the upper voice, while the overlapping fifth entry initiates the following section of the fugue.

Unusual Cases

- 1) WTC II d
- 2) WTC II b-flat
- 3) WTC II F#
- 4) WTC II C#

Now that all the readily identifiable non-modulating subject and exposition types in the WTC have been discussed, we are in a position to examine the few WTC fugue expositions--all in Book II--which have unusual structural characteristics. In each case the special structural characteristics arise from unique qualities in the subjects themselves.

1) WTC II d (subject analysis: Example 2.23)

The WTC II d exposition manifests characteristics associated typically with three different subject types: 5-4-3, 5-4-3-2-1, and 3-2-1. The melodic ascent of the subject gives a corresponding melodic ascent in the answer, and in this case leads to an earlier than usual beginning to the dominant prolongation.⁵

Example 6.11 shows the voice-leading structure of the WTC II d exposition. The first unusual characteristic is that the conclusion of the answer contains a fundamental alteration of the form of the subject. The answer ends not on 7 but on 5, through a substitution of the final answer note, made possible by use of the closing formula mentioned in Chapter 3. This alteration demonstrates the use of the potential for structural reinterpretation which is inherent in this closing formula: Bach advantageously substitutes 5-4-3-2-(5)-1, the ending for subjects which end on 1, for 5-4-(3-2-5)-3, the ending for subjects which end on 3. The altered answer, taking the form of an answer to a 5-4-3-2-1 type subject, aids in the downward registral shift which is necessary to accommodate the countersubject at the third entry.⁶

5. Compare the WTC II f and G expositions.

6. Compare WTC I g, Example 3.6.

Example 6.11
Structural Analysis, WTC II d Fugue Exposition.

⑤

a)

I V⁴ - - I (6 6 6 6 6 6) (V⁴ I)

b)

10 10 10 10

c)

The countersubject, rather than ending in V as so often happens in counterpoints to answers in 5-4-3-2-1 type expositions, resolves deceptively through 4 to I as in counterpoints to answers in 3-2-1 type expositions. This deceptive resolution avoids a cadence at the end of the second entry, and leads the music on directly to the bridge. Further, it aids in the descending registral shift necessary to make way for the descending motion of the upper-voice. Had the elided cadence not been used, the countersubject would have followed precisely the 3-8-6-#4-5 descending motive described in Chapter 3.

The bridge combines the functions of harmonic change and registral change through an imitative sequence, shown in Example 6.11, which prolongs V. The overall structure of the third entry is like that of the second entry, ending with a descent to 1, not 3, but the details are different. As Example 6.11 shows, the third entry expresses a descending octave, supporting parallel 6th-chords. While the cadential motion of the third entry naturally closes a prolongation of the tonic, the upper part (countersubject) has a deceptive motion--C-natural not C#--(as in the previous statement of the countersubject), which leads to a further tonic prolongation. Simultaneously the middle part overlaps the elided cadence as it introduces a new motive,

itself based on the 5-4-3 linear progression and imitated through a cycle of fifths.

The connection of the answer with the countersubject at the third entry dictates the bold modification of the end of the answer, made possible by the structural potential inherent in the closing formula of the subject. Likewise, the elided conclusion of the countersubject aids in connection with the succeeding music. The same considerations also apply to the conclusion of the third entry and its countersubject. The clear definition of formal divisions is bridged here by asynchronous tonal motion.

2) WTC II b-flat (subject analysis: Example 2.22)

The WTC II b-flat fugue also has an unconventional exposition based on a 5-4-3 type subject with melodic ascent. A number of factors gives layers of complication to the hypothetical 5-4-3 exposition pattern presented in Chapter 3. Here extension of the melodic ascent of the subject allows a redistribution of tonal events, and it is just this resultant disjunction of structure and formal design that animates the exposition: as an element of formal design concludes, a tonal motion begins, while tonal arrivals take place in the midst of formal units. The play of 3 as third of I and as leading-tone to IV (measures 5 and

15), and the corresponding play of 7 as 3 of V and leading-tone of I (measures 7, 9, and 21) through inflected forms (natural and raised), animates the tonal motion of the exposition in a manner which is impossible in the major key, where both 3 and 7 remain unchanged, whether functioning as mediants of I and V or leading-tones of IV and I. (The same play operates at the end of the fourth and fifth entries of the WTC I b-flat fugue.)

The format of the exposition is typical--second entry above and third entry below. However, the dominant prolongation begins not at the end, but in the middle, of the answer (measure 7). Conversion of the dominant from minor-V to major-V⁷ occurs in the latter part of the answer, not in the bridge, and the dominant is then prolonged through the bridge, leading to the return to I at the beginning of the third entry, as demanded by the initial tonic of the subject (see Example 6.12). As in the WTC II d fugue, the conclusion of the third entry then imitates the conclusion of the second entry (I acts as V of IV, not as I of I), leading the music beyond the end of the third entry, and avoiding a cadence.

As in other fugues with countersubjects, the problem of countersubject range is dealt with here by giving the countersubject twice in the first part, and not at all in

Example 6.12
Structural Analysis, WTC II b-flat Fugue Exposition
(first three entrances).

The image displays three systems of handwritten musical notation, labeled a), b), and c). Each system consists of a grand staff with a treble and bass clef, and a single bass line with figured bass notation.

- System a):** The treble staff contains a complex, highly ornamented melodic line with many sixteenth and thirty-second notes. The bass line has a simpler, more sustained line. The figured bass notation below the staff includes the Roman numeral 'I' and several figures: 3- -7, 2b - -4, 2b - -4, and 2b - -4.
- System b):** The treble staff continues the melodic line with similar ornamentation. The bass line is more active, with more frequent notes. The figured bass notation is not present in this system.
- System c):** The treble staff shows a continuation of the melodic line. The bass line is also active. The figured bass notation is not present in this system.

The notation is handwritten and appears to be a draft or a working manuscript. The ink is dark, and the paper is aged and slightly discolored.

the second part during the exposition. Specifically, this allows the leading-tone, A-natural at the end of the answer to resolve in the proper register to Bb at the beginning of the third entry, as shown in Example 6.12.

Only the fourth and final entry of the exposition ends like the subject, on the minor third of the acting tonal center. It ends with a cadence (bridged only on the surface by the 9-8 suspension in the upper voice), and the counter-subject finally gives the previously suppressed #4-5 motion, providing a fitting conclusion to the exposition.⁷

In both the WTC II d and WTC II b-flat fugue expositions, melodic ascent in the subject provides the time which allows the structural complexities described above to occur. In contrast to the transparent texture of the WTC II C fugue, where formal plan and tonal structure coincide, here formal design and structural design are opposed. The effect, further intensified by chromaticism, is one of much greater complexity.

7. This procedure is similar to that of the 3-2-1 type expositions discussed above, where the last statement of the countersubject gives the most structurally normal form.

3) WTC II F#

In contrast to all other fugue subjects discussed thus far, no single linear progression or neighbor motion exists as a basis of the WTC II F# subject. Instead, two partial linear progressions occur, each of which includes implied notes. Example 6.13 shows the voice-leading structure of this subject, and includes all the implied voices. The primary linear motions are the usual ones, 5-4-3, 8-7-8, and 3-2-1. Example 6.13 shows that it is through the many structural levels in the subject that the subdominant inflection of measures 2 and 3 can be understood as a subordinate passing motion which gives consonant support to B of the inner voice third-progression C#-B-A#. Since the

Example 6.13
Structural Analysis, WTC II F# Subject.

The image contains two musical staves, labeled 'a)' and 'b)', illustrating the structural analysis of the WTC II F# Subject. Staff 'a)' shows the subject in treble and bass clefs, with various melodic lines and implied voices. Staff 'b)' shows a similar analysis, focusing on the inner voice third-progression C#-B-A#.

contrapuntal lines of the subject are the standard ones, the succeeding exposition structure is otherwise conventional, as is evident from the background level of Example 6.14. The unusual leading-tone opening is understood as an incomplete neighbor to the tonic, and the accented tonic itself dictates the harmonic organization of the exposition: The beginning of the third entry coincides with a return to I. The startling entry of the answer an augmented fourth above the end of the subject links the initial prolongation of I to the dominant prolongation of the answer, by forcing F# to move down to E# in measure 5. The main upper-voice is a descending fifth, 5-4-3-(2)-1, and the conclusion of the exposition is marked by the low register tonic immediately following, and motivically part of, the third entry.

4) WTC II C# (subject analysis: Example 2.25)

The subject structure of the WTC II C# fugue, as discussed in Chapter 2, can easily be understood as Paradigm 1 (5-4-3). The stretto exposition dictates the subdominant motion of measure 2.⁸ Yet the exposition still concludes an

8. Had the answer been real--D# not C#--the stretto would not have been possible. But a descending third is desirable in the answer since nothing intervenes between 5 and 4 of the subject that would permit a tonal modification. Compare the fugue in G minor from Bach's Sonata I (BWV 1001) for unaccompanied violin.

Example 6.14
Structural Analysis, WTC II F# Fugue Exposition.

(5) (6)

a)

I II I (II) I

b)

c)

overall 8-7-8 motion in the upper voice and a I-V-I harmonic motion (See Example 6.15), as in more conventional 5-4-3 type expositions. As in the WTC II c fugue, lack of an upper neighbor to 5 in the subject means that no prominent (and possibly structural) 3 will occur in the upper voice of the exposition.

In each of the above examples, deviations from the common structural patterns have been accounted for by unusual characteristics within the subjects themselves. They can be viewed as having the same underlying voice-leading origins as those conforming to more usual patterns, transformed through successive levels of variation and ornamentation.

Subject Paradigms and Exposition Patterns

Figure 6.1 summarizes the most usual exposition patterns of the most common subject types in the WTC. Thirty six of WTC fugue expositions conform to the following table. Those that do not are those based on unusual subject structures (4), those based on modulating subjects (5), and the WTC II C#, c#, and F# fugues.

Example 6.15
Structural Analysis, WTC II C# Fugue Exposition.

a)

Part a) shows the first system of the fugue exposition. It features a grand staff with treble and bass clefs. The right hand plays a complex melodic line with many beamed sixteenth and thirty-second notes. The left hand provides a harmonic accompaniment with chords and moving lines. A large slur covers the first two measures. Roman numerals 'I' and 'II; V' I' are written below the staff. A fermata is placed over the final note of the first system.

b)

Part b) shows the second system of the fugue exposition. It continues the melodic and harmonic development from the first system. The right hand's melodic line remains highly active. A large slur covers the first two measures. Roman numerals 'I' and 'II; V' I' are written below the staff. A fermata is placed over the final note of the second system.

c)

Part c) shows the third system of the fugue exposition. It continues the melodic and harmonic development. The right hand's melodic line remains highly active. A large slur covers the first two measures. Roman numerals 'I' and 'II; V' I' are written below the staff. A fermata is placed over the final note of the third system.

Figure 6.1
Common Subject Paradigms and Exposition Patterns.

Subject Paradigm	Exposition Pattern and number of occurrences.		
5-4-3	m-h-1 (9)	h-m-1 (6)	1-m-h (6)
1-2-3	m-h-1 (3)	h-m-1 (3)	
5-4-3-2-1	m-h-1 (5)	h-m-1 (1)	
3-2-1			1-m-h (3)

Chapter 7

MODULATING SUBJECTS AND EXPOSITION PATTERNS

Fugues in this category include:

- 1) WTC I g#
- 2) WTC I b
- 3) WTC I Eb
- 4) WTC I A
- 5) WTC I e

As noted early in this essay, modulating subjects are structurally different from non-modulating subjects in fundamental ways. We can therefore also expect radical structural differences in expositions of non-modulating subjects. This chapter explores the structures of such subjects and expositions--all in Book I--and compares them with the previously illustrated structural patterns based on non-modulating subjects. Although not enough cases appear in the WTC to allow a categorization of modulating subjects and expositions, a further study of a many examples, by Bach and others, would probably yield recognizable underlying patterns. This discussion begins, therefore, not with hypothetical models, but with analysis.

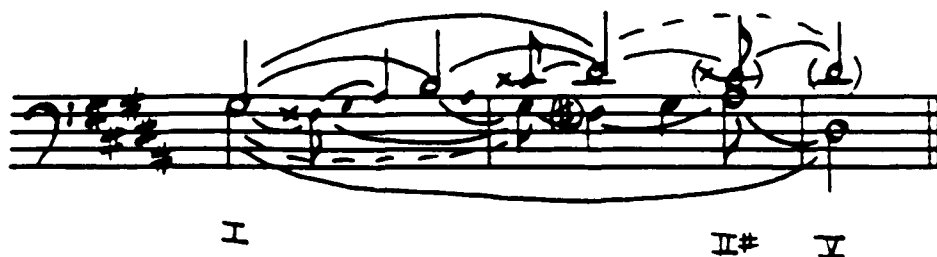
Whereas non-modulating subjects are generally self-contained units, modulating subjects demand continuation, since their endings occur at the dominant, a transitory point in a larger tonal motion. They and their answers usually correspond well to the metaphorical labels

"question" and "answer," since the second entry often completes the tonal segment initiated by the first entry. Therefore, expositions based on modulating subjects normally follow a pattern of subject-answer pairs--even in fugues with an odd number of parts--whereas expositions based on non-modulating subjects normally follow a pattern of three entries, sometimes expanded by additional entrances.

