

Schoenberg, Opus 11/I Pitch-Class Set Genera Matrix

	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12
6-z3	o	o	o		o	o	o	o				
6-z10	o	o	o		o	o	o	o	o	o		o
6-z13	o	o	o			o	o		o			
6-16	o	o		o	o	o		o	o	o	o	o
6-z19	o	o	o	o				o	o	o		
6-21	o	o	o	o	o	o	o	o	o	o		o
6-z36	o	o	o		o	o	o	o				
6-z39	o	o	o		o	o	o	o	o	o		o
6-z42	o	o	o			o	o		o			
6-z44	o	o	o	o				o	o	o		

Counts: 10 10 9 4 6 8 7 8 8 8 6 1 4

G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12
[SI]		[SII]		[SIII]	[SIV]

Squo Indices in Descending Order with Genera

- .229: G5 (chroma)
- .222: G3 (diminished)
- .216: G8 (atonal), G9 (atonal-tonal)
- .202: G4 (augmented)
- .197: G6 (semichroma)
- .176: G1 (atonal)
- .172: G7 (chroma-dia)
- .170: G2 (whole-tone)
- .162: G10 (atonal-tonal)
- .098: G12 (dia-tonal)
- .038: G11 (dia)

mm 15

lacking pcs 10, 11

5-21: {5, 1, 4, 5, 8, 9}

4-19: {9, 1, 4, 5}

4-19: {1, 5, 8, 9}

4-19: {5, 6, 9, 11}

4-19: {1, 2, 5, 9}

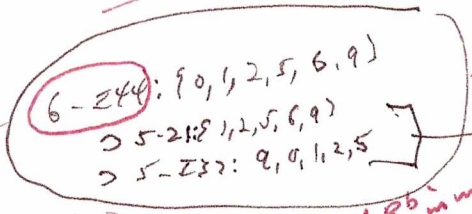
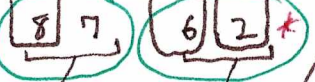
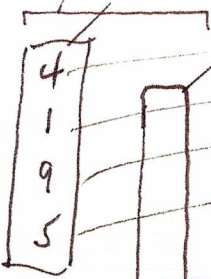
6-239: {1, 4, 5, 6, 7, 9} m. 18

5-217: {1, 2, 4, 5, 9}

7-217: {0, 1, 2, 4, 5, 6, 9?}

4-19: {5, 9, 0, 1}

memo form



articles

includes in (b)

3-3

instead of B⁵ in m. 11 (?)

Thematic motion of 2 different versions of theme

mm. 1-2

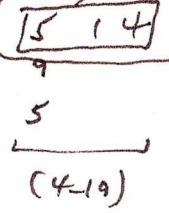
m. 9

5-23: {1, 4, 5, 6, 9}

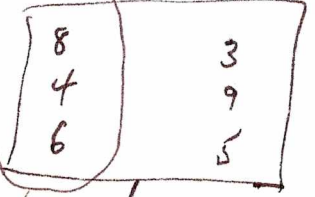


3-3 m. 3

as before



6-236: {2, 5, 6, 7, 8, 9} 'concrete'



first time

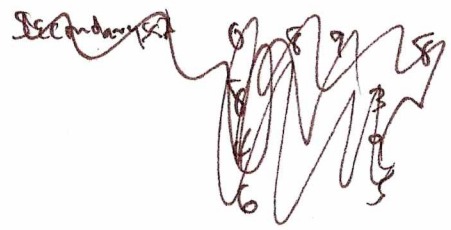
6-21: {0, 2, 4, 5, 6, 8}

6-23: {3, 4, 5, 6, 8, 9} cf. mm. 10-11 - 6-236

same triad types (3-6 and 3-8) as 6-236

M.B. in articles - on Z-relations in general

6-236: {1, 4, 5, 6, 7, 8}

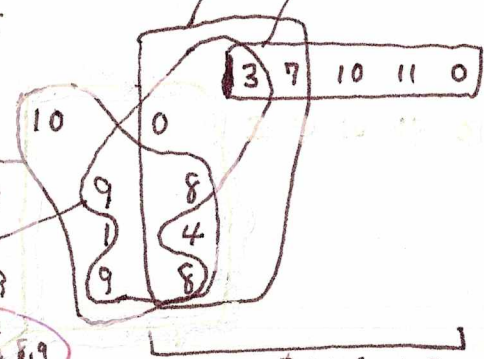


* Both motivic references and add. forms of 4-19 with core triad 1, 5, 9 shared

mm. 19-24

Lacking pcs {2, 5, 6}

Principal Sets

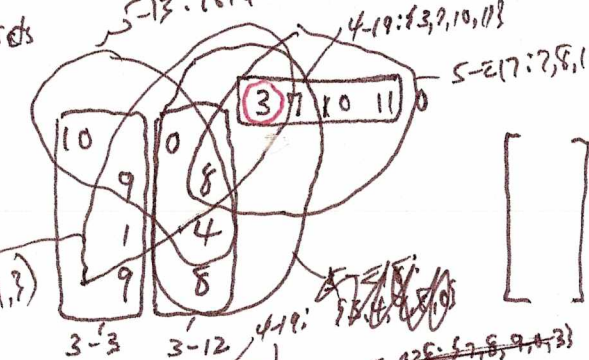


✓ 5-238: {5, 9, 10, 1, 4}
 ✓ 5-238: {5, 7, 10, 11, 0, 3}
 common: the doubled pcs 8, 9

