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**MODELS OF UNITY AND DIVERSITY IN THE SYMPHONIES OF
WILLIAM SCHUMAN: AN EXPLORATION OF GENERAL THEORIES
IN RELATION TO STYLISTIC CHANGE AND THE DYNAMICS OF
FORM**

VOLUME II

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Chapter 2

MUSICAL EXAMPLES

Ex. 2.1a

Handwritten musical score for four staves (violin 1, violin 2, viola, and cello) with vocal lines and lyrics. The score is written in treble clef for all instruments. The lyrics are: 'dia' 'dia' 'dia' 'dia' 'chrom'.

The score is divided into four systems, each corresponding to a measure of the vocal line. The first system is marked with a tempo of $b.63$. The second system is marked with a tempo of $b.68$. The third system is marked with a tempo of $b.63$. The fourth system is marked with a tempo of $b.68$.

The vocal lines are written in a stylized, handwritten notation. The lyrics are written below the vocal lines. The instrumental parts are written in a stylized, handwritten notation. The score is written in a single system, with the vocal lines and instrumental parts written on the same staff.

Ex. 2.1b

Handwritten musical score for four staves (vln 1, vln 2, vla, vc) with various musical notations, including notes, rests, and dynamic markings like *mp*, *un poco rit.*, and *morendo*. The score includes performance instructions such as *b. 119* and *b. 120*. The bottom right corner contains the notation *[C, D, G]*.

Ex. 2.1c

Handwritten musical score for four staves (b. 1, vln 1, vln 2, vla) with various musical notations, including notes, rests, and dynamic markings like *mp*, *un poco rit.*, and *morendo*. The score includes performance instructions such as *b. 119* and *b. 120*. The bottom right corner contains the notation *[D, G]*.

'dia' 'chromi' 'dia'

Ex. 2.2.2

Ex. 2.2b

Ex. 2.3a

Voyage 1. Anticipation

Handwritten musical score for Voyage 1. Anticipation. The score is written on two staves. The top staff is in treble clef and the bottom staff is in bass clef. The key signature has one sharp (F#). The time signature is 4/4. The score includes a circled section with a 6-243 bracket. The bottom staff has a 7-22 bracket. The top staff has a 4-16 4-22 3-11 5-28 6-249 bracket.

Ex. 2.3b

2. Caprice

Handwritten musical score for 2. Caprice. The score is written on two staves. The top staff is in treble clef and the bottom staff is in bass clef. The key signature has one sharp (F#). The time signature is 4/4. The score includes a 6-243 bracket. The top staff has a 7-22 bracket. The bottom staff has a 7-22 bracket.

Ex. 2.3c

3. Realization

Handwritten musical score for 3. Realization. The score is written on two staves. The top staff is in treble clef and the bottom staff is in bass clef. The key signature has one sharp (F#). The time signature is 4/4. The score includes a 6-243 bracket. The top staff has a 7-22 bracket. The bottom staff has a 7-22 bracket.

Voyage 4. Decision

Handwritten musical score for "Missa" by J. S. Bach. The score is written on multiple staves, featuring various musical notations including notes, rests, and dynamic markings. The notation is dense and includes complex rhythmic patterns. Key markings include "ppp marcato" and "mp". The score is divided into sections by a double bar line and a repeat sign. The handwriting is in ink on aged paper.

↑
5-21

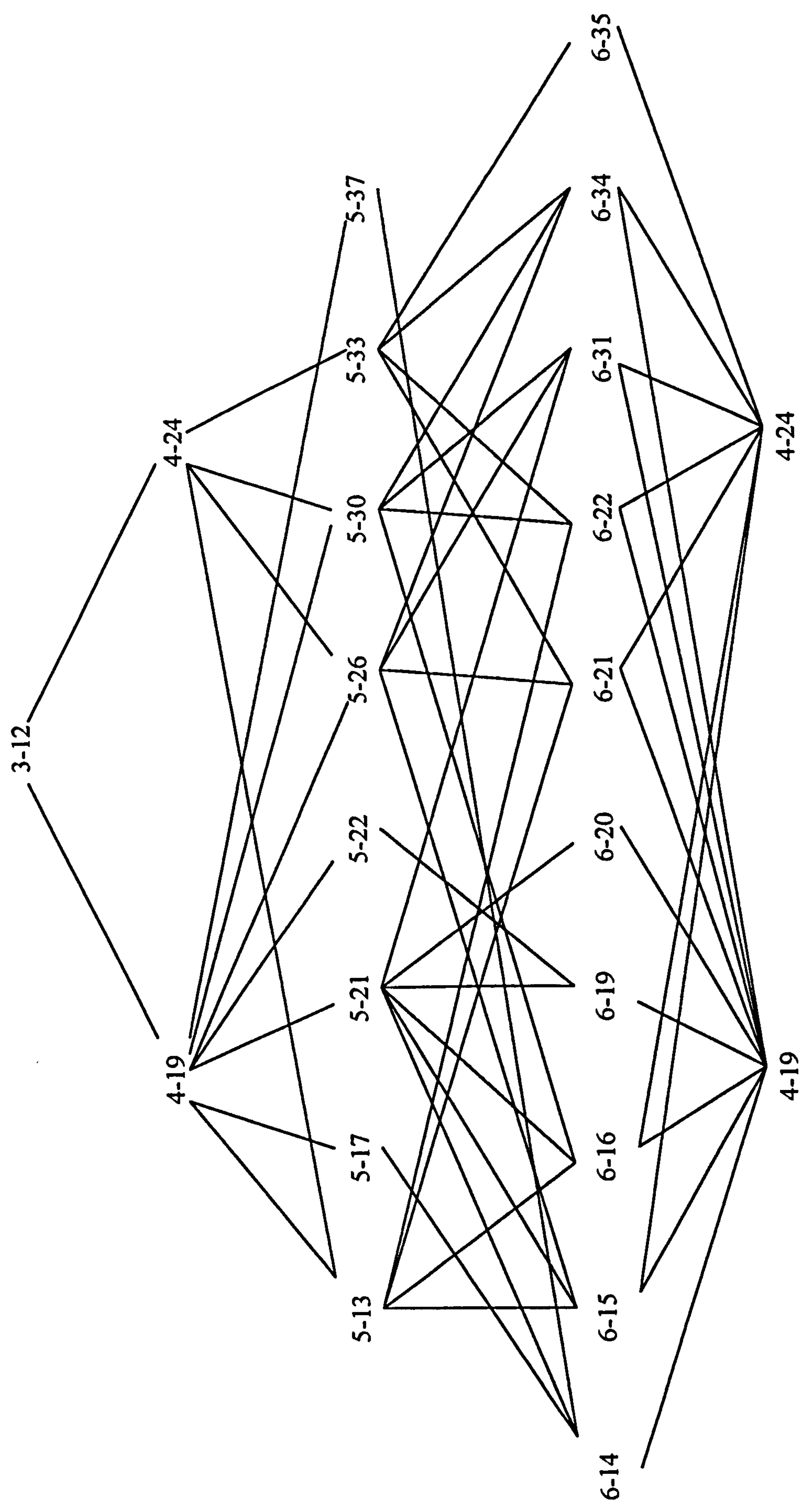
5. Retrospection

b.1

6-243

6-243

Fig. 2.2 Inclusion relationships (Kh) Genus 4



N.B. 3-12 is in the relationship Kh to all the sets listed

Chapter 3

MUSICAL EXAMPLES AND OVERSIZE FIGURES

Ex. 3.1

Theme A - Passacaglia

Handwritten musical notation for Theme A - Passacaglia. The staff is in treble clef with a 3/4 time signature. The melody starts with a half note B1, followed by a quarter note A, and then a half note G. The key signature has one sharp (F#). The notation includes various accidentals and slurs, with some notes marked with 'b' and 'c'.

Theme B - Fugue

Handwritten musical notation for Theme B - Fugue. The staff is in treble clef with a 3/4 time signature. The melody starts with a half note B1, followed by a quarter note A, and then a half note G. The key signature has one sharp (F#). The notation includes various accidentals and slurs, with some notes marked with 'b' and 'c'.

Theme B1 - Fugue

Handwritten musical notation for Theme B1 - Fugue. The staff is in treble clef with a 3/4 time signature. The melody starts with a half note B1, followed by a quarter note A, and then a half note G. The key signature has one sharp (F#). The notation includes various accidentals and slurs, with some notes marked with 'b' and 'c'.

Theme B2 - Fugue

Handwritten musical notation for Theme B2 - Fugue. The staff is in treble clef with a 3/4 time signature. The melody starts with a half note B1, followed by a quarter note A, and then a half note G. The key signature has one sharp (F#). The notation includes various accidentals and slurs, with some notes marked with 'b' and 'c'.

Ex. 3.1 (cont.)

Theme C - Chorale

Handwritten musical notation for Theme C - Chorale, measures 1 to 157. The notation is on a single staff with a treble clef and a key signature of one sharp (F#). The melody consists of eighth and sixteenth notes, with some rests. The measure numbers 1, 57, and 157 are written at the beginning of their respective staves.

Theme D - Toccata

Handwritten musical notation for Theme D - Toccata, measures 157 to 259. The notation is on a single staff with a treble clef and a key signature of one sharp (F#). The melody is more complex, featuring many sixteenth and thirty-second notes, with some rests. The measure numbers 157, 259, and 259 are written at the beginning of their respective staves.

Theme D' - Toccata

Handwritten musical notation for Theme D' - Toccata, measures 259 to 259. The notation is on a single staff with a treble clef and a key signature of one sharp (F#). The melody is simple, consisting of a few notes and rests. The measure number 259 is written at the beginning of the staff.

Ex. 3.2
Theme A

Handwritten musical score for Theme A, Ex. 3.2. The score consists of 14 staves of music, primarily in treble clef with a key signature of one sharp (F#). The notation includes various musical symbols such as notes, rests, and accidentals, along with extensive handwritten annotations and fingerings.

Key annotations and fingerings include:

- Staff 1: $b.1$, $6-248$, $5-14$, $6-225$, $3-3$
- Staff 2: $5-23$, $3-7$, $CP1$, $3-2$
- Staff 3: $b.10$, $5-35$, $4-3$, $4-11$
- Staff 4: $3-7$, $CP2$, $b.15$, $3-2$, $4-13$
- Staff 5: $5-14$, $3-2$, $3-2$
- Staff 6: $3-2$, $3-2$
- Staff 7: $b.20$, $4-26$, $3-9$, $3-2$, $CP3$, $3-2$
- Staff 8: $3-5$
- Staff 9: $3-9$
- Staff 10: $b.25$, $3-4$, $3-2$
- Staff 11: $3-2$, $3-2$
- Staff 12: $3-11$, $3-7$

Ex 3.3

a)

AT1 b8

7-3577
8-2370
9-977

b)

AT2

10-575

7-3578 8-27781

c)

AT3 b22

9-979 8-2376 (9-976) 9-979 (9-979)

Ex.3.4 Passacaglia - Vertical sets bb. 14³ - 29¹

Bar	14 ³				15				16				17								
vl2	11				11	9	11	8	6	6	4		1	11	8	6	4	3	7	3	
va	2		4	1			11		9	9	11	6			0	3	4	6	3	10	
vc	6			6		2			1	8	1		3		10					7	
set	3-11	3-9	3-9	3-11	2-5	3-7	3-11	3-11	3-11	3-11	3-11	3-7	3-6	3-9	3-11	3-11	2-6	3-11	3-11	2-5	3-11

Bar	18				19				20				21								
vl1																7					
vl2	3	1	11			10	8	6	8	3	4	6	1		8	3	10	2		5	
va	10	8	3		8		4		6	9	1		6	9	4	1		6	9	7	
vc	10			6	3	11			8	9	4	11	6		6	3	6	1	0		
set	2-5	3-7	3-4	3-11	3-11	3-9	3-11	3-9	3-11	2-4	3-11	3-9	3-11	3-9	3-11	3-7	3-11	2-4	3-4	3-11	3-9

Bar	22				23				24				25						
vl1	7				3		2	9	4		11			8		11		7	4
vl2	2		0			10	10	0	7		1	4	6	7	4	11	9	4	9
va	7		3	4	10	10	9			4	11		2		1	6	6	7	4
vc	0	10	0	9	7	7	5		2	0		9	7	6	4	8	4	2	0
set	3-9	3-11	3-11	4-26	4-26	3-11	4-20	4-26	3-6	4-23	4-20	4-22	4-26	3-11	4-26	4-26	3-9	4-22	3-9

Bar	26				27				28				29					
vl1	0				9	10	5	0	7	4	7	2	1		1			
vl2	5			4	2	7	10	5	2		7	10	8		8			
va	0		11	0	9	10		0	4	7	0	7	1		8			
vc	9	7	9	4	5	7	2	9	9	11	3		4	6	3			
db													8		8			
set	3-11	4-16	3-11	3-11	4-20	4-14	3-11	3-11	3-7	4-20	4-23	4-22	4-26	3-11	4-20	3-11	3-9	3-9

Ex. 3.5

Handwritten musical score for Ex. 3.5, featuring three staves labeled 'ww', 'str.', and a bottom staff with a dashed line. The score includes notes, rests, and a bracketed section labeled '9-9 To' and '7-14 Toi'.

The notation includes various musical symbols such as notes, rests, and a bracketed section labeled '9-9 To' and '7-14 Toi'.

Ex. 3.7

Theme A



Variation 1

Ex. 3.8

Handwritten musical notation for Ex. 3.8. The top staff shows two measures of chords with intervals 3-11i and 3-11i, followed by a chord labeled (4 8) Invariant. The bottom staff shows two measures of chords with intervals 5-32 T1i and 5-32 T4i.

Ex. 3.9

Variation 2

Handwritten musical notation for Ex. 3.9, Variation 2. The notation spans five staves. Key intervals and accidentals include: 7-35, 3-6, 4-23, 8-23 T4, 9-9 T11, 10-5 T4, 5-24, 3-7, 5-29, 4-22, 3-2, and 6-74. The notation includes various accidentals (sharps, flats, naturals) and ties.

Handwritten musical notation for Ex. 3.9, showing seven staves. Key intervals and accidentals include: 6-80, 3-7, 5-35, 6-33, 3-9, 5-29, 6-33, 5-29, 3-9, 4-215, 8-23 T1, 9-9 T11, and 10-5 T6. The notation includes various accidentals (sharps, flats, naturals) and ties.

Ex. 3.10 Variation 2 Collections and vertical sonorities

	b. 74				b. 75				b. 76				b. 77				b. 78				b. 79					
ww	4	5	7	9	11	0	2	4	4	2	0	11	6	4	1	9	6	4	0	11	4	2	11	6	8	6
c	4							4	4			4		4						4				4		
h	1							1	1			1		0						1				0		
o	9							9	9			9		7					9				7			
r	4							4	4			4		3					4				3			
d	7							7	7			7		10					7				10			
s	0							0	0			0		3					0				3			
vertical	5-32	6-31			6-46		6-47		6-47		6-46	6-50		6-50	6-49		6-46		6-47		6-50	6-31				
cllm	9-9													7-31			8-23							7-26		

	b. 80				b. 81				b. 82				b. 83												
ww	9	←																							
vl1	4	←	←		2	4	11	4	2	11	9	6	1	8	3	1	11	9	6	8	3				
vl2	8		←		6	8	3	8	6	3	1	10	5	0	7	5	3	6	2	5	0				
va	1	←	←		11	1	8	1	11	8	6	3	10	5	0	10	8	1	11	0	7				
vc	4	←	←		2	4	11	4	2	11	9	6	1	8	3	1	11	9	6	8	3				
db	7	←	←																						
db	0	←	←																						
Timp	0 →																								
vertical	6-44	(5-32)	5-22	4-29	4-19	4-19	4-17	4-19	4-29	4-17	4-18	4-27	4-14	3-11	3-11	4-14	4-17	4-18	4-29	3-11	3-11				

	b. 84				b. 85				b. 86			
vl1	3	1	8	10	7	3	1	9	10	10		
vl2	0	10	0	2	11	7	5	1	2	2		
va	7	5	5	7	4	0	10	6	7	7		
vc	3	1	8	10	7	3	1	9	10	10		
Timp	0 →									5		
vertical	3-11	4-14	3-11	4-22	4-20	3-11	4-14	4-18	4-22	4-26		

Ex. 3.11 Variation 3

Ex. 3.11 Variation 3

Handwritten musical score for Variation 3. The score is written on multiple staves, featuring various musical notations including notes, rests, and dynamic markings such as *p str.* and *ppp*. The score includes various time signatures and key signatures, and is annotated with measure numbers and performance instructions.

Ex. 3.12 α_1 Theme A_C

Handwritten musical score for Ex. 3.12, Theme A_C. The score consists of 15 staves of music. The first staff is a melody in treble clef. The subsequent staves are chords in various clefs (treble and bass). The music includes various accidentals (sharps, flats, naturals) and fingerings. There are several annotations: "Var 3" above the first staff, "b.91" above the second staff, "b.94" above the third staff, "b.100" above the fourth staff, "b.104" above the eighth staff, "b.105" above the ninth staff, "b.107" above the thirteenth staff, "b.108" above the fourteenth staff, and "b.109 4-13" above the fifteenth staff. There are also many numerical annotations: "3-4", "2-5", "3-11", "3-8", "4-229", "4-26", "5-35", "3-11", "5-217", "3-2", "7-35 19", "8-22 19", "9-9 19", "4-23", "4-10", "3-2", "5-23". The score ends with a double bar line on the fifteenth staff.

Ex. 3.12 (cont.)

Handwritten musical score for Ex. 3.12 (cont.), featuring 18 staves of music. The notation includes various chords and intervals, with some measures marked with a bar line and a key signature change (b.110, b.112, b.113, b.115, b.117). The score is organized into systems of three staves each, with a vertical line separating the first and second systems. The notation includes various chords and intervals, with some measures marked with a bar line and a key signature change (b.110, b.112, b.113, b.115, b.117). The score is organized into systems of three staves each, with a vertical line separating the first and second systems.

Key markings and intervals include:

- b.110
- 3-6
- 3-2
- 7-35-11
- 4-22
- 5-35
- 3-7
- 3-7
- 3-7
- (7-14-10)
- 9-9-17
- 4-22
- 3-5
- 4-11
- 4-13
- b.113
- 4-23
- 4-23
- 8-22-10i
- 3-7
- 3-7
- 3-9
- b.115
- 3-9
- 3-9
- 4-23
- 3-9
- 4-23
- 3-9
- 4-23
- b.117
- 6-9
- 4-14
- 7-23
- 4-22

Fig. 3.10 Variation 3: Collections and invariant sets

Block	Collection	Bar/beat	Duration (beats)	D	i	a	-	c	y	c	l	e	Invariant sets (adj)	Invariant sets (alt)	Notable features	
I	9-9 _{T0}	86 ¹ -94 ⁴	49	0	7	2		6	1	8	3	10	5	5-23 _{T0}	+ violas	
	9-7 _{T10}	94 ⁵ -95 ⁴	6	0		2	11	6	1	8	3	10	5	5-29 _{T2i} *		
	8-23 _{T2}	95 ⁵ -98 ²	16	0	7	2	9	4	11		3		5	8-22 _{T0}		
	7-35 _{T8}	98 ³ -98 ⁶	4	0	7	2	9	4	11	6	1	8	5	5-10 _{T11} *		
II	7-35 _{T9}	99 ¹ -99 ³	3	0	7	2	9				3	10	5	4-23 _{T9}	+ violas	
	9-9 _{T5}	99 ⁴ -100 ²	5	0	7			11	6	1	8	3	10	5		5-35 _{T5}
	7-35 _{T11}	100 ³ -100 ⁶	4	0	7	2	9	4	11				5	8-23 _{T5}		
	9-7 _{T8i}	101 ¹ -103 ⁵	17	0	7		4	6	1	8	3	10	5	5-35 _{T5}		
III	9-9 _{T11}	103 ⁶ -105 ²	9	0	7	2	9	4	11	6	1		5	8-23 _{T5}	D ⁶ -D ⁵ -B ⁵ (mel)	
	9-9 _{T2}	105 ³ -106 ⁴	8	0	7	2	9	4		8	3	10	5	9-9 _{T11}		
	9-9 _{T11}	106 ⁵ -107 ²	4	0	7	2	9	4	11	6	1		5	9-9 _{T2}		
				0	7	2	9	4	11	6	1		5	9-9 _{T11}		
IV	9-7 _{T5}	107 ³ -107 ⁶	4	0	7		9	6	1	8	3	10	5	7-35 _{T0}	C ⁶	
	7-35 _{T11}	108 ¹ -108 ⁶	6	0	7	2	9	4	11				5	6-32 _{T7}		
	7-35 _{T0}	109 ¹ -109 ⁴	4	0				6	1	8	3	10	5	7-35 _{T0}		
	8-22 _{T6}	109 ⁵ -109 ⁶	2	0	7	2	9	4	11	6				6-32 _{T7}		
V	9-7 _{T4}	110 ¹ -111 ⁴	10	0	7	2	9	4	11	6			5	7-14 _{T7i} *	+ d. basses	
	7-30 _{T1} *	111 ⁵ -111 ⁶	2		7	2	9		1		3	10	5	6-z46 _{T1} *		
	7-14 _{T7i} *	112 ¹ -112 ²	1.5	0	7	2		4	11	6			5	7-14 _{T7i} *		
	9-9 _{T0}	112 ³ -112 ⁶	4.5	0	7	2			6	1	8	3	10	5		6-z46 _{T1} *
VI	9-9 _{T6}	113 ¹ -113 ²	2	0	7	2	9	4	11	6	1	8		5-14 _{T7i} *	E ² pedal	
	8-23 _{T5}	113 ³ -113 ⁶	4	0	7			6	1	8	3	10	5	6-7 _{T0} *		
				0	7			6	1	8	3	10	5	5-7 _{T6} *		
				0	7	2	9	4	11	6	1		5	5-7 _{T6} *		
VII	9-9 _{T11}	114 ¹ -116 ⁶	18	0	7	2	9	4	11	6	1		5	5-32 _{T1i} *	+ woodwind Var 2 chord Var 2 chord	
	9-9 _{T9}	117 ¹ -117 ⁶	6	0	7	2	9	4	11		3	10	5	5-32 _{T4i} *		
	5-32 _{T1i} *	118 ¹ -118 ⁶	6	0	7		9	4		1				5-32 _{T1i} *		
	5-32 _{T4i} *	119 ¹ -119 ⁶	6	0	7			4			3	10	5	5-32 _{T4i} *		
4-22 _{T2}			6	2			9	4	6							
9-9 _{T1}			8	7	2	9	4	11	6	1	8	3	4-22 _{T2}	Var 4		

Ex. 3.13

Theme A

b.1

Var. 4

b.125

6-247

6-217

4-14

b.132

6-223

3-5

3-8

5-5

b.139

5-33

b.143

7-35

8-22

Ex. 3.14

Variation 4

Handwritten musical score for Variation 4, measures 1-35. The score is written on five staves: Violin 1 (Vln.1), Violin 2 (Vln.2), Viola (Vla), Violoncello (Vcl), and Double Bass (Cb). The key signature has one flat (B-flat). The time signature is 3/4. The score includes various musical notations such as notes, rests, and slurs. At the bottom, there are rehearsal marks: 7-35, 8-22, 9-9, 10-5, and 10-11. A large bracket on the left side of the staves indicates a section from measure 1 to 35.