1) WTC I g#

The WTC I g# exposition shows a simple structural arrangement of four entries for a modulating subject. The subject itself is clear enough as regards tonal direction, suggesting an auxiliary cadence to the dominant by its emphatic conclusion 4-5-1 of V. But the melodic line which counterpoints this bass is largely implied: after an arpeggiation 1-3-5, the concluding #4-5 must be "understood" as the logical conclusion of the implied upper voice. Example 7.1 shows that the underlying polyphonic structure of this subject is like the non-modulating WTC II F# subject, since it has no complete linear progression in its upper voice. (The implied lower-neighbor pattern, 5-#4-5, is, however, reminiscent of the exceptional WTC I Ab subject, 5-6-5.)

Example 7.1
Structural Analysis, WTC I g# subject.



The entry of the answer, above the first part, gives a conclusion to the implied upper voice of the subject, and continues the rising motion which the subject began. Much structural reinterpretation occurs with the answer, since it expresses a very different tonal motion (V-I rather than I-V), since it is a tonal answer (as is almost invariably the case for modulating subjects), and since it has an accompanying bass which contributes to the tonal expression. The end of the answer coincides with the completion of a tonal unit, I-V-I, but it is the entry of the third part that completes the upper stratum, thereby uniting the second tonal segment of the exposition (entries 3 and 4) with the first. Example 7.2 shows the tonal structure of the answer, and of the whole exposition.

The third entry continues the upward arpeggiation of the tonic chord, as far as D#, but the fourth entry, in the bass, fails to complete the implied upper voice D# of the

Example 7.2
Structural Analysis, WTC I g# Fugue Exposition.

The image displays two staves of musical notation from the WTC I g# Fugue Exposition. The notation includes various musical symbols such as notes, rests, and accidentals. Below the staves, there are Roman numerals (I, V, I) indicating harmonic structure. Annotations include circled letters (D, S, N), numbers in parentheses ((1), (2)), and dashed lines. A bracket labeled 'A' spans a section of the first staff. The second staff has a bracket labeled 'S' and a dashed line labeled '(2)'. The Roman numerals are placed below the staves: I, V, I on the first staff and I, V, I on the second staff.

third entry. Why is the fourth entry below, not above?
Apparently not only for variety, but more importantly (1) to allow the final statement of the exposition to express its cadential power through the emphatic bass motion 4-5-1, which is also the "linkage" to the subsequent music, and (2) to establish D# as the Kopfton, goal of the arpeggiation and

highest note of the exposition. Logically the chain of rising entries must be broken at some point, or it will continue to spiral upwards: had the fourth entry been above, the resolution of a dangling high G# would then be wanting. It is thus evident that Bach's arrangement, T-A-S-B, is the best one for this particular subject. The direct relationship between motive and structure demonstrated here accounts to some extent for the unity and strength of Bach's fugues.

2) WTC I b

The WTC I b exposition follows essentially the same tonal plan as the WTC I g# exposition--two linked harmonic motions, I-V-I-V-I--but is much more complex. The intensely chromatic subject is fundamentally a 5-6-5 motion, in which a modulation is implied through the raised sixth and natural seventh degrees. The broken triads F#-D-B and C#-A-F# which frame the subject clarify the harmonic poles. If the subject's semitonal dyads are understood as appoggiatura-and-resolution, the underlying tonal structure (shown in Example 7.3) is quite clear.

Example 7.3
Structural Analysis, WTC I b Subject.



As in the WTC I g# fugue, the answer returns the music to I. The countersubject, consisting of two parts, a passage in sixteenth-notes and a scale segment in quarter-notes, is treated in an unusually free fashion.¹ First, the inverted form of the first part of the countersubject appears before the prime form is heard, at the entry of the answer. This brilliant stroke of compositional technique avoids an otherwise necessary and obvious leap from F# to C# or D to begin the countersubject, gives some very free dissonance treatment in measure 4, beat 3--remarkably free even for Bach, and presents in the high F# which results from the inversion, the Kopfton of the entire fugue!²

1. Hans Weisse gives an analysis of this passage in "The Music Teacher's Dilemma," Proceedings of the Music Teachers National Association (1935): 122-37, reprinted in Theory and Practice X/1-2 (July-December, 1985): 45-47.

2. This interpretation agrees with that of Karl-Otto Plum, Untersuchungen zu Heinrich Schenkers Stimmführungs-analyse, (Regensburg: Gustav Bosse Verlag, 1979): 70.

other repeated motivic elements, a rising passage in sixteenth-notes and a chromatic motive in eighth-notes, labelled "x" and "y," in the four parts.

In terms of tonal structure, the bridge before the third entry is superfluous, since it merely prolongs the tonic through an ascending motion from the inner voice, as shown in Example 7.4. But it is necessary for the motivic detail of the piece, since it prepares the high register of the upper voice for the countersubject at the third entry. This way of dealing with the connection of the end of the theme with the beginning of the countersubject is practical in the middle of an exposition, but not before the entry of the second part.

The third entry, as expected, leads the music again to V, but the one-measure bridge to the fourth entry returns the music to I at measure 13. Thus the fourth entry is structurally different from the second entry: a prolongation of I, not a motion to I. Again, variety is not the only factor here. The prolongation of I through measures 13-16 establishes strongly the terminus for the initial tonic prolongation, so that the direct motion to a new prolongation of V at measure 17 does not undermine the stability of this tonic.

Example 7.4
Structural Analysis, WTC I b Fugue Exposition.

The musical score is presented in two systems. The first system covers measures 1 through 10, with measure numbers 5 and 10 circled above the staff. The second system covers measures 11 through 17, with measure number 13 circled above the staff. The notation includes treble and bass staves with various musical symbols. Below the staves, structural analysis markings 'I' and 'V' are placed under specific measures: measures 1, 3, 5, 7, and 9 in the first system, and measures 11 and 15 in the second system. A dashed line connects the end of the first system to the beginning of the second.

The upper voice for measures 1-17, a descending fifth, 5-4-3-2-1, gives a sense of completion and unity to the

exposition. The Kopft F# is regained immediately in measure 17, and reaffirmed in measure 19, where Bach anticipates the next thematic entry with the opening notes of the subject in the alto.

The dexterity with which Bach integrates the motivic material into a comprehensive tonal structure in this work is amazing. Although this is not the favorite WTC fugue of most people, probably on account of its harsh dissonance and chromaticism, the overwhelming technique which controls its difficult texture makes it a fitting conclusion to the first book of the WTC.

3) WTC I Eb

The transparent lace of the WTC I Eb fugue is quite unlike the densely entangled web of the WTC I b fugue. But the outline of the subject is much the same--an upper-neighbor motion, 5-6-5, over an auxiliary cadence to V (see Example 7.5). The small bridge which follows the first entry seems to contradict the essential motion of the subject by returning at once to I. Why a bridge in this case, but not in the previous one? Essentially, the bridge is required here because the answer begins emphatically on the strong beat--compare the answer in the WTC I b fugue. The perfect fifth Eb-Bb, which would have occurred had the

answer began at the end of the subject, contradicts the harmonic motion to V in the subject. Consequently, the answer must be separated in time from the subject. Had the answer begun on F, the bridge would have been unnecessary, but a "consonant fourth," F-Bb would have resulted.³ (In the previous example the unstressed B which begins the answer can be understood as a non-harmonic tone resolving to A.) This tiny bridge becomes an organic part of the composition through motivic repetition in the subsequent bridges and episodes.

Example 7.5
Structural Analysis, WTC I Eb Subject.



Although it begins emphatically on Eb, Bach nevertheless maintains the answer as an expression of V moving to I, not as a prolongation of I. Example 7.6 illustrates how the

3. That is, a fourth which implies a $\frac{5}{4}$ inversion, but which actually stands for a root position chord. Compare the entry of the answer in the WTC II g# fugue.

Example 7.6
Structural Analysis, WTC I Eb Fugue Exposition.

The image displays a handwritten musical score for the exposition of the Eb Fugue from the Well-Tempered Clavier, Book I. The score is written on three systems of grand staves (treble and bass clef). The notation includes various musical symbols such as notes, rests, and accidentals. Above the first system, a circled number 5 is present. Below the first system, the letters 'I', 'V', and 'I' are written, indicating structural divisions. The second system also has a circled number 5 above it. Below the second system, the letters 'I', '(II)', and 'V' are written. The third system has a circled number 10 above it. Below the third system, the letters 'V' and 'I' are written. The score is annotated with various musical symbols and structural markers, including a large bracket spanning the first two systems and a smaller bracket under the third system.

"tonic" chord of measure 3 can be understood as harmonic support for a passing Eb in a third-motion F-Eb-D, which prolongs V. This is structurally similar to the passing tonic chord at the beginning of the third entry in the WTC II F fugue.⁴ The sudden leap to the beginning of the countersubject contradicts the principle of stepwise connection which justified the inverted countersubject in the WTC I b fugue. But here the sudden Ab contributes to the tonal structure by destabilizing the apparent tonic of measure 3 through the delayed resolution of the upper voice F.

The bridge to the third entry is tonally unnecessary, since it simply prolongs I. However, as in the bridge to the second entry, it allows the third part to enter via a passing V chord, and avoids the consonant ♯ which would otherwise occur. The bridge also provides an elegant approach to the third entry through a stepwise bass motion. The third entry itself functions in the usual manner, but its conclusion provides an emphatic cadence to V.

4. It is possible to hear a return to I at this point in either fugue, but in any case the strongest return to I occurs at the end of the answer.

The bridge (or episode) which leads to the fourth thematic statement (measure 11) serves mainly to prepare the registers of the voices. Although in traditional terms this entry is not part of the exposition, but part of the counterexposition, I consider it as part of the exposition since it completes the initial tonic prolongation of the piece, by bringing the music back to I and by completing a fifth descent in the upper voice. From here an extensive episode leads to VI in measure 17, and initiates the larger tonal motion of the piece.

4) WTC I A

Many analysts do not believe that the subject of the WTC I A fugue modulates.⁵ The question is not easy, but, after a thorough examination of the behavior of the subject throughout the fugue, I am convinced that indeed this is a modulating subject. If the G# of the first part at the beginning of measure 3 is regarded as a substitution for E,

5. The following consider the subject to be non-modulating: Czackzes, Analyse des WTC, II: 189; Higgs, Fugue: 23; Prout, Fugue: 56; and Von Bruyck Technische und ästhetische Analysen: 182. These consider that the subject does modulate: David, Das wohltemperierte Clavier: 74; F. Stade, Die Fugen des WTC, partiturmässig dargestellt 2 vols. (Offenbach am Main: Steingraben [c. 1900]), I: 67; Iliffe, The Forty-Eight: 65; Keller, The Well-Tempered Clavier: 109.

necessitated by the limitations of the two-part texture, a complete melodic unit results, a unit which is the basis of the succeeding entries.⁶ (Likewise, the first note of the second part in measure 4 must be understood as a substitute for A.) Compare this unit with the subject statements in measures 4 and 9. Since the two-measure subject is imitated after only one measure, we are dealing with a procedure which is unusual for the WTC, but not uncommon in other imitative music, and quite common in vocal music of the sixteenth and seventeenth centuries. The stretto opening puts this fugue in quite a different structural class from the others (excepting WTC II C# fugue), and obviously the stretto itself plays an important part, then, in the tonal organization of the exposition.

Imagining the first two entrances without the stretto overlap, we can form an idea of the theoretical basis of the tonal structure. That is, the dominant prolongation would normally begin at the the end of the subject and the beginning of the answer. But in the telescoping process of stretto, the point of junction is overlapped, and the

6. Keller (The Well-Tempered Clavier: 109) remarks: "The cadential note E at the beginning of the third bar is avoided because it would have created the interval of a fourth with the lower voice B."

dominant occurs not at the beginning but in the middle of the answer--still at the end of the subject. From this point on, the tonal structure is straightforward. The end of the answer returns the music to I for the third entry, incorporating a 5-4-3 descent in the upper voice (see Example 7.7). The third entry again leads the music to V, and the fourth entry leads it back again to I, with an extended cadence which completes a fifth-progression in the upper voice.

5) WTC I e

The WTC I e fugue is again quite different, since here the answer neglects to return the music to I. By giving a real answer for a modulating subject, Bach has suggested the possibility of an endless spiral of rising fifths, and for this tonal reason (not mentioning stylistic considerations) the exposition is limited to only two entries. The first entry leads to V, but the second entry leads to V of V, rather than II, so the exposition remains within the traditional orbit of I and V (Compare WTC I d). Example 7.8 includes the episode which follows, by which means the incomplete motion of the exposition can be understood within the larger context of a motion to III, the first harmonic goal of the piece. I have interpreted the V of the answer

Example 7.7
Structural Analysis, WTC I A Fugue Exposition.

The image displays two systems of musical notation for a piano piece, with structural analysis labels below the staves. The first system consists of two staves (treble and bass clef) with a key signature of one sharp (F#). The music features complex melodic lines with many beamed sixteenth and thirty-second notes. Above the first staff, there is a circled '5' and a bracketed section. Below the first staff, the labels 'I', 'V', 'I', and 'V' are positioned under different measures. The second system also consists of two staves, continuing the musical passage. Above the first staff of the second system, there is a circled '7'. Below the second staff, the labels 'V' and 'I' are positioned under different measures. The notation includes various musical symbols such as notes, rests, beams, and slurs, indicating a highly technical and rhythmic composition.

within a passing motion to the following II[#], the chord which gives the impetus for the episode that follows, leading ultimately to III. Example 7.9 shows the theoretical contrapuntal basis of this passage in a series of descending tenths.

Example 7.8

Structural Analysis, WTC I e Fugue Exposition.