7-21: {3, 4, 7, 8, 10, 11, 0}
 7-238: {5, 8, 9, 10, 0, 1, 3, 4}

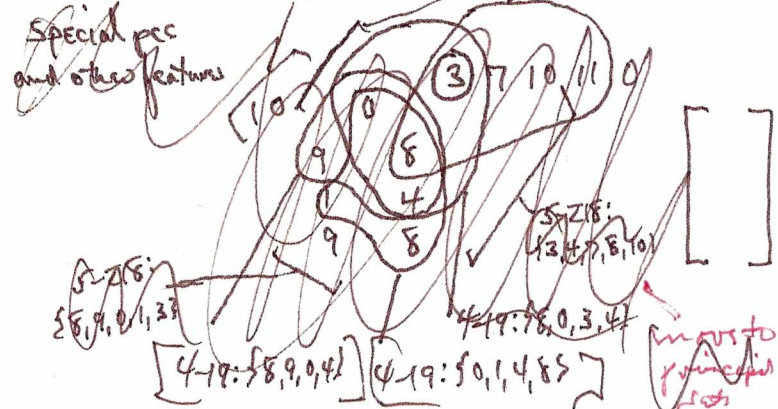
M.B. for article

Secondary Sets



5-218: {5, 9, 10, 1, 3}
 3-3
 3-12
 4-19: {3, 7, 10, 11, 0}

Special pcs and other features



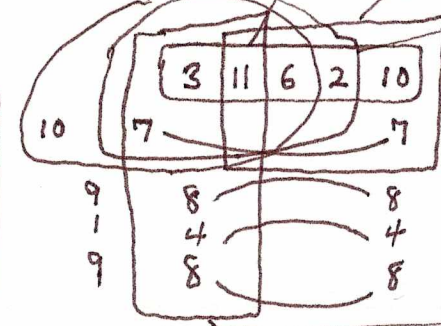
5-218: {5, 8, 9, 0, 1, 3}
 4-19: {5, 8, 9, 0, 4}

mm. 27 m. 24

(checking) pcs {0, 5}

in thematic 6-16: {5, 6, 9, 10, 13}

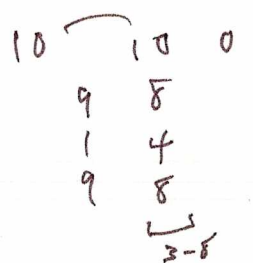
Op. 11/1-7



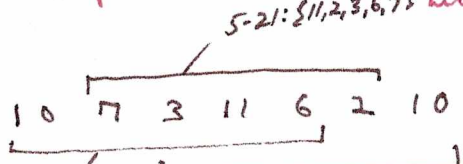
6-242: {7, 8, 9, 10, 1, 4} → m. 7
 5-21: {3, 4, 7, 8, 11}

Discuss relation between 5-237 and 5-21

not really, because of rhythm

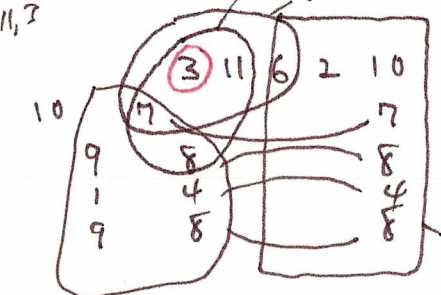


Complete imbrication of 5-21:

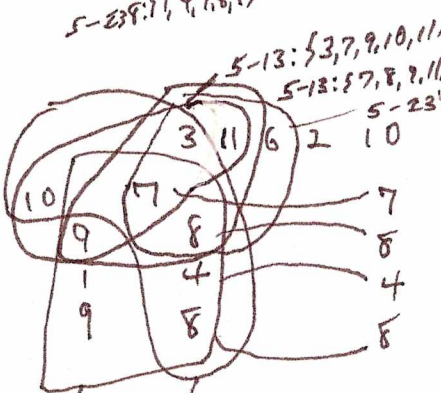


5-21: {5, 8, 9, 10, 11} included about
 5-21: {10, 11, 2, 3, 6} included above

no space



Imports to principal sets
 6-21: {2, 4, 6, 7, 8, 10}

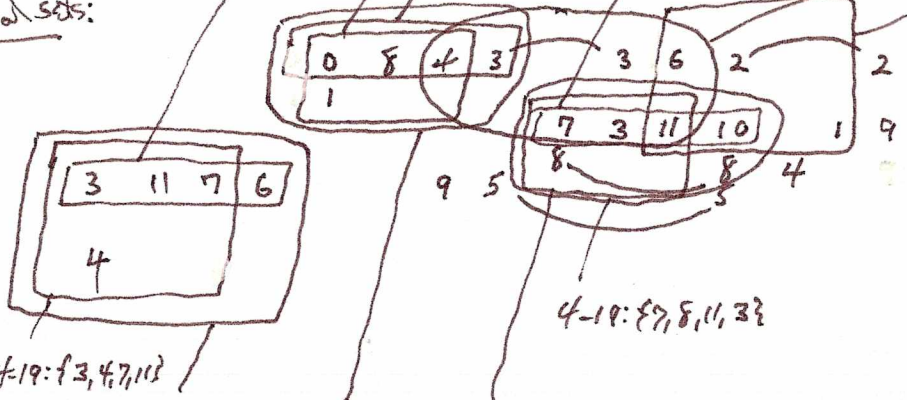


5-238: {5, 8, 9, 0, 4}
 4-19: {5, 0, 1, 4, 8, 3} Imports to principal sets
 5-237: {3, 8, 7, 8, 11} M.B.
 5-238: {5, 6, 7, 8, 11, 2}

m.m. 25-27

Principal sets:

4-19
5-217
(6-21 shown separately)

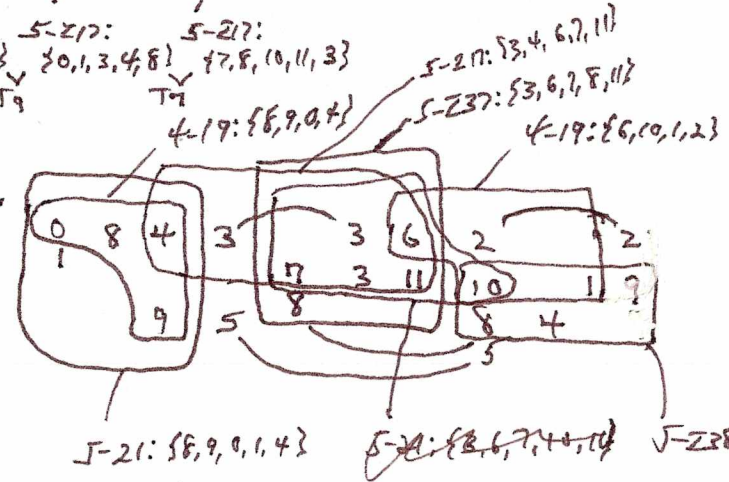


- 1) "Two-dimensional" 4-19 patterns/configurations
- 2) 6-21 - i.e. m. 9 invariant
- 3) 5-217 (in relation to 5-237/7-237 (develop.

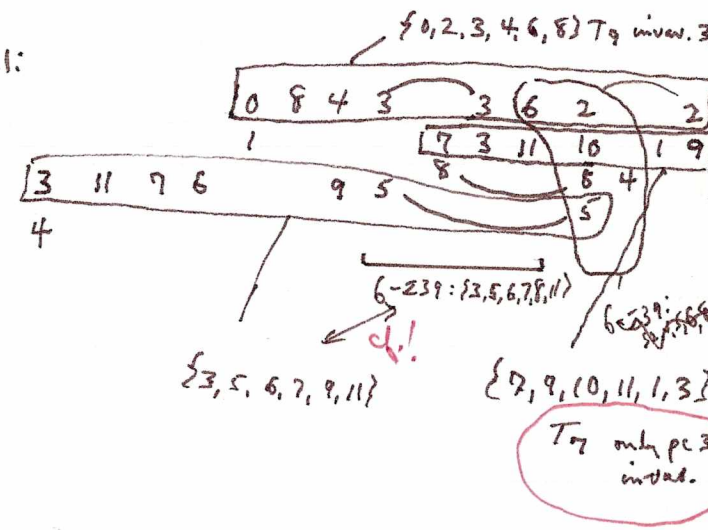
Secondary sets:

4-19
5-21
5-237
5-238
~~5-239~~

3 11 7 6
4



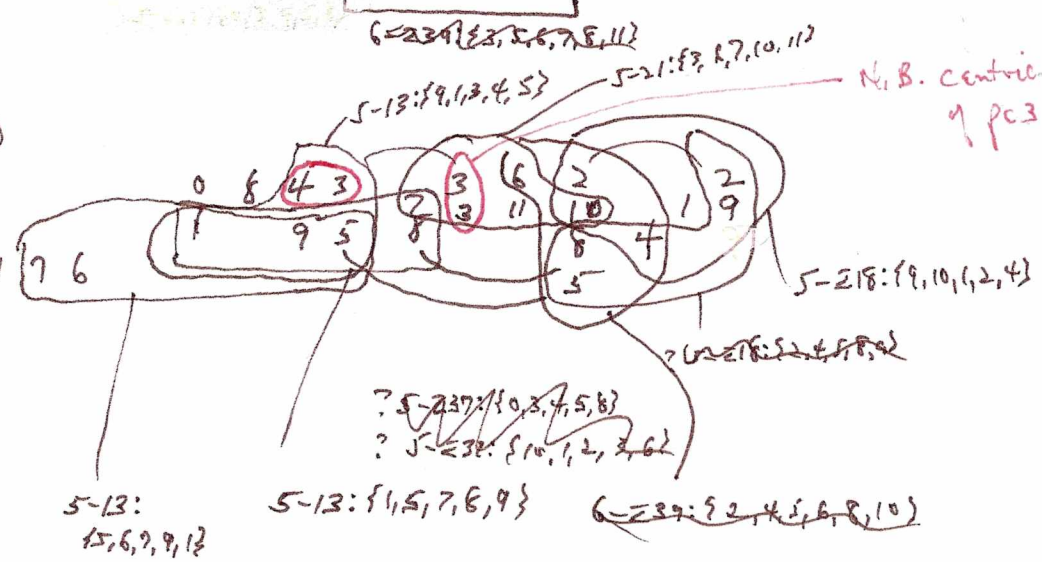
Rel set 6-21:
(m. 9)



Additional Conceivable (Secondary) sets:

5-13
5-218
5-237?
5-21

3
4



N.B. central node
9 pc3

6-239 from m. 4, where it contained 5-237

Special node of Es as invariant pc over 3 forms of 6-21

lacking pgs 6, 10

6-16: {11, 0, 3, 4, 5, 7, 2}
6-239: {11, 2, 3, 4, 5, 7, 2}
6-242: {2, 3, 4, 5, 8, 11}

6-16: {8, 9, 0, 1, 2, 4}
4-19: {0, 1, 4, 8}

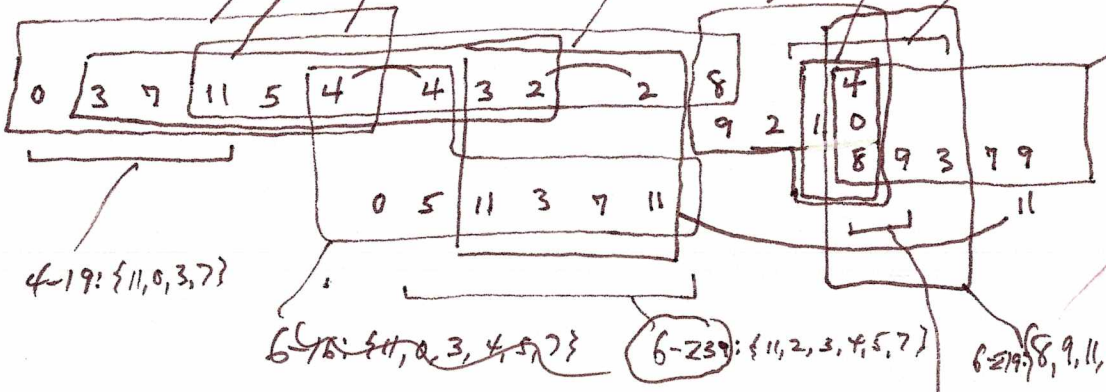
6-219: {8, 9, 0, 1, 3, 4}

6-244: {0, 3, 4, 7, 8, 9}

Note hexachordal imbrication
6-219 & 6-244 at end

Principal Sets:

- 6-16
- 6-239
- 6-244
- 4-19
- 6-219
- 6-244



4-19: {11, 0, 3, 7}

6-16: {11, 0, 3, 4, 5, 7}

6-239: {11, 2, 3, 4, 5, 7}

6-219: {8, 9, 0, 1, 3, 4}

4-19: {0, 1, 4, 8}

note intersection

Secondary Sets:

- 4-19
- 5-13
- 5-21
- 6-16
- 5-238
- 6-239

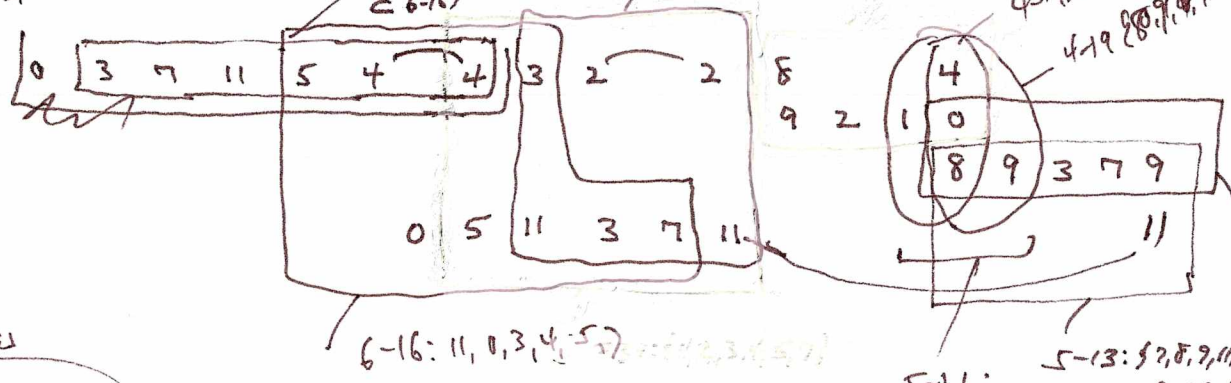
5-13: {3, 4, 5, 7, 11} = 6-16

4-19: {2, 11, 2, 3}

4-19: {0, 1, 4, 8}

4-19: {0, 1, 4, 8}

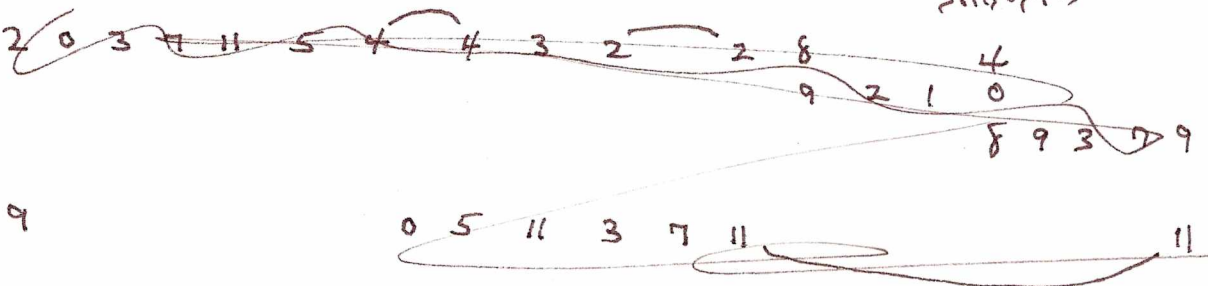
Special note of 5-13
Appearance of 6-239