Handwritten musical score for Variation 4, measures 36-65. The score continues on five staves: Violin 1 (Vln.1), Violin 2 (Vln.2), Viola (Vla), Violoncello (Vcl), and Double Bass (Cb). The key signature has one flat (B-flat). The time signature is 3/4. The score includes various musical notations such as notes, rests, and slurs. At the bottom, there are rehearsal marks: 11-11, 12-22, 13-32, 14-42, 15-52, 16-62, 17-72, 18-82, 19-92, 20-102, 21-112, 22-122, 23-132, 24-142, 25-152, 26-162, 27-172, 28-182, 29-192, 30-202, 31-212, 32-222, 33-232, 34-242, 35-252, 36-262, 37-272, 38-282, 39-292, 40-302, 41-312, 42-322, 43-332, 44-342, 45-352, 46-362, 47-372, 48-382, 49-392, 50-402, 51-412, 52-422, 53-432, 54-442, 55-452, 56-462, 57-472, 58-482, 59-492, 60-502, 61-512, 62-522, 63-532, 64-542, 65-552. A large bracket on the left side of the staves indicates a section from measure 36 to 65.

Ex. 3.15 Passacaglia - Variation 4

Bar 121													Bar 122												
VII	B	E	C#	A	A	F#	D	G	E	A	F#	D	Eb	D	G#	Eb	C	E	A	F#	C#	A	D		
VII	E																								
Vla																									
Vc																									
dia-c	7-35 _{TI}																				7-35 _{TI}				
dia-c	8-22 _{TI}																								
dia-c	9-9 _{TI}																				9-9 _{TI}				
dia-c	10-5 _{TI}																								

(dia-c = diatonic collection)

Bar 123												
VII		A	E				E	B		B	F#	
VI2	B			B	D				D	A		A
VIa	D		D	E		B	G			D	A	
Vc											D	D
dia-c	7-35 _{TI}											
dia-c	9-9 _{TI}											
dia-c	(10-5 _{TI})											
VT	3-7	3-9	2-5	2-2	3-7	3-7	3-11	3-6	3-7	2-2	3-11	

(VRT = vertical sonority)

Bar 124																						
V1	(F#)	D	G					C	C													
V2	B																					
V1a	(A)	E	B				B	E														
Vc	(D)																					
dia-c	(7-35 _{TI})																					
dia-c																						
dia-c	(9-9 _{TI})																					
dia-c	(10-5 _{TI})																					
VT	4-26	4-22	3-11	2-3	3-11	4-26	4-23	4-22	4-14	3-11	2-3	3-11	3-11	2-4	3-8	3-11	2-3					

[illegible][illegible][illegible]

Bar 137 (Ex. 3.15)

[illegible]

Bar 138

[illegible]

Bar 139

Tb1	(G)	G		G		F	
Tb2	(E)	E		E		D	
Tb3	(C)	C		C		B $\flat$	
VII	(C)	G	G	E E		G F	
VI2	C		G E		C C		
Va	(E)	G E		D C		G B $\flat$	D
Vc	(C)		G C		B A		
c ltn	(8-22)		3-11			5-25	B $\flat$ C
dia-c	(7-35) _{T6})			6-32			5-27
dia-c							
dia-c	(9-9) _{T4})				7-35 _{T4}		
vrt	3-11	2-4	3-11	4-22	3-11	4-20	4-26 4-29 4-10 5-27 3-9 4-22

Bar 140 (Ex. 3.15)

[illegible]

Bar 141

[illegible]

Bar 142

[illegible]

Fig. 3.13 Symphony no.3: Centricity and stable collections

	Clltn	Bar/beat	D i a - c y c l e												Centre	Notable features
			8	3	10	5	0	7	2	9	4	11	6	1		
Passacaglia																
α	9-9 _{T0}	46 ² -49 ²	8	3	10	5	0	7	2				6	1		Canon (T6)
	6-33 _{T1}	63 ¹ -65 ²	8	3	10					4			6	1	EbDbGb	Var 1
	5-32 _{T1i}	74 ¹ -76 ³					0	7		9	4			1	C	Var 2
	β 5-32 _{T4i}	77		3	10		0	7			4				Eb	
	α 5-32 _{T1i}	78					0	7		9	4			1	C	
β	5-32 _{T4i}	79		3	10		0	7			4				Eb	
	(Pedal)	80-85													C	Timpani
α	9-9 _{T0}	86-95 ⁴	8	3	10	5	0	7	2				6	1	Ab/F	Var 3
	9-9 _{T11}	114 ¹ -116 ⁶				5	0	7	2	9	4	11	6	1	E	
	5-32 _{T1i}	118 ¹ -118 ⁶					0	7		9	4			1	C	
	β 5-32 _{T4i}	119 ¹ -119 ⁶		3	10		0	7			4				Eb	
	9-9 _{T1}	121 ¹ -122 ²	8	3					7	2	9	4	11	6	1	
	9-9 _{T11}	122 ⁴ -124 ⁶				5	0	7	2	9	4	11	6	1		
	9-9 _{T0}	141 ¹ -141 ⁶	8	3	10	5	0	7	2				6	1		
	9-9 _{T10}	142 ¹ -144 ⁶	8	3	10	5	0				4	11	6	1		
Fugue																
	8-23 _{T10}	195 ² -201 ¹	8	3	10	5	0					11	6	1	Db-Ab	“Elec Tpts”
	9-9 _{T0}	199 ¹ -204 ²	8	3	10	5	0	7	2				6	1		" "
	6-33 _{T7i}	208 ¹ -209 ⁴			10	5	0	7	2		4				BbCF	
	3-4 _{T5i}	273 ¹ -284 ¹				5	0				4				C	trans (timp)
	(Pedal)	319 ¹ -327 ⁶													Eb	Trombone
	8-22 _{T6i}	328 ¹ -349 ⁴	8	3	10	5	0				4		6	1	Eb	+ ww
	9-11 _{T8}	375 ³ -382 ¹	8	3	10	5			2	9		11	6	1	Bb/B/D	
Chorale																
	7-35 _{T11}	1 ¹ -9 ⁴				5	0	7	2	9	4	11			A-E	Intro (str)
	8-22 _{T0}	12 ³ -15 ⁴	8	3	10	5	0		2				6	1		
	6-32 _{T0}	15 ³ -21 ²				5	0	7	2	9	4				A-E	
	9-9 _{T11}	110 ⁴ -118 ²				5	0	7	2	9	4	11	6	1	A-E	Return (hn)
	7-23 _{T10}	134 ¹ -140 ⁴		3	10	5	0	7	2					1	Bb	Coda/trans
Toccata																
	(Pedal)														Bb	bsn + sn dr
	7-23 _{T10i}	157 ¹ -158 ²	8	3	10	5		7					6	1	Eb	b-clt
	9-9 _{T4}	171 ¹ -172 ²			10	5	0	7	2	9	4	11	6		D	+ ob, cor
	8-23 _{T5}	185 ¹ -186 ³	8	3	10	5	0	7					6	1	Eb	+ clt
	9-9 _{T6}	208 ¹ -210 ⁴	8				0	7	2	9	4	11	6	1	G	Ped (timp)
	8-23 _{T4}	230 ¹ -231 ⁴				5	0	7	2	9	4	11	6			Th. D (var)
	8-23 _{T9}	259 ¹ -266 ³			10	5	0	7	2	9	4	11				vc ‘recit’
	9-9 _{T4}	267 ¹ -273 ⁴			10	5	0	7	2	9	4	11	6		C-G	Ped (vc)
	8-22 _{T11}	286 ³ -288 ²				5	0	7	2	9	4	11		1	C#	str ‘recit’
	9-9 _{T11}	309 ¹ -311 ³				5	0	7	2	9	4	11	6	1	C	‘cad’ on C
		320 ¹ -323 ¹													Db-Ab	tuba, c-bsn
		347 ¹ -350 ⁴													Gb	Th D (aug)
	7-35 _{T11}	351 ¹ -355 ²				5	0	7	2	9	4	11				tpts+ww
	5-35 _{T11}	394 ¹ -395 ⁴	8	3								11	6	1	AbDbGb	timpani
	3-11 _{T3}	408 ⁴ -410 ³		3	10								6			(trpts) Bb ⁵
β	5-32 _{T4i}	410 ⁴ -end		3	10		0	7			4				Eb	Conclusion

Ex. 3.16

Handwritten musical score for Ex. 3.16, measures 195-200. The score is written on four staves, labeled 195, 196, 197, and 198. The notation includes various musical symbols such as notes, rests, and accidentals (sharps and flats). The key signature is one sharp (F#). The time signature is not explicitly shown but appears to be 4/4. The score is written in a cursive, handwritten style.

Handwritten musical score for Ex. 3.16, measures 201-208. The score is written on four staves, labeled 201, 202, 203, and 204. The notation includes various musical symbols such as notes, rests, and accidentals (sharps and flats). The key signature is one sharp (F#). The time signature is not explicitly shown but appears to be 4/4. The score is written in a cursive, handwritten style.

Handwritten musical score for Ex. 3.16, measures 209-216. The score is written on two staves, labeled 209 and 210. The notation includes various musical symbols such as notes, rests, and accidentals (sharps and flats). The key signature is one sharp (F#). The time signature is not explicitly shown but appears to be 4/4. The score is written in a cursive, handwritten style.

6-3377i

Ex. 3.17

b.370 Pesante

b.375

6-32 11

5-32 131

9-11 18

Ex. 3.18a

b.259

celli

b.270

Div.

Ex. 3.18b

b.309

Vn.1 Vn.2 Va. Vc. Db.

Ex. 3.19

Handwritten musical notation for Exercise 3.19, measures b.410 to b.417. The notation is written on a grand staff (treble and bass clefs). It features various musical symbols including notes, rests, and dynamic markings. A bracket labeled 'L' is positioned below the staff. The notation ends with a wavy line and the word 'etc'.

Handwritten musical notation for Exercise 3.19, measures b.422 to b.429. The notation is written on a grand staff (treble and bass clefs). It features various musical symbols including notes, rests, and dynamic markings. A bracket labeled 'L' is positioned below the staff.

5-32

Chapter 4

OVERSIZE TABLES

Table 4.6 Passacaglia Variation 4

	G1	G2	G3	G4	G7	G8	G9	G10	G11	G12
3-2					o					
3-3							o			
3-4								o		
3-5	o									
3/9-6		o								
3-7									o	
3-8		o								
3/9-9									o	
3-10			o							
3/9-11								o		
3-12				o						
8-4						o				
4-5		o								
4-10					o					
4-13			o							
4-14								o		
4-15		o								
4-17							o			
4-18							o			
4-19								o		
4/8-20								o		
4/8-22									o	
4/8-23									o	
4-26										o
4-27										o
4-29		o								
5-5								o		
5-13								o		
5-14									o	
5-17								o		
5-18								o		
5-19							o			
5-20								o		
5-21								o		
5-22								o		
5-23								o		
5-24									o	
5-25										o
5-26								o		
5-27								o		
5-28										o
5-29								o		
5-30								o		
5-31										o
5-33				o						
5-34									o	
5/7-35									o	
5-38								o		
6-5								o		
6-(11)/40								o		
6-15								o		
6-17/43								o		
6-19								o		
6-23										o
6-(24)/46								o		
6-25/47								o		
6-26								o		
6-27										o
6-(29)/50										o
6-32								o		
6-33								o		
6-34								o		
Count:	1	5	2	2	2	1	4	29	8	8

Squo Indices:

(Full)

.114: G10 (atonal-tonal)

.106: G11 (dia)

.104: G12 (dia-tonal)

.094: G9 (atonal-tonal)

.093: G3 (diminished)

.092: G4 (augmented)

.087: G2 (whole-tone)

.084: G1 (atonal)

.082: G7 (chroma-dia)

.079: G8 (atonal)

(Reduced)

.114: G10 (atonal-tonal)

.044: G11 (dia)

.029: G12 (dia-tonal)

.016: G9 (atonal-tonal)

.015: G4 (augmented)

.012: G2 (whole-tone)

.007: G3/7 (dim/chroma-dia)

.004: G8 (atonal)

.003: G1 (atonal)

Table 4.7 Passacaglia - Total

	G1	G2	G3	G4	G6	G7	G8	G9	G10	G11	G12
3-2						o					
3-3								o			
3-4									o		
3-5	o										
3/9-6		o									
3/9-7										o	
3-8		o									
3/9-9										o	
3-10			o								
3/9-11									o		
3-12				o							
4-3					o						
8-4							o				
4-5	o										
4-6	o										
4-10						o					
4-11						o					
4-13			o								
4-14									o		
4-15	o										
4-16	o										
4-17								o			
4-18								o			
4-19									o		
4/8-20									o		
4/8-22										o	
4/8-23										o	
4-26											o
4/8-27											o
4-29	o										
5-5									o		
5-11										o	
5-13									o		
5/7-14										o	
5-17									o		
5-18									o		
5-19								o			
5-20									o		
5-21									o		
5/7-22									o		
5/7-23										o	
5/7-24										o	
5/7-25											o
5/7-26									o		
5-27										o	
5-28											o
5/7-29										o	
5/7-30										o	
5/7-31											o
5-32											o
5-33		o									
5/7-34										o	
5/7-35										o	
5-36										o	
5-38									o		

(continued)

Table 4.7 (continued)

	G1	G2	G3	G4	G6	G7	G8	G9	G10	G11	G12
6-5									o		
6-9										o	
6-(11)/40										o	
6-15									o		
6-17/43									o		
6-19/44									o		
6-23											o
6-(24)/46										o	
6-25/47										o	
6-26/48										o	
6-27											o
6-(28)/49											o
6-(29)/50											o
6-31										o	
6-32										o	
6-33										o	
6-34										o	
Count:	6	2	2	2	1	3	1	4	18	23	10

Squo Indices
(Full)

.110: G11 (dia)
.108: G10 (atonal-tonal)
.108: G12 (dia-tonal)
.098: G9 (atonal-tonal)
.093: G3 (diminished)
.088: G1 (atonal)
.086: G4 (augmented)
.085: G2 (whole-tone)
.083: G7 (chroma-dia)
.078: G8 (atonal)
.068: G6 (semichroma)

(Reduced)

.110: G11 (dia)
.061: G10 (atonal-tonal)
.031: G12 (dia-tonal)
.014: G9 (atonal-tonal)
.013: G1/G4 (atonal)/(augmented)
.009: G7 (chroma-dia)
.006: G3 (diminished)
.004: G2 (whole-tone)
.003: G8 (atonal)
.003: G6 (semichroma)

Tables 4.9 - 4.15 Symphony no.3 Pc-set Inclusion relationships (Passacaglia)

Table 4.9 - Cardinal 3

	3-2	3-3	3-4	3-5	3-6	3-7	3-8	3-9	3-10	3-11	3-12
3/9-6	k+	k+	k+	k+	C	k+	k+	k+	k+	k+	k+
3/9-7	k+	k+	k+	k+	k+	C	k+	k+	k+	k+	k+
3/9-9	k+	k+	k+	k+	k+	k+	k+	C	k+	k+	k+
3/9-11	k+	k+	k+	k+	k+	k+	k+	k+	k+	C	k+
4-3	Kh	Kh	k-	k-	k-	k-	k-	k-	k-	k-	k-
8-4	k+	Kh	Kh	k+	k+	Kh	k+	k+	k+	k+	k+
4-5	k-	k-	Kh	Kh	k-	k-	Kh	k-	k-	k-	k-
4-6	k-	k-	k-	Kh	k-	k-	k-	Kh	k-	k-	
4-10	Kh	k-	k-	k-	k-	Kh	k-	k-	k-	k-	
4-11	Kh	k-	Kh	k-	Kh	Kh	k-	k-	k-	k-	k-
4-13	Kh	k-	k-	Kh	k-	Kh	k-	k-	Kh	k-	
4-14	Kh	k-	Kh	k-	k-	k-	k-	Kh	k-	Kh	k-
4-15	k-	Kh	k-	Kh	k-	Kh	Kh	k-	k-	k-	k-
4-16	k-	k-	Kh	Kh	k-	k-	Kh	Kh	k-	k-	k-
4-17	k-	Kh	k-	k-	k-	k-	k-	k-	k-	Kh	k-
4-18	k-	Kh	k-	Kh	k-	k-	k-	k-	Kh	Kh	k-
4-19	k-	Kh	Kh	k-	k-	k-	k-	k-	k-	Kh	Kh
4/8-20	k+	k+	Kh	k+	k+	k+	k+	k+	k+	Kh	k+
4/8-22	k+	k+	k+	k+	Kh	Kh	k+	Kh	k+	Kh	k+
4/8-23	k+	k+	k+	k+	k+	Kh	k+	Kh	k+	k+	
4-26	k-	k-	k-	k-	k-	Kh	k-	k-	k-	Kh	k-
4/8-27	k+	k+	k+	k+	k+	Kh	Kh	k+	Kh	Kh	k+
4-29	Kh	k-	k-	Kh	k-	k-	Kh	k-	k-	Kh	k-
5-5	Kh	k-	Kh	Kh	k-	k-	Kh	Kh	k-	Kh	
5-11	Kh	Kh	Kh	k-	Kh	Kh	k-	Kh	k-	Kh	k-
5-13	Kh	Kh	Kh	Kh	Kh	k-	Kh	k-	k-	Kh	Kh
5/7-14	k+	Kh	Kh	Kh	k+	Kh	Kh	Kh	k+	k+	
5-17	Kh	Kh	Kh	k-	k-	k-	k-	Kh	k-	Kh	Kh
5-18	Kh	Kh	Kh	Kh	k-	k-	Kh	Kh	Kh	Kh	k-
5-19	Kh	Kh	k-	Kh		Kh	Kh	k-	Kh	Kh	
5-20	Kh	k-	Kh	Kh	k-	k-	Kh	Kh	k-	Kh	k-
5-21	k-	Kh	Kh	k-	k-	k-	k-	k-	k-	Kh	Kh
5/7-22	k+	Kh	Kh	Kh		k+	k+	k+	Kh	Kh	Kh
5/7-23	Kh	k+	Kh	k+	Kh	Kh	k+	Kh	k+	Kh	
5/7-24	Kh	k+	Kh	Kh	Kh	Kh	Kh	Kh	k+	Kh	k+
5/7-25	Kh	k+	k+	Kh	k+	Kh	Kh	k+	Kh	Kh	
5/7-26	Kh	Kh	Kh	k+	Kh	Kh	Kh	k+	Kh	Kh	Kh
5-27	Kh	k-	Kh	k-	Kh	Kh	k-	Kh	k-	Kh	k-
5-28	Kh	Kh	k-	Kh	k-	Kh	Kh	k-	Kh	Kh	k-
5/7-29	Kh	k+	Kh	Kh	k+	Kh	Kh	Kh	Kh	Kh	
5/7-30	k+	Kh	Kh	Kh	Kh	Kh	Kh	Kh	k+	Kh	Kh
5/7-31	Kh	Kh		Kh		Kh	Kh		Kh	Kh	
5-32	k-	Kh	k-	Kh	k-	Kh	Kh	k-	Kh	Kh	k-
5-33	k-	k-	k-	k-	Kh	k-	Kh	k-	k-	k-	Kh
5/7-34	k+	k+	k+	k+	Kh	Kh	Kh	Kh	Kh	Kh	k+
5/7-35	k+		k+	k+	Kh	Kh	k+	Kh	k+	Kh	
5-36	Kh	Kh	k-	Kh	Kh	Kh	k-	Kh	Kh	Kh	
5-38	k-	Kh	Kh	Kh	k-	Kh	Kh	k-	Kh	Kh	k-
6-5	Kh	Kh	Kh	Kh		Kh	Kh	Kh	Kh	Kh	
6-9	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh		Kh	
6-(11)/40	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	
6-15	Kh	Kh	Kh	Kh	Kh	Kh	Kh		Kh	Kh	Kh
6-17/43	Kh	Kh	Kh	Kh	k*	Kh	Kh	Kh	Kh	Kh	k*
6-19/44	k*	Kh	Kh	Kh		k*	Kh	k*	Kh	Kh	Kh
6-23/(45)	Kh	Kh		Kh	k-	Kh	Kh	k-	Kh	Kh	
6-(24)/46	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	k-
6-25/47	Kh	k*	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	
6-26/48	k*	k*	Kh	Kh	Kh	Kh	Kh	Kh		Kh	k*
6-27	Kh	Kh		Kh		Kh	Kh		Kh	Kh	
6-(28)/49	Kh	Kh	k-	Kh	k-	Kh	Kh		Kh	Kh	k-
6-(29)/50	Kh	Kh	k-	Kh		Kh	Kh	k-	Kh	Kh	
6-31	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh
6-32	Kh		Kh		Kh	Kh		Kh		Kh	
6-33	Kh		Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	
6-34	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh
Kh/C	46	42	49	51	34	60	52	44	40	68	16
k+/k*	16	15	10	13	11	6	11	10	13	6	12

N.B. Kh/C counts include set itself

Table 4.10 - Cardinal 4

	4-3	4-5	4-6	4-10	4-11	4-13	4-14	4-15	4-16	4-17	4-18	4-19	4-20	4-22	4-23	4-26	4-27	4-29
3-2	Kh	k-	k-	Kh	Kh	Kh	Kh	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	Kh
3-3	Kh	k-	k-	k-	k-	k-	k-	Kh	k-	Kh	Kh	Kh	k-	k-	k-	k-	k-	k-
3-4	k-	Kh	k-	k-	Kh	k-	Kh	k-	Kh	k-	k-	k-	Kh	k-	k-	k-	k-	k-
3-5	k-	Kh	Kh	k-	k-	Kh	k-	Kh	Kh	k-	Kh	k-	k-	k-	k-	k-	k-	Kh
3/9-6	k+	k+	k+	k+	Kh	k+	k+	k+	k+	k+	k+	k+	k+	Kh	k+	k+	k+	k+
3/9-7	k+	k+	k+	Kh	Kh	Kh	k+	Kh	k+	k+	k+	k+	k+	Kh	Kh	Kh	Kh	k+
3-8	k-	Kh	k-	k-	k-	k-	k-	Kh	Kh	k-	k-	k-	k-	k-	k-	k-	Kh	Kh
3/9-9	k+	k+	Kh	k+	k+	k+	Kh	k+	Kh	k+	k+	k+	k+	Kh	Kh	k+	k+	k+
3-10	k-	k-	k-	k-	k-	Kh	k-	k-	k-	k-	Kh	k-	k-	k-	k-	k-	Kh	k-
3/9-11	k+	k+	k+	k+	k+	k+	Kh	k+	k+	Kh	Kh	Kh	Kh	Kh	k+	Kh	Kh	Kh
3-12	k-	k-			k-		k-	k-	k-	k-	k-	Kh	k-	k-		k-	k-	k-
8-4	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+
4/8-20	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	C	k+	k+	k+	k+	k+
4/8-22	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	C	k+	k+	k+	k+
4/8-23		k+	k+	k+	k+	k+	k+	k+	k+	k+	k+		k+	k+	C	k+	k+	k+
4/8-27	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	C	k+
5-5	k-	Kh	Kh	k-	k-	k-	Kh	k-	k-		k-			k-	k-			Kh
5-11	k-	k-		k-	k-	k-	Kh	k-	k-	Kh		k-	k-	Kh	k-	k-	k-	k-
5-13	k-	Kh			k-		k-	k-	k-	k-	k-	Kh	k-	k-			k-	Kh
5/7-14		k+	Kh	k+	k+	k+	k+	Kh	Kh		k+		k+	k+	Kh	k+	k+	k+
5-17	Kh	k-			k-		Kh	k-		k-	k-	Kh	k-	k-		k-	k-	
5-18		k-	k-	k-	k-	k-	Kh	k-	Kh	k-	Kh	k-	k-	k-		k-	k-	k-
5-19		k-	k-			Kh	k-	Kh	k-		Kh		k-	k-	k-	k-	k-	Kh
5-20		k-	k-			k-	Kh	k-	Kh	k-	k-	k-	Kh	k-	k-	k-	k-	Kh
5-21	k-	k-			k-		k-	k-	k-	Kh	k-	Kh	Kh	k-		k-	k-	k-
5/7-22	k+	k+					k+	k+	k+	k+	Kh	Kh	k+			k+	k+	k+
5/7-23		k+	k+	Kh	Kh	k+	Kh	k+	k+	k+	k+		k+	Kh	Kh	k+	k+	k+
5/7-24		k+	k+	k+	Kh	k+	k+	k+	Kh			k+		Kh	k+	k+	k+	Kh
5/7-25	k+		k+	Kh	k+	Kh	k+	k+	k+	k+	k+			k+	k+	Kh	Kh	Kh
5/7-26	k+	k+			Kh		k+	k+	k+	k+	k+	Kh	k+	k+		k+	Kh	k+
5-27	k-		k-	k-	Kh	k-	Kh	k-	k-	k-	k-	k-	Kh	Kh	k-	Kh	k-	
5-28		k-	k-	k-	k-	k-		Kh	k-	k-	k-	k-		k-			Kh	Kh
5/7-29		k+	k+	k+	k+	Kh	Kh	k+	Kh	k+	k+		k+	k+	Kh	k+	Kh	k+
5/7-30		k+			k+		k+	Kh	Kh	k+	k+	Kh	k+	Kh		k+	k+	k+
5/7-31	k+			k+		Kh		k+		k+	Kh					k+	Kh	k+
5-32	k-			k-	k-	k-	k-	Kh	k-	Kh	Kh	k-	k-	k-	k-	Kh	Kh	k-
5-33		k-			k-		k+	k-	k-			k-		k-			k-	k-
5/7-34	k+			k+	k+	k+	k+	k+	k+			k+		Kh	k+	k+	Kh	k+
5/7-35				k+	k+	k+	k+		k+				k+	Kh	Kh	k+	k+	k+
5-36	k-	k-	Kh	k-	k-	Kh	k-	k-	k-		Kh		k-	Kh	k-	k-	k-	k-
5-38	k-	Kh	k-	k-	k-	k-	k-	k-	k-	k-	Kh	k-	Kh	k-	k-		Kh	k-