I

III

Example 7.9

Contrapuntal Basis of Example 7.8.

a)

b)

The main structural characteristics, then, of expositions based on modulating subjects as opposed to on non-

modulating are: (1) expositions are based on an even, rather than an odd number of entries, (2) subject and answer act as a pair, giving a complete tonal unit I-V-I, (3) a tendency towards end-orientation--that is, arrivals at new tonal points coincide with subject or answer statements more consistently than in fugues based on non-modulating subjects, where the initial tonic can play an important structural role, and (4) the mediant has a subordinate role in the overall upper-voice structure.

Chapter 8

STRUCTURE IN THE FUGUE AS A WHOLE

He who is not acquainted with Bach's fugues cannot even form an idea of what a true fugue is and ought to be. In fugues of the ordinary kind, there is nothing but a certain very insignificant and sloppy routine (Schlendrian). They take a theme, give it a companion, transpose both gradually into the keys related to the original one, and make the other parts accompany them in all these transpositions with a kind of thorough-bass chords. This is a fugue; but of what kind? It is very natural that a person acquainted with only such fugues can have no great opinion of the whole species. How much art does it, then, require to make oneself master of such commonplace?

Bach's fugue is of quite another kind. It fulfills all the conditions which we are otherwise accustomed to demand only of more free species of composition. A highly characteristic theme; an uninterrupted principal melody, wholly derived from it and equally characteristic from the beginning to the end; not mere accompaniment in the other parts, but in each of them an independent melody, according with the others, also from the beginning to the end; freedom, lightness, and fluency in the progress of the whole; inexhaustible variety of modulation combined with perfect purity; the exclusion of every arbitrary note not necessarily belonging to the whole; unity and diversity in the style, rhythm, and meters; and, lastly, diffused through the whole, so that it sometimes appears to the performer or hearer as if every single note were animated--these are the properties of Bach's fugue, properties which necessarily excite admiration and astonishment in every judge who knows how much power of mind is required for the production of such works.¹

1. Johann Nicolaus Forkel, On Johann Sebastian Bach's Life, Genius, and Works (Leipzig, 1802), trans. A. C. F. Kollmann in Hans T. David and Arthur Mendel, The Bach Reader 2nd. ed. (New York: Norton, 1966): 324-325 (italics mine).

Forkel's perceptive characterization of Bach's fugal art, touching on many points of Bach's contrapuntal genius, remains largely subjective and impressionistic. Schenker's description, below, is also general, yet it accounts concisely for the variety, consistency, and quality of Bach's fugal art in more objective and technical terms:

Despite the fact that each one exhibits a different design, the fugues of J. S. Bach are genuine fugues in the strictest sense; they are always determined by the subject, by its dimensions and harmonic content, and are controlled by a fundamental structure. Without improvisational gift, that is, without the ability to connect the composition to the middleground and background, no good fugue can ever be written.²

Chapters 3 through 7 have demonstrated the effect of a subject as a structural determinant in fugal expositions. This chapter illustrates some ways in which the overall structure of fugues can reflect the structure and ornamentation of the subject itself, as suggested by Schenker in the above quotation.

Establishment of the fundamental top line (Urlinie) of a fugue constitutes one of the primary difficulties for the analyst. The very nature of fugal style includes copious voice-exchanges, voice crossings, register shifts, subsidi-

2. Schenker, Free Composition: 143. See also Jonas, Introduction: 147.

ary motions to and from inner voices, superposition of inner voices above the main voice, rests in both outer voices, and the unique demands which the various imitative techniques place on the voice leading.³ Further, the one-part, through-composed form of many fugues gives little in the way of definite structural indicators for the analyst. Nevertheless, the difficulty is not always insurmountable, and, as Schachter points out,

In principle the analysis of a fugue should present no problems essentially different from those encountered in other types of music. Fugal procedures, after all, grow out of the contrapuntal and harmonic elements fundamental to tonality. And two fugues by the same composer may well differ by at least as much as two rondos, two sonata movements, or two nocturnes.⁴

Subject Type and Umlinie Definition

The tradition of imitation at the fifth in and of itself suggests 5 rather than 3 as the preeminent Kopftone in the genre of fugue. Historically, the organization of imitative subjects around these notes in music of the

3. Schachter, "Bach's Fugue in Bb Major," The Music Forum III: 239.

4. Ibid.: 238. Jonas, Introduction: 83, has a similar view: ". . . it is idle to speak of polyphony versus homophony. The contrapuntal basis of a Bach fugue is no different from that of a Mozart sonata or a Schubert song. The conduct of the voices is always governed by that contrapuntal basis and by the triad for which those voices speak."

sixteenth and seventeenth centuries supports this hypothesis. This is not to say, however, that 3 is therefore an unthinkable option: Schachter's analysis of the WTC I Bb fugue demonstrates that 3 indeed can be the Kopftön in certain fugues. The Kopftön 3 in this fugue no doubt stems from the prominent 3 in the subject itself (1-2-3) and from the fact that the subject, rather than the answer, appears in the highest part in the exposition. But in most instances 5 is the more likely Kopftön for the further reason that it occupies a prominent place in many of the fundamental structural types of subject and in their corresponding answers. The more natural, hence more likely (but by no means necessary) choice of Kopftöne for fugues based on the various subject types are suggested in the following table.

Figure 8.1
Subject Paradigms and Suggested Kopftöne.

Subject Paradigm	Suggested <u>Kopftön</u>
5-4-3	5
1-2-3	3
5-4-3-2-1	5
3-2-1	3 or 5
1-2-3-4-5	5
5-6-7-8	5
5-6-5	5
(1-2-1)	(5)

Although 5-4-3 and 5-4-3-2-1 as subject paradigms suggest 5 as Kopfton, 3 as Kopfton is not at all out of the question even here, especially in the many cases where the transposition of the upper neighbor 6 in the subject gives a prominent 3 in the answer, and where the answer is in the highest part. Salzer's analysis of the WTC I D fugue illustrates precisely this possibility.⁵ The 3-2-1 subject paradigm suggests in itself 3 as Kopfton, but the necessary initial tonic gives a prominent 5 in the answer form. 1-2-3-4-5 suggests a 5 Kopfton, and this theory finds support in Schenker's analysis of the WTC I d fugue.⁶ Likewise, the 5-6-7-8 paradigm does not suggest 3 in either its subject or answer form. The neighbor-note type subjects all suggest 5 as Kopfton, whether in the subject itself or in the answer, since these forms center on 1 and 5. I cannot overstate, however, that these guidelines, based on the barest of theoretical considerations, must not be taken as "rules." Their are no a priori restrictions as to which background

5. Structural Hearing, Example 474 (Vol. II: 240-242). John Rothgeb's analysis of the exposition of Bach's Sinfonia 8 also suggests this form, although no definite conclusion can be made regarding the whole on the basis of only the first seven measures. See Rothgeb, "Thematic Content," Aspects of Schenkerian Analysis, Example 8, p. 48.

6. Schenker, Free Composition, II, Fig. 156.1.

structure a fugue must follow, and any of the Urlinie forms is possible with any subject type. The first statement of the subject or answer, indeed the entire exposition, need not necessarily establish the Kopfton in its firmest expression. In Salzer's analysis of the WTC I D fugue, the Kopfton is reached through initial ascent (Anstieg) only at measure 7, after the four subject entries of the exposition are complete.⁷ One should bear in mind also, the possibility of the overall structure of a fugue being based on an expansive arpeggiation, rising through the tonic triad for the greater part of its length. Schenker's Figures 40.2, 40.7, and 40.8 in Free Composition, although not fugal analyses, illustrate this structure.

Subject Structure--Fugal Structure

Jonas' brief analysis of the WTC I F fugue illustrates one way by which the overall design of a fugue can reflect the structure of its subject. The 5-4-3 background of the subject suggests the Kopfton 5, and the excursion into the relative minor (mm. 46-55) supports an extended upper-neighbor in the Urlinie, which reflects the upper neighbor

7. Salzer, Structural Hearing, II, Example 474a (pp. 240-241).

D--the main ornamental note of the subject--in a greatly expanded form.⁸

Kalib's analysis of the WTC I g fugue also highlights the relationship of overall structure to subject structure. Here again the same subject outline (5-6-5-4-3) acts as the main upper-voice of the entire fugue. 5-6-5-4-3 is expanded (and of course completed) as 5-6-5-4-3-2-1.⁹

Harmonic Structure in Fugue

Kalib's analysis of the WTC I g fugue also illustrates a harmonic characteristic of fugue which can cause great difficulty for the analysis of fugal structure: the intermediate recurrence of the tonic after the exposition and before the final return of the tonic. A tonic sometimes appears as a passing chord at the beginning of a sonata development, or at the beginning of the second part of a binary form, usually within a larger motion to the subdominant, and usually in a contrapuntal role, not in a structural role. However, in fugue it is common for the tonic chord to reappear in a structural role in the middle. This feature of fugue no doubt stems from the historical

8. Jonas, Introduction, Figure 144, p. 94.

9. Kalib, "Thirteen Essays," I, Fig. 214, p. 290.

origins of fugue in the ricercare and motet, both organized in their simplest forms as series of fugatos or "points" of imitation, each constituting a more or less discrete tonal segment within the tonic key or mode or within a very closely related tonal area.¹⁰ Restatements of the tonic in the course of a movement seem to work against the idea of a broad harmonic and voice-leading structure, and accounting for them in relation to a comprehensive harmonic framework can be extremely difficult: In the WTC I g fugue, is the point of tonic arrival in measure 24 a high-ranking event both in harmony and in voice leading, or is it merely the contrapuntal result of some all-encompassing linear progression? Does it mark the resumption of the opening condition of the piece after an interruption, as is often the case in ternary forms and sonata movements? Kalib's Figure 214-b shows the essential harmonic framework of the fugue as two broad progressions I-III-IV-V-I and I-II-V-I, linked at measure 24. The Urlinie is here distributed over the two progressions as two third-progressions, 5-4-3 followed by 3-2-1.¹¹ While the resulting background struc-

10. Czackzes, Analyse des WTC, bases his analyses on this approach, and sees each WTC fugue as a series of expositions.

11. Schenker, Free Composition, Figure 156.1, shows a similar background plan in the WTC I d fugue: 5-4-3-2-1 is distributed as two third-progressions over two harmonic progressions, the second of which is subordinate.

ture is theoretically compelling, its obvious weakness as an accurate summary of this piece is the arrival of the background 3 in measure 24--actually occurring in the alto voice--since the upper voice, announcing the subject emphatically in measure 28, reaffirms the Kopfton D (5) in the obligatory register and implies retrospectively that the motion to 3 in measure 24 is simply a motion to the inner voice. Kalib evidently senses this also, for the final and more satisfactory illustration of his analytical essay, Figure 224, shows the Kopfton retained through measure 24, all the way to measure 32, at which point a rapid final descent begins. The motion to 3 in measure 24 is represented here not as an essential progression of the Urlinie, but as a motion to an inner voice over a subsidiary harmonic progression. The conflict inherent in this fugue is between tonal motion (here two functional progressions of virtually equal weight) and upper-voice motion (here an extensive Kopfton followed by a rapid final descent). The difficulty lies in the reconciliation of the conflicting forces in an entirely convincing manner. The conflict as presented in the WTC I g fugue is not at all uncommon, as will be seen in the analyses which follow.

This analysis suggests a general trend towards the retention of a 5 Kopfton for the bulk of the composition in such cases, rather than for a division of the Urlinie into two segments. If 3 appears as the Kopfton, it will naturally be retained until the final cadence in the background structure.

Wallace Berry's analysis of the WTC I d# fugue in terms of cadential arrival points disregards the prolongational aspect.¹² He infers that V is prolonged from measure 43 to the final cadence, as part of an overarching progression I-III-IV-V-I, since no cadence to I occurs before the end of the piece. However, there is at least one strong tonic arrival (not a cadence) at measure 52, where the stretto must be heard as a prolongation of I. In this view, at least some of the the cadences to V must be considered as half cadences which are only temporary digressions from I.

12. Wallace Berry, "J. S. Bach's Fugue in D# Minor (WTC I #8): A naive approach to linear analysis," In Theory Only, II/10 (January, 1977): 4-7.

Three Analyses:

- 1) WTC II f
- 2) WTC II C
- 3) WTC I F#

For him [Schenker], the prerequisite requirement of a real fugue and its foremost consideration is that organic element, even if some of the textbook features may be exceptionally lacking.¹³

The following three analyses of the voice-leading structures of entire fugues demonstrate specific ways in which subject and overall fugal structure are closely interrelated in the the fugues of Bach. It seems natural to begin with the simplest of the WTC fugues, from which one may be able to establish a clearer approach to the more difficult pieces. There is no invertible counterpoint or stretto in the WTC II f and C fugues. The WTC I F# fugue, however, has two countersubjects which do operate in invertible counterpoint. In fugues without great contrapuntal demands the music is more likely to proceed in an unambiguous manner, and the overall structure may be more easily discerned.

13. Kalib, "Thirteen Essays," I: 282.

1) WTC II f (exposition analysis Example 3.20)

This fugue is full from end to end of such expressive melody, the restatements of the theme are so clear and penetrating in all transpositions, and the progression of all the voices is so natural and unentangled, as in few fugues except those of Handel.¹⁴

Indeed it is probably the simplest of all the WTC fugues in terms of imitation, rhythm, and transparency of voice leading.