5-238: {7, 8, 9, 0, 3} = 6-244

5-21: {8, 9, 0, 1, 4}
5-13: {2, 8, 9, 11, 3} = 6-16 & 6-219

Other features



9

Development
m. 34

m. 35

REGISTER IS BASIC TO SEGMENTATION

m. 36

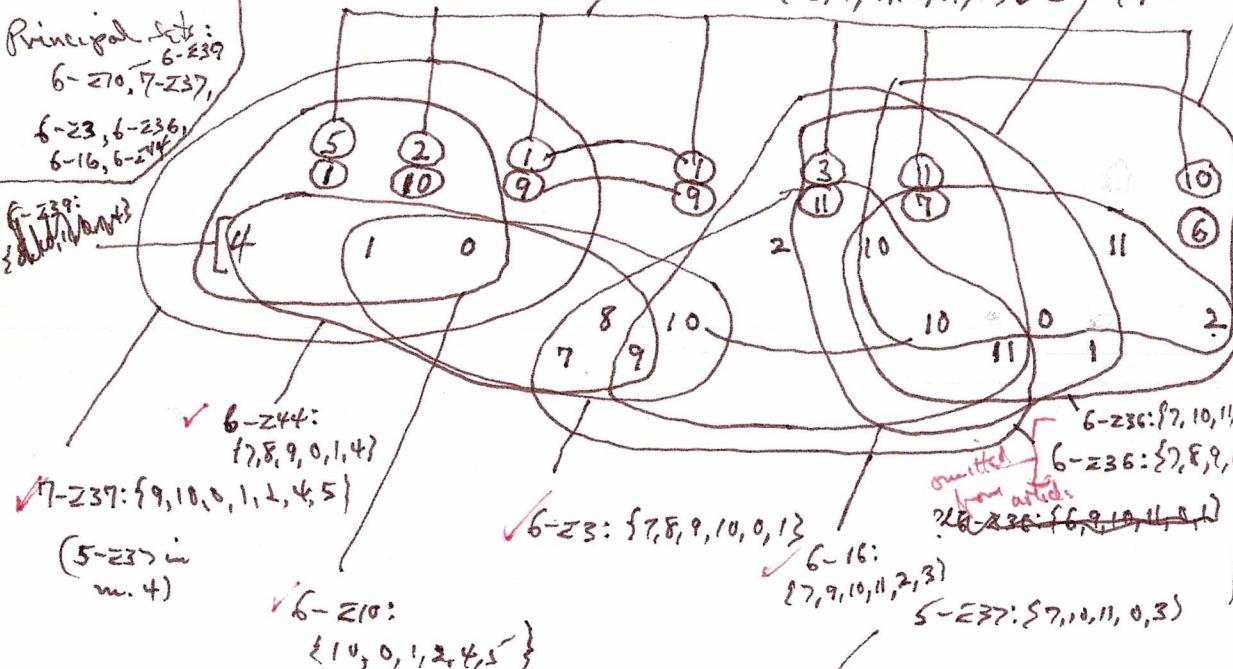
✓ 6-16: {6, 7, 10, 11, 0, 2}

SEE p. 116

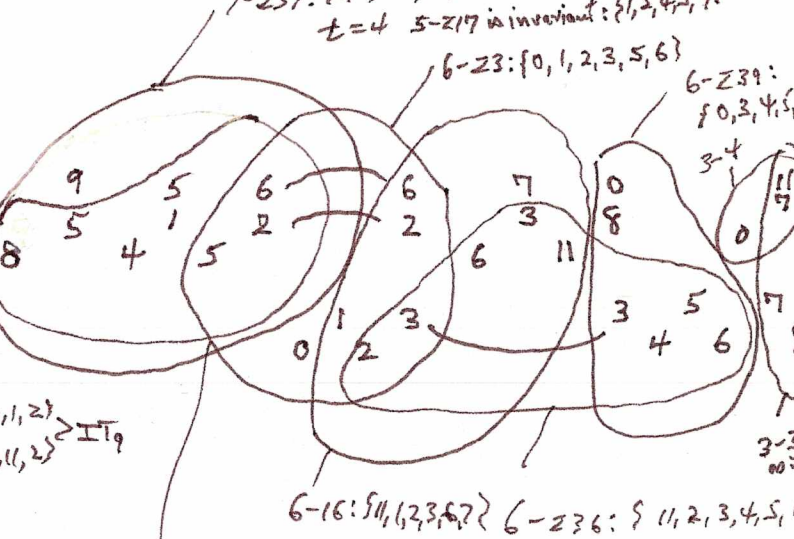
Op. 11/1 - 11a
m. 38

multiple 3-3's

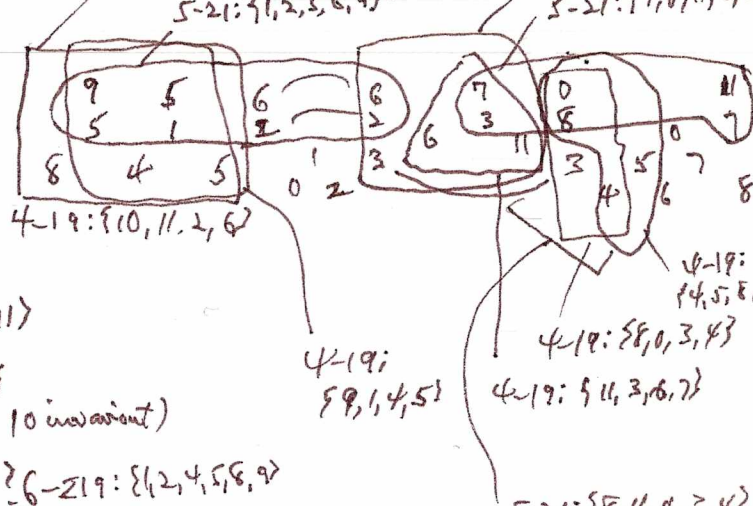
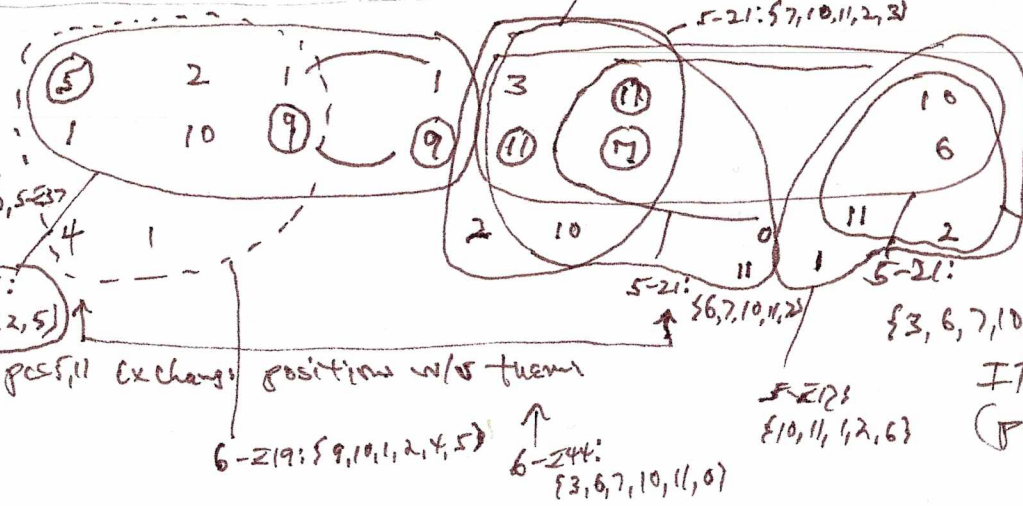
Principal set:
6-270, 7-237,
6-23, 6-236,
6-16, 6-244
6-239: {1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11}



no pc10



Invariants w/v theme circled
Form of 5-21, 5-217, 5-237
I form of 4-19 shown (TA6VE)
Also "shadow" (5-21: {9, 10, 1, 2, 5})