(Table 4.10 cont. - Cardinal 4)

	4-3	4-5	4-6	4-10	4-11	4-13	4-14	4-15	4-16	4-17	4-18	4-19	4-20	4-22	4-23	4-26	4-27	4-29
6-5		Kh	Kh			Kh	Kh	Kh	Kh		Kh							Kh
6-9		Kh	Kh	Kh	Kh		Kh	Kh	Kh					Kh	Kh			Kh
6-(11)/40	k-	k*	Kh	Kh	Kh	Kh	Kh	k-	k-		Kh		k*	Kh	k-	k*	k*	k*
6-15	Kh	Kh			Kh					Kh	Kh	Kh	Kh				Kh	Kh
6-17/43		Kh	k*			k*	k*	Kh	Kh		Kh	k*	k*	k*			k*	Kh
6-19/44	k*	k*					k*	k*	k*	Kh	Kh	Kh	Kh			k*	k*	Kh
6-23/(45)	k*		k-	k*		Kh		k*			k-			k-		k*	k*	k*
6-(24)/46	k-	k*		k-	Kh	k-	Kh	Kh	k-	k*	k*	k-	k*	Kh	k-	k*	Kh	
6-25/47			k*	k*	k*	Kh	Kh	k*	Kh	k*	k*		k*	Kh	Kh	Kh	Kh	k*
6-26/48			k*		k*		k*	k*	Kh			k*	k*	Kh	k*	Kh		k*
6-27	Kh			Kh		Kh		Kh		Kh	Kh					Kh	Kh	Kh
6-(28)/49	k*				k-	k-		k*		k*	Kh	k-				k*	Kh	k*
6-(29)/50				k*		Kh	k-	k*	k-	k*	Kh				k-	k*	Kh	k*
6-31					Kh		Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh		Kh	Kh	
6-32				Kh	Kh		Kh						Kh	Kh	Kh	Kh		
6-33				Kh	Kh	Kh	Kh		Kh					Kh	Kh	Kh	Kh	Kh
6-34					Kh			Kh	Kh			Kh		Kh			Kh	Kh
Kh/C	6	12	11	13	22	22	26	21	27	12	26	20	14	34	19	19	32	23
k+/k*	16	19	15	17	15	14	18	22	15	19	16	11	19	9	10	22	15	24

N.B. Kh/C counts include set itself

Table 4.11 - Cardinal 5

	5-5	5-11	5-13	5-14	5-17	5-18	5-19	5-20	5-21	5-22	5-23	5-24	5-25	5-26	5-27	5-28	5-29	5-30	5-31	5-32	5-33	5-34	5-35	5-36	5-38
3-2	Kh	Kh	Kh	k-	Kh	Kh	Kh	Kh	k-	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	k-	Kh	k-	k-	k-	Kh	k-
3-3	k-	Kh	Kh	Kh	Kh	Kh	Kh	k-	Kh	Kh	k-	k-	k-	Kh	Kh	Kh	Kh	k-	Kh	Kh	k-	k-	Kh	Kh	Kh
3-4	Kh	Kh	Kh	Kh	Kh	Kh	k-	Kh	Kh	Kh	Kh	Kh	k-	Kh	Kh	Kh	k-	Kh	Kh	Kh	k-	k-	k-	k-	Kh
3-5	Kh	k-	Kh	Kh	k-	Kh	Kh	Kh	k-	Kh	k-	Kh	Kh	k-	Kh	Kh	Kh	Kh	Kh	Kh	k-	k-	k-	k-	Kh
3/9-6	k+	Kh	Kh	k+	k+	k+		k+	k+		Kh	Kh	k+	Kh	Kh	Kh	k+	Kh	Kh	k+	Kh	Kh	Kh	Kh	k+
3/9-7	k+	Kh	k+	Kh	k+	k+	Kh	Kh	k+	k+	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh
3-8	Kh	k-	Kh	Kh	k-	Kh	Kh	Kh	k-	k-	k-	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh
3/9-9	Kh	Kh	k+	Kh	Kh	Kh	k+	Kh	k+	k+	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh
3-10	k-	k-	k-	k-	k-	Kh	Kh	k-	k-	Kh	k-	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh
3/9-11	Kh	Kh	Kh	k+	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh
3-12		k-	Kh		Kh	k-		k-	Kh	Kh		k-		Kh	k-	k-		Kh	Kh	k-	Kh	k-			k-
4-3	k-	k-	k-		Kh				k-	k-			k-	k-	k-	k-				k-	k-	k-			k-
8-4	k+	Kh	k+	Kh	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+		k+	k+					k+	Kh
4-5	Kh	k-	Kh	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	Kh
4-6	Kh			Kh		k-	Kh				k-	k-	k-				k-	k-						k-	Kh
4-10	k-	k-		k-		k-					Kh	k-	Kh					k-	k-						k-
4-11	k-	k-	k-	k-	k-	k-			k-		Kh	Kh	k-	Kh	Kh	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-
4-13	k-	k-		k-		k-	Kh	k-			k-	k-	Kh		k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-
4-14	Kh	Kh	k-	k-	Kh	Kh	k-	Kh	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-
4-15	k-	k-	k-	Kh	k-	k-	Kh	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-
4-16	k-	k-	k-	Kh		Kh	k-	Kh	k-	k-	k-	Kh	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-
4-17		Kh	k-		k-	k-		k-	Kh	k-	k-		k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-
4-18	k-		k-	k-	k-	Kh	Kh	k-	k-	Kh	k-		k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-
4-19		k-	Kh		Kh	k-		k-	Kh	Kh		k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-
4/8-20		k+	k+	k+	k+	k+	k+	Kh	Kh	k+	k+			k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+
4/8-22	k+	Kh	k+	k+	k+	k+		k+	k+		Kh	Kh	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+
4/8-23	k+	k+		Kh			k+	k+			Kh	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+
4-26		k-		k-	k-	k-		k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-
4/8-27		k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+	k+
4-29	Kh	k-	Kh	k-		k-	Kh	Kh	k-	k-	k-	Kh	Kh	k-			Kh	k-	k-	k-	k-	k-	k-	k-	k-

(Table 4.11 cont. - Cardinal 5)

	5-5	5-11	5-13	5-14	5-17	5-18	5-19	5-20	5-21	5-22	5-23	5-24	5-25	5-26	5-27	5-28	5-29	5-30	5-31	5-32	5-33	5-34	5-35	5-36	5-38	
5/7-14	k+			C			k+	k+			k+	k+	k+					k+						k+	k+	
5/7-22					k+	k+		k+	k+	C						k+					k+				k+	
5/7-23	k+	k+		k+							C	k+	k+				k+	k+				k+	k+	k+	k+	
5/7-24	k+		k+	k+							k+	C	k+	k+			k+	k+	k+		k+	k+	k+	k+	k+	
5/7-25		k+		k+		k+					k+	k+	C				k+	k+		k+		k+	k+	k+	k+	
5/7-26		k+	k+			k+			k+			k+		C	k+	k+									k+	
5/7-29		k+		k+			k+	k+			k+	k+	k+				C	k+			k+	k+	k+	k+	k+	
5/7-30		k+	k+			k+		k+	k+			k+		k+	k+	k+			C		k+	k+	k+	k+	k+	
5/7-31							k+						k+			k+			C		k+				k+	
5/7-34					k+						k+	k+	k+	k+		k+	k+	k+	k+							
5/7-35								k+			k+	k+	k+		k+			k+	k+			C	k+			
6-5	Kh					Kh	Kh																			
6-9	Kh			Kh							Kh	Kh														
6-(11)/40	k*			k-		k-					k-	Kh	k*		k*			k+			k+	C				
6-15			Kh						Kh					Kh										Kh	Kh	
6-17/43			k*			k*	k*	k*		k*						k*			k*					k*	k*	
6-19/44					k*	k*		k*	Kh	Kh															k*	
6-23/(45)													k*			k*				k-			k-		k*	
6-(24)/46		k*			k-						k-			k-			k-	k-	k-							
6-25/47		k*		k*				k*			k*		k*		k*			Kh					k*	k*	k*	
6-26/48				k*				k*				k*			k*				k*							
6-27													Kh						Kh	Kh						
6-(28)/49										k-				k-			k*			k-	k*					
6-(29)/50						k-	k*						k*					k-		k-						
6-31						Kh			Kh					Kh	Kh			Kh								
6-32											Kh				Kh											
6-33											Kh	Kh			Kh			Kh					Kh	Kh		
6-34												Kh	Kh													
Kh/C	15	17	15	17	12	16	15	14	14	13	22	22	18	21	20	15	23	22	16			18	9	17	19	18
k+/k*	9	10	10	11	9	12	10	15	9	6	10	12	16	7	13	12	10	8	1	17	9	9	9	10	10	13

N.B. Kh/C counts include set itself

Table 4.12 - Cardinal 6

	6-5	6-9	6-(11)/40	6-15	6-17	6-43	6-19	6-44	6-23/(45)	6-(24)/46	6-25	6-47	6-26	6-48	6-27	6-(28)/49	6-(29)/50	6-31	6-32	6-33	6-34
3-2	Kh	Kh	Kh	Kh	Kh	Kh	k*	k-	Kh	Kh	Kh	Kh	k*	k-	Kh	Kh	Kh	Kh	Kh	Kh	Kh
3-3	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	k-	k*	k-	k*	Kh	Kh	Kh	Kh	Kh	Kh	Kh
3-4	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	k-	k-	Kh	Kh	Kh	Kh
3-5	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh
3/9-6		Kh	Kh	Kh	k*	k*			k*	Kh	Kh	Kh	Kh	Kh	Kh	k*	Kh	Kh	Kh	Kh	Kh
3/9-7	Kh	Kh	Kh	Kh	Kh	Kh	k*	k*	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh
3-8	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh
3/9-9	Kh	Kh	Kh	Kh	Kh	Kh	k*	k*	k*	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh
3-10	Kh		Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh			Kh	Kh	Kh	Kh	Kh	Kh	Kh
3/9-11	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh
3-12				Kh	k*	k-	Kh	Kh		k-			k-	k*	Kh	k-	Kh	Kh	Kh	Kh	Kh
4-3			k-	Kh			k*	k-	k*	k-					Kh	k*					
8-4	Kh	Kh	Kh	Kh	k*	k-	k*	k-		k-	k*	k-	k*	k-							
4-5	Kh	Kh	k*	Kh	Kh	Kh	k-	k*		k*											
4-6	Kh	Kh	Kh	Kh	k*	k-			k-		k-	k*	k-	k*							
4-10		Kh	Kh	Kh					k*	k-	k*	k-	k-	k*	Kh		k*		Kh	Kh	Kh
4-11		Kh	Kh	Kh						Kh			k*		Kh	k-	Kh	Kh	Kh	Kh	Kh
4-13	Kh		Kh	Kh	k*	k-			Kh	k-	Kh	Kh			Kh	k-	Kh	Kh	Kh	Kh	Kh
4-14	Kh	Kh	Kh		k-	k*	k*	k-		Kh	Kh	Kh	k*	k-			k-	Kh	Kh	Kh	Kh
4-15	Kh	Kh	k-	Kh	Kh	Kh	k-	k*	k*	Kh	k-	k*	k-	k*	Kh	k*	k*	Kh	Kh	Kh	Kh
4-16	Kh	Kh	k-	Kh	Kh	Kh	k*	k-		k-	Kh	Kh	Kh	Kh			k-	Kh	Kh	Kh	Kh
4-17				Kh			Kh	Kh		k*	k-	k*			Kh	k*	k*	Kh			
4-18	Kh		Kh	Kh	Kh	Kh	Kh	Kh	k-	k*	k-	k*			Kh	Kh	Kh	Kh			
4-19				Kh	k*	k-	Kh	Kh		k-			k-	k*		k-		Kh			Kh
4/8-20			k*	Kh	k*	k*	Kh	Kh		k*	k*	k*	k*	k*				Kh	Kh	Kh	Kh
4/8-22		Kh	Kh						k*	Kh	Kh	Kh	Kh	Kh				Kh	Kh	Kh	Kh
4/8-23		Kh	k*							k*	Kh	Kh	k*	k*			k*	Kh	Kh	Kh	Kh
4-26			k*				k-	k*	k*	k*	Kh	Kh	Kh	Kh	Kh		k*	Kh	Kh	Kh	Kh
4/8-27			k*	Kh	k*	k*	k*	k*	Kh	Kh	Kh	Kh	Kh	Kh	Kh		k*	Kh	Kh	Kh	Kh
4-29	Kh	Kh	k*	Kh	Kh	Kh	k*	k-	k*		k*	k-	k*	k-	Kh	k*	k*	Kh	Kh	Kh	Kh

(Table 4.12 cont. - Cardinal 6)

	6-5	6-9	6-(11)/40	6-15	6-17	6-43	6-19	6-44	6-23/(45)	6-(24)/46	6-25	6-47	6-26	6-48	6-27	6-(28)/49	6-(29)/50	6-31	6-32	6-33	6-34
5-5	Kh	Kh	k*																		
5-11										k*	k-	k*									
5-13				Kh	k*	k-															
5/7-14		Kh	k*								k*	k*	k*	k*							
5-17							k*	k-		k-											
5-18	Kh		k-		k-	k*	k*	k-									k-	Kh			
5-19	Kh				k*	k-											k*				
5-20					k-	k*	k*	k-			k*	k-	k*	k-							
5-21				Kh			Kh	Kh										Kh			
5/7-22					k*	k*	Kh	Kh		k*						k*					
5/7-23		Kh	k*							k*	k*	k*							Kh		
5/7-24		Kh											k*	k*					Kh	Kh	Kh
5/7-25			k*						k*		k*	k*			Kh		k*			Kh	
5/7-26				Kh						k*						k*		Kh			Kh
5-27			k*							k*	k*	k-	k*	k-				Kh	Kh		
5-28					k-	k*			k*												Kh
5/7-29										k*	Kh	Kh					k*			Kh	
5/7-30					k*	k*				k*			k*	k*	Kh		k*	Kh			Kh
5/7-31									k*						Kh	k*	k*				
5-32							k-	k*		k*	k-	k*			Kh	k*	k*	Kh			
5-33																					Kh
5/7-34									k*	k*										Kh	Kh
5/7-35											k*	k*	k*	k*					Kh	Kh	
5-36			Kh		k*	k-			k-		k-	k*									
5-38			k*	Kh	k-	k*	k-	k*		k*											
Kh/C	25	34	25	31	18	18	17	17	13	22	26	26	16	16	25	13	14	38	26	39	35
k+/k*	0	0	12	0	14	11	12	8	12	15	11	13	13	11	0	11	12	0	0	0	0

N.B. Each Kh/C count includes the set itself

Table 4.13 - Cardinal 7

	7-14	7-22	7-23	7-24	7-25	7-26	7-29	7-30	7-31	7-34	7-35
3-2	k+	k+	Kh	Kh	Kh	Kh	Kh	k+	Kh	k+	k+
3-3	Kh	Kh	k+	k+	k+	Kh	k+	Kh	Kh	k+	
3-4	Kh	Kh	Kh	Kh	k+	Kh	Kh	Kh		k+	k+
3-5	Kh	Kh	k+	Kh	Kh	k+	Kh	Kh	Kh	k+	k+
3/9-6	k+		Kh	Kh	k+	Kh	k+	Kh		Kh	Kh
3/9-7	Kh	k+	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh
3-8	Kh	k+	k+	Kh	Kh	Kh	Kh	Kh	Kh	Kh	k+
3/9-9	Kh	k+	Kh	Kh	k+	k+	Kh	Kh		Kh	Kh
3-10	k+	Kh	k+	k+	Kh	Kh	Kh	k+	Kh	Kh	k+
3/9-11	k+	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh
3-12		Kh		k+		Kh		Kh		k+	
4-3		k+			k+	k+			k+	k+	
8-4	Kh	k-	k-	k-	k-	k-	k-	k-			
4-5	k+	k+	k+	k+		k+	k+	k+			
4-6	Kh		k+	k+	k+		k+				
4-10	k+		Kh	k+	Kh		k+		k+	k+	k+
4-11	k+		Kh	Kh	k+	Kh	k+	k+		k+	k+
4-13	k+		k+	k+	Kh		Kh		Kh	k+	k+
4-14	k+	k+	Kh	k+	k+	k+	Kh	k+		k+	k+
4-15	Kh	k+	k+	k+	k+	k+	k+	Kh	k+	k+	
4-16	Kh	k+	k+	Kh	k+	k+	Kh	Kh		k+	k+
4-17		k+	k+		k+	k+	k+	k+	k+		
4-18	k+	Kh	k+		k+	k+	k+	k+	Kh		
4-19		Kh		k+		Kh		Kh		k+	
4/8-20	k+	k+	k+			k+	k+	k+			k+
4/8-22	k+		Kh	Kh	k+	k+	k+	Kh		Kh	Kh
4/8-23	Kh		Kh	k+	k+		Kh			k+	Kh
4-26	k+	k+	k+	k+	Kh	k+	k+	k+	k+	k+	Kh
4/8-27	k+	k+	k+	k+	Kh	Kh	Kh	k+	Kh	Kh	k+
4-29	k+	k+	k+	Kh	Kh	k+	k+	k+	k+	k+	k+
5-5	k+		k+	k+							
5-11			k+		k+	k+	k+	k+			
5-13				k+		k+		k+			
5/7-14	C		k+	k+	k+		k+				
5-17		k+								k+	
5-18		k+			k+	k+		k+			
5-19	k+						k+		k+		
5-20	k+	k+					k+	k+			k+
5-21		k+				k+		k+			
5/7-22		C									
5/7-23	k+		C	k+	k+		k+			k+	k+
5/7-24	k+		k+	C	k+	k+	k+	k+		k+	k+
5/7-25	k+		k+	k+	C		k+		k+	k+	k+
5/7-26				k+		C		k+		k+	
5-27	k+		k+			k+	k+	k+			k+
5-28		k+		k+		k+		k+	k+	k+	
5/7-29	k+		k+	k+	k+		C			k+	k+
5/7-30				k+		k+		C		k+	
5/7-31					k+				C		
5-32		k+	k+		k+	k+	k+	k+	k+		
5-33				k+		k+		k+		k+	
5/7-34			k+	k+	k+	k+	k+	k+		C	k+
5/7-35			k+	k+	k+		k+			k+	C
5/7-36	k+		k+		k+		k+				
5-38	k+	k+	k+			k+	k+	k+			
6-5											
6-9	Kh		Kh	Kh							
6-(11)/40	k*		k*		k-						
6-15						Kh					
6-17/43		k*						k*			
6-19/44		Kh									
6-23/(45)					k-				k*	k*	
6-(24)/46			k*			k*	k*	k*		k-	
6-25/47	k*		k*		k*		Kh				k*
6-26/48	k*			k*				k*			k*
6-27					Kh				Kh		
6-(28)/49		k*				k*			k*		
6-(29)/50					k-		k*		k*		
6-31						Kh		Kh			
6-32			Kh								Kh
6-33			Kh	Kh	Kh		Kh			Kh	Kh
6-34				Kh		Kh		Kh		Kh	
Kh/C	17	13	22	22	18	21	23	22	16	18	17
k+/k*	28	23	30	26	26	27	28	27	13	27	22

Table 4.14 - Cardinal 8

	8-4	8-20	8-22	8-23	8-27
3-2	k+	k+	k+	k+	k+
3-3	Kh	k+	k+	k+	k+
3-4	Kh	Kh	k+	k+	k+
3-5	k+	k+	k+	k+	k+
3/9-6	k+	k+	Kh	k+	k+
3/9-7	Kh	k+	Kh	Kh	Kh
3-8	k+	k+	k+	k+	Kh
3/9-9	k+	k+	Kh	Kh	k+
3-10	k+	k+	k+	k+	Kh
3/9-11	k+	Kh	Kh	k+	Kh
3-12	k+	k+	k+		k+
4-3	k+	k+	k+		k+
4-5	k+	k+	k+	k+	k+
4-6	k+	k+	k+	k+	k+
4-10	k+	k+	k+	k+	k+
4-11	k+	k+	k+	k+	k+
4-13	k+	k+	k+	k+	k+
4-14	k+	k+	k+	k+	k+
4-15	k+	k+	k+	k+	k+
4-16	k+	k+	k+	k+	k+
4-17	k+	k+	k+	k+	k+
4-18	k+	k+	k+	k+	k+
4-19	k+	k+	k+		k+
4/8-20	k+	C	k+	k+	k+
4/8-22	k+	k+	C	k+	k+
4/8-23	k+	k+	k+	C	k+
4-26	k+	k+	k+	k+	k+
4/8-27	k+	k+	k+	k+	C
4-29	k+	k+	k+	k+	k+
5-5	k+		k+	k+	
5-11	Kh	k+	Kh	k+	k+
5-13	k+	k+	k+		k+
5/7-14	Kh	k+	k+	Kh	k+
5-17	k+	k+	k+		k+
5-18	k+	k+	k+		k+
5-19	k+	k+		k+	k+
5-20	k+	Kh	k+	k+	k+
5-21	k+	Kh	k+		k+
5/7-22	k+	k+			k+
5/7-23	k+	k+	Kh	Kh	k+
5/7-24	k+		Kh	k+	k+
5/7-25	k+		k+	k+	Kh
5/7-26	k+	k+	k+		Kh
5-27	k+	Kh	Kh	k+	k+
5-28			k+		Kh
5/7-29	k+	k+	k+	Kh	Kh
5/7-30	k+	k+	Kh		k+
5/7-31					Kh
5-32		k+	k+	k+	Kh
5-33			k+		k+
5/7-34			Kh	k+	Kh
5/7-35		k+	Kh	Kh	k+
5-36	k+	k+	Kh	k+	k+
5-38	Kh	Kh	k+	k+	Kh
6-5	Kh				
6-9	Kh		Kh	Kh	
6-(11)/40	Kh	k-	Kh	k*	k-
6-15	Kh	Kh			Kh
6-17/43	k*	k*	k*		k*
6-19/44	k*	Kh			k*
6-23/(45)			k*		Kh
6-(24)/46	k-	k-	Kh	k*	Kh
6-25/47	k*	k*	Kh	Kh	Kh
6-26/48	k*	k*	Kh	k*	
6-27					Kh
6-(28)/49					Kh
6-(29)/50				k*	Kh
6-31		Kh	Kh		Kh
6-32		Kh	Kh	Kh	
6-33			Kh	Kh	Kh
6-34			Kh		Kh
Kh/C	13	14	34	19	32
k+/k*	46	43	40	38	42