Example 8.1 shows the voice-leading structure of this fugue. Characteristics of the fugal exposition already discussed in Chapters 2 and 3 need to be restated here because of their importance for the structure of the entire fugue. The subject features two complete voices, and an incomplete upper neighbor, 6, which, in combination with the lower neighbor in the lower voice, gives a prolonged diminished-seventh chord for measures 2 and 3. The presentation of the subject in the upper voice suggests 5 as Kopfton, a hypothesis borne out in the following analysis. At the entrance of the answer, the first part simply fills in the harmony with the third of the hypothetical contrapuntal lines, rising above the main upper voice, to Eb. Significantly, the Eb is connected with the Kopfton through

14. Johann Friedrich Reichardt, Musikalisches Kunstmagazin, 1782, I: 196., trans. in David and Mendel, The Bach Reader: 456.

Example 8.1
Foreground Analysis, WTC II f Fugue.

① ⑧ ⑩

I V I

⑫ ⑬ ⑭ ⑮

I (I, V) I

23 24 25 26

III (x - V. 5) V. 2 =

27 28 29

I III V. 2 = II

54 55 56 57

VI IV I I

58 59 60 61 62

I IV I I (I) I

D-natural, giving a rising inflection to D, which not only allows for the introduction of the answer in the dominant, but also complements the falling tendency of the upper neighbor Db of the subject. Indeed, the D-natural in measure 4 initiates a conflict with the diatonic Db which becomes an important issue in the development of this piece. The bridge to the third entry introduces the Kopfton in the upper octave, and the upper voice returns to the two-line C at the end of the third entry, stressing repeatedly the upper neighbor Db-C.

The episode which follows (mm. 17-24) provides for the motion to the relative major, Ab (m. 25), through a recombination of the C-D-Eb third which previously occurred in measure 4. However, here the D-natural is buried in the inner voice, rather than exposed in the upper voice; it acts essentially as a harmonic rather than a melodic factor.

The Ab section (III), measures 25-32, supports a temporary upper voice of Eb, as an expansion of the projected inner voice Eb in measure 5, and the Eb remains prominent in the following C minor section (mm. 33-40), where it forms a 3-2-1 third-progression, a transference of fundamental structure to V, incorporating the D-natural. Following the cadence to V (m. 40), there occurs a direct return to the tonic as a structural entity. (As discussed

above, it is by no means unusual for a structural return of the tonic to occur at just such a place as this.) The Db-D-natural conflict, which is important in the first half of the work, ceases to have a role in the second half.

From measure 41 a new development begins, the first phase of which is a development of the diminished-seventh-chord idea of measure 2 in measures 45-46, followed by a motion to V as dominant (m. 50), which sets up the striking deceptive resolution to VI in measure 54. All of this occurs as support for an upper voice fifth-progression C-F. The deceptive motion in the bass, C-Db is an expansion of the original upper-neighbor idea in the subject. Next, the bass moves through IV-V-I (mm. 59-65), supporting an upper-voice third-progression 5-4-3, in the upper octave, which links registrally with the high C of m. 8. In the following measures (66-75) this upper register is connected through a descending fifth to a very important upper neighbor, Db in m. 75, supported by IV, which represents an expansion of the original upper-neighbor motive of the subject to the largest level. A further harmonic progression, IV-V-I (mm. 75-78) leads the upper neighbor Db back to the Kopfton C, and returns the harmony to I. By this stage in the composition the main harmonic events have already taken place, but the Urlinie remains on 5. In the final eight measures of the

Example 8.2
 Middleground Analysis, WTC II f Fugue.

0 3 10 17 25 32 40

I III V I

47 54 61 68 75 82 89 96

I IV II I V I (V I I)

fugue the upper voice makes its structural descent to the tonic, embodying again the upper neighbor motive. Likewise the bass also states the upper neighbor motive a final time in measure 84.

It is apparent from the middleground sketch of Example 8.2 that the Urlinie moves only after the essential harmonic events of the fugue are complete. This is not an unusual feature in fugue, but in fact represents one of the ways in which fugal structure can be at odds with the more usual structural models of tonal composition. Both the diminished seventh and the upper neighbor Db of the subject play important roles in the overall structure of the fugue and provide the characteristic elements which unify the composition. In this respect, the episodic material forms a contrast (essentially diatonic rather than chromatic material) yet still relates to the subject through the melodic sixth (cf. subject F-Db). The first tonal digression is based on an outlining of the tonic chord, F-Ab-C, while the second is based on the integration of the C-Db motive in a larger framework.

Example 8.1 illustrates my interpretation of the metrical groupings through heavy bar-lines. Although the subject normally follows a very direct metric plan of four measures, the first of which receives the most weight, two

occurrences of the subject involve a redistribution of this metrical scheme.¹⁵ In measure 51 the subject is introduced in the inner voice, one measure after the beginning of a bass prolongation of V, and at a weak metric placement. The structural context of the subject at this point is unusual, since it occurs within a prolongation of V rather than I. The second instance is again in the middle voice, and again at its initial transposition (m. 75), but here the subject is interpreted within a prolongation of IV, moving to V, and in an altered rhythmic guise--altered through its slight overlap with the preceding entry in the upper voice. This rhythmic conflict has an important function in terms of the overall composition: the resultant metric disturbance gives added weight to the important tonic arrival in measure 78.

15. Such regular groupings are not always apparent in fugue. Schenker, Free Composition, Fig. 149.8a, shows how the overlapping entries in the WTC I c# fugue exposition cause continual disturbance and reinterpretation of the metric groupings.

2) WTC II C (exposition analysis Example 3.2)

Like the WTC II f fugue, the WTC II C fugue has a simple and clear design. Although the subject type is the same, the working out of the overall structure is different. Again there are two main harmonic motions in the piece, measures 1-39 and 39-76, but in this case the main notes of the Urlinie are in fact distributed across the two progressions as 5-4-3 and 3-2-1 (see Examples 8.3 and 8.4). The main method of prolonging the notes of the Urlinie is not through an upper neighbor, as in the WTC I F and g, and WTC II f fugues, but through coupling of the main notes to the lower octave. Example 8.4 shows how this occurs, through alternately ascending and descending sequences. The dominant which arrives at measure 22 must be understood essentially as back-relating rather than structural since it does not take part in a larger harmonic progression. It is the succeeding motion to II (measure 25) which initiates the main harmonic and voice-leading events of the piece.

The balanced couplings of G, F, and E in the first half of the composition do not in themselves require that either octave be considered the obligatory register (although the prominence of the upper one naturally gives it a better

Example 8.3
Foreground Analysis, WTC II C Fugue.

① ③ ⑥ ⑪ ⑬

I (II) (=)

⑬ ⑮ ⑱ ⑲

II VII =

Handwritten musical score for piano, measures 49 to 54. The score is written on a grand staff (treble and bass clefs). Measures 49 and 50 are grouped by a dashed line and labeled 'I'. Measures 51 and 52 are grouped by a dashed line and labeled '(V'. Measure 53 is labeled 'I)'. Measure 54 is marked with a '3' above the staff. A bracket labeled 'A' spans measures 51 and 52. A bracket labeled '15' spans measures 50 and 51. The notation includes various musical symbols such as notes, rests, and dynamic markings.

Handwritten musical score for piano, measures 55 to 60. The score is written on a grand staff (treble and bass clefs). Measures 55 and 56 are grouped by a dashed line and labeled 'V'. Measures 57 and 58 are grouped by a dashed line and labeled 'I'. Measure 59 is marked with a '3' above the staff. A bracket labeled '15' spans measures 58 and 59. The notation includes various musical symbols such as notes, rests, and dynamic markings.

Example 8.4
Middleground Analysis, WTC II C Fugue.

The first system of the musical score covers measures 11 through 15. Above the staff, measure numbers 11, 12, 13, 14, and 15 are circled. A horizontal line with vertical stems connects measure 11 to measure 14, with the number '5' written above the line at measure 11 and the number '4' written above the line at measure 14. The musical notation includes a treble and bass staff with various notes, rests, and accidentals. Dashed lines indicate phrasing or breath marks. Below the staff, Roman numerals are placed: 'I' under measure 11, 'II' under measure 13, 'III' under measure 14, and 'I' under measure 15.

The second system of the musical score covers measures 16 through 22. Above the staff, measure numbers 16, 17, 18, 19, 20, 21, and 22 are circled. A horizontal line with vertical stems connects measure 19 to measure 22, with the number '3' written above the line at measure 19 and the number '2' written above the line at measure 20. The musical notation includes a treble and bass staff with various notes, rests, and accidentals. Dashed lines indicate phrasing or breath marks. Below the staff, Roman numerals are placed: 'I' under measure 16, 'II' under measure 18, and 'I' under measure 20.

claim), but the end of the composition leads undoubtedly to the higher C, by omitting an explicit tonic arrival in the lower octave. Nevertheless, the final subject entrance implies a descent to the lower tonic at the end, as Example 8.4 shows.

The earliest version of this piece does not include measures 68-83, but instead concludes with a simple cadence at what would be measure 70.¹⁶ The added measures--which are an interpolation, since they do not alter the overall structure but merely prolong the motion to the final cadence--allow for a coupling (C-C), followed by a rising arpeggiation, E-C, which reflect and balance the couplings in the first part of the piece. The effect is not unlike that of the WTC I C prelude, discussed in the following chapter. As Example 8.3 shows, the deceptive motion to A (measure 68) marks the only place in the fugue where the regular metrical plan is broken.

While the neighbor note of the subject finds no expression in the composing-out of the Urlinie, it does appear in enlarged form in the bass motion of measures 65-76. Indeed, it is conceivable that the music beginning at measure 68 was

16. The "Kellner" copy. See Bach Werke, XXXVI (Leipzig: Bach-Gesellschaft, 1890): 224-225. This version is in common-time, not two-four.

added by Bach not only in order to give a better balance to the composition (through the addition of a series of subject entries after the long sequential episode of mm. 55-68, through the introduction of a tonic pedal at the end, and through the above mentioned coupling), but also to introduce the reference to the subject in the bass, the main elaboration of which is the upper neighbor A, thereby uniting the structural levels of the composition motivically.

Although the subject structures of the WTC II f and C fugues are the same, their function in minor and major tonal contexts yields different expressive qualities. The diminished seventh implied by the WTC II f subject suggests chromaticism, while the WTC II C subject is entirely diatonic. Thus in the f fugue, chromaticism is generally confined to the parts of the composition which include subject statements, while in the WTC II C fugue chromatic elements occur generally in the episodic parts.

3) WTC I F#

The WTC I F# subject presents a special characteristic--arpeggiation to the upper tonic--which plays an important role in the structure of this fugue. Further, an

invertible countersubject as well as a second countersubject (introduced in measure 12) contribute to the the complexity of the composition. Again, the most salient ornament of the subject is the upper neighbor. This neighbor also has a deep structural role in this composition, but in none of the three fugues here discussed does the upper neighbor have the same structural role.

To summarize the main elements of this fugue in terms of voice-leading structure, the upper voice presents an upper neighbor 6 over a large span (see m. 23), understood structurally in exactly the same way it is understood in the subject itself, that is as an incomplete upper neighbor which moves to the structural 4 through a passing 5 (5-6-(5)-4-3) (see Examples 8.5 and 8.6). Like the others, this piece contains two main harmonic motions. The first is a simple modulation to the dominant, and the second embodies motivic references to the subject. The Urlinie begins to move (5-4-3) in the second harmonic motion, so that the final tonic prolongation supports only 3-2-1 rather than the entire fifth-progression, as in the WTC II f fugue. The upper-tonic motion of the subject finds expression in the descending third-progression, 8-7-6, which begins in measure 12, and concludes in the motion to the the prominent D# upper neighbor of the Urlinie. It finds further expression,

Example 8.5
Foreground Analysis, WTC I F# Fugue.

The image displays two systems of handwritten musical notation for the foreground analysis of the WTC I F# Fugue. Each system consists of two staves, likely representing the right and left hands of the piano. The notation includes various musical symbols such as notes, rests, and accidentals. Above the first system, there are two horizontal dashed lines, each preceded by a circled number '5'. Below the first system, there are four horizontal lines, each preceded by a circled number '5'. The second system also features similar annotations, with two horizontal dashed lines at the top and four horizontal lines at the bottom, each preceded by a circled number '5'. The handwriting is in black ink on a white background.

⑭ ⑮

I II

⑯ ⑰

I II

① ② ③

IV

IV

④ ⑤ ⑥

IV

IV, V, I (II, III, I)

Example 8.6
 Middleground Analysis, WTC I F# Fugue.

The musical score is presented in two systems. The first system covers measures 7 through 23, with a bracket labeled 'N' above measures 7-13 and another 'N' above measure 23. The second system covers measures 29 through 35, with a bracket labeled 'N' above measure 29 and another 'N' above measure 35. Roman numerals are placed below the staff: (VI) under measure 23, (VI) under measure 29, IV under measure 31, and I, I', I', I' under measures 33-35. A bracket labeled 'N.F.' is placed under measures 31-33. Circled numbers 7, 13, 17, 23, and 29 are placed above the staff. A horizontal line with a '3' is placed above measures 7-13. A horizontal line with a '3' is placed above measures 33-35.

and indeed, completion in the final measures of the piece, where an 8-7-8 motion in the highest voice in fact supplants the 3-2-1 structural descent--a descent which must be inferred in the inner voices. The intricate web of voice leading in the second part of this piece expresses direct motivic references to the subject at very deep levels, both in the upper voice and in the lower voice, shown by the brace in Example 8.6.¹⁷ Further, the alteration of the end of the third entry of the subject, mentioned in Chapter 3, receives justification through the motivic expansion in the bass, and at the same time provides the basis by which the complete bass motion of the enlargement finds a motivic meaning in the composition. Incidental to the structure of this fugue, but not to Bach's compositional process, is the recomposition of measures 11.5-17 at the subdominant level, and in inversion, as measures 28-33.5. By this means the motion I-II[#]-V in the first part becomes IV-V-I in the second part. Obviously such treatment is more suited to, and more common in, fugues with one or more countersubjects,

17. Although the variant reading of A-sharp as the last bass note in measure 32 (found in the Hoffmeister edition) gives a more exact reference to the motivic expansion of the subject in the bass, it spoils the surface detail, which in this case is a descending series of thirds, D[#]-B-G[#], exploited throughout the piece.

where repetition is more abundant, since there are more themes to deal with.