Registeral partitioning articulates forms of 6-210 melodic theme

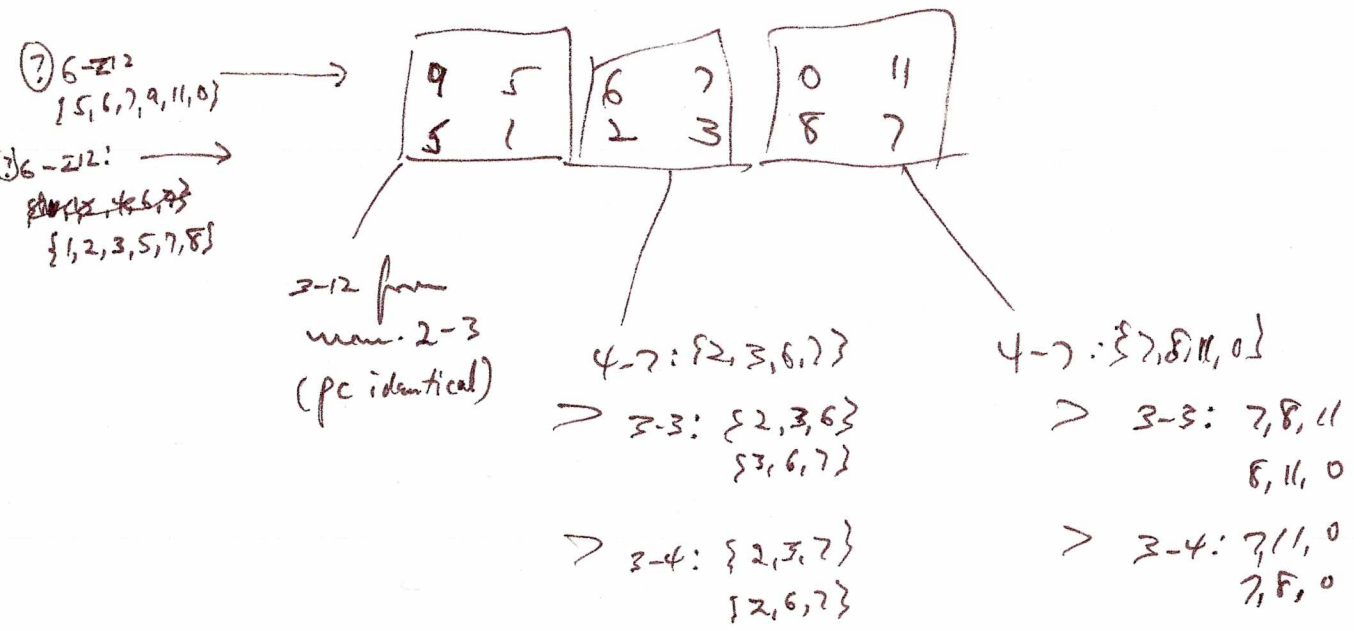
Not "chromatic" bass.