Table 4.15 - Cardinal 9

	9-6	9-7	9-9	9-11
3-2	k+	k+	k+	k+
3-3	k+	k+	k+	k+
3-4	k+	k+	k+	k+
3-5	k+	k+	k+	k+
3/9-6	C	k+	k+	k+
3/9-7	k+	C	k+	k+
3-8	k+	k+	k+	k+
3/9-9	k+	k+	C	k+
3-10	k+	k+	k+	k+
3/9-11	k+	k+	k+	C
3-12	k+	k+	k+	k+
4-3	k+	k+	k+	k+
8-4		Kh		
4-5	k+	k+	k+	k+
4-6	k+	k+	Kh	k+
4-10	k+	Kh	k+	k+
4-11	Kh	Kh	k+	k+
4-13	k+	Kh	k+	k+
4-14	k+	k+	Kh	Kh
4-15	k+	Kh	k+	k+
4-16	k+	k+	Kh	k+
4-17	k+	k+	k+	Kh
4-18	k+	k+	k+	Kh
4-19	k+	k+	k+	Kh
4/8-20	k+	k+	k+	Kh
4/8-22	Kh	Kh	Kh	Kh
4/8-23	k+	Kh	Kh	k+
4-26	k+	Kh	k+	Kh
4/8-27	k+	Kh	k+	Kh
4-29	k+	k+	k+	Kh
5-5	k+	k+	Kh	Kh
5-11	Kh	Kh	Kh	Kh
5-13	Kh	k+	k+	Kh
5/7-14	k+	Kh	Kh	k+
5-17	k+	k+	Kh	Kh
5-18	k+	k+	Kh	Kh
5-19		Kh	k+	Kh
5-20	k+	k+	Kh	Kh
5-21	k+	k+	k+	Kh
5/7-22		k+	k+	Kh
5/7-23	Kh	Kh	Kh	Kh
5/7-24	Kh	Kh	Kh	Kh
5/7-25	k+	Kh	k+	Kh
5/7-26	Kh	Kh	k+	Kh
5-27	Kh	Kh	Kh	Kh
5-28	k+	Kh	k+	Kh
5/7-29	k+	Kh	Kh	Kh
5/7-30	Kh	Kh	Kh	Kh
5/7-31		Kh		Kh
5-32	k+	Kh	k+	Kh
5-33	Kh	k+	k+	k+
5/7-34	Kh	Kh	Kh	Kh
5/7-35	Kh	Kh	Kh	Kh
5-36	Kh	Kh	Kh	Kh
5-38	k+	Kh	k+	Kh
6-5		Kh	Kh	Kh
6-9	Kh	Kh	Kh	Kh
6-(11)/40	Kh	Kh	Kh	Kh
6-15	Kh	Kh		Kh
6-17/43	k*	Kh	Kh	Kh
6-19/44		k*	k*	Kh
6-23/(45)	k*	Kh	k*	Kh
6-(24)/46	Kh	Kh	Kh	Kh
6-25/47	Kh	Kh	Kh	Kh
6-26/48	Kh	Kh	Kh	Kh
6-27		Kh		Kh
6-(28)/49	k*	Kh		Kh
6-(29)/50		Kh	k*	Kh
6-31	Kh	Kh	Kh	Kh
6-32	Kh	Kh	Kh	Kh
6-33	Kh	Kh	Kh	Kh
6-34	Kh	Kh	Kh	Kh
Kh/C	34	60	44	68
k+/k*	40	29	36	21

Table 4.16 Percentage of total embraced by sets of each cardinality (#3-#9)

Cardinal 3	2	3	4	5	6	7	8	9	10	11	12
Kh/C	46	42	49	51	34	60	52	44	40	68	16
k+/k*	16	15	10	13	11	6	11	10	13	6	12
total	62	57	59	64	45	66	63	54	53	74	28
of	85	85	85	85	85	85	85	85	85	85	85
%	72.9	67.1	69.4	75.3	52.9	77.6	74.1	63.5	62.4	87.1	32.9

Kh/C count includes the relation between the set and itself. Percentage figure based upon the total number of Passacaglia sets (95), less the sets of the cardinality in question (in this case #3), plus the set itself.

Cardinal 4	3	5	6	10	11	13	14	15	16	17	18	19	20	22	23	26	27	29
Kh/C	6	12	11	13	22	22	26	21	27	12	26	20	14	34	19	19	32	23
k+/k*	16	19	15	17	15	14	18	22	15	19	16	11	19	9	10	22	15	24
total	22	31	26	30	37	36	44	43	42	31	42	31	33	43	29	41	47	47
of	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78
%	28.2	39.7	33.3	38.5	47.4	46.2	56.4	55.1	53.8	39.8	53.8	39.8	42.3	55.1	37.2	52.6	60.3	60.3

Cardinal 5	5	11	13	14	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	38
Kh/C	15	17	15	17	12	16	15	14	14	13	22	22	18	21	20	15	23	22	16	17	6	18	17	19	18
k+/k*	9	10	10	11	9	12	10	15	9	6	10	12	16	7	13	12	10	8	1	17	9	9	9	10	13
total	24	27	25	28	21	28	25	29	23	19	32	34	34	28	33	27	33	30	17	34	15	27	26	29	31
of	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71
%	33.8	38.0	35.2	39.4	29.6	39.4	35.2	40.8	32.4	26.8	45.1	47.9	47.9	39.4	46.5	38.0	46.5	42.3	23.9	47.9	21.1	38.0	36.6	40.8	43.7

Cardinal 6	5	9	40	15	17	43	19	44	23	46	25	47	26	48	27	49	50	31	32	33	34
Kh/C	25	34	25	31	18	18	17	17	13	22	26	26	16	16	25	13	14	38	26	39	35
k+/k*	0	0	12	0	14	11	12	8	12	15	11	13	13	11	0	11	12	0	0	0	0
total	25	34	37	31	32	29	29	25	25	37	37	39	29	27	25	24	26	38	26	39	35
of	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
%	33.3	45.3	49.3	41.3	42.7	38.7	38.7	33.3	33.3	49.3	49.3	52.0	38.7	36.0	33.3	32.0	34.7	50.7	34.7	52.0	46.7

Cardinal 7	14	22	23	24	25	26	29	30	31	34	35
Kh/C	17	13	22	22	18	21	23	22	16	18	17
k+/k*	28	23	30	26	26	27	28	27	13	27	22
total	45	36	52	48	44	48	51	49	29	45	39
of	85	85	85	85	85	85	85	85	85	85	85
%	52.9	42.4	61.2	56.5	51.8	56.5	60.0	57.6	34.1	52.9	45.9

Cardinal 8	4	20	22	23	27
Kh/C	13	14	34	19	32
k+/k*	46	43	40	38	42
total	59	57	74	57	74
of	91	91	91	91	91
%	64.8	62.6	81.3	62.6	81.3

Cardinal 9	6	7	9	11
Kh/C	34	60	44	68
k+/k*	40	29	36	21
total	74	89	80	89
of	92	92	92	92
%	80.4	96.7	87.0	96.7

Table 4.18 Set affiliation by Squo indices for prominent sets and collections.

	a	b	c	d	e	f	g	h	i		a	b	c	d	e	f	g	h	i
3-2				x	x	x	o	o	x	5-32							o	o	x
3-3							o	o	x	5-33							o		x
3-4				x	x	x	o	o	x	5-34	x				x	x	o	o	x
3-5					x	x	o	o	x	5-35	x	x	x	x	x	x	o	o	x
3-6	x		x	x	x	x	o	o	x	5-36	x						o	o	x
3-7	x	x	x	x	x	x	o	o	x	5-38							o	o	x
3-8					x	x	o	o	x	6-5									x
3-9	x	x	x	x	x	x	o	o	x	6-9	x	x					o	o	x
3-10					x	x	o	o	x	6-40	x						o	o	x
3-11	x		x	x	x	x	o	o	x	6-15									
3-12							o		x	6-17	x								x
4-3							o		x	6-43							o		x
4-5							o	o	x	6-19									
4-6							o	o	x	6-44									x
4-10				x	x	x	o	o	x	6-23							o		x
4-11				x	x	x	o	o	x	6-46	x						o	o	x
4-13					x	x	o	o	x	6-25	x	x				x	o	o	x
4-14				x	x	x	o	o	x	6-47	x	x	x				o	o	x
4-15							o	o	x	6-26	x					x	o	o	x
4-16					x	x	o	o	x	6-48	x	x	x				o		x
4-17							o	o	x	6-27									
4-18							o	o	x	6-49									
4-19							o		x	6-50								o	x
4-20				x		x	o	o	x	6-31	x						o		x
4-22	x		x	x	x	x	o	o	x	6-32	x	x	x	x		x	o	o	x
4-23		x	x	x	x	x	o	o	x	6-33	x	x	x		x	x	o	o	x
4-26			x	x	x	x	o	o	x	6-34	x						o		x
4-27					x	x	o	o	x	7-14	x	x						o	x
4-29					x	x	o	o	x	7-22									
5-5							o	o	x	7-23	x	x	x	x	x		o	o	x
5-11	x						o	o	x	7-24	x	x	x		x		o		x
5-13							o		x	7-25	x	x	x		x				
5-14		x					o	o	x	7-26	x								
5-17							o		x	7-29	x	x	x		x			o	x
5-18							o		x	7-30	x						o		x
5-19								o	x	7-31									
5-20						x	o	o	x	7-34	x	x	x		x		o		x
5-21							o		x	7-35	x	x	x	x	x	x	o	o	x
5-22									x	8-4	x	x							
5-23	x	x		x	x	x	o	o	x	8-20	x	x	x	x					
5-24	x				x	x	o	o	x	8-22	x	x	x	x	x	x	o		x
5-25					x	x	o	o	x	8-23	x	x	x	x	x	x		o	x
5-26							o		x	8-27	x	x	x		x				
5-27	x			x		x	o	o	x	9-6	x	x	x	x	x	x	o		
5-28							o		x	9-7	x	x	x	x	x	x	o	o	
5-29		x			x	x	o	o	x	9-9	x	x	x	x	x	x	o	o	x
5-30	x						o		x	9-11	x	x	x	x	x	x	o		
5-31										total	43	29	26	26	39	39	74	57	80

a) 4-22 b) 4-23 c) 5-35 d) 6-32 e) 6-33 f) 7-35 g) 8-22 h) 8-23 i) 9-9

Table 4.20 Passacaglia: Complex genus 8-22/8-23

Counts: 105													
8-22	12	1	2	3	4	5	6	7	8	9	10	11	12
#3	27	1	2	3	4	5	6	7	8	10	11	12	13
#4	31	2	3	4	5	6	9	10	11	12	13	14	15
#5	22	3	8	9	11	14	16	22	23	24	25	26	31
#6	8	11	23	24	27	30	34	35	36				
#7	1	22											
#8	4	6	7	9	11								

Counts: 72													
11	1	2	3	4	5	6	7	8	9	10	11		
22	1	2	4	5	6	8	9	10	11	13	14		
19	2	5	7	9	11	12	14	19	20	23	24		
13	8	9	12	18	25	26	32	33	38	40	46		
4	14	23	29	35									
1	23												
2	7												

Primary sets		Counts: 62											
#3	11	1	2	3	4	5	6	7	8	9	10	11	
#4	21	1	2	4	5	6	8	10	11	13	14	15	
#5	17	2	5	9	11	12	14	20	23	24	25	27	
#6	9	8	9	25	26	32	33	40	46	47			
#7	2	23	35										
#8	0												
#9	2	7	9										

Secondary sets		Counts: 53											
#3	1	12											
#4	7	3	7	9	12	19	24	25					
#5	16	3	4	6	7	10	13	15	17	18	19	21	26
#6	17	3	11	12	14	16	18	22	23	24	31	34	38
#7	8	11	14	24	27	29	30	34	36				
#8	2	22	23										
#9	2	6	11										

Genus total: 115

Chapter 5

Musical examples and oversize table

Ex. 5.1

Handwritten musical notation for Ex. 5.1, consisting of two staves. The first staff contains a sequence of notes with a box around the first measure labeled "Tonic". The second staff contains a sequence of notes with a box around the first measure labeled "Subdominant" and a box around the fifth measure labeled "Dominant".

Ex. 5.2a

Handwritten musical notation for Ex. 5.2a, consisting of a single staff. The notation includes various notes and rests, with a box around the first measure labeled "Tonic" and a box around the fifth measure labeled "Dominant".

Ex. 5.2b

Handwritten musical notation for Ex. 5.2b, consisting of a single staff. The notation includes various notes and rests, with a box around the first measure labeled "Tonic" and a box around the fifth measure labeled "Dominant".

Ex. 5.2c

Handwritten musical notation for Ex. 5.2c, consisting of a single staff. The notation includes various notes and rests, with a box around the first measure labeled "Tonic" and a box around the fifth measure labeled "Dominant".

Ex. 5.3

The image displays a musical score for Exercise 5.3, consisting of two staves. The upper staff is a complex rhythmic exercise, while the lower staff provides a simplified, structural version of the same material.

Upper Staff: This staff contains a dense sequence of rhythmic figures. It begins with a treble clef and a key signature of one flat (B-flat). The notation includes numerous eighth and sixteenth notes, often beamed together in groups. There are several measures with rests, and the piece concludes with a final cadence marked by a double bar line and a common time signature (C). Measure numbers 1, 5, 10, 15, and 20 are indicated at the top of the staff.

Lower Staff: This staff shows the structural framework of the exercise. It uses the same clef and key signature as the upper staff. The notes are simplified, often represented by whole or half notes, and are connected by horizontal lines to show the overall melodic and harmonic structure. The staff is divided into measures corresponding to the upper staff. Labels "I", "IV", and "V" are placed below the staff to indicate specific sections or measures.

Ex. 5.4

Handwritten musical score for Ex. 5.4, featuring multiple staves and measures. The score includes various musical notations such as notes, rests, and dynamic markings. Key markings include C^i , $b.22$, $b.25$, $b.30$, $b.35$, F^i , IV , V , E , $b. IV$, V , and C^{iii} . The notation is dense and complex, typical of a detailed musical manuscript.

Handwritten musical score for Ex. 5.4, featuring multiple staves and measures. The score includes various musical notations such as notes, rests, and dynamic markings. Key markings include $b.39$, $b.44$, C^{iii} , C^i , V , and $etc.$. The notation is dense and complex, typical of a detailed musical manuscript.

Ex. 5.5

Handwritten musical score for a vocal solo (Solo) and piano accompaniment. The score is written on two systems of staves. The vocal line is marked with a 'Solo' instruction. The piano accompaniment is marked with a 'C' time signature and a 'C' key signature. The score includes various musical notations such as notes, rests, and bar lines. The tempo is marked 'Allegro'.

Handwritten musical score for a vocal solo (Solo) and piano accompaniment. The score is written on two systems of staves. The vocal line is marked with a 'Solo' instruction. The piano accompaniment is marked with a 'C' time signature and a 'C' key signature. The score includes various musical notations such as notes, rests, and bar lines. The tempo is marked 'Allegro'.

Handwritten musical score for a vocal solo (Solo) and piano accompaniment. The score is written on two systems of staves. The vocal line is marked with a 'Solo' instruction. The piano accompaniment is marked with a 'C' time signature and a 'C' key signature. The score includes various musical notations such as notes, rests, and bar lines. The tempo is marked 'Allegro'.

Handwritten musical score for a vocal solo (Solo) and piano accompaniment. The score is written on two systems of staves. The vocal line is marked with a 'Solo' instruction. The piano accompaniment is marked with a 'C' time signature and a 'C' key signature. The score includes various musical notations such as notes, rests, and bar lines. The tempo is marked 'Allegro'.

Ex. 5.6

Handwritten musical score for Ex. 5.6. The score is written on a grand staff with five systems of staves. The first system includes a treble clef and a common time signature 'C'. The notation is dense, featuring many beamed notes and rests. There are some markings like 'sim.' and 'sare' in the first system. The score ends with a double bar line and a repeat sign.

Handwritten musical score for Ex. 5.6, continuing from the previous system. The notation continues on the grand staff. There are markings like 'b.105' and 'Coda bms' in the second system. The score ends with a double bar line and a repeat sign.

Ex. 5.7

Coda

Handwritten musical score for Ex. 5.7, Coda. The score is written on three staves. The top staff is labeled "Hrns" and contains a melodic line with various accidentals (sharps, flats, naturals) and a key signature change to one flat (b111). The middle staff is labeled "b.115" and contains a bass line. The bottom staff is labeled "b.120" and contains a bass line. The score concludes with a double bar line and repeat signs.

Handwritten musical score for Ex. 5.7, Coda. The score is written on three staves. The top staff is labeled "Hrns" and contains a melodic line with various accidentals (sharps, flats, naturals) and a key signature change to one flat (b125). The middle staff is labeled "b.130" and contains a bass line. The bottom staff is labeled "b.135" and contains a bass line. The score concludes with a double bar line and repeat signs.

Handwritten musical score for Ex. 5.7, Coda. The score is written on three staves. The top staff is labeled "Hrns" and contains a melodic line with various accidentals (sharps, flats, naturals) and a key signature change to one flat (b140). The middle staff is labeled "b.145" and contains a bass line. The bottom staff is labeled "b.150" and contains a bass line. The score concludes with a double bar line and repeat signs.

Ex. 5.8

Handwritten musical score for Ex. 5.8. The score is written on a grand staff (treble and bass clefs). It begins with an introduction marked "Intro" and a piano dynamic "p". The main section consists of a series of chords, each with a measure of music above it. The chords are labeled as follows:

- C^I (measure b.29)
- C^{II} (measure b.38)
- C^{III} (measure b.49)
- C^{IV} (measure b.58)
- C^V (measure b.102)
- C^{VI} (measure b.129)

The score concludes with a section labeled "Coda" and a final chord labeled C^I (measure b.129). The notation includes various musical symbols such as notes, rests, and accidentals.

Ex. 5.9

The image shows two staves of handwritten musical notation. The top staff is labeled "Theme A" and the bottom staff is labeled "Theme C". Both staves are in treble clef and contain a sequence of notes with various fingering and interval markings.

Theme A: The notation starts with a quarter rest, followed by a quarter note G4, a quarter note A4, a quarter note B4, a quarter note C5, a quarter note B4, a quarter note A4, a quarter note G4, and a quarter note F4. Above the notes are several "5" markings, likely indicating fingerings. A bracket above the first four notes is labeled "6-248". A bracket above the last four notes is labeled "5".

Theme C: The notation starts with a quarter note G4, a quarter note A4, a quarter note B4, a quarter note C5, a quarter note B4, a quarter note A4, a quarter note G4, and a quarter note F4. Above the notes are several "5" markings. A bracket above the first four notes is labeled "6-248". A bracket above the last four notes is labeled "3-11".

Ex. 5.10

(Handwritten musical score for two staves, labeled "Tpe" and "Str". The notation includes various notes, rests, and dynamic markings such as "Cⁱ", "Cⁱⁱ", "Fle", and "L". Time signatures like "6-226", "5-30", "7-25", "9-11", "4-8", "3-2", "4-19", "4-26", "4-23", "4-20", and "4-14" are present. Some measures are circled or grouped by brackets.)

[illegible]

Ex. 5.11

Handwritten musical score for Ex. 5.11, featuring a complex rhythmic pattern with various note values and rests. The score is written on a single staff. Key annotations include:
 - **6-49** (circled)
 - **6-248 (melody)**
 - **4-24**
 - **6-226**
 - **6-55**
 - **6-60**
 - **6-65**
 - **6-32**
 - **4-22**
 - **sig.** (signature)
 - **etc.** (etcetera)

Handwritten musical score for Ex. 5.11, featuring a complex rhythmic pattern with various note values and rests. The score is written on a single staff. Key annotations include:
 - **4-22**
 - **6-32**
 - **5-30 (melody)**
 - **6-75**
 - **6-217 (ml)**

Handwritten musical score for Ex. 5.11, featuring a complex rhythmic pattern with various note values and rests. The score is written on a single staff. Key annotations include:
 - **6-80**
 - **8-23 (ml)**

Handwritten musical score for Ex. 5.11, featuring a complex rhythmic pattern with various note values and rests. The score is written on a single staff. Key annotations include:
 - **6-85**
 - **7-23 (ml)**
 - **6-10**

Ex. 5.12

Handwritten musical score for Tuti. The score is written on a single staff with a treble clef. It begins with a key signature of one flat (B-flat) and a common time signature (C). The tempo is marked "Allegro". The score is divided into two main sections: a first section (measures 1-26) and a second section (measures 27-42). The first section is marked with a "6-248 (mol)" and a "5-30 (mol)". The second section is marked with a "6-226 (mol)". The score includes various musical notations such as notes, rests, and dynamic markings. The word "Tuti" is written at the beginning and end of the score.

Handwritten musical score for Tuti. The score is written on a single staff with a treble clef. It begins with a key signature of one flat (B-flat) and a common time signature (C). The tempo is marked "Allegro". The score is divided into two main sections: a first section (measures 1-26) and a second section (measures 27-42). The first section is marked with a "6-248 (mol)" and a "5-30 (mol)". The second section is marked with a "6-226 (mol)". The score includes various musical notations such as notes, rests, and dynamic markings. The word "Tuti" is written at the beginning and end of the score.

Handwritten musical score for Tuti. The score is written on a single staff with a treble clef. It begins with a key signature of one flat (B-flat) and a common time signature (C). The tempo is marked "Allegro". The score is divided into two main sections: a first section (measures 1-26) and a second section (measures 27-42). The first section is marked with a "6-248 (mol)" and a "5-30 (mol)". The second section is marked with a "6-226 (mol)". The score includes various musical notations such as notes, rests, and dynamic markings. The word "Tuti" is written at the beginning and end of the score.

Handwritten musical score for Tuti. The score is written on a single staff with a treble clef. It begins with a key signature of one flat (B-flat) and a common time signature (C). The tempo is marked "Allegro". The score is divided into two main sections: a first section (measures 1-26) and a second section (measures 27-42). The first section is marked with a "6-248 (mol)" and a "5-30 (mol)". The second section is marked with a "6-226 (mol)". The score includes various musical notations such as notes, rests, and dynamic markings. The word "Tuti" is written at the beginning and end of the score.