No doubt much more could be said about the complex structure of this fugue, particularly in reference to surface detail, but the above discussion provides at least an overview of the structure of the work as a whole in relation to its subject.

This brief discussion of only three complete fugues provides merely an introduction to the topic--a vantage point from which further and deeper study can proceed. As a word of caution, the more intricate, involved, and longer fugues of Bach demand a much greater application of analytical ingenuity, for the problems of structural coherence become almost unmanageable. I stress "almost" since I would not go as far as William Benjamin, in saying that

the problems of trying to account for harmonic coherence in contrapuntal music . . . become even more intractable when broader spans of music are under consideration [i.e. broader than segments of a few measures] . . . and positively unmanageable with respect to intensely imitative music, in which the notion of a single structural upper voice becomes a veritable fiction.¹⁸

18. William E. Benjamin, "Models of Underlying Tonal Structure: How Can They Be Abstract, and How Should They Be Abstract?" Music Theory Spectrum IV (1982): 40.

Rather, it seems to me that the problems do multiply, but not necessarily to the point where they becomes absolutely unmanageable. If our ears can intuitively appreciate the intricate beauties of a complex fugue, then surely our intellects can untangle the art to at least some degree. To the extent that a fugue consists of a logically unified expression, including a coherent upper voice design, (as opposed to a random or unconsidered arrangement) it should logically yield to the powers of a comprehensive analytical procedure.

Chapter 9

VOICE-LEADING PATTERNS IN OTHER MUSIC OF BACH

This chapter demonstrates that recognizable voice-leading patterns occur not only within the rigorous schemes of fugal exposition, but also in other, non-fugal works of Bach.¹ Even without searching beyond the WTC one can find such recurring patterns. For Example, Paradigm 1, the 5-4-3 linear progression so commonly used as the structural basis of Bach's fugue-subjects, is also the basis of many of the opening motives or phrases in the WTC preludes. The 5-4-3 progression appears often and, as in the fugue subjects, is usually elaborated by an upper-neighbor, giving a 5-6-5-4-3 shape. Figure 9.1 enumerates the occurrences of this paradigm at the beginnings of the WTC preludes.

1. It would not be at all surprising if identifiable common voice-leading patterns were also found in the works of other composers. Further, such compositional techniques as these are not necessarily restricted to the great composers, for it is even more likely that such commonly recurring structural patterns occur in the works of composers who perhaps have a less fully developed musical vocabulary.

Figure 9.1
Paradigm 1 (5-4-3 Linear Progression) in the WTC
Preludes.

Prelude	Measures	Comments
WTC I: D	1-3	1-2-4-3 rather than 5-4-3
d	1-2	
eb	1-4	
E	1-3	
e	1-3	
F#	1-4	
f#	1-2	
g	1-2, 2-3	
Ab	1-9	
g#	1-2	
A	1-3	with melodic ascent
B	1-2	with melodic ascent
WTC II: c	1-2, 2-3	with melodic ascent
D	1-3	
d	1-5	
Eb	1-4	
d#	1-2	
E	1-4	
e	1-3	
F#	1-4	
f#	1-2, 2-3	
g	1-2	

I shall briefly illustrate this paradigm in a small selection from the above list.²

2. The WTC II c Prelude is analysed by Christopher Wintle in "Skin and Bones': The C Minor Prelude from J. S. Bach's Well-Tempered Clavier, Book 2," Music Analysis, V/1 (March, 1986): 85-96. Among other things, Wintle demonstrates the expansion of the 5-6-5-4-3 motive over the course of the entire prelude, in much the same manner as we have seen in a number of the fugues discussed in Chapter 8. A voice-leading analysis of the opening of the WTC II E Prelude appears in Salzer and Schachter Counterpoint in Composition: 184.

1) WTC I d prelude

The WTC I d prelude presents an example of the 5-4-3 linear progression used as the basis of an initial tonic prolongation, elaborated through a texture of broken chords. Example 9.1 illustrates the structural framework of this passage.

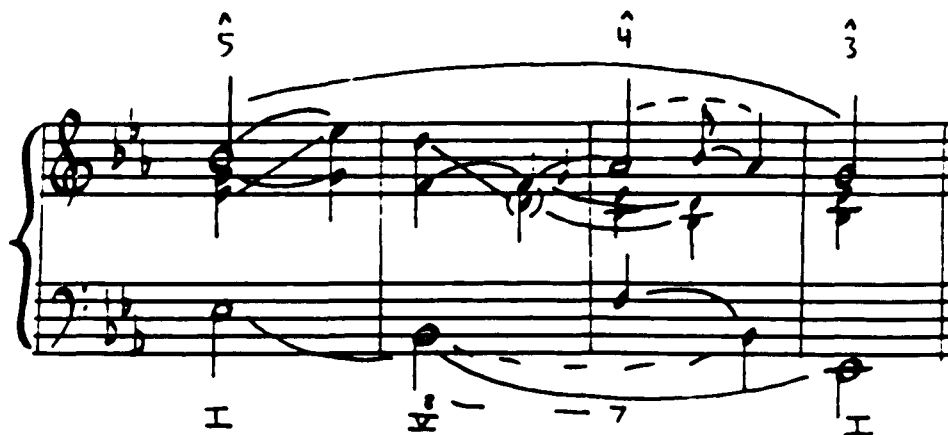
Example 9.1
Structural Analysis, WTC I d Prelude, Measures 1-2.

The image shows a musical score for two staves (treble and bass clef) representing measures 1 and 2. Above the treble staff, there are three vertical markers labeled 5, 4, and 3, each with a small caret (^) above it. A large horizontal bracket spans across these three markers, indicating a linear progression. Below the bass staff, there are three vertical markers labeled I, (V/I), and I. A large horizontal bracket spans across these three markers, indicating a harmonic structure. The musical notation includes various notes, rests, and accidentals, with a sharp sign (#) visible in the second measure of the treble staff.

2) WTC II Eb prelude

The initial 5-4-3 linear progression of the WTC II Eb prelude occurs in the context of an opening four-measure phrase. This particular example is closely related to the opening four-measure phrase of the WTC II F# prelude, not only in its structural aspect, but also in terms of rhythm, arpeggiation, and rests.

Example 9.2
Structural Analysis, WTC II Eb Prelude, Measures 1-4.



3) WTC I Ab prelude

The WTC I Ab prelude illustrates the same linear progression over a much larger span (9 measures), and including a melodic ascent (measures 1-4) and imitation at the octave.

Example 9.3
Structural Analysis, WTC I Ab Prelude, Measures 1-9.



Occurrences of the same upper-voice structure in the identical location in twenty-two of forty-eight preludes is, I believe, a large enough portion to suggest a habitual procedure of composition, intuitively or intellectually based; a compositional procedure founded on the elaboration of certain voice-leading progressions through a variety of means, and capable of forming the basis of a great diversity of musical styles.

As shown in previous chapters, the structural relationships between fugues continue recognizably at least within the confines of complete expositions, and overall fugal structures have been shown to be at times closely related. A further demonstration of intimate structural relationships between different compositions of J. S. Bach is afforded by a group of closely related preludes in the WTC I in which the structural similarities run from the surface etude-like characteristics right through to the deepest levels: the preludes in C, c, D, and e. Each of these preludes survives in its earliest form in the Clavier-Büchlein vor Wilhelm Friedemann Bach, dating from 1720, and is included in the WTC in a revised and expanded form.³ In the final, WTC

3. In the Clavier-Büchlein vor Wilhelm Friedemann Bach the four preludes occur as a series, interrupted only by the early version of the WTC I d prelude, which is also related to these four preludes, but in a less direct way.

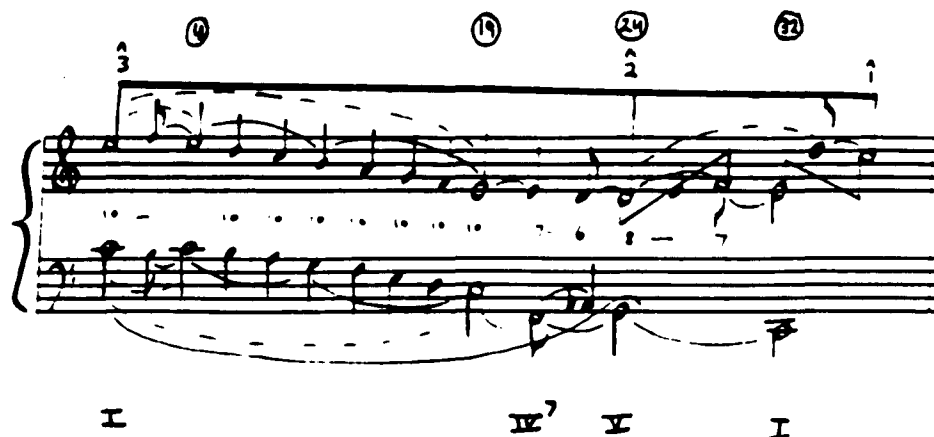
versions the main structural elements of each of the four preludes are (1) an initial prolongation of the tonic through neighboring motion, (2) a further prolongation of the tonic through an octave descent in the bass, harmonized by the upper voice in parallel tenths,⁴ (3) a motion to the dominant, (4) a dominant prolongation which supports an unfolded third or sixth, and (5) a return to the tonic. In each case the background structure is a descending third, 3-2-1, over a I-V-I harmonic motion. The additional music found in the later, WTC versions, provides in some cases for the dominant prolongation and in others for an expansion of a dominant prolongation. It also provides for an expanded final tonic section in the C and c preludes, and for an extended subdominant prolongation in the D and e preludes.

Example 9.4 shows the elements enumerated above as they occur in the WTC I C prelude.⁵

4. Original registers are in some cases regained through octave transfers within the stepwise descents.

5. Schenker provides a detailed and comprehensive analysis of this piece in Five Graphic Music Analyses (1932) new ed. (New York: Dover, 1969): 36-37.

Example 9.4
 Middleground Analysis, WTC I C Prelude.



A comparison of Example 9.4 with Example 9.5, a graph of the WTC I c prelude, shows how closely the structures of the two preludes resemble one another.⁶ The Kopfton is coupled to the lower octave through a series of parallel-tenths above the bass in both preludes--but notice how an inflection of the relative major is introduced within the stepwise motion of the Prelude in c--and the 2-1 motion of the Urlinie is expanded through an unfolding. In the Prelude in c, the dominant is approached through $II\bar{6}$ rather

6. Schenker concludes his essay "The Organic Aspect," trans. in Kalib "Thirteen Essays" II: 299-320, with an analysis of the structure of this prelude.

than through IV_5^6 , and the dominant prolongation begins with a $\frac{8}{4}$ rather than a $\frac{5}{3}$ position, as Example 9.5 shows. The only important structural element in the Prelude in C which does not occur here is the coupling of the second note of the Urlinie.

Example 9.5
Middleground Analysis, WTC I c Prelude.

The stepwise descent in tenths, articulated at the dominant is also remarkably similar to the exposition structure of a few of the WTC fugues: WTC II C embodies an underlying descent in tenths (see Example 3.2), as do WTC II g (Example 3.10) and WTC I C# (Example 5.11).

In the WTC I D prelude a stepwise descent in parallel tenths again gives a coupling of the Kopfton, while in the WTC I e prelude the descending tenths are presented within a large harmonic motion I-III-IV-V-I which repeats the opening sixteenth-note motive of the bass in a greatly expanded form (see Examples 9.6 and 9.7).⁷ In the WTC I e prelude, as in the Prelude in c, the relative major is inflected within the initial tonic prolongation. Motion to the subdominant occurs in two ways in these pieces: The Prelude in e follows the example of the Prelude in C by moving directly from I to IV, while the Prelude in D follows the pattern of the Prelude in c, using a descending scale-segment in the bass. But in the Preludes in D and e an unfolding of the first two notes of the Urfinie rather than the last two provides for a consonant subdominant which is tonicized and prolonged en route to the dominant. Indeed, the IV section of the Prelude in D includes a repetition of the opening material (measures 20-25). In contrast, since the 3 is retained until the dominant is reached in the Preludes in C and c (except for a 1 measure anticipation of the 2 in the former), the subdominant appears as a dissonance, IV⁷ in the

7. This analysis is based on an unpublished analysis by Carl Schachter.

Prelude in C and IV⁶ in the Prelude in c, precluding prolongation of the subdominant as a consonance. This can be seen by comparing Examples 9.6 and 9.7 with the previous examples.

Example 9.6
Middleground Analysis, WTC I D Prelude.

Example 9.7
 Middleground Analysis, WTC I e Prelude.

The close structural similarities of these four preludes suggests--but cannot prove--a common underlying conception in the mind of the composer. However, the relationship of these patterns to thoroughbass instruction of the period (the subject of the next chapter) gives further weight to this view.