? 5-217: {1, 2, 4, 5, 9}
{3, 4, 6, 7, 11}

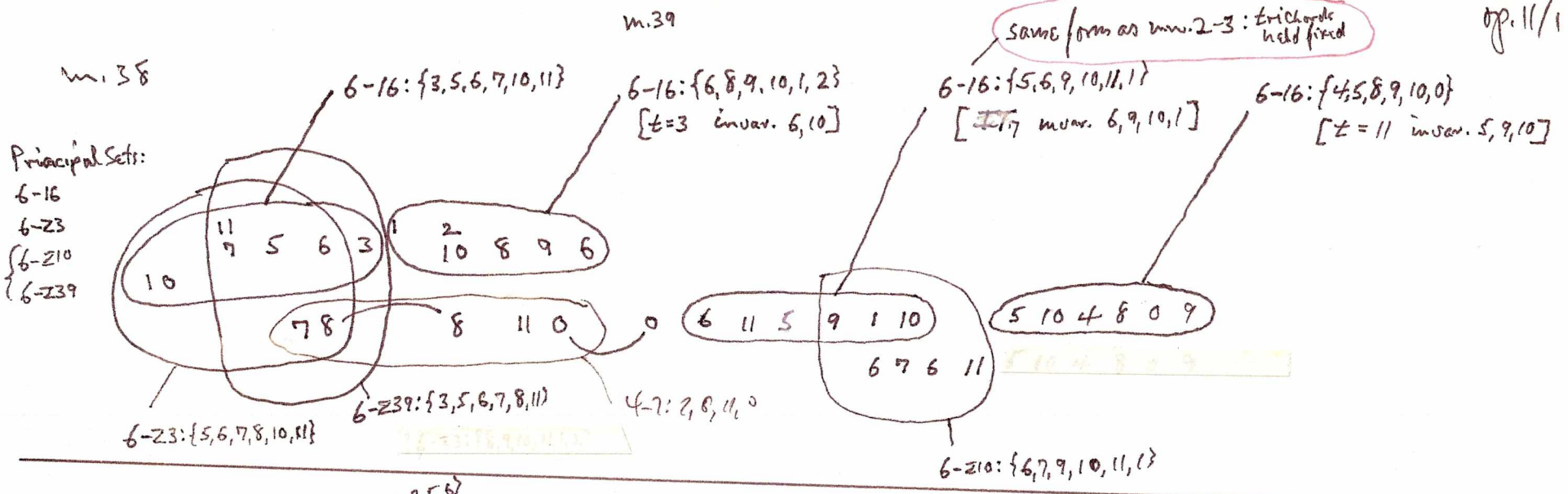
? 5-238: {3, 4, 5, 7, 11}

? 6-244: {11, 2, 3, 6, 7, 8}

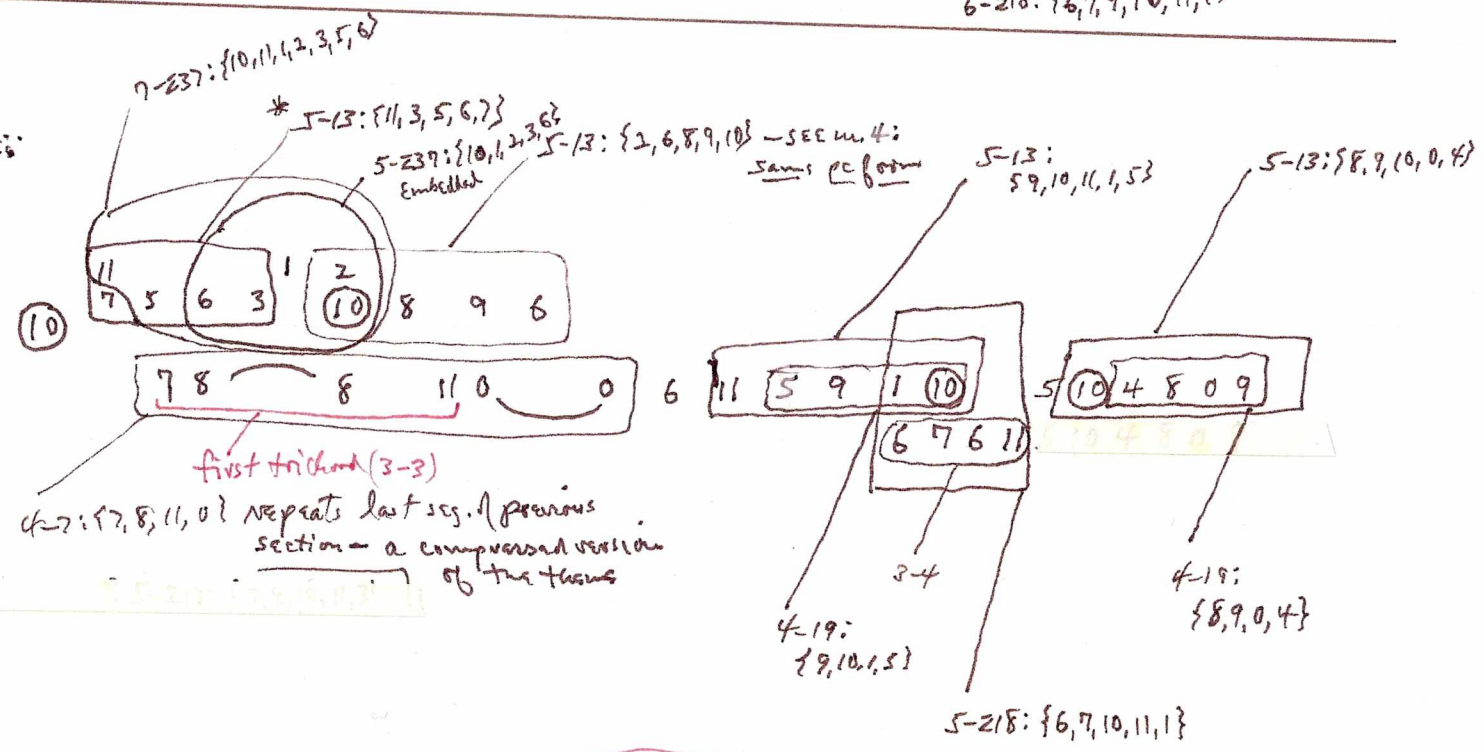
man. 36-39: R.H. part
 structured in a way ^{that} differs from
 the preceding R.H. part



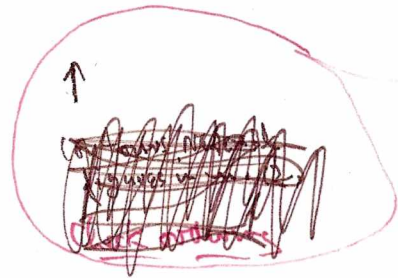
[4-7 is composed entirely of triads of
 the thematic types 3-3 and 3-4]



- Other features:
- invar. pc 10,
 - 4-19,
 - 5-13,
 - 5-218
 - 4-7
 - 5-239
 - 7-237
 - 3-4



* 5-13 originally occurred (in m. 4) as a subset of 6-239



ARTICLES

NOT YET COMPUTED

m. 40 (no pc 7)

derived from 6-242 by complementation