Table 5.1 Chorale: Complex genus 8-22/8-23

8-22		Counts: 105															
#3	12	1	2	3	4	5	6	7	8	9	10	11	12				
#4	27	1	2	3	4	5	6	7	8	10	11	12	13	14	15	16	17
#5	31	2	3	4	5	6	9	10	11	12	13	14	15	17	18	20	21
#6	22	3	8	9	11	14	16	22	23	24	25	26	31	32	33	34	39
#7	8	11	23	24	27	30	34	35	36								40
#8	1	22															41
#9	4	4	6	7	9	11											43

8-23		Counts: 72															
#3	11	1	2	3	4	5	6	7	8	9	10	11					
#4	22	1	2	4	5	6	8	9	10	11	13	14	15	16	17	18	20
#5	19	2	5	7	9	11	12	14	19	20	23	24	25	27	29	32	34
#6	13	8	9	12	18	25	26	32	33	38	40	46	47	50			
#7	4	14	23	29	35												
#8	1	23															
#9	2	7	9														

Primary sets		Counts: 62															
#3	11	1	2	3	4	5	6	7	8	9	10	11					
#4	21	1	2	4	5	6	8	10	11	13	14	15	16	17	18	20	21
#5	17	2	5	9	11	12	14	20	23	24	25	27	29	32	34	35	36
#6	9	8	9	25	26	32	33	40	46	47							
#7	2	23	35														
#9	2	7	9														

Secondary sets		Counts: 51															
#3	1	12															
#4	7	3	7	9	12	19	24	25									
#5	16	3	4	6	7	10	13	15	17	18	19	21	26	28	30	33	37
#6	17	3	11	12	14	16	18	22	23	24	31	34	38	39	41	43	48
#7	8	11	14	24	27	29	30	34	36								50
#8	2	22	23														
#9	2	6	11														

Genus total: 115

Chapter 6

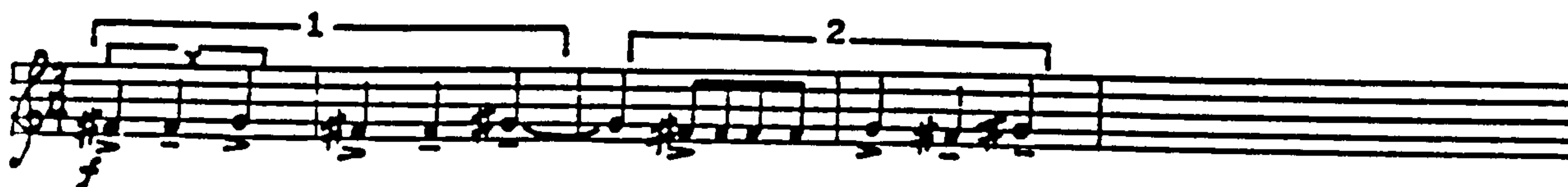
MUSICAL EXAMPLES AND OVERSIZE FIGURES AND TABLES

Ex. 6.1a (Stehman 1973, p. 1039)

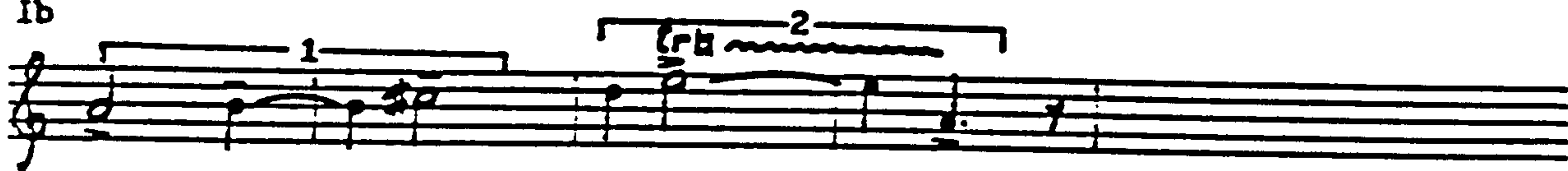
Igers:



Ia



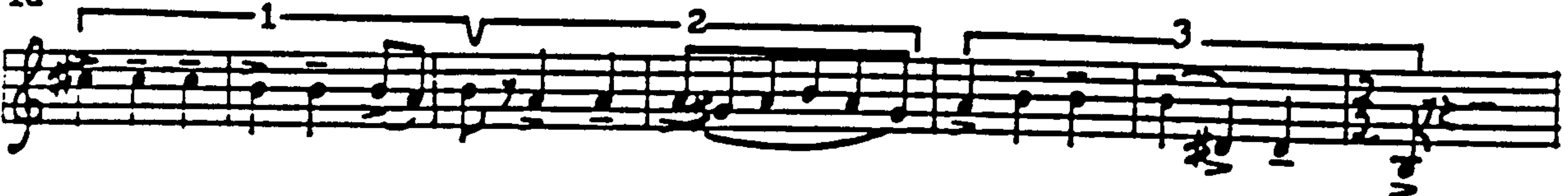
Ib



Ic

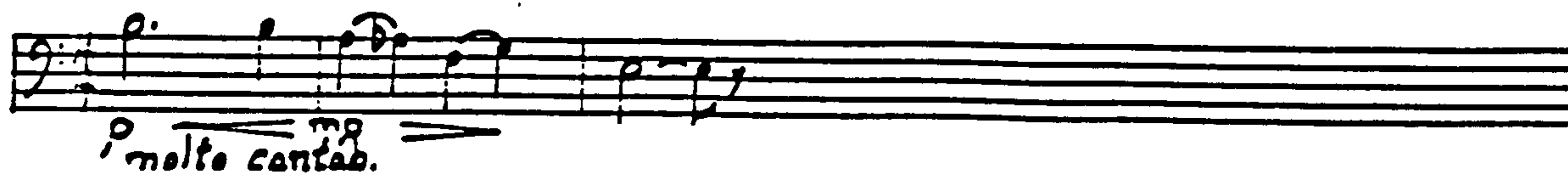


Id



Ex. 6.1b (Stehman 1973, p. 1083)

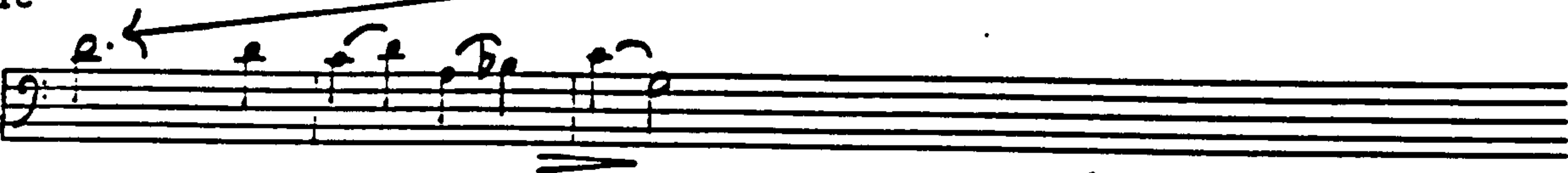
Ta



Tb



Tc



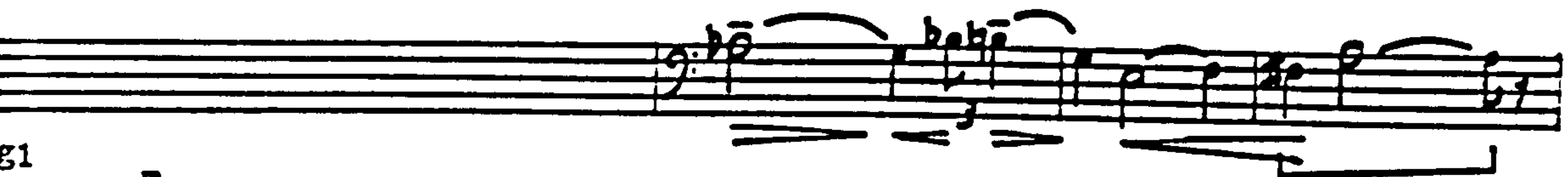
Td



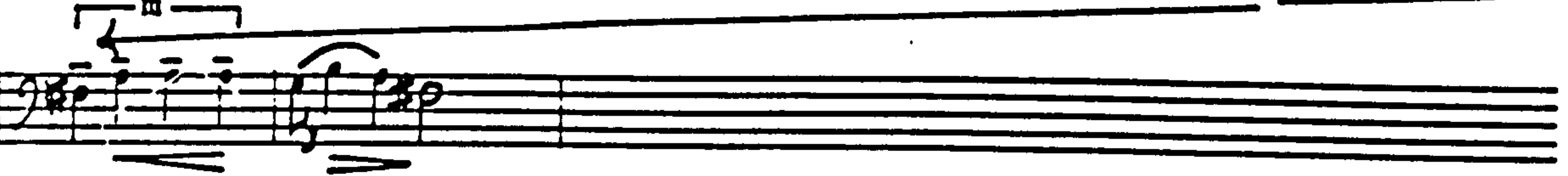
Te



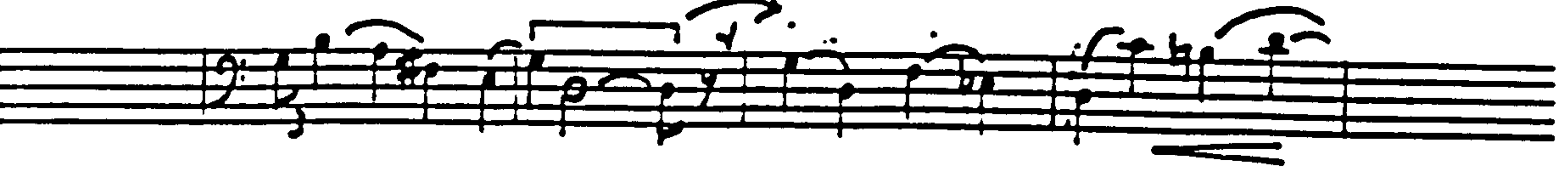
Tf



Tg1



Tg2



Th

Ex. 6.2 (Schoenberg 1995, p. 139)

Handwritten musical notation for two staves, labeled I and II, in treble clef with a key signature of three sharps (F#, C#, G#).

Staff I contains two measures. The first measure has a bracket labeled 'a' above it, spanning a half note G#4 and a quarter note A#4. The second measure has a bracket labeled 'b' above it, spanning a half note B4 and a quarter note C#5. A slur connects the end of the first measure to the beginning of the second.

Staff II contains two measures. The first measure has a bracket labeled 'a' above it, spanning a half note G#4 and a quarter note A#4. The second measure has a bracket labeled 'b' above it, spanning a half note B4 and a quarter note C#5. A slur connects the end of the first measure to the beginning of the second.

Ex. 6.4

Theme B
(T₀)

Handwritten musical notation for Theme B (T₀) on a single staff. The melody consists of eighth and quarter notes. Bar numbers 1 through 28 are written above the staff, with some bars grouped by brackets. The key signature has one sharp (F#).

bar 13

Handwritten musical notation for bar 13, continuing the melody from the previous staff. Bar numbers 29 through 49 are written above the staff.

bar 17
Theme B
Varied (T₂)

Handwritten musical notation for Theme B Varied (T₂) starting at bar 17. The melody is a variation of the original theme. Bar numbers 50 through 74 are written above the staff.

bar 20

Handwritten musical notation for bar 20, continuing the variation. Bar numbers 75 through 100 are written above the staff.

bar 23

Handwritten musical notation for bar 23, continuing the variation. Bar numbers 101 through 114 are written above the staff.

Table 6.1 Theme B - pitch interval and contour profiles

Segment	ICP	Segment	ICP
1,13,37,42,44,46,54,109,111,113	+1+2	59	-13+3
2,3,8,9,10,11,38,39,65,96,97	+2+2	60,102,107	+3+2
4	+2+3	61,81	+2+6
5	+3-1	62	+6-14
6	-1-11	63	-14+13
7	-11+2	64	+13+2
12,40,43,45,47,108,110,112,114	+2+1	66	+2-6
14,52	+2+4	67	-6-2
15	+4-2	68,74	-2-7
16,20	-2-1	69	-7+6
17	-1+2	70	+6+2
18,50	+2-4	71	+2-3
19	-4-2	72	-3+10
21	-1+9	73,100	+10-2
22	+9-1	75	-7-2
23	-1-2	76	-2-3
24,28,34,92	-2-6	77	-3+1
25	-6-1	78	+1+5
26	-1+11	79	+5-4
27	+11-2	82	+6-2
29	-6+5	83	-2+7
30,88	+5-2	84	+7-1
31,89	-2-5	85	-1-9
32,90	-5-5	86	-9+2
33,91	-5-2	87	+2+5
35,93	-6+9	94	+9-3
36	+9+1	95	-3+2
41	+1+1	98	+2-8
48	+1-15	99	-8+10
49	-15+2	101	-2+3
51,80	-4+2	103	+2-17
53	+4+1	104	-17+2
55	+2-5	105	+2+10
56	-5+7	106	+10+3
57	+7+2	115	+1+6
58	+2-13		

Table 6.2 Theme B - recurring trichord segment sequences

Recurring patterns	Segment sequence
i = +1+2, +2+2	1-2, (7-8), 37-38, (64-65)
ii = +2+2, +2+2	2-3, 8-9, 9-10, 10-11, 38-39, 96-97
iii = +2+2, +2+1	11-12, 39-40
iv = +2+1, +1+2	12-13, 43-44, 45-46, 108-109, 110-111,112-113
v = +1+2, +2+1	42-43, 44-45, 46-47, 109-110, 111-112,113-114
vi = -1-2, -2-6	23-24, (27-28)
vii = +5-2, -2-5, -5-5, -5-2, -6+9	30-35, 88-93
viii = +2+6, +6-2	61-62, (81-82)

Ex. 6.5

Theme B bar 7 i-ii (i)-ii

Theme B (varied) (i) ii bar 17 (ii) vi

Ex. 6.6

Handwritten musical notation for measures 1-5, 8-11, 12, and 21. Includes a key signature of two flats and a common time signature.

Handwritten musical notation for measures 24-25, 31-32, 33-35, 36, 43-47, 48, and 49-52. Includes a key signature of two flats and a common time signature.

Handwritten musical notation for measures 55-56, circled 18.

Handwritten musical notation for measures 51-52.

Handwritten musical notation for measures 59-60.

Handwritten musical notation for measure 63, circled 19.

Handwritten musical notation for measures 66-68.

Handwritten musical notation for measures 71-72, circled 20.

Handwritten musical notation for measures 74-75.

Handwritten musical notation for measures 77-78.

Handwritten musical notation for measures 80-82, circled 21.

Handwritten musical notation for measures 89-93, circled 22.

Handwritten musical notation for measures 95-96.

Handwritten musical notation for measures 110-114, circled 23.

Handwritten musical notation for measures 103-107, circled 24.

Table 6.3 Theme B - I-CCPs and variants

I-CCP				Segment
(-11+2)			(+11-2)	
(+13+2)				
+1+2	+2+1	-2-1	-1-2	1,(7),13,37,42,44,46,54,(64),109,111,113/ 12,40,43,45,47,108,110,112,114/16,20/23,(27)
	(+10-2)			
+2+2	-2-2			2,3,8,9,10,11,38,39,65,96,97/(73)*,(100)
	(-9+2)	(-3+10)		
+2+3	+3+2	-3-2	-2-3	4/60,(86),102,107/(72)76
	(+9+1)	(-1-9)	(+1-15)	
		(-13+3)		
+3-1	-3+1	-1+3	+1-3	5/(36),77/(59)(85)/(48)
(-1-11)				
-1+1				(6)
(+2-8)				
+2+4	-4-2			14,52(98)19
(-8+10)				
+4-2	+2-4	-4+2		15,(99)18,50/51,80
	(+2-13)	(-14+13)		
-1+2	+2-1	-2+1		17/(58)/(63)
(-1+9)	(+9-1)			
-1-3	-3-1			(21)/(22)
-2-6	+2+6	-6-2	+6+2	24,28,34,92/61,81/67/70
-6-1	+1+6			25/115
(-1+11)				
-1-1	+1+1			(26)/41
-6+5				29
(-7-2)	(+2-17)	(+7+2)	(-2-7)	
		(-17+2)		
+5-2	+2-5	-5+2	-2+5	30,(75)88/55,(103)/(57),(104)/(68),(74)
(-2+7)				
-2-5	-5-2	+2+5		31,(83),89/33,91/87
(-5+7)				
-5-5				32,(56),90
(-6+9)				
-6-3				(35),(93)
(-15+2)		(+10+3)		
-3+2	+2-3	-2+3		(49),95/71/101,(106)
+4+1				53
(+6-14)				
+6-2	+2-6			(62),82/66
(-7+6)				
+5+6				(69)
	(+7-1)			
+1+5	-5-1			78/(84)
+5-4				79
(+9-3)				
-3-3				(94)
(+2+10)				
+2-2				(105)

* Note: some types appear only in their 'ungeneralised' form. Segment (73) = (+10-2), there are no 'real' (unbracketed) instances of -2-2.

Ex. 6.7

Handwritten musical score for Ex. 6.7, measures 1-32. The score is written on five staves. The first staff contains measures 1-14, the second staff contains measures 15-24, the third staff contains measures 25-31, and the fourth staff contains measure 32. The notation includes various musical symbols such as notes, rests, and accidentals. Measure numbers are written above the corresponding measures.

Ex. 6.7 (cont.)

Handwritten musical score for Ex. 6.7 (cont.), measures 33-105. The score is written on five staves. The first staff contains measures 33-49, the second staff contains measures 50-78, the third staff contains measures 79-94, and the fourth staff contains measures 95-105. The notation includes various musical symbols such as notes, rests, and accidentals. Measure numbers are written above the corresponding measures.

Fig. 6.2 Theme B - temporal distribution of I-CCPs

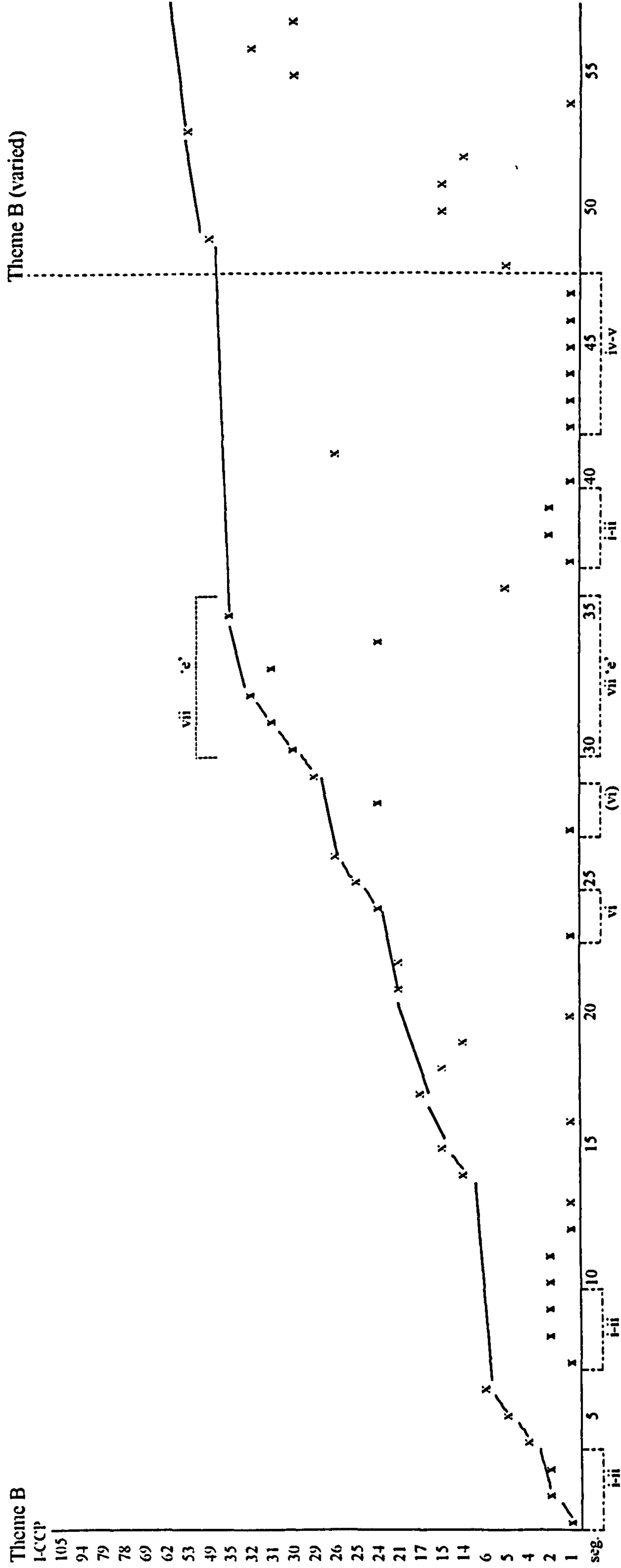
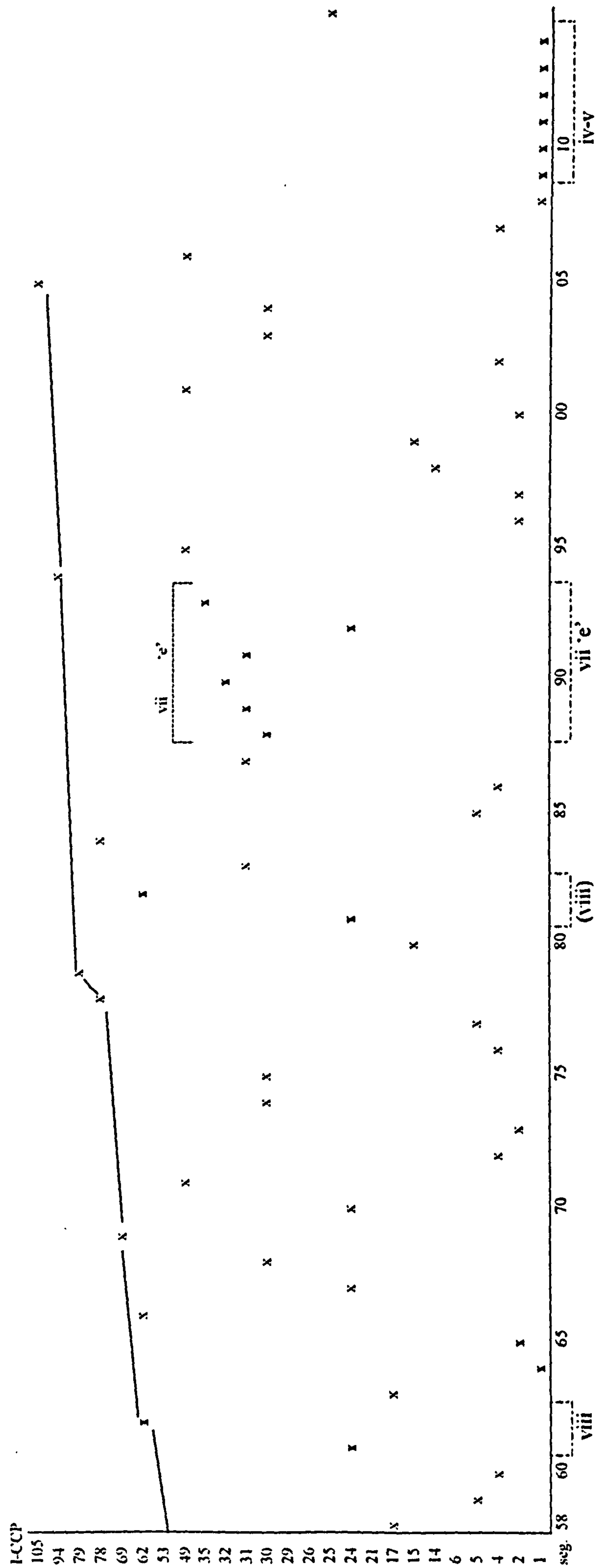


Fig. 6. 2 (cont.)



Ex. 6.8

Handwritten musical notation for Ex. 6.8. The main staff shows a sequence of notes with interval markings above them: $a1$, $+1$, $+2$, $a2$, $+2$, $+4$, $a3$, b , e , -5 , -5 , -6 , -3 . Arrows point from these intervals to specific notes or groups of notes, with labels: $D(+2+3) \rightarrow D$, $C(-2-6) \rightarrow D$, and $C(-2-6)$. Below the staff, there are two diagrams: a 'motive' diagram with notes $\#$, -2 , $+2$, -4 and a 'chord' diagram with notes y , $(\#)$, $(\#)$. Arrows point from the 'motive' and 'chord' diagrams to the main staff.