Chapter 10

VOICE-LEADING PATTERNS AND THE COMPOSITIONAL PROCESS

The value of a theory of music is recognized not only by the analytical insights it provides, but also by the directness of its relationship to the creative process. For the present theory the relevance of voice-leading patterns to Bach's creative process can be demonstrated by an examination of his teaching methods, and of two didactic works directly connected with Bach, as well as others of his era, and by a review of Robert Marshall's evidence regarding Bach's compositional process for imitative music.¹

Bach's Teaching Methods

It can, I think, be assumed that Bach's teaching methods reflect his compositional method at least to some extent. Since part of the compositional process is instinctive rather than conscious, we cannot expect to find all the answers here, but we can presume that his teaching methods will be in accord with his compositional methods. Among the reports of Bach's approach to pedagogy, none has greater authority than that of his second son, C. P. E. Bach, the greatest composer among Bach's children:

1. Robert Marshall, The Compositional Process of J. S. Bach. 2 vols., (Princeton: Princeton University Press, 1972).

Since he himself had composed the most instructive pieces for the clavier, he brought up his pupils on them. . . . he started his pupils right with what was practical, and omitted all the dry species of counterpoint that are given in Fux and others. His pupils had to begin their studies by learning pure four-part thorough bass.²

Johann Philipp Kirnberger, a pupil of J. S. Bach and associate of C. P. E. Bach, records a similar pedagogical approach. Further, he claims to base his own pedagogical approach to composition on that of J. S. Bach.

His method is the best, for he proceeds steadily, step by step, from the easiest to the most difficult, and as a result even the step to the fugue has only the difficulty of passing from one step to the next. On this ground I hold the method of Johann Sebastian Bach to be the best and only one. It is to be regretted that this great man never wrote anything theoretical about music, and that his teachings have reached posterity only through his pupils. I have sought to reduce the method of the late Joh. Seb. Bach to principles, and to lay his teachings before the world to the best of my powers, in my "Art of Pure Writing" (Kunst des reinen Satzes).³

2. C.P.E.Bach's letter to Forkel, Jan 13, 1775, in David and Mendel, The Bach Reader: 278. This testimony forms the basis of discussions of Bach's teaching methods from Forkel's biography (for which it supplied the direct source) down to the present day. See Forkel Life of J. S. Bach, in David and Mendel, The Bach Reader: 329, Philipp Spitta, Johann Sebastian Bach 3 vols. trans. by Clara Bell and J. A. Fuller-Maitland (London: Novello, 1883-85), III: 120, and David and Mendel, The Bach Reader: 39.

3. Johann Philipp Kirnberger, Gedanken uber die verschiedenen Lehrarten in der Komposition als Vorbereitung zur Fugenkenntniss (1782): 4-5. trans. in David and Mendel, The Bach Reader: 262.

In the Art of Strict Musical Composition, Johann Philipp Kirnberger presents harmony first in four, then in three, then in two, and finally in one part, but does not discuss fugue.⁴ Music in fewer than four parts is understood as music in which certain less important notes or voices are omitted.⁵ Kirnberger's counterpoint treatise, Gedanken über die verschiedenen Lehrarten, consists only of preparatory work to fugue. He compares the methods of Fux and Bach, and illustrates the principles of invertible counterpoint, but does not approach genuine fugue. He excuses the omission by saying--quite perceptively--that the rhythmic aspect distinguishes Bach's fugues from the dry counterpoint of Fux, and consequently he intends first to write a book on the various dance rhythms which Bach often uses in his contrapuntal works. He never did write an exhaustive book on fugue.

Johann Friedrich Agricola, another pupil of Bach and also an acquaintance of C. P. E. Bach, gives the same evidence in a discussion of thoroughbass:

4. Johann Philipp Kirnberger, The Art of Strict Musical Composition 4 vols. (1771-79) trans. (Vol. I and part I of Vol. II only) by David Beach and Jurgen Tym, (New Haven: Yale University Press, 1982).

5. Spitta, J. S. Bach, III: 120.

. . . anyone desirous of teaching thoroughbass must first give solid instruction at least in practical harmony. Thus--to cite a remarkable example in support of this statement--taught the greatest master of harmony known until now, the late Capellmeister Johann Sebastian Bach, who caused his pupils to set down on paper, according to well explained rules, the tones to be introduced in thoroughbass playing. The advantage of this was that his students, when they had finished their lessons, and if they had shown sufficient application, were fairly secure in the writing of pure four-part harmony, and thus were acquainted with important foundations of composition itself. It is in any case absurd to separate the art of accompaniment from the art of composing, and to set up boundaries between them.⁶

The last sentence, in particular, supports the view that thoroughbass and composition represent complementary aspects of one art in the Baroque. Spitta repeats this conclusion, saying that "thoroughbass is the beginning of composition" and that "imprinting it on the memory is a great part of the whole art [of composition]."⁷

The Role of Thoroughbass

The above quotations show the crucial importance of thoroughbass for composition in the Baroque era. But what is the relationship of thoroughbass to composition for Bach?

6. Allgemeine deutsche Bibliothek, XXIII¹ (1774): 527. Signed "Z." Ascribed to Johann Friedrich Agricola. Trans. in David and Mendel, The Bach Reader: 446-447.

7. Spitta, J. S. Bach, III: 119-120.

The descending octave-progression, so suitable to the manual technique which the etude-like preludes analyzed in Chapter 9 address, illustrates this relationship. It stems from Baroque thoroughbass treatises, in which one of the common tasks was the realization of a suitable harmony for a scale in the bass, ascending and descending, in four parts; the regola dell' ottava. Examples can be found in treatises by such theorists as Francesco Gasparini, Johann David Heinichen, Jean-Philippe Rameau, Friedrich Erhard Niedt, and Kirnberger among others.⁸ The Vorschriften und Grundsätze zum vierstimmigen Spielen des Generalbasses, a manuscript treatise on thoroughbass which claims to be by Bach, but which is in fact based largely on Part I of Niedt's Musicalische Handleitung of 1700, also contains figured-bass exercises founded on scalar patterns.⁹ Example 10.1, from

8. This practice has been well documented in Franck Thomas Arnold, The Art of Accompaniment from a Thoroughbass, 2 vols. (London: Oxford University Press, 1931), Volume 1, where examples by Heinichen (p. 265), Rameau (p. 266), and Gasparini (p. 280, fn. 20.) are presented. See also Kirnberger, The Art of Strict Musical Composition: 70.

9. This manuscript, dated 1738, appears to be in the hand of Carl August Thieme, a student at the Thomas-Schule from 1735-1745. See Hans-Joachim Schulze, "'Das Stück in Goldpapier' Ermittlungen zu einigen Bach-Abschriften des frühen 18. Jahrhunderts." Bach-Jahrbuch LXIV (1978): 39-41. It appears in Spitta J. S. Bach III: 315-347, as Appendix 12, and in David and Mendel, The Bach Reader: 392-398.

the section titled "Rules for Playing En Quatre," shows one of these exercises as it appears in the Vorschriften. It is in effect an abstraction of the scalar descents found in the WTC I preludes discussed above. Bach evidently found the descending form to be more musically satisfying, and in the aforementioned preludes it undoubtedly provided an ideal link between figured-bass exercises and genuine musical compositions for the young Wilhelm Friedemann. Earlier versions, in the Clavier-Buchlein vor Wilhelm Friedemann Bach itself, consist of only the descending octave-progression followed by a final cadence of as many as 9 measures.

It is not difficult to see the close relationship of thoroughbass to the arpeggiated harmonies of the WTC prelude in C, much of which is in fact notated as block chords in the Clavier-Buchlein vor Wilhelm Friedemann Bach, but does thoroughbass have a genuine relationship to polyphonic writing, which is after all, so characteristic of the Baroque? Another look at Examples 3.2 (WTC II C), 3.10 (WTC II g), 3.11 (WTC II g), and 5.11 (WTC I C#) will confirm that fugue expositions can indeed have a very direct relationship to abstract thoroughbass. These expositions are also founded on an octave descent in the bass, supporting tenths in the upper voices. Of course the details of

the writing are much more complex, but the underlying motion is the same.

Example 10.1
From "Rules for Playing En Quatre," Example 13
(Realization by W. R.).

The image displays a musical score for piano, consisting of four systems of staves. Each system is a grand staff with a treble and bass clef. The notation is complex, featuring many beamed sixteenth and thirty-second notes, suggesting a fast tempo. Fingerings are indicated by numbers 1-5. Some measures include performance instructions in brackets, such as *[...]* and *[C#]*. The final measure of the fourth system is marked with "D.C." (Da Capo). The overall style is characteristic of 17th or 18th-century French lute tablature realization.

Examples 3, 3a, and 3b from Niedt's Musicalische Handleitung, Part I, Chapter 8, reproduced here as Examples 10.2a, b, and c, demonstrate the transformation of a simple homophony into polyphony, first by adding diminutions in the bass (Example 10b), and then by adding diminutions in the upper parts (Example 10c), by which means the original four-voice homophony is changed into a three-part polyphony of fluid contrapuntal lines.¹⁰

This example illustrates vividly the idea that music in less than four parts--such as the three-part expositions analyzed in previous chapters--can have four-part harmony as its basis. It demonstrates a particular manner of contrapuntal thought quite at odds with the Fuxian, linear approach, but in fact the fundamental one for imitative counterpoint in the Baroque era. I believe that the relationship between thoroughbass and composition suggested here applies not just to Bach's instructional methods, but also to his compositional method. Indeed it provides a vital link between the theory of thoroughbass and the practice of Baroque composition as a whole.

10. From Arnold, The Art of Accompaniment: 229-230. The final chapter of Niedt's first volume contains nothing but a list of 16 different key-signatures--C, D, E, F, G, A, Bb, and B, both major and minor. Also included are certain alternate signatures for the dorian mode and its transpositions. Ibid.: 235.

Example 10.2
Examples 3, 3a, and 3b from Niedt's Musikalische
Handleitung, Part I, Chapter 8.

a)

b)

c)

Kirnberger's two fugal analyses also support this relationship, but by opposite means: By giving thoroughbass accompaniments to fugues, he attempts to show that a logical voice leading underlies the complex motivic surface of Bach's WTC I b fugue and his own Fugue in E minor.¹¹

¹¹ Kirnberger, The True Principles: 210-222, and The Art of Strict Musical Composition: 270-275.

Improvisation

The stylistic consistency which characterizes the Baroque (and indeed any well-defined musical period) provides the necessary basis for the high level of development attained by Bach and his contemporaries in improvisation. Creative freedom in improvisation comes from combining well-known and often repeated fragments into a whole. When many of the compositional procedures become habitual through repetition of standard patterns, the musician is free to focus on the refinement and careful organization of such patterns. Internalization of these patterns allows the performer to concentrate on the "individualization" of such patterns into specific and characteristic pieces of music.

Bach had a wide reputation as an improviser of formidable talent. Among the numerous stories of his talents, the following bears directly on this discussion:

When John Seb. Bach seated himself at the organ when there was no divine service, which he was often requested to do by strangers, he used to choose some subject and to execute it in all the various forms of organ composition so that the subject constantly remained his material, even if he had played, without intermission, for two hours or more. First, he used this theme for a prelude and a fugue, with the full organ. Then he showed his art of using the stops for a trio, a quartet, etc., always upon the same subject. Afterwards followed a chorale, the melody of which was playfully surrounded in the most diversified manner by the original subject, in three of four parts. Finally,

the conclusion was made by a fugue, with the full organ, in which either another treatment only of the first subject predominated or one or, according to its nature, two others were mixed with it. This is the art which old Reinken, at Hamburg, considered as being already lost in his time, but which, as he afterwards found, not only lived in John Sebastian Bach, but had attained through him the highest degree of perfection."¹²

Bach also had a very great intellectual gift in his understanding of fugue, for, as C. P. E. Bach reports,

When he listened to a rich and many-voiced fugue, he could soon say, after the first entries of the subject, what contrapuntal devices it would be possible to apply, and which of them the composer by rights ought to apply, and on such occasions, when I was standing next to him, and he had voiced his surmises to me, he would joyfully nudge me when his expectations were fulfilled.¹³

Forkel characteristically repeats the story with some elaboration:

If he heard, in a church, a fugue for a large body of musicians, and one of his two eldest sons happened to stand near him, he always, as soon as he heard the first entries of the theme, said beforehand what the composer ought to introduce, and what possibly might be introduced. Now if the composer had performed his work well, what Bach had predicted happened; then he was delighted, and jogged his son to make him observe it.¹⁴

12. Forkel, Life of J. S. Bach, trans. Kollmann, in David and Mendel, The Bach Reader: 315-316.

13. C.P.E. Bach, letter to Forkel (c.1774), trans. in David and Mendel, The Bach Reader: 277.

14. Forkel, Life of Bach, trans. by Kollmann in David and Mendel, The Bach Reader: 334-335.

And as David and Mendel paraphrase:

. . . when Father Bach had heard the beginning of a fugue he would at once state "what contrapuntal devices it would be possible to apply, and which of them the composer by rights ought to apply." The fugue had definite principles, and a given opening would raise certain expectations; anyone who knew the craft would derive satisfaction from the very fulfillment of those expectations.¹⁵

Although later contrapuntal combinations is not part of the present discussion, understanding fugue subjects in terms of underlying linear paradigms, as presented in Chapter 2, does provide a solid basis for such thought. Although the predictions mentioned above involve the artificial contrapuntal combinations possible for a given subject, a deep understanding of imitative structure along the lines shown in the foregoing chapters provides a similar avenue by which one can predict to an extent what patterns an exposition, and perhaps later sections, should or could take.

If I exclude some (but, nota bene, not all) of his clavier pieces, particularly those for which he took the material from improvisations on the clavier, he composed everything else without instrument, but later tried it out on one.¹⁶

15. David and Mendel, The Bach Reader: 37.

16. Letter from Carl Philipp Emanuel Bach to Forkel, trans. in David and Mendel The Bach Reader: 329.

This suggests that at least some of Bach's keyboard music originated in improvisation, but that his vocal music generally originated on paper.¹⁷ When such improvisations are used as the basis of written compositions, the surface details can undergo numerous revisions, alterations, and refinements from the initial conception. Indeed, such a process of refinement can also lead to deeper structural changes as refinements of surface detail are integrated in the larger plan. The WTC I preludes discussed in Chapter 9 and the WTC II C fugue discussed in Chapter 8 illustrate the sorts of major changes which can take place in the polishing of a composition. It is indeed possible that a great many pieces in the WTC began as improvisations, and gradually assumed their final written form after a great deal of refinement and recomposition.

17. In a greatly simplified view, then, thoroughbass represents the newer, instrumental approach to composition, while traditional counterpoint, as codified by Johann Joseph Fux in Gradus ad Parnassum (Vienna, 1725), represents the vocal approach.

Partimento Fugue

Still more specific evidence that the patterns of thoroughbass instruction and improvisation have a demonstrable relationship with the composition of fugue, is provided by the "partimento fugue," a little discussed but fascinating genre that plays a crucial role in this relationship. In partimento fugue only the lowest part and figures are given, plus indications of where the subject entries are to occur. In some instances, usually at the first entry of the answer, two parts are shown; all the rest is left to the ingenuity of the player. For composition, partimento fugue brings imitative counterpoint into the framework of pure voice leading, and it is the link between an essential harmonic framework and an elaborative contrapuntal texture. Of course, in practical terms, the importance of these works lies first in their relation to the accompaniment of imitative vocal polyphony, in which the singers can be greatly assisted by the keyboard player if he sounds the fresh entries of the subject as it occurs in the various parts,¹⁸ and only secondly in their role of training

18. Indeed, partimento fugues bear much the same appearance as continuo parts for fugal choruses. See William D. Gudger, "Playing organ continuo in Handel's Messiah," The American Organist, XIX/2 (February, 1985): 91-92.

for the performance of ex tempore keyboard fugues. It is the latter skill which is directly related to the compositional process, the focus of this discussion.

Examples of partimento fugue occur in treatises and manuals by Niedt, Heinichen, Keller, Bach/Thieme, and Handel. Also, a manuscript attributed to Bach, the so-called "Langloz" manuscript, titled Praeludia et Fugen del Signor Johann Sebastian Bach, contains 56 partimento fugues, as well as 15 partimento preludes and one aria.¹⁹

Niedt's Musikalische Handleitung, Part I.

The first part of Niedt's treatise contains the well-known Narrative of Tacitus, an allegorical polemic on the relative merits of thoroughbass and German organ tablature, in the course of which it is suggested that the thoroughbass method allows students quite easily to "make a Fugue and the like ex tempore . . ."²⁰ The one example of partimento

19. Berlin, Staatsbibliothek Preussischer Kulturbesitz, Musikabteilung, Mus. Mn. P 296, listed in Wolfgang Schmieder, Thematisch-systematisches Verzeichnis der musikalischen Werke von Johann Sebastian Bach (Leipzig: Breitkopf & Härtel, 1950): xiii, item 22. The owner's name is inscribed, possessor A.W.Langloz Anno 1763, but the hand of the manuscript is unidentified. The Aria, in another hand, belongs to a later period.

20. Arnold, The Art of Accompaniment: 222. The Niedt treatise is discussed in detail on pp. 213-236.

fugue which occurs near the end of Niedt's treatise is not just an exposition but a complete piece.²¹ In this particular type of partimento fugue, all entries of the subject are notated as they should sound. To accomplish this, the subject very often occurs in the lowest part, and the exposition follows a descending series of entries. The short subject is a 5-4-3 progression with very simple ornamentation; so simple in fact, that the answer is necessarily plagal--a real answer at the fourth above, 8-7-6 instead of 8-8-7.²²

Keller's Compleat Method

A different style of partimento fugue is found in Godfrey Keller's treatise A Compleat Method for Attaining to Play a Thorough Bass . . . (London, 1707), the 21st. chapter of which is titled "Short Lessons by way of Fugeing." It contains nine lessons each consisting of "a short fugal exposition, after which the student is left to introduce the Subject or Answer in an upper part over the figured Bass at

21. Niedt, Musikalische Handleitung I (1700). Chapter 10, Example 9, pp. 31-33, given in Arnold, The Art of Accompaniment, I: 234.

22. Bach also used a plagal answer for the fugue subject in the Sonata in G for unaccompanied violin, a subject virtually identical to Niedt's.

appropriate points indicated for his benefit" by the sign "Fug." above the bass.²³ In the fifth lesson the first two entries are given, but the student must supply the subject at the correct pitch level for the third and fourth, as well as for later entries.

Heinichen's Der General-Bass in der Composition

An example of partimento fugue, with the realization supplied, appears in Johann David Heinichen's Der General-Bass in der Composition (1728).²⁴ This particular example also contains an exposition of a second subject, beginning at measure 11.

The Bach/Thieme manuscript

The Bach/Thieme manuscript mentioned above contains 5 partimento-fugue expositions, labelled Examples 12 through 16, in which the realizations are supplied.²⁵ The realiza-

23. See Arnold, The Art of Accompaniment, I: 248-249, which contains part of the fifth lesson.

24. Part I, Ch V, #18, p. 515. It is reproduced in Arnold, The Art of Accompaniment, I: 375-376, and in George J. Buelow, Thorough-Bass Accompaniment according to Johann David Heinichen (Berkeley: University of California Press, 1966): 191-193.

25. They are reproduced in Spitta, Johann Sebastian Bach, III: 336-339. They do not appear in Niedt's treatise.

tions are apparently student work, since they display a rudimentary style, glaring errors noted by Spitta and Arnold, and none of the originality for which Bach was so celebrated.²⁶ As in the Niedt example, the entries usually appear in descending order, allowing a clear statement of each succeeding subject entry in the lowest part. Example 14, beginning alto-soprano, is an exception.

Example 10.3 shows the whole of the first fugue. Notice particularly the lack of coherent shape in the upper voice, as it harmonizes the motivic elements of the lowest voice in simple block chords and makes no attempt at a polyphonic treatment. Although these pieces are not directly related to Bach's fugal technique in detail of construction, they illuminate a certain method of conceptualizing fugal design as an extension and refinement of thoroughbass.

The "Langloz" manuscript

The authorship of the Langloz manuscript is as yet unknown. It contains two sets of partimento compositions. The first set consists of 38 partimento fugues arranged in

26. Arnold, The Art of Accompaniment, I: 215, footnote; Spitta, Johann Sebastian Bach, III: 336-339, footnotes.

Example 10.3
Partimento Fugue 1 from the Bach/Thieme Manuscript.

The image displays three systems of musical notation for a Partimento Fugue. Each system consists of two staves joined by a brace on the left. The notation includes various musical symbols such as clefs, key signatures, and note values. Fingerings are indicated by numbers 1 through 7 placed below the notes. The first system shows a melodic line in the upper staff and a more complex, possibly figured bass or harmonic line in the lower staff. The second and third systems continue this pattern, with the lower staff featuring more intricate rhythmic and melodic patterns. A small bracketed mark is visible at the end of the second system.

an ascending series of fifteen keys, C, c, D, d (no flats in signature), Eb, e, E, F, f, g, G, A, a, Bb, and b.²⁷ Evidently the complete set should have been 40 fugues: Fuga 26 apparently was skipped by the copyist, and only the title is given for Fuga 40. That Fuga 22 is a copy of the Niedt example given above, with some alterations of figuring, indicates at least that the whole cannot possibly be by Bach. Niedt mentions at the end of his treatise that he intends to write a treatise on the performance of fugues *ex tempore*, and perhaps this set of partimento fugues is a part of that otherwise unknown work.²⁸ The second set, containing one prelude, two fugues, and fourteen prelude-and-fugue combinations, is also arranged in ascending key sequence, C, c, D, d, Eb, e, F, G, a. The two sets are possibly the work of different composers.

The partimento fugues in the Langloz manuscript follow essentially the same format as those in the Niedt and Bach/Thieme sources. They vary in length from 15 to 57 measures. Again, as Alfred Mann has observed, all thematic

27. Compare this with Niedt's list of 16 keys given above. See footnote 11 supra.

28. See Arnold, The Art of Accompaniment, I: 235.

entrances are notated.²⁹ A cursory review of the subjects reveals that 23 are based on Paradigm 1, the 5-4-3 linear progression--a slightly lower, but still very considerable proportion as compared to the WTC. Further, the subjects of fugues 50, 51, and 52, all in Eb and all based on 5-4-3, appear to be variants of each other, incorporating similar motivic and intervallic details. This again supports the view of elaboration of simple models as the basis for fugal composition. Whether or not Bach composed any of the music preserved in this manuscript--I believe that the style is too unrefined and matter-of-fact to be Bach's--and whether or not he had any direct contact with this manuscript, or a copy of it, it nevertheless illustrates clearly the prevalence of a harmonic rather than contrapuntal conception of fugue in the years immediately preceding the composition of the WTC.

29. See Alfred Mann, "Bach and Handel as Teachers of Thoroughbass," in Bach, Handel, Scarlatti Tercentenary Essays, ed. Peter Williams (Cambridge, Cambridge University Press, 1985), 256, and Alfred Mann, Georg Friederich Händel Composition Lessons, (Supplement, Band I, Hallische Händel-Ausgabe) (Kassel: Barenreiter, 1978): 47.

Handel's partimento fugues

Handel composed some partimento fugues in the course of his instructions for Princess Anne, eldest daughter of George II.³⁰ The examples by Handel indicate in tablature notation the starting pitch of each entry of the subject, allowing for the possibility of entries in the upper parts, and for a rising series of entries in the exposition. He also composed partimento double-fugues, with indications of where the subject and countersubject are to enter. Mann discusses the difference between the partimento fugues ascribed to Bach and those composed by Handel:

Bach's examples, and those ascribed to him, differ from Handel's in that all thematic entrances are written out, despite the notation on a single staff. Indications in the Langloz manuscript refer merely to those already contained in the example, not to entrances to be added by the student.³¹

Mann comments that "in Handel's instruction the study of fugue evolves from thoroughbass technique."³²

30. [George Frederick Handel, "Aufzeichnungen zur Kompositionslehre" (Composition Lessons)] Published as Hallische Händel-Ausgabe, Supplement, Band I., ed. Alfred Mann. (Kassel: Barenreiter, 1978). See especially pp. 44-52.

31. Ibid.: 46.

32. Ibid.: 45.

The subjects of the partimento fugues discussed above very often follow the voice-leading paradigms presented in Chapter 2, and the 5-4-3 linear progression is very common, occurring in the Niedt, Keller, and Heinichen examples, and, as mentioned above, also in many of the examples ascribed to Bach.

All of these pieces substantiate a way of thinking which combines imitation and voice leading, and approach the core of the compositional process.

Fugue Proper

Although many Baroque treatises deal extensively with fugue, little discussion of issues of voice leading and the relationship of fugue to thoroughbass can be found. Fux has a large section on techniques of imitative counterpoint, but his heart remained in the older idiom of vocal polyphony.³³ Marpurg's Abhandlung is disappointing since he does not tackle the more difficult issues of fugal design. Even Mattheson does not provide a really solid discussion of fugue as it was practiced in his time. His example of a complete fugue in Kern Melodischer Wissenschaft, that is, if

33. Fux, Gradus ad Parnassum: 140-273.

reconstructed from the instructions provided, gives a very rudimentary fugue indeed.³⁴ Kirnberger's interesting contribution has already been mentioned.