Ex. 6.9

b.26

b.25

1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41 43 45 47 49 51 53 55 57 59 61 63 65 67 69 71 73 75 77 79

b.26A

26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72 74 76 78

b.28A

80 82 84 86 88 90 92 94 96 98 100 102 104 106 108 110

b.30

111 113 115 117 119

Table 6.5 Theme C - I-CCPs and variants

I-CCP		Segment		
(+8-2)	(+10-4)			
-4-2	-2-4			(1),67/(17),93
(-2+11)				
-2-1	-1-2	+1+2	+2+1	2,50,52,(68),74,114,118,120/3,51,79,113,116,119/39/41
-2-6	-6-2			4,34/5,27,35
-2-2	+2+2			6,32,33,61,62,63,64,117/40,91,99, 100
(-2+7)	(+7-2)			
-2-5	-5-2	+5+2	+2+5	7,(28),(65),(108)/(31),(109)/88/101
	(+2+7)			
-5+2	+2-5	+5-2	-2+5	8,12/(13)/86/87
(+2+9)				
+2-3	+3-2	-3+2		(9),89/49/90,98
(+9-6)				
-3-6				(10),26
-6-5	+6+5			11,84
(+7-5)				
(-5+7)				
-5-5	+5+5			(14),13,77,96,(104),(105)/47,71,85
-5+1	+1-5	-1+5	+5-1	15/42/46/102
(+1+10)				
+1-2	-2+1			(16)/36
-4+1				18
+1-3				19,54
(-3+7)				
(+9-5)				
-3-5	-5-3	+5+3		(20),(55),(24)/25,97,106/48
(+7-4)	(-7+16)			
-5-4	+5+4			(21),44,(56),(66)/(58)
(-4-7)				
-4+5				(22),57
(-3+9)				
-3-3				(23)
(+7+5)	(+5+7)			
-5+5	+5-5			(29)/(30)
(-11+5)				
+1+5	+5+1	-5-1	-1-5	37,(70)/38/78/103
-4-1				45,112
(+11-11)				
-1+1				53,(69)
(+16-3)				
+4-3	-4+3			(59)/94
-3-2	-2-3			60,73,81,107/80,82
+5-3	+3-5			72/95
-1+6				75
+6-5				76
-3+6				83
+2-2	-2+2			92/110
+2-4				111
-1-1				115

Ex. 6.10

b.23 Picc.

6-33

5-24

5-23

Fl.

etc.

Ex. 6.11

Handwritten musical score for Ex. 6.11, measures 7-10 to 9-1. The notation is on a single staff with a treble clef. The key signature has one flat (B-flat). The time signature is 4/4. The score includes various musical notations such as notes, rests, and accidentals. Brackets indicate measure groupings with labels: 7-10, 5-25, 4-13, b.25A, 6-240, 8-11, b.26, 4-27, 5-20, 2-5, 4-21, 5-24, and 9-1.

Handwritten musical score for Ex. 6.11, measures b.26A to b.28. The notation is on a single staff with a treble clef. The key signature has one flat (B-flat). The time signature is 4/4. The score includes various musical notations such as notes, rests, and accidentals. Brackets indicate measure groupings with labels: b.26A, 5-23, b.27, 7-236, 3-9, 4-14, 4-10, 5-20, 3-9, 4-21, 5-24, 4-229, 5-29, b.28, and 3-9.

Handwritten musical score for Ex. 6.11, measures b.28A to b.29A. The notation is on a single staff with a treble clef. The key signature has one flat (B-flat). The time signature is 4/4. The score includes various musical notations such as notes, rests, and accidentals. Brackets indicate measure groupings with labels: b.28A, 8-8, 8-11, b.29, 6-32, 4-21, 3-9, 5-24, 4-23, 3-9, and b.29A, 7-35.

Handwritten musical score for Ex. 6.11, measures b.30. The notation is on a single staff with a treble clef. The key signature has one flat (B-flat). The time signature is 4/4. The score includes various musical notations such as notes, rests, and accidentals. Brackets indicate measure groupings with labels: b.30, 3-6, 8-27, and 6-225.

Chapter 7

MUSICAL EXAMPLES AND OVERSIZE FIGURES AND TABLES

Ex. 7.1

3-11

4-14

4-17

Ex. 7.2a

Theme A₇₀

3-11

4-14

4-17

Theme A'₇₀

Figure 7.1 - Schuman Symphony no. 6 - Overall design

Figure 1.1 - Schumann Symphony No. 3																				
Tempo	b.1	b.7	b.9	b.17	b.25	b.35	b.40	b.50	b.80	b.94	b.105	b.123	b.132	b.140	b.150	b.169	b.190	b.206	b.219	b.234
Theme	<i>Largo</i> A _{T0} — A _{T6} A _{T9} Aa Aa Aa A _{T8} A _{T9} B _{T3} C _{T0}																			
Theme	B _{T0} — B _{T2}																			
Theme	C _{T0}																			
Theme	Moderato con moto accel.																			
Theme	A ¹ _{T0} A _{T5} B _{T11} 'A' A _{T8} B _{T2} 'A'																			
Theme	C _{T0} —																			
Theme	Timp																			
Set	4-17	4-14	4-14	4-14	4-14	4-14	6-33	4-14	4-14	4-14	3-11	4-17	4-17	4-17	4-14	4-14	4-14	4-14	4-14	4-14
Tempo	b.273	b.299	b.325	b.351	b.377	b.403	b.418	b.421	b.435	b.444	b.453	b.456	b.460	b.467	b.472	b.485	b.495	b.515	b.539	b.556
Theme	<i>Adagio</i> Aa																			
Theme	B _{T0} —																			
Theme	'A'																			
Theme	D _{T9} D _{T6} D _{T9} D _{T0}																			
Theme	D _{T0} D _{T3} D _{T9} D _{T0}																			
Theme	D _{T9} D _{T9}																			
Set	4-14	4-14	4-14	4-14	4-14	4-14	4-14	4-17	4-14	4-14	4-14	4-14	4-17	4-17	4-17	4-17	4-17	4-17	4-17	4-17
Tempo	b.571	b.577	b.589	b.592	b.599	b.603	b.608	b.618	b.630	b.635	b.638	b.645	b.655	b.688	b.701					
Theme	<i>Presto</i> A ¹ _{T1} A ¹ _{T11} A ¹ _{T7}																			
Theme	A ¹ _{T1} A ¹ _{T11} A ¹ _{T7}																			
Theme	A ¹ _{T1} A ¹ _{T11} A ¹ _{T7}																			
Theme	'C'																			
Theme	D _{T9} — D<																			

Ex. 7.2b

b.299 Theme Pro

b.334 Theme B (motive e)

bsn.

vln.1

Ex. 7.3

b.9

vln.1

b.15

4-14

4-14

4-14

4-14

4-14

4-14

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4-14

Ex. 7.4

Handwritten musical score for Ex. 7.4, featuring staves for Violin 1 (vln. 1), Violin 2 (vln. 2), Viola (vla.), and Cello/Double Bass (vc/bb). The score includes various musical notations such as notes, rests, and accidentals, along with performance instructions like "b. 17" and "b. 20".

Violin 1 (vln. 1) part includes measures with notes and rests, and a section marked "b. 17".

Violin 2 (vln. 2) part includes measures with notes and rests, and a section marked "b. 20".

Viola (vla.) part includes measures with notes and rests.

Cello/Double Bass (vc/bb) part includes measures with notes and rests.

Handwritten musical score for Ex. 7.4, featuring staves for Violin 1 (vln. 1), Violin 2 (vln. 2), Viola (vla.), and Cello/Double Bass (vc/bb). The score includes various musical notations such as notes, rests, and accidentals, along with performance instructions like "b. 22".

Violin 1 (vln. 1) part includes measures with notes and rests, and a section marked "b. 22".

Violin 2 (vln. 2) part includes measures with notes and rests.

Viola (vla.) part includes measures with notes and rests.

Cello/Double Bass (vc/bb) part includes measures with notes and rests.

Ex. 7.5

Handwritten musical score for Ex. 7.5, measures 6-32 to 6-33. The score is written for five staves: vln (Violin), str (String), brass, and solo vln (Solo Violin). The key signature is one flat (B-flat). The time signature is 4/4. The tempo is marked 'V' (Vivace). The score includes various musical notations such as notes, rests, and dynamic markings. The measure numbers 6-32, 6-33, and 6-34 are indicated at the bottom of the staves.

Handwritten musical score for Ex. 7.5, measures 6-34 to 6-35. The score is written for five staves: vln (Violin), str (String), brass, and solo vln (Solo Violin). The key signature is one flat (B-flat). The time signature is 4/4. The tempo is marked 'V' (Vivace). The score includes various musical notations such as notes, rests, and dynamic markings. The measure numbers 6-34, 6-35, and 6-36 are indicated at the bottom of the staves.

Handwritten musical score for Ex. 7.5, measures 6-36 to 6-37. The score is written for five staves: vln (Violin), str (String), brass, and solo vln (Solo Violin). The key signature is one flat (B-flat). The time signature is 4/4. The tempo is marked 'V' (Vivace). The score includes various musical notations such as notes, rests, and dynamic markings. The measure numbers 6-36, 6-37, and 6-38 are indicated at the bottom of the staves.

Ex. 7.6a

Handwritten musical score for guitar, featuring two systems of music. The notation includes standard musical symbols (staves, notes, rests, accidentals) and specific guitar techniques indicated by brackets and slurs. The score is divided into measures, with some measures containing multiple notes or chords. The notation is written in a style typical of handwritten musical manuscripts.

११.३

Handwritten musical score for guitar, featuring two systems of music. The first system includes measures b.94 and b.102, with a wavy line indicating a continuation. The second system includes measures b.104 and b.106, with a wavy line indicating a continuation. The notation includes various musical symbols such as notes, rests, and dynamic markings like 'nw.' and 'p'. Fingering numbers (1-4) are present below the notes. The score is written on a single staff.

Ex. 7.6c

b.105 vlns
str+brass
4-14
↑

8-22 (melody)

b.119
4-14
4-16
4-14 (bass)
8-22 (collection)
b.123

Ex. 7.6d

b.80
Th A III
Th B III
5-212
6-23
3-2
6-34
5-9
5-33
b.229

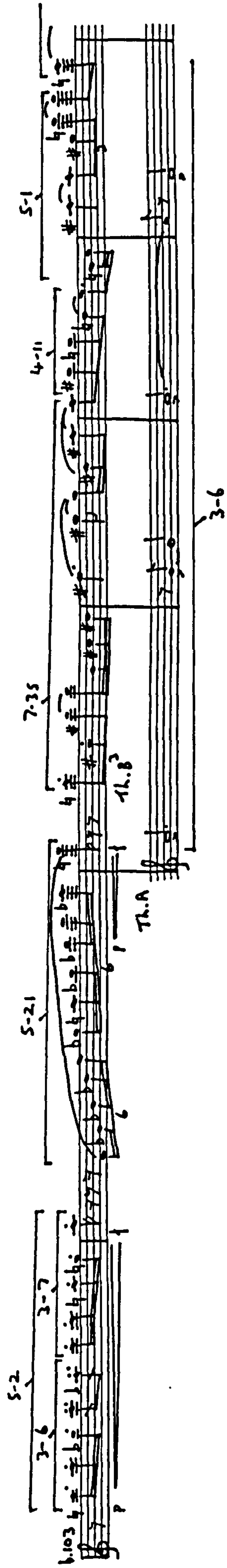
4-24

5-9
3-6
4-14
5-212
4-14
5-27
8-27
melody only (vln)

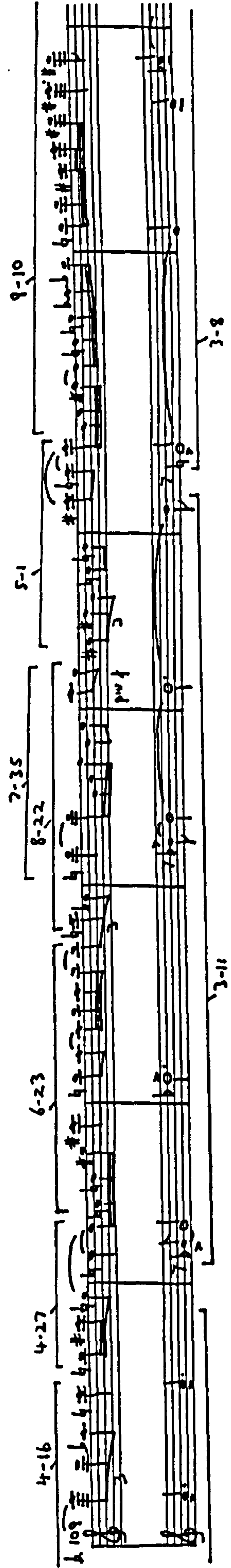
Ex. 7.6b (cont.)



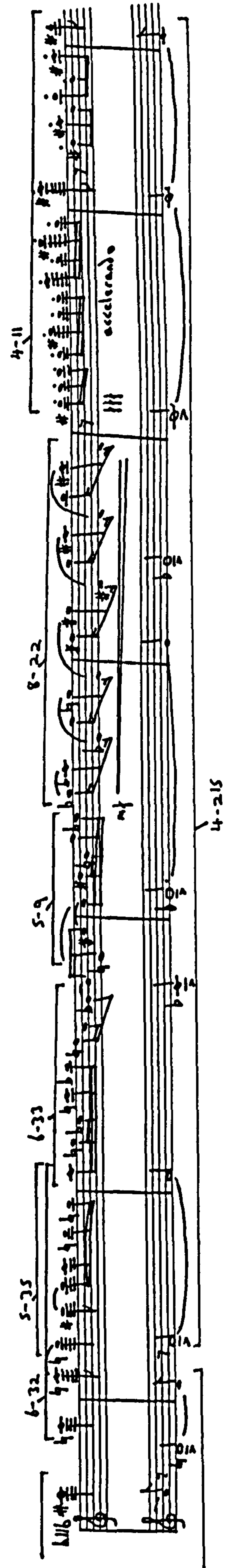
Handwritten musical score system 1. It consists of two staves. The upper staff has a treble clef and a key signature of one flat. The lower staff has a bass clef. The system is divided into measures by vertical bar lines. Above the staves, there are handwritten annotations: '5-29' above the first measure, '6-23' above the second, '7-238' above the third, '6-219' above the fourth, '3-2' above the fifth, '4-11' above the sixth, '3-2' above the seventh, '4-20' above the eighth, '6-246' above the ninth, '3-8' above the tenth, and '4-28' above the eleventh. The music features various note values, including eighth and sixteenth notes, and rests.



Handwritten musical score system 2. It consists of two staves. The upper staff has a treble clef and a key signature of one flat. The lower staff has a bass clef. The system is divided into measures by vertical bar lines. Above the staves, there are handwritten annotations: '5-2' above the first measure, '3-6' above the second, '3-7' above the third, '5-21' above the fourth, '7-35' above the fifth, '4-11' above the sixth, '5-1' above the seventh, and '3-6' above the eighth. The music features various note values, including eighth and sixteenth notes, and rests. There are also some markings like 'Th.A' and '1h.8'.



Handwritten musical score system 3. It consists of two staves. The upper staff has a treble clef and a key signature of one flat. The lower staff has a bass clef. The system is divided into measures by vertical bar lines. Above the staves, there are handwritten annotations: '4-16' above the first measure, '4-27' above the second, '6-23' above the third, '8-22' above the fourth, '7-35' above the fifth, '5-1' above the sixth, '9-10' above the seventh, and '3-8' above the eighth. The music features various note values, including eighth and sixteenth notes, and rests. There is a marking 'pwt' in the sixth measure.



Handwritten musical score system 4. It consists of two staves. The upper staff has a treble clef and a key signature of one flat. The lower staff has a bass clef. The system is divided into measures by vertical bar lines. Above the staves, there are handwritten annotations: '6-32' above the first measure, '5-35' above the second, '6-33' above the third, '5-9' above the fourth, '8-22' above the fifth, '4-11' above the sixth, and '4-215' above the seventh. The music features various note values, including eighth and sixteenth notes, and rests. There is a marking 'accelerando' in the sixth measure.

Ex. 7.7a

b.123 w.w. + tpts

b.131

Ex. 7.7b

7-10

4-16

4-16

7-6

7-212

Ex. 7.8

Ex. 1.8

b.132 brass
w w + str
8-12 (melody)
6-2-4-9
etc
4-17
↑
3-11

sdr
rmp.
4-17
↑
3-11

b.135
w w + str
9-2 (melody)
6-2-7
4-7
etc
4-17
↑
3-11

Ex. 7.9a

b.495 Allegro risoluto

hrn
sn.
hrn.
str+w
etc
4-14
5-23
6-33
5-217

Ex. 7.9b

b.509 8-22 (melody)

str+w.
brass
str.
3-9
4-16
5-24
5-35
5-23
3-4
4-14
4-14 (all)
4-14

Ex. 7.9c

b.546

pft
b.ssb
str+w
b.ssb
str+w
b.ssb
3-4
4-14
4-14
4-14
5-217
4-14
3-4
3-4
3-4

Ex. 7.10a

Handwritten musical score for Ex. 7.10a, featuring five staves. The notation includes various musical symbols such as notes, rests, and dynamic markings. The score is labeled with "b.419" and "b.421" at the top left, and "Abagio (Th. B cont.)" at the top right. The staves are labeled with "flc.", "str.", "pft.", "wv. bd.", and "pft." from top to bottom. The score includes a key signature change to one sharp (F#) and a time signature change to 3/4. The notation is dense, with many notes and rests, and includes a large bracketed section in the middle of the score.

Ex. 7.10b

Handwritten musical score for Ex. 7.10b, featuring five staves. The notation includes various musical symbols such as notes, rests, and dynamic markings. The score is labeled with "b.472" and "b.480" at the top left, and "Abagio (Th. B cont.)" at the top right. The staves are labeled with "flc.", "str.", "pft.", "wv. bd.", and "pft." from top to bottom. The score includes a key signature change to one sharp (F#) and a time signature change to 3/4. The notation is dense, with many notes and rests, and includes a large bracketed section in the middle of the score.

Ex. 7.11

Handwritten musical score for a 12-part ensemble. The score is organized into four systems, each with three staves. The instruments are listed on the left: Flute (Fl.), Piccolo (Pic.), Violin (vln), Viola (vla), Violoncello (vcl), and Double Bass (db). The score includes various musical notations such as notes, rests, and dynamic markings. Above the staves, there are handwritten annotations: 12-1, 9-9, 10-5, 12-1, 7-3, 5, 10-5, 18, 9-9, and 6-4, 5. The score is written in a single system, with the instruments grouped together.

455

Ex. 7.13

Handwritten musical score for a string quartet, featuring four staves. The notation includes various musical symbols such as notes, rests, and dynamic markings. The score is divided into measures, with some measures containing multiple notes. The notation is written in a style typical of handwritten musical manuscripts.

三十一

[illegible]

Handwritten musical score for a 12-part choir, consisting of six systems of two staves each. The notation includes various musical symbols such as notes, rests, and bar lines. Above the first system, the number "b.700" is written. Above the sixth system, the number "b.705" is written. Below the first system, the number "b.700" is written. Below the sixth system, the number "b.705" is written. The score is written in a cursive, handwritten style.

6710

Handwritten musical score for 'The Rose Tree'. The score is written on a grand staff with two systems of five staves each. The first system includes a treble clef and a key signature of one sharp (F#). The music is in common time (C). The melody is written in the first staff of each system, with accompaniment in the other four staves. The lyrics 'The Rose Tree' are written below the first staff of the first system. The score ends with a double bar line and a repeat sign.

Table 7.3 Pc-set inclusion relationships with potential cynosures (bb. 80-169)

	4-14	7-35	3-4	5-27	6-32	6-33	8-22	9-9	4-17	3-3	5-21	6-27	6-49	7-21	8-17	7-35	3-3	4-14/7-35	3-3/4-17
3-2	x	x		x	x	x	x	x				x	x	x	x	x		P	
3							x	x	x	C	x	x	x	x	x		C		P/C
4	x	x	C	x	x	x	x	x			x			x	x	x		P	
5		x				x	x	x				x	x	x	x	x		S	
6		x		x	x	x	x	x						x	x	x		S	
7		x		x	x	x	x	x				x	x	x	x	x		S	
8		x				x	x	x				x	x	x	x	x		S	
11	x	x		x	x	x	x	x	x		x	x	x	x	x	x		P	S
4-3							x	x		x		x	x	x	x		x		S
4			x				x	x		x				x	x		x		S
7			x				x	x		x	x			x	x		x		S
10		x			x	x	x	x				x			x	x		S	
11		x	x	x	x	x	x	x						x	x	x		S	
12							x	x		x		x	x	x	x		x		S
13		x				x	x	x				x			x	x		S	
14	C	x	x	x	x	x	x	x						x	x	x		P/C	
15							x	x		x		x	x	x	x		x		S
16		x	x			x	x	x						x	x	x		S	
17							x	x	C	x	x	x	x	x	x		x		P/C
18							x	x		x		x	x	x	x		x		S
19			x				x	x		x	x			x	x		x		S
20		x	x	x	x		x	x			x			x	x	x		S	
22		x		x	x	x	x	x						x	x	x		S	
23		x			x	x	x	x						x	x	x		S	
24							x	x						x	x				
27		x				x	x	x				x	x	x	x	x		S	
28												x	x		x				

Table 7.3 (cont.)

	4-14	7-35	3-4	5-27	6-32	6-33	8-22	9-9	4-17	3-3	5-21	6-27	6-49	7-21	8-17	7-35	3-3	4-14/7-35	3-3/4-17
5-1										X							X		S
2			X				X	X		X					X		X		S
5	X		X				X	X										S	
9			X				X	X		X							X		S
11	X		X				X	X	X	X				X	X		X	S	P
12		X	X				X	X							X	X		S	
13			X				X	X		X				X	X		X		S
17	X		X				X	X		X				X	X		X	S	S
18	X		X				X	X		X				X	X		X	S	S
20	X	X	X				X	X						X	X	X		P	
21			X				X	X	X	X	C			X	X		X		P
22			X					X		X				X	X		X		S
23	X	X	X			X	X	X					X		X	X		P	
24		X	X			X	X	X								X		S	
27	X	X	X	C	X		X	X						X	X			P	
29	X	X	X			X	X	X							X	X		P	
30			X				X	X		X				X	X		X		S
32							X	X	X	X		X	X	X	X		X		P
33							X	X											
34		X				X	X	X								X		S	
35		X			X	X	X	X								X		S	
37			X				X	X		X				X	X		X		S
38			X				X	X		X				X	X		X		S

Table 7.3 (cont.)

	4-14	7-35	3-4	5-27	6-32	6-33	8-22	9-9		4-17	3-3	5-21	6-27	6-49	7-21	8-17		7-35	3-3	4-14/7-35	3-3/4-17
6-3			x				x	x			x					x			x		S
8	x		x				x	x		x	x					x			x	S	P
14	x		x	x			x	x		x	x	x			x	x			x	S	P
16	x		x				x	x		x	x	x			x	x			x	S	P
19	x		x							x	x	x			x	x			x	S	P
25	x	x	x	x			x	x								x				P	
27										x	x		C			x			x		P
29	x		x								x					x			x	S	S
31	x		x	x			x	x		x	x	x			x	x			x	S	P
32	x	x	x	x	C		x	x										x		P	
33	x	x	x			C	x	x										x		P	
34			x				x	x											x		S
38	x		x					x												S	
40	x		x	x			x	x			x								x	S	S
46	x		x	x			x	x			x								x	S	P
49										x	x			C					x		P

Table 7.3 (cont.)