Another source, dating from much later, but directly connected to Bach, does suggest at least something of the way fugue could be practically approached from thoroughbass. J. S. Bach's last pupil, Johann Christian Kittel (1732-1809), also claims to have grounded his method in the principles of Bach.³⁵ His treatise, Der angehende praktische Organist, (1803-1809) contains some enlightening examples regarding fugue. In Book 3, a series of imitative openings is given for a simple subject based on 5-4-3 with an upper neighbor (5-6-5-4-3).³⁶ The thirteen examples, reproduced here as Example 10.4, illustrate how a great variety of textures, melodic, contrapuntal, and fugal, can be developed for such a simple theme. The first example is a 3-part fugato, beginning with an exposition of alto, soprano, and bass. The second example shows the same

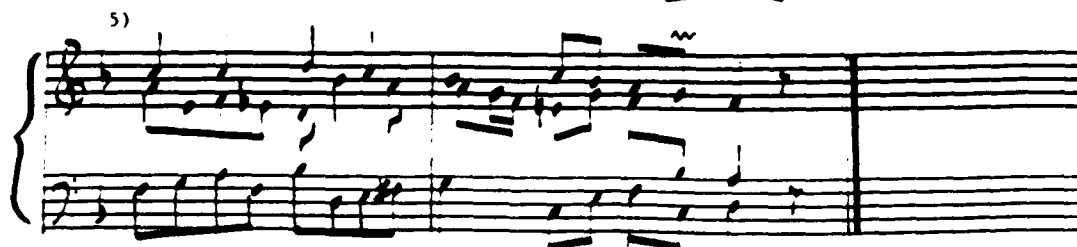
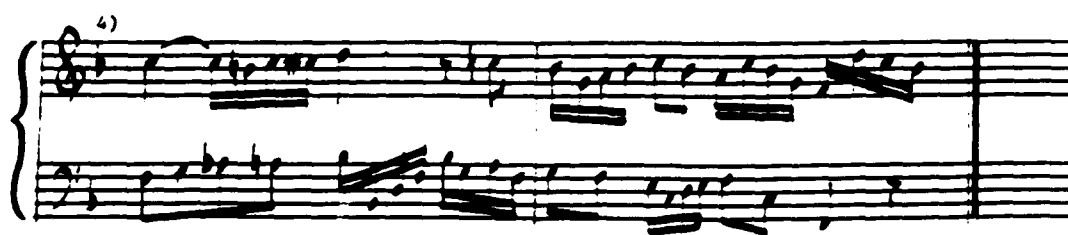
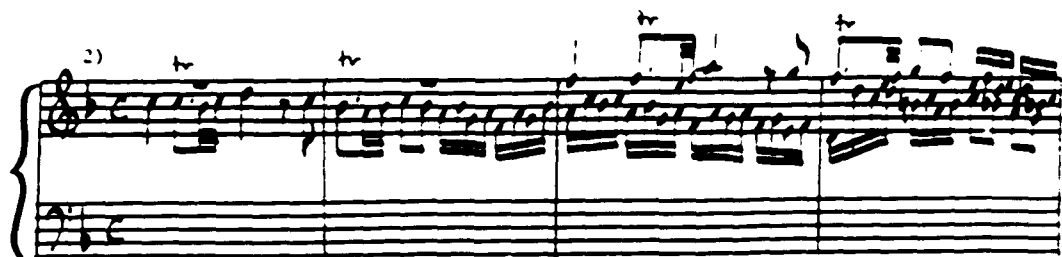
34. Johann Mattheson, Kern Melodischer Wissenschaft (Hamburg: Herold, 1737, reprint Hildesheim: Georg Olms Verlag, 1976): 175-177.

35. Karl Gustav Fellerer, "Johann Christian Kittel," The New Grove, ed Stanley Sadie (London: Macmillan, 1980), X: 90.

36. Johann Christian Kittel, Der angehende praktische Organist, 3 vols. (1803-1808), III: 5-9. The subject is the opening of the Chorale "Warum soll ich mich denn grämen."

Example 10.4
Example from Kittel's Der angehende praktische
Organist, III, 5-9.

The image displays a handwritten musical score for organ, consisting of five systems of staves. Each system is a grand staff with a treble and bass clef. The notation is in a historical style, featuring various note values, rests, and dynamic markings. The first system begins with a '1)' marking above the treble staff. The second system includes a 'tr' (trill) marking above the treble staff. The third system features a 'tr' marking above the treble staff and a 'tr' marking below the bass staff. The fourth system includes a 'tr' marking above the treble staff and a 'tr' marking below the bass staff. The fifth system includes a 'tr' marking above the treble staff and a 'tr' marking below the bass staff. The score is written in a clear, legible hand, with some corrections and erasures visible.



7)

8)

9)

10)

10)

10)

11)

12)

13)

14)

15)

opening, but with a more ornamented version of the subject. Example 3 shows a simpler form of the subject in conjunction with a countersubject, which is structurally identical to the second countersubject of Bach's WTC I F# fugue! The remaining examples show a great variety of textures, in each case based on the same subject, but with a variety of ornamental additions and variations. The final example treats the subject in a chorale fashion above an imitative texture. Although the music itself is not spectacular, the scheme bears direct comparison with Forkel's description of Bach's improvisational art.

. Again, this material is highly suggestive of a manner of thinking about fugue in terms of elaboration and variation of simple motives and voice-leading-structures.

The Compositional Process

Robert Marshall's study of the autographs of Bach's vocal works has clarified Bach's compositional process as regards the empirical evidence of sketches, drafts, additions, erasures, etc. Marshall consciously limits his topic to "compositional process," and steers away from the "creative process"--that unknowable operation that takes place only in the mind of the composer. He focuses on the

empirical evidence and reasons as to the "active critical intelligence" that governs the process.³⁷ He admits that his study sheds light on the deeper origins of a work only to a limited extent.³⁸ Further, he discusses only the vocal works, which may well have been developed in quite different ways than the keyboard works, in which the sense of touch plays an important role, as does improvisation. The cantatas are more likely to have originated on paper and the keyboard works at the clavier. Marshall notes further differences near the end of his book:

[The keyboard works] often make use of considerably more complex compositional techniques than do the vocal works; they also depend much less on tight schematic and mechanical procedures of continuation but rather indulge frequently in the "spontaneous," "organic" generation of material. . . . We may assume that the composer here made use of preliminary drafts, that he worked on these compositions with an extraordinary intensity of concentration and an unusual degree of self-criticism but at a relatively leisurely pace.³⁹

One of Marshall's categories of revision, "ornamental corrections," however, relates closely to the idea of underlying structural models:

37. Marshall, The Compositional Process: viii.

38. Ibid.

39. Ibid.: 240. Of course, Marshall is here speaking of not only the WTC, but also of such densely contrapuntal pieces as the Art of Fugue, the Musical Offering, and the Canonic Variations on "Vom Himmel Hoch".

Corrections of the diminution type reflect a principle characteristic of Bach's composing scores, just as they reflect an essential element of baroque composition in general. The diminution principle as a principle of elaboration, extension, and enlargement is operative on many levels of the Bach compositional process. For Bach's tendency when changing his original idea was to expand upon it, and add to it rather than to reduce or contract it. This holds true whether it is a question of (1) adding notes to a melody, i.e. diminution in the strictest sense, (2) adding doubling, heterophonic, filler, or obbligate parts to the texture, (3) adding measures to the original context, or (4) adding movements to the original composition.⁴⁰

Marshall includes an insightful commentary on the genesis of a choral fugue exposition, the first movement of Cantata 65. Interestingly, the revised version of the subject alters the original conclusion to produce a 5-4-3 pattern.

Marshall says that "there is little evidence [in the surviving autographs] that Bach deliberately wrote down contrapuntal, melodic, or numerical schemes which were to be elaborated afterwards,"⁴¹ but I maintain that thoroughbass itself is the abstract contrapuntal and melodic scheme, unwritten but internalized. Each composition is seen as an elaboration of thoroughbass patterns which have become so

40. Ibid.: 35-36.

41. Ibid.: 129.

familiar to the composer that they are totally subconscious.

As Marshall comments later,

Even the most heavily corrected of Bach's manuscripts are rarely concerned with anything but the surface--with the "foreground" of musical events. The underlying formal design, the modulation plan, of the outer-voice framework were rarely subjected to any profound transformation. The deeper levels, "the background" of the structure must have been so self-evident, so firmly and so intuitively grasped by the composer as to be of no conscious concern to him. Accordingly, Bach's musical imagination--his Genius--was "naïve." It operated on the surface, and (like naïve listeners and even naïve music analysts ever since) was concerned about details and nuances upon that surface while the "background" took care of itself.⁴²

Thoroughbass in the Baroque relates to fugue only on the foreground level. The reductive analyses of Chapters 3 to 8 show the reverse of this process, that is, the reduction of fugues back to thoroughbass. However, only the foreground graphs show thoroughbass from the eighteenth century point of view; reduction to deeper levels, to underlying backgrounds, was beyond the scope of eighteenth-century theory. To the genius Bach, the remoter levels may have been "self-evident" and "of no conscious concern," as Marshall says, but they are by no means self evident to the rest of us! It remained for Schenker to point them out in terms of a

42. Ibid.: 236.

general theory, and the present contribution shows them specifically in terms of fugal exposition.

Conclusion

The foregoing discussion of the relationship of voice-leading patterns to the compositional process does not prove that Bach conceived of fugal imitation according to the patterns and principles outlined in this dissertation. But for our understanding of Bach's music, and of the principles of imitative tonal counterpoint, the theory presented here deals with specific and general aspects of fugal construction with consistency and force.

I believe that this comparative approach, although laborious, is a fruitful way to understanding fugal style on a different level than has hitherto been possible. My purpose has been, first, to show the existence of recurring voice-leading patterns--a vocabulary of common phrases as it were--and, second, to show the main tonal patterns of Bach's keyboard-fugue expositions, and explain why they are used; thirdly, to explain the reasons for deviations from the basic tonal patterns; and fourthly to show the close relationship of these patterns to those of non-imitative music.

Examination of imitative counterpoint in the manner used here clarifies a number of important relationships and problems: Tonal and real answer are understood in terms of underlying harmonic structure; direct relationship is made between subject type and exposition plan; specific effects of a countersubject on exposition structure (in terms of tonality and register) are illustrated, and the important point is made that the use of a countersubject gives much greater structural complexity to fugal exposition. In addition, the various functions and uses of the bridge are illustrated and discussed. Tonal coherence in fugal exposition, the relationship of the number of parts to the tonal plan, and the overall structural unity of upper voice, bass, harmony, and motive, which binds the exposition together--structural features of fugue rarely discussed in the standard treatises on fugue--are all treated in an attempt to link imitative counterpoint directly with the principles of tonality.

I suggest that the approach presented here has a useful role in the pedagogy of tonal counterpoint and fugue. Some aspects of the theory have been used with success in teaching undergraduate courses in fugue. The pedagogical application of this theory combines analysis and composition of

fugues, using voice-leading models as starting points for composition assignments. Subject structures are an effective approach to the invention of subjects, and to the construction of appropriate answers in a comprehensive way which avoids many of the "rules" and exceptions to the rules, giving principles instead. Voice-leading patterns of expositions can be used as the basis of student compositions, and appropriate exposition forms can be selected on the basis of subject type. Three-part fugue is presented as the norm for keyboard music, and the use of countersubjects is delayed until fluency is achieved in free counterpoint.

Comparative analysis, such as that presented in this dissertation--illustrating the common and unusual structural patterns in Bach's contrapuntal music--can, I believe, also be applied effectively to other types of music, and to music of other composers. For example, one might correlate foreground voice-leading patterns with formal elements (phrases and sections) in the keyboard sonatas of Haydn, or in the songs of Schubert.

I hope that this study, merely a first step towards a full understanding of imitation and voice leading in tonal music, will provide a foundation for further inquiry. A broader and deeper field of research will yield revisions,

emendations, and additions to this theory, and perhaps lead in time to a very different, still more comprehensive set of principles. No doubt, however, Bach's art--artifice, unity, and radiance--will continue to challenge, fascinate, and delight.

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INDEX OF MUSICAL EXAMPLES AND ANALYSES

Bach, J. S.

WTC I:

Fugue in C, 2.32, 2.36, 4.6, 4.12
 Fugue in c, 2.19, 3.7
 Fugue in C#, 2.41, 5.11
 Fugue in c#, 2.46, 6.6
 Fugue in D, 2.26, 3.12
 Fugue in d, 2.50, 6.7
 Fugue in Eb, 7.5, 7.6
 Fugue in d#, 2.43, 5.7
 Fugue in E, 2.39, 4.5
 Fugue in e, 7.8, 7.9
 Fugue in F, 2.4, 2.5, 2.6, 3.3
 Fugue in f, 2.40, 5.5
 Fugue in F#, 2.11, 3.17, 8.5, 8.6
 Fugue in f#, 2.45, 5.8
 Fugue in G, 2.51, 6.8
 Fugue in g, 2.13, 3.6
 Fugue in Ab, 2.52, 6.10
 Fugue in g#, 7.1, 7.1
 Fugue in A, 7.7
 Fugue in a, 2.44, 5.9
 Fugue in Bb, 2.31, 4.9
 Fugue in b-flat, 2.20, 3.19
 Fugue in B, 2.48, 6.5
 Fugue in b, 7.3, 7.4
 Prelude in C, 9.4
 Prelude in c, 9.5
 Prelude in D, 9.6
 Prelude in d, 9.1
 Prelude in e, 9.7
 Prelude in Ab, 9.3

WTC II:

Fugue in C, 2.3, 3.2, 4.12, 8.3, 8.4
 Fugue in c, 2.2, 3.5
 Fugue in C#, 2.25, 6.15
 Fugue in c#, 2.38, 4.10
 Fugue in D, 2.27, 3.13
 Fugue in d, 2.23, 6.11
 Fugue in Eb, 2.15, 3.14
 Fugue in d#, 2.37, 4.8
 Fugue in E, 2.47, 6.4
 Fugue in e, 2.24, 3.21
 Fugue in F, 2.16, 3.18
 Fugue in f, 2.17, 3.20, 8.1, 8.2

Fugue in F#, 6.13, 6.14
Fugue in f#, 2.42, 5.6
Fugue in G, 2.10, 3.22
Fugue in g, 2.9, 3.10
Fugue in Ab, 2.18, 3.4
Fugue in g#, 2.29, 4.7
Fugue in A, 2.21, 3.15
Fugue in a, 2.14, 3.11
Fugue in Bb, 2.30, 4.4
Fugue in b-flat, 2.22, 6.12
Fugue in B, 2.49, 6.9
Fugue in b, 2.6, 2.7, 2.8, 3.8
Prelude in Eb, 9.2

Handel, G. F.

Suite 2 in F for Harpsichord, Fugue, 2.35

Mozart, W. A.

Præambulum et Fuga, K.394, 2.34