	4-14	7-35	3-4	5-27	6-32	6-33	8-22	9-9		4-17	3-3	5-21	6-27	6-49	7-21	8-17		7-35	3-3	4-14/7-35	3-3/4-17
7-2	x		x							x	x								x	S	P
6	x		x							x	x	x							x	S	P
10	x		x	x						x	x		x						x	S	P
12	x		x							x	x			x					x	S	P
21	x		x	x						x	x	x			C	x			x	S	P
32	x		x	x						x	x	x	x			x			x	S	P
35	x	C	x	x	x	x	x	x										C		P/C	
37	x		x	x						x	x	x							x	S	P
38	x		x							x	x	x							x	S	P
8-12	x		x	x						x	x	x	x	x					x	S	P
17	x		x	x						x	x	x	x		x	C			x	S	P
22	x	x	x	x	x	x	C	x		x	x	x						x	x	P	P
27	x		x	x		x				x	x	x	x	x					x	S	P
29	x		x			x				x	x	x	x						x	S	P
9-2	x		x	x	x	x				x	x	x	x	x					x	S	P
10	x		x	x		x				x	x	x	x	x					x	S	P
11	x	x	x	x		x				x	x	x	x	x				x	x	P	P
	41	30	57	28	19	28	61	62		30	50	25	26	20	42	56		30	50		

Table 7.6 Complex genus 3-3/4-17

3-3	Counts: 156																			
#3	1	3																		
#4	9	2	3	4	7	12	15	17	18	19										
#5	25	1	2	3	4	6	8	9	10	11	13	14	16	17	18	19	21	22	26	28
#6	43	1	2	3	4	5	6	8	9	10	11	12	13	14	15	16	17	18	19	20
		29	30	31	34	36	37	39	40	41	42	43	44	45	46	47	48	49	50	
#7	37	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
		26	27	28	29	30	31	32	33	34	36	37	38							
#8	29	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
#9	12	1	2	3	4	5	6	7	8	9	10	11	12							

4-17	Counts: 84																			
#3	2	3	11																	
#4	1	17																		
#5	4	11	16	21	32															
#6	16	8	10	13	14	15	16	19	20	27	31	36	44	46	47	49	50			
#7	24	2	3	4	6	10	11	12	13	16	17	18	20	21	22	23	25	26	27	29
#8	25	1	2	3	4	5	7	8	10	11	12	13	14	15	16	17	18	19	20	22
#9	12	1	2	3	4	5	6	7	8	9	10	11	12							

(cont.)

Table 7.6 (cont.) Complex genus 3-3/4-17

	Counts: 82
Primary sets	
#3 /	3
#4 /	17
#5 +	16 21 32
#6 /6	8 10 13 14 15 16 19 20 27 31 36 44 46 47 49 50
#7 23	2 3 4 6 10 11 12 13 16 17 18 20 21 22 23 25 26 27 29 31 32 37 38
#8 25	1 2 3 4 5 7 8 10 11 12 13 14 15 16 17 18 19 20 22 23 24 26 27 28 29
#9 /2	1 2 3 4 5 6 7 8 9 10 11 12

[illegible]

Genus total: 157

Table 7.14 Forte genera (Full and Reduced matrices) bb. 80-168

	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12
9/3-2					o	o	x					
3-3						o		o	x			
3-4								o		x		
3-5	x											
3-6		x										
3-7							o				x	o
3-8		x										
9-10			x									
9/3-11									o	x		o
4-3						x						
4-4								x				
4-7								x				
4-10							x					
4-11							x					
8/4-12		o	x			o						
4-13	o		x				o					
4-14										x		
4-15	o	x										
4-16	o	x										
8/4-17									x			
4-18	o		o						x			
4-19				o				o	o	x		
4-20										x		
8/4-22											x	o
4-23											x	
4-24		o		x								
8/4-27		o	o									x
4-28			x									
8-29	o	x										
5-1					o	x						
7/5-2					o	o	o	x				
5-5	o	o			o					x		
7-6	o	o						x				
5-9	o	o			o	o	x					
7-10	o	o	x			o	x					
7-11					o	o		o	o	x	o	o
7/5-12	o		x				x					
5-13	o	o		o	o	o		o	o	x		
5-17				o		o		o	o	x		
5-18	o	o	o			o		o	o	x		
5-20	o	o								x		
7/5-21				o				o	o	x		
5-22	o		o	o				o	o	x		
5-23							o			x	o	o
5-24	o	o					o				x	o
5-27							o			x	o	o

(continued)

Table 7.14 (cont.)

	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12
5-29	o	o	o				o			x	o	o
5-30	o	o		o				o	o	x	o	o
7/5-32	o	o	o						x			o
5-33		o		x								
5-34		o	o								x	o
7/5-35											x	o
7/5-37				o				o	o	x		o
7/5-38	o	o	o					o	o	x		o
6-3	o	o	o		o	o	o	x				
6-(6)38	o	x										
6-8					o	o	o	o	o	x	o	o
6-(11)40	o	o	o		o	o	o	o	o	x	o	o
6-14				o	o	o	o	o	o	x	o	o
6-16	o	o		o	o	o		o	o	x	o	o
6-19(44)	o	o	o	o				o	o	x		
6-(24)46	o	o	o			o	o	o	o	x	o	o
6-25	o	o	o				o			x	o	o
6-27	o	o	o			o	o		x			o
6-(28)49	o	o	o			o			x			o
6-29	o	o	o				o		x			o
6-31	o	o	o	o		o	o	o	o	x	o	o
6-32							o			x	o	o
6-33	o	o	o				o			x	o	o
6-34	o	o	o	o		o	o	o	o	x	o	o
Count: (f)	33	35	25	14	12	22	25	25	26	30	21	28
Count: (r)	1	6	6	2	0	2	6	5	7	30	6	1

Squo indices

(Full)

- .105: G10 (atonal-tonal)
- .103: G11 (dia)
- .095: G4 (augmented)
- .091: G9 (atonal-tonal)
- .089: G12 (dia-tonal)
- .087: G8 (atonal)
- .079: G3/7 (diminished)/(chroma-dia)
- .077: G2 (whole-tone)
- .075: G1 (atonal)
- .070: G6 (semichroma)
- .059: G5 (chroma)

(Reduced)

- .105: G10 (atonal-tonal)
- .030: G11 (dia)
- .024: G9 (atonal-tonal)
- .019: G3/7 (diminished)/(chroma-dia)
- .017: G8 (atonal)
- .014: G4 (augmented)
- .013: G2 (whole-tone)
- .006: G6 (semichroma)
- .003: G12 (dia-tonal)
- .002: G1 (atonal)

Table 7.15 (Reduced matrix) bb.80-123¹

	G2	G3	G5	G7	G8	G9	G10	G11
3-2				o				
3-4							o	
3-6	o							
3-7								o
3-8	o							
9-10		o						
3-11							o	
4-4					o			
4-10				o				
4-11				o				
4-14							o	
4-15	o							
4-16	o							
4-17						o		
4-19							o	
4-20							o	
8/4-22								o
4-24	o							
8/4-27	o							
4-28		o						
5-1			o					
5-2					o			
5-5							o	
5-9				o				
5-11							o	
5-12				o				
5-13							o	
5-17							o	
5-18							o	
5-20							o	
7/5-21							o	
5-23							o	
5-24								o
5-27							o	
5-29							o	
5-30							o	
5-32						o		
5-33	o							
5-34								o
7/5-35								o
5-37							o	
7/5-38							o	
6-3(36)					o			
6-(11)40							o	
6-14							o	
6-16							o	
6-19(44)							o	
6-(24)46							o	
6-25(47)							o	
6-29(50)						o		
6-32							o	
6-33							o	
6-34							o	
Count:	7	2	1	5	3	3	27	5

Squo indices
(Full)

G10 .124
G11 .117
G8/9 .087
G7 .084
G2 .078
G5 .072
G3 .071

(Reduced)

G10 .124
G11 .033
G7 .021
G2 .020
G8/9 .014
G3 .008
G5 .007

Table 7.16 (Reduced matrix) bb.123-31

	G1	G7	G10
3-2		o	
3-4			o
3-11			o
4-13	o		
4-16	o		
7-6	o		
7-10	o		
7-12	o		
5-20	o		
7-32	o		
6-(6)38	o		
6-8		o	
6-31	o		
Count:	9	2	2

Squo indices
(Full)

G1 .110

G7 .103

G10 .094

(Reduced)

G1 .110

G10 .038

G7 .017

Table 7.17 (Reduced matrix) bb.132-68

	G1	G2	G6	G8	G9	G10	G11
9/3-2			o				
3-3					o		
3-5	o						
3-6		o					
3-7							o
3-8		o					
9/3-11					o		
4-3			o				
4-7				o			
8/4-12			o				
4-13	o						
4-14						o	
4-15	o						
8/4-17					o		
4-18					o		
4-19					o		
4-20						o	
4-23							o
8-29	o						
7-2			o				
5-20						o	
5-22					o		
5-32					o		
5-33		o					
5-35							o
7-37					o		
6-27					o		
6-(28)49					o		
6-32						o	
Count:	4	3	4	1	10	4	3

Squo indices
(Full)

G9 .084

G10 .067

G1 .055

G6 .054

G2 .053

G8 .050

G11 .048

(Reduced)

G9 .084

G11 .036

G6/10 .034

G1 .022

G2 .016

G8 .008

Chapter 8

MUSICAL EXAMPLES AND OVERSIZE FIGURES AND TABLES

465

1

(c)

(CP2)

430

Ex. 8.1 cont.

Theme B Ba (-6+6) Bc (-2+1) e, Be (-4-4)

b.24 H, ob, bsn 3 Bb (-6-2) 7 Bb (-1-4) 18 Bf (-3+5)

B¹ b.56 str, pn

B² b.140 picc, fl

B³ b.172 picc, xyl

B⁴ b.255 vln

Ex. 8.1 cont.

Handwritten musical score for strings and woodwinds. The notation is on a single staff with a treble clef. The key signature has one flat (B-flat). The time signature is 4/4. The score includes various musical notations such as notes, rests, and dynamic markings. At the bottom, there are handwritten annotations: "2", "4/3", "b", "3", "4", "5", "6", "7", "8", "9", "10", "11", "12", "13", "14", "15", "16", "17", "18", "19", "20", "21", "22", "23", "24", "25", "26", "27", "28", "29", "30", "31", "32", "33", "34", "35", "36", "37", "38", "39", "40", "41", "42", "43", "44", "45", "46", "47", "48", "49", "50", "51", "52", "53", "54", "55", "56", "57", "58", "59", "60", "61", "62", "63", "64", "65", "66", "67", "68", "69", "70", "71", "72", "73", "74", "75", "76", "77", "78", "79", "80", "81", "82", "83", "84", "85", "86", "87", "88", "89", "90", "91", "92", "93", "94", "95", "96", "97", "98", "99", "100".

Handwritten musical notation on a single staff, featuring various notes, rests, and accidentals. The notation includes several measures with specific markings above them: $5 \quad +1-4(c\sharp)$, $5 \quad -3-3(c\flat)$, $11 \quad +6+3(c\sharp)$, $8 \quad -1-6(c\flat)$, and $13 \quad +2+1(c\flat)$. The piece concludes with the instruction $str(pix) \quad -4-6(c\sharp)$. The manuscript is dated $b.405$ in the upper right corner.

C4 "chorale"
 b.463
 1st
 b.479
 +3-2 (Ca)
 +3-6 (Cc)

Ex. 8.1 cont.

Theme C 3 cb (-1+6)

Handwritten musical notation for Theme C, measures 67-70. The notation includes a treble clef, a key signature of one flat (B-flat), and a common time signature. The melody is written on a five-line staff. Above the staff, there are annotations: "b.67", "3", "cb (-1+6)", "4", "Ce (+6+3)", "b.70", "15", "Cb (-3+3)", and "+3+6 (Ce)". The notes are connected by slurs and include various accidentals (sharps, flats, naturals).

C' 1 -1+3 (Ca)

Handwritten musical notation for C', measures 263-270. The notation includes a treble clef, a key signature of one flat (B-flat), and a common time signature. The melody is written on a five-line staff. Above the staff, there are annotations: "b.263", "1", "-1+3 (Ca)", "5", "+3-6 (Cc)", "b.270", "6", "-6-1 (Cb)", "b.275", "16", "+5+2 (Cc)", and "b.280". The notes are connected by slurs and include various accidentals (sharps, flats, naturals).

b.299 5+5+ (Ce)

Handwritten musical notation for b.299. The notation includes a treble clef, a key signature of one flat (B-flat), and a common time signature. The melody is written on a five-line staff. Above the staff, there are annotations: "b.299", "5+5+ (Ce)", and "3". The notes are connected by slurs and include various accidentals (sharps, flats, naturals).

Ex. 8.1 cont

Theme D (Offertorium)

Handwritten musical notation for Theme D (Offertorium). The notation is written on a grand staff (treble and bass clefs) with a key signature of one sharp (F#). The piece is in 3/4 time. The notation includes various musical symbols such as notes, rests, and accidentals. Above the staff, there are several measures of music with annotations: $7, Db(-4+5)$, $12, Dc(+3-2)$, $18, D\delta(-1+1)$, $25, Dc(+6+1)$, and $32, D(-6+6)$. The notation is labeled "strings" at the bottom.

Handwritten musical notation for Theme D (Offertorium). The notation is written on a grand staff (treble and bass clefs) with a key signature of one sharp (F#). The piece is in 3/4 time. The notation includes various musical symbols such as notes, rests, and accidentals. The notation is labeled "strings" at the bottom.

Handwritten musical notation for Theme D (Offertorium). The notation is written on a grand staff (treble and bass clefs) with a key signature of one sharp (F#). The piece is in 3/4 time. The notation includes various musical symbols such as notes, rests, and accidentals. The notation is labeled "strings" at the bottom.

Fig. 8.1 (cont.)

Bar	298	312	318	344	373	374	398	409	446	449	451	458
Tempo			<i>rit.</i>	<i>a tempo</i>	<i>rit.</i>	<i>a tempo</i>						
Theme				C ² _____		C ² _____	+ C ³	'B' _____				
Theme								'C' _____				
Theme (C ¹)			C ¹ _____									
Theme				D ¹ _____		D ¹ _____						
Inst	str	ww	str/brass	str/ww	str/ww	tpt/bass	+vln	str/ww	4-3	10-6	ww/brass	
Harm	3-2/4-1		4-1	4-3	4-3				'pillar'		4-3	4-3
Artic	timp-ost	canon	ostinato	'pillar'		ww/hrm-ost	ww/hrm-ost	dev	E		'scales'	'pillar'/timp
Centre	FGAb/F#		FGAb/Gb	D						A-Ab		C#/FGAb

[illegible]

Postludium

Postludium										Coda				
Bar	536	548	552	559	575	578	586	587	592	600	601	603	623	627
Tempo	♩	= ca. 60	<i>rit.</i>	♩ = ca. 46	♩ = ca. 63					<i>rit.</i>	♩ = ca. 160	♩ = ca. 63		
Theme					A _{T0} ———	A _{T1} ———								
Theme					CP _{T0} ———	B ³ ———								
Theme						+ 'B ² ' ———								
Theme					C ⁴ ———	+ 'D ¹ ' ———								
Theme						+ 'D'								
Inst	vw	str/pn/cymb	+timp	str	str/trb	str/trb	str/vw	belt	pice	pice/xyl	tpt	+timp	str/vw	t-bells
Harm	chrom	12-l			triadic						3-5			
Artic		chrm										timp-ost		chrm
Centre		B-B	C#		'chorale'							F#C#G#G	F#C#G#G/Eb	A Eb C-Bb

Table 8.1 Theme A - I-CCPs and variants

I-CCP				Segment
(+8+2)				
-4+2	+4-2			(1), (72) / 76
(+2-9)	(+10-15)			
	(-2+9)	(+15+2)		
+2+3	-2-3	+3+2	-3-2	(2), 29, 87 / (5), (49) / (26) / 61
(-9-4)				
+3-4				(3)
(-4+10)	(-10+4)			
-4-2	+2+4			(4), 38 / (75)
(-15+5)				
-3+5				(6)
(+5+10)	(-10-5)			
+5-2	+2-5			(7) / (9)
(+10-10)	(+2-14)			
-2+2	+2-2			(8), (11) / (47)
(-5+10)				
-5-2				(10)
(-10+13)	(-1+10)		(+1-10)	
+2+1	-1-2	-2-1	+1+2	(12), 73 / 34, (81) / 58, 80 / (74)
(+13-6)	(+6-13)	(-13+6)		
+1-6	+6-1	-1+6		(13), (17) / (15), 83 / (65)
-6+6				14, 23
(-13+13)				
-1+1				(16)
(-6-8)				
-6+4	+4-6			(18) / 55
(-8+15)	(-3+8)			
+4+3	-3-4			(19) / (71)
(+15-15)				
+3-3				(20)
(-15+14)	(-14+15)	(+3-14)		
(+9+2)	(-2+15)			
-3+2	-2+3	+3-2		(21), (45) / (25), (39), 77 / (78)
(-14+6)		(+10+6)	(+6+14)	
+2-6	-6+2	-2+6	+6-2	(22), 32 / 31 / 62, (82) / (24)
	(-14-2)			
+2+2	-2-2			(27), 28, 46 / 35, (48), 57, (79)
	(+6+9)			
+3-6	+6-3			30 / (63)
-6-1	-1-6	+6+1		33 / 41 / 66
-2+1	-1+2			36 / 86
+1-4				37
(+15-1)	(+9-11)			
+3-1	-3+1	+1-3		(40) / (50) / 70
(-6-7)	(-7-6)			
-6+5	+5-6			(42) / (43)
(-6+9)				
-6-3				(44)
(-11+13)				
+1+1				(51)
(+13+5)				
+1+5	+5+1	-1-5		(52) / 53, 69 / 59
+1+4				54
-6-2				56
-5-3	+3+5			60 / 68
(+9-13)				
-3-1	+1+3	-1-3		(64), 85 / 67 / 84

Ex. 8.2

Handwritten musical score for a string quartet, featuring staves for Violin I (Th. C), Violin II (Th. A), Viola (Th. B), and Cello/Double Bass (Th. D). The score includes various musical notations such as notes, rests, and dynamic markings, along with a section labeled "CP1" and a reference to "6-213".

Handwritten musical score for a 12-part setting, likely a Mass, featuring a vocal line (top staff) and a piano accompaniment (bottom staff). The score is divided into four systems, each with a time signature (9-5, 10-4, 12-1 (Maj), 12-1 (Maj)). The notation includes various musical symbols such as notes, rests, and dynamic markings.

Ex. 8.3

Cumulative bell-tone sonorities
7-16

b.85 Theme A78

pn (+ str., w.w. sustaining)

Ped. #.

Pitch class: 6 2 4 7 3 1 10 (10)(1) 8 (3) 11 5 9 0

6-23 6-236

b.94 T10

Ped. 4 6 9 5 3 0 10 1 7 11 2

12-1 b.98 T11

6-23

brass

brass + str.

3-5

7-16

b.102

8-12 11-1 11-1 (no C#)

5 7 10 6 4 1 11 2 8 0 3

Ex. 8.4

Theme A (Anteludium - Postludium) 7-16

b.110 Theme D (Offertorium)

Ex. 8.5

Handwritten musical score for Ex. 8.5, featuring multiple staves and measures. The score includes various musical notations such as notes, rests, and dynamic markings. Key elements include:

- Theme: D** (Measures 110-119)
- Bar: 110** (Measures 119-127)
- Bar: 127** (Measures 127-135)
- Bar: 135** (Measures 135-143)
- Bar: 143** (Measures 143-151)
- Bar: 151** (Measures 151-159)
- Bar: 159** (Measures 159-167)
- Bar: 167** (Measures 167-175)
- Bar: 175** (Measures 175-183)
- Bar: 183** (Measures 183-191)
- Bar: 191** (Measures 191-199)
- Bar: 199** (Measures 199-207)
- Bar: 207** (Measures 207-215)
- Bar: 215** (Measures 215-223)
- Bar: 223** (Measures 223-231)
- Bar: 231** (Measures 231-239)
- Bar: 239** (Measures 239-247)
- Bar: 247** (Measures 247-255)
- Bar: 255** (Measures 255-263)
- Bar: 263** (Measures 263-271)
- Bar: 271** (Measures 271-279)
- Bar: 279** (Measures 279-287)
- Bar: 287** (Measures 287-295)
- Bar: 295** (Measures 295-303)
- Bar: 303** (Measures 303-311)
- Bar: 311** (Measures 311-319)
- Bar: 319** (Measures 319-327)
- Bar: 327** (Measures 327-335)
- Bar: 335** (Measures 335-343)
- Bar: 343** (Measures 343-351)
- Bar: 351** (Measures 351-359)
- Bar: 359** (Measures 359-367)
- Bar: 367** (Measures 367-375)
- Bar: 375** (Measures 375-383)
- Bar: 383** (Measures 383-391)
- Bar: 391** (Measures 391-399)
- Bar: 399** (Measures 399-407)
- Bar: 407** (Measures 407-415)
- Bar: 415** (Measures 415-423)
- Bar: 423** (Measures 423-431)
- Bar: 431** (Measures 431-439)
- Bar: 439** (Measures 439-447)
- Bar: 447** (Measures 447-455)
- Bar: 455** (Measures 455-463)
- Bar: 463** (Measures 463-471)
- Bar: 471** (Measures 471-479)
- Bar: 479** (Measures 479-487)
- Bar: 487** (Measures 487-495)
- Bar: 495** (Measures 495-503)
- Bar: 503** (Measures 503-511)
- Bar: 511** (Measures 511-519)
- Bar: 519** (Measures 519-527)
- Bar: 527** (Measures 527-535)
- Bar: 535** (Measures 535-543)
- Bar: 543** (Measures 543-551)
- Bar: 551** (Measures 551-559)
- Bar: 559** (Measures 559-567)
- Bar: 567** (Measures 567-575)
- Bar: 575** (Measures 575-583)
- Bar: 583** (Measures 583-591)
- Bar: 591** (Measures 591-599)
- Bar: 599** (Measures 599-607)
- Bar: 607** (Measures 607-615)
- Bar: 615** (Measures 615-623)
- Bar: 623** (Measures 623-631)
- Bar: 631** (Measures 631-639)
- Bar: 639** (Measures 639-647)
- Bar: 647** (Measures 647-655)
- Bar: 655** (Measures 655-663)
- Bar: 663** (Measures 663-671)
- Bar: 671** (Measures 671-679)
- Bar: 679** (Measures 679-687)
- Bar: 687** (Measures 687-695)
- Bar: 695** (Measures 695-703)
- Bar: 703** (Measures 703-711)
- Bar: 711** (Measures 711-719)
- Bar: 719** (Measures 719-727)
- Bar: 727** (Measures 727-735)
- Bar: 735** (Measures 735-743)
- Bar: 743** (Measures 743-751)
- Bar: 751** (Measures 751-759)
- Bar: 759** (Measures 759-767)
- Bar: 767** (Measures 767-775)
- Bar: 775** (Measures 775-783)
- Bar: 783** (Measures 783-791)
- Bar: 791** (Measures 791-799)
- Bar: 799** (Measures 799-807)
- Bar: 807** (Measures 807-815)
- Bar: 815** (Measures 815-823)
- Bar: 823** (Measures 823-831)
- Bar: 831** (Measures 831-839)
- Bar: 839** (Measures 839-847)
- Bar: 847** (Measures 847-855)
- Bar: 855** (Measures 855-863)
- Bar: 863** (Measures 863-871)
- Bar: 871** (Measures 871-879)
- Bar: 879** (Measures 879-887)
- Bar: 887** (Measures 887-895)
- Bar: 895** (Measures 895-903)
- Bar: 903** (Measures 903-911)
- Bar: 911** (Measures 911-919)
- Bar: 919** (Measures 919-927)
- Bar: 927** (Measures 927-935)
- Bar: 935** (Measures 935-943)
- Bar: 943** (Measures 943-951)
- Bar: 951** (Measures 951-959)
- Bar: 959** (Measures 959-967)
- Bar: 967** (Measures 967-975)
- Bar: 975** (Measures 975-983)
- Bar: 983** (Measures 983-991)
- Bar: 991** (Measures 991-999)
- Bar: 999** (Measures 999-1007)
- Bar: 1007** (Measures 1007-1015)
- Bar: 1015** (Measures 1015-1023)
- Bar: 1023** (Measures 1023-1031)
- Bar: 1031** (Measures 1031-1039)
- Bar: 1039** (Measures 1039-1047)
- Bar: 1047** (Measures 1047-1055)
- Bar: 1055** (Measures 1055-1063)
- Bar: 1063** (Measures 1063-1071)
- Bar: 1071** (Measures 1071-1079)
- Bar: 1079** (Measures 1079-1087)
- Bar: 1087** (Measures 1087-1095)
- Bar: 1095** (Measures 1095-1103)
- Bar: 1103** (Measures 1103-1111)
- Bar: 1111** (Measures 1111-1119)
- Bar: 1119** (Measures 1119-1127)
- Bar: 1127** (Measures 1127-1135)
- Bar: 1135** (Measures 1135-1143)
- Bar: 1143** (Measures 1143-1151)
- Bar: 1151** (Measures 1151-1159)
- Bar: 1159** (Measures 1159-1167)
- Bar: 1167** (Measures 1167-1175)
- Bar: 1175** (Measures 1175-1183)
- Bar: 1183** (Measures 1183-1191)
- Bar: 1191** (Measures 1191-1199)
- Bar: 1199** (Measures 1199-1207)
- Bar: 1207** (Measures 1207-1215)
- Bar: 1215** (Measures 1215-1223)
- Bar: 1223** (Measures 1223-1231)
- Bar: 1231** (Measures 1231-1239)
- Bar: 1239** (Measures 1239-1247)
- Bar: 1247** (Measures 1247-1255)
- Bar: 1255** (Measures 1255-1263)
- Bar: 1263** (Measures 1263-1271)
- Bar: 1271** (Measures 1271-1279)
- Bar: 1279** (Measures 1279-1287)
- Bar: 1287** (Measures 1287-1295)
- Bar: 1295** (Measures 1295-1303)
- Bar: 1303** (Measures 1303-1311)
- Bar: 1311** (Measures 1311-1319)
- Bar: 1319** (Measures 1319-1327)
- Bar: 1327** (Measures 1327-1335)
- Bar: 1335** (Measures 1335-1343)
- Bar: 1343** (Measures 1343-1351)
- Bar: 1351** (Measures 1351-1359)
- Bar: 1359** (Measures 1359-1367)
- Bar: 1367** (Measures 1367-1375)
- Bar: 1375** (Measures 1375-1383)
- Bar: 1383** (Measures 1383-1391)
- Bar: 1391** (Measures 1391-1399)
- Bar: 1399** (Measures 1399-1407)
- Bar: 1407** (Measures 1407-1415)
- Bar: 1415** (Measures 1415-1423)
- Bar: 1423** (Measures 1423-1431)
- Bar: 1431** (Measures 1431-1439)
- Bar: 1439** (Measures 1439-1447)
- Bar: 1447** (Measures 1447-1455)
- Bar: 1455** (Measures 1455-1463)
- Bar: 1463** (Measures 1463-1471)
- Bar: 1471** (Measures 1471-1479)
- Bar: 1479** (Measures 1479-1487)
- Bar: 1487** (Measures 1487-1495)
- Bar: 1495** (Measures 1495-1503)
- Bar: 1503** (Measures 1503-1511)
- Bar: 1511** (Measures 1511-1519)
- Bar: 1519** (Measures 1519-1527)
- Bar: 1527** (Measures 1527-1535)
- Bar: 1535** (Measures 1535-1543)
- Bar: 1543** (Measures 1543-1551)
- Bar: 1551** (Measures 1551-1559)
- Bar: 1559** (Measures 1559-1567)
- Bar: 1567** (Measures 1567-1575)
- Bar: 1575** (Measures 1575-1583)
- Bar: 1583** (Measures 1583-1591)
- Bar: 1591** (Measures 1591-1599)
- Bar: 1599** (Measures 1599-1607)
- Bar: 1607** (Measures 1607-1615)
- Bar: 1615** (Measures 1615-1623)
- Bar: 1623** (Measures 1623-1631)
- Bar: 1631** (Measures 1631-1639)
- Bar: 1639** (Measures 1639-1647)
- Bar: 1647** (Measures 1647-1655)
- Bar: 1655** (Measures 1655-1663)
- Bar: 1663** (Measures 1663-1671)
- Bar: 1671** (Measures 1671-1679)
- Bar: 1679** (Measures 1679-1687)
- Bar: 1687** (Measures 1687-1695)
- Bar: 1695** (Measures 1695-1703)
- Bar: 1703** (Measures 1703-1711)
- Bar: 1711** (Measures 1711-1719)
- Bar: 1719** (Measures 1719-1727)
- Bar: 1727** (Measures 1727-1735)
- Bar: 1735** (Measures 1735-1743)
- Bar: 1743** (Measures 1743-1751)
- Bar: 1751** (Measures 1751-1759)
- Bar: 1759** (Measures 1759-1767)
- Bar: 1767** (Measures 1767-1775)
- Bar: 1775** (Measures 1775-1783)
- Bar: 1783** (Measures 1783-1791)
- Bar: 1791** (Measures 1791-1799)
- Bar: 1799** (Measures 1799-1807)
- Bar: 1807** (Measures 1807-1815)
- Bar: 1815** (Measures 1815-1823)
- Bar: 1823** (Measures 1823-1831)
- Bar: 1831** (Measures 1831-1839)
- Bar: 1839** (Measures 1839-1847)
- Bar: 1847** (Measures 1847-1855)
- Bar: 1855** (Measures 1855-1863)
- Bar: 1863** (Measures 1863-1871)
- Bar: 1871** (Measures 1871-1879)
- Bar: 1879** (Measures 1879-1887)
- Bar: 1887** (Measures 1887-1895)
- Bar: 1895** (Measures 1895-1903)
- Bar: 1903** (Measures 1903-1911)
- Bar: 1911** (Measures 1911-1919)
- Bar: 1919** (Measures 1919-1927)
- Bar: 1927** (Measures 1927-1935)
- Bar: 1935** (Measures 1935-1943)
- Bar: 1943** (Measures 1943-1951)
- Bar: 1951** (Measures 1951-1959)
- Bar: 1959** (Measures 1959-1967)
- Bar: 1967** (Measures 1967-1975)
- Bar: 1975** (Measures 1975-1983)
- Bar: 1983** (Measures 1983-1991)
- Bar: 1991** (Measures 1991-1999)
- Bar: 1999** (Measures 1999-2007)
- Bar: 2007** (Measures 2007-2015)
- Bar: 2015** (Measures 2015-2023)
- Bar: 2023** (Measures 2023-2031)
- Bar: 2031** (Measures 2031-2039)
- Bar: 2039** (Measures 2039-2047)
- Bar: 2047** (Measures 2047-2055)
- Bar: 2055** (Measures 2055-2063)
- Bar: 2063** (Measures 2063-2071)
- Bar: 2071** (Measures 2071-2079)
- Bar: 2079** (Measures 2079-2087)
- Bar: 2087** (Measures 2087-2095)
- Bar: 2095** (Measures 2095-2103)
- Bar: 2103** (Measures 2103-2111)
- Bar: 2111** (Measures 2111-2119)
- Bar: 2119** (Measures 2119-2127)
- Bar: 2127** (Measures 2127-2135)
- Bar: 2135** (Measures 2135-2143)
- Bar: 2143** (Measures 2143-2151)
- Bar: 2151** (Measures 2151-2159)
- Bar: 2159** (Measures 2159-2167)
- Bar: 2167** (Measures 2167-2175)
- Bar: 2175** (Measures 2175-2183)
- Bar: 2183** (Measures 2183-2191)
- Bar: 2191** (Measures 2191-2199)
- Bar: 2199** (Measures 2199-2207)
- Bar: 2207** (Measures 2207-2215)
- Bar: 2215** (Measures 2215-2223)
- Bar: 2223** (Measures 2223-2231)
- Bar: 2231** (Measures 2231-2239)
- Bar: 2239** (Measures 2239-2247)
- Bar: 2247** (Measures 2247-2255)
- Bar: 2255** (Measures 2255-2263)
- Bar: 2263** (Measures 2263-2271)
- Bar: 2271** (Measures 2271-2279)
- Bar: 2279** (Measures 2279-2287)
- Bar: 2287** (Measures 2287-2295)
- Bar: 2295** (Measures 2295-2303)
- Bar: 2303** (Measures 2303-2311)
- Bar: 2311** (Measures 2311-2319)
- Bar: 2319** (Measures 2319-2327)
- Bar: 2327** (Measures 2327-2335)
- Bar: 2335** (Measures 2335-2343)
- Bar: 2343** (Measures 2343-2351)
- Bar: 2351** (Measures 2351-2359)
- Bar: 2359** (Measures 2359-2367)
- Bar: 2367** (Measures 2367-2375)
- Bar: 2375** (Measures 2375-2383)
- Bar: 2383** (Measures 2383-2391)
- Bar: 2391** (Measures 2391-2399)
- Bar: 2399** (Measures 2399-2407)
- Bar: 2407** (Measures 2407-2415)
- Bar: 2415** (Measures 2415-2423)
- Bar: 2423** (Measures 2423-2431)
- Bar: 2431** (Measures 2431-2439)
- Bar: 2439** (Measures 2439-2447)
- Bar: 2447** (Measures 2447-2455)
- Bar: 2455** (Measures 2455-2463)
- Bar: 2463** (Measures 2463-2471)
- Bar: 2471** (Measures 2471-2479)
- Bar: 2479** (Measures 2479-2487)
- Bar: 2487** (Measures 2487-2495)
- Bar: 2495** (Measures 2495-2503)
- Bar: 2503** (Measures 2503-2511)
- Bar: 2511** (Measures 2511-2519)
- Bar: 2519** (Measures 2519-2527)
- Bar: 2527** (Measures 2527-2535)
- Bar: 2535** (Measures 2535-2543)
- Bar: 2543** (Measures 2543-2551)
- Bar: 2551** (Measures 2551-2559)
- Bar: 2559** (Measures 2559-2567)
- Bar: 2567** (Measures 2567-2575)
- Bar: 2575** (Measures 2575-2583)
- Bar: 2583** (Measures 2583-2591)
- Bar: 2591** (Measures 2591-2599)
- Bar: 2599** (Measures 2599-2607)
- Bar: 2607** (Measures 2607-2615)
- Bar: 2615** (Measures 2615-2623)
- Bar: 2623** (Measures 2623-2631)
- Bar: 2631** (Measures 2631-2639)
- Bar: 2639** (Measures 2639-2647)
- Bar: 2647** (Measures 2647-2655)
- Bar: 2655** (Measures 2655-2663)
- Bar: 2663** (Measures 2663-2671)
- Bar: 2671** (Measures 2671-2679)
- Bar: 2679** (Measures 2679-2687)
- Bar: 2687** (Measures 2687-2695)
- Bar: 2695** (Measures 2695-2703)
- Bar: 2703** (Measures 2703-2711)
- Bar: 2711** (Measures 2711-2719)
- Bar: 2719** (Measures 2719-2727)
- Bar: 2727** (Measures 2727-2735)
- Bar: 2735** (Measures 2735-2743)
- Bar: 2743** (Measures 2743-2751)
- Bar: 2751** (Measures 2751-2759)
- Bar: 2759** (Measures 2759-2767)
- Bar: 2767** (Measures 2767-2775)
- Bar: 2775** (Measures 2775-2783)
- Bar: 2783** (Measures 2783-2791)
- Bar: 2791** (Measures 2791-2799)
- Bar: 2799** (Measures 2799-2807)
- Bar: 2807** (Measures 2807-2815)
- Bar: 2815** (Measures 2815-2823)
- Bar: 2823** (Measures 2823-2831)
- Bar: 2831** (Measures 2831-2839)
- Bar: 2839** (Measures 2839-2847)
- Bar: 2847** (Measures 2847-2855)
- Bar: 2855** (Measures 2855-2863)
- Bar: 2863** (Measures 2863-2871)
- Bar: 2871** (Measures 2871-2879)
- Bar: 2879** (Measures 2879-2887)
- Bar: 2887** (Measures 2887-2895)
- Bar: 2895** (Measures 2895-2903)
- Bar: 2903** (Measures 2903-2911)
- Bar: 2911** (Measures 2911-2919)
- Bar: 2919** (Measures 2919-2927)
- Bar: 2927** (Measures 2927-2935)
- Bar: 2935** (Measures 2935-2943)
- Bar: 2943** (Measures 2943-2951)
- Bar: 2951** (Measures 2951-2959)
- Bar: 2959** (Measures 2959-2967)
- Bar: 2967** (Measures 2967-2975)
- Bar: 2975** (Measures 2975-2983)
- Bar: 2983** (Measures 2983-2991)
- Bar: 2991** (Measures 2991-2999)
- Bar: 2999** (Measures 2999-3007)
- Bar: 3007** (Measures 3007-3015)
- Bar: 3015** (Measures 3015-3023)
- Bar: 3023** (Measures 3023-3031)
- Bar: 3031** (Measures 3031-3039)
- Bar: 3039** (Measures 3039-3047)
- Bar: 3047** (Measures 3047-3055)
- Bar: 3055** (Measures 3055-3063)
- Bar: 3063** (Measures 3063-3071)
- Bar: 3071** (Measures 3071-3079)
- Bar: 3079** (Measures 3079-3087)
- Bar: 3087** (Measures 3087-3095)
- Bar: 3095** (Measures 3095-3103)
- Bar: 3103** (Measures 3103-3111)
- Bar: 3111** (Measures 3111-3119)
- Bar: 3119** (Measures 3119-3127)
- Bar: 3127** (Measures 3127-3135)
- Bar: 3135** (Measures 3135-3143)
- Bar: 3143** (Measures 3143-3151)
- Bar: 3151** (Measures 3151-3159)
- Bar: 3159** (Measures 3159-3167)
- Bar: 3167** (Measures 3167-3175)
- Bar: 3175** (Measures 3175-3183)
- Bar: 3183** (Measures 3183-3191)
- Bar: 3191** (Measures 3191-3199)
- Bar: 3199** (Measures 3199-3207)
- Bar: 3207** (Measures 3207-3215)
- Bar: 3215** (Measures 3215-3223)
- Bar: 3223** (Measures 3223-3231)
- Bar: 3231** (Measures 3231-3239)
- Bar: 3239** (Measures 3239-3247)
- Bar: 3247** (Measures 3247-3255)
- Bar: 3255** (Measures 3255-3263)
- Bar: 3263** (Measures 3263-3271)
- Bar: 3271** (Measures 3271-3279)
- Bar: 3279** (Measures 3279-3287)
- Bar: 3287** (Measures 3287-3295)
- Bar: 3295** (Measures 3295-3303)
- Bar: 3303** (Measures 3303-3311)
- Bar: 3311** (Measures 3311-3319)
- Bar: 3319** (Measures 3319-3327)
- Bar: 3327** (Measures 3327-3335)
- Bar: 3335** (Measures 3335-3343)
- Bar: 3343** (Measures 3343-3351)
- Bar: 3351** (Measures 3351-3359)
- Bar:**

[illegible]

6-244

Ex. 8.6 cont.

Handwritten musical score for Ex. 8.6 cont. (Measures 147-151). The score is written for a single melodic line on a five-line staff. Measure 147 begins with a treble clef and a key signature of one sharp (F#). The notation includes various intervals and accidentals. Above the staff, there are handwritten annotations: a bracket spanning measures 147-151 labeled "12-1", a circled "5-8" above measure 147, a circled "6-240" above measure 148, a circled "3-8" above measure 149, a circled "6-213" above measure 150, and a circled "7-8" above measure 151. The word "sim." (simile) is written below the staff in measure 148. Measure 149 contains a circled "4-7" below the staff. Measure 150 contains a circled "9-2" below the staff. Measure 151 contains a circled "8-1" below the staff. The score ends with a double bar line and a circled "6-21" above the final measure.

Handwritten musical score for Ex. 8.6 cont. (Measures 154-158). The score is written for a single melodic line on a five-line staff. Measure 154 begins with a treble clef and a key signature of one sharp (F#). The notation includes various intervals and accidentals. Above the staff, there are handwritten annotations: a bracket spanning measures 154-158 labeled "8-19", a circled "5-19" above measure 154, a circled "9-3" above measure 155, a circled "15-3" above measure 156, a circled "4-7" above measure 157, and a circled "7-22" above measure 158. The score ends with a double bar line and a circled "4-7" above the final measure.

Handwritten musical score for Ex. 8.6 cont. (Measures 160-164). The score is written for a single melodic line on a five-line staff. Measure 160 begins with a treble clef and a key signature of one sharp (F#). The notation includes various intervals and accidentals. Above the staff, there are handwritten annotations: a bracket spanning measures 160-164 labeled "9-3", a circled "4-7" above measure 160, a circled "9-3" above measure 161, a circled "4-7" above measure 162, a circled "5-218" above measure 163, and a circled "5-21" above measure 164. The word "(vns)" is written below the staff in measure 161. The score ends with a double bar line and a circled "4-7" above the final measure.

9-7 (cont.)

[illegible]

Handwritten musical score for a 12-measure piece, labeled "12-measure" at the top. The score is written on a grand staff (treble and bass clefs) and includes various musical notations such as notes, rests, and dynamic markings. The piece is divided into four measures, each containing a complex melodic line. The notation includes many accidentals (sharps, flats, naturals) and is heavily annotated with handwritten numbers and symbols, suggesting a specific performance style or a complex harmonic structure. The piece concludes with a double bar line and the word "Fin." written below the staff.

Ex. 8.7 cont.

b. 281

4-2 5-10 4-5 4-18 4-8 4-17

4-2 4-13 3-2 etc 4-8 5-21 4-17

Ex. 8.8

Handwritten musical score for Ex. 8.8, featuring multiple staves with notes, rests, and performance instructions. The score includes the following annotations:

- b.451** 4-3 5-10
- b.455**
- trps + ww (8vc)**
- 4-3 (all)**
- 3-2**
- trps**
- ring.**
- 4-3 (all)**
- 5-6**
- 4-7**
- ww, trb, etc**
- 4-3 2-1**
- 2-1 3-1 4-4 5-6 6-26**
- 6-243 7-1 7-6 7-11 6-16**

Handwritten musical score for Ex. 8.8, featuring multiple staves with notes, rests, and performance instructions. The score includes the following annotations:

- b.457**
- 3**
- ring**
- str + trb**
- 4-3**
- 5-16 5-16 5-16**
- 5-16**
- 6-24**
- tan-tan**
- sub. cyn**
- trp k**
- trb**
- 5-16 5-16 5-16**

Ex. 8.9

Tr. C4 'chorale'

Handwritten musical score for Ex. 8.9, Tr. C4 'chorale'. The score is written on a grand staff (treble and bass clefs). It includes various musical notations such as notes, rests, and accidentals. Below the staff, there are several measures of figured bass notation (e.g., 4-13, 4-18, 4-17, 4-11, 4-215, 4-1, 4-3, 4-1). The word "bass" is written below the first few measures, and "perc." is written below the last few measures.

Handwritten musical score for Ex. 8.9, Tr. C4 'chorale'. The score is written on a grand staff (treble and bass clefs). It includes various musical notations such as notes, rests, and accidentals. Below the staff, there are several measures of figured bass notation (e.g., 4-4, 4-215, 4-3, 4-2, 4-10, 3-3, 4-215, 4-3, 4-12, 4-13, 3-2, 3-3, 3-2, 3-3). The word "bass" is written below the first few measures, and "perc." is written below the last few measures.

Handwritten musical score for Ex. 8.9, Tr. C4 'chorale'. The score is written on a grand staff (treble and bass clefs). It includes various musical notations such as notes, rests, and accidentals. Below the staff, there are several measures of figured bass notation (e.g., 6-243, 6-246, 6-243, 6-33, 4-3, 5-10, 5-16, 5-16). The word "bass" is written below the first few measures, and "perc." is written below the last few measures.

Ex. 8.10

Handwritten musical score for Ex. 8.10, featuring a complex arrangement of staves with notes, rests, and various annotations including 'b.508', 'b.517', and numerical sequences like '6-242', '6-246', '6-243', '6-244', '6-245', '6-246', '6-247', '6-248', '6-249', '6-250', '6-251', '6-252', '6-253', '6-254', '6-255', '6-256', '6-257', '6-258', '6-259', '6-260', '6-261', '6-262', '6-263', '6-264', '6-265', '6-266', '6-267', '6-268', '6-269', '6-270', '6-271', '6-272', '6-273', '6-274', '6-275', '6-276', '6-277', '6-278', '6-279', '6-280', '6-281', '6-282', '6-283', '6-284', '6-285', '6-286', '6-287', '6-288', '6-289', '6-290', '6-291', '6-292', '6-293', '6-294', '6-295', '6-296', '6-297', '6-298', '6-299', '6-300'.

487

Ex. 8.11

Handwritten musical score for Ex. 8.11, featuring three staves and various musical notations.

Staff 1 (Top): Labeled "b. 575". It begins with a treble clef and a key signature of one sharp (F#). The notation includes a whole note chord (F#, C#) and a half note chord (F#, C#). The staff concludes with the label "Theme D'".

Staff 2 (Middle): Labeled "Theme A To". It begins with a treble clef and a key signature of one sharp (F#). The notation includes a whole note chord (F#, C#) and a half note chord (F#, C#). The staff concludes with the label "vlns".

Staff 3 (Bottom): Labeled "vln". It begins with a treble clef and a key signature of one sharp (F#). The notation includes a whole note chord (F#, C#) and a half note chord (F#, C#). The staff concludes with the label "vlns".

Measure Numbers and Fingerings:

- Measure 1: 4-229, 4-22
- Measure 2: 4-18, 4-14, 4-19
- Measure 3: 4-19, 4-229, 4-18
- Measure 4: 4-14, 5-217, 6-225
- Measure 5: 4-14, 4-229, 4-18
- Measure 6: 4-18, 4-14, 4-19
- Measure 7: 4-229, 4-22, 4-18, 4-14, 4-19
- Measure 8: 4-229, 4-22, 4-18, 4-14, 4-19
- Measure 9: 4-229, 4-22, 4-18, 4-14, 4-19
- Measure 10: 4-229, 4-22, 4-18, 4-14, 4-19
- Measure 11: 4-229, 4-22, 4-18, 4-14, 4-19
- Measure 12: 4-229, 4-22, 4-18, 4-14, 4-19
- Measure 13: 4-229, 4-22, 4-18, 4-14, 4-19
- Measure 14: 4-229, 4-22, 4-18, 4-14, 4-19
- Measure 15: 4-229, 4-22, 4-18, 4-14, 4-19
- Measure 16: 4-229, 4-22, 4-18, 4-14, 4-19
- Measure 17: 4-229, 4-22, 4-18, 4-14, 4-19
- Measure 18: 4-229, 4-22, 4-18, 4-14, 4-19
- Measure 19: 4-229, 4-22, 4-18, 4-14, 4-19
- Measure 20: 4-229, 4-22, 4-18, 4-14, 4-19
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- Measure 100: 4-229, 4-22, 4-18, 4-14, 4-19

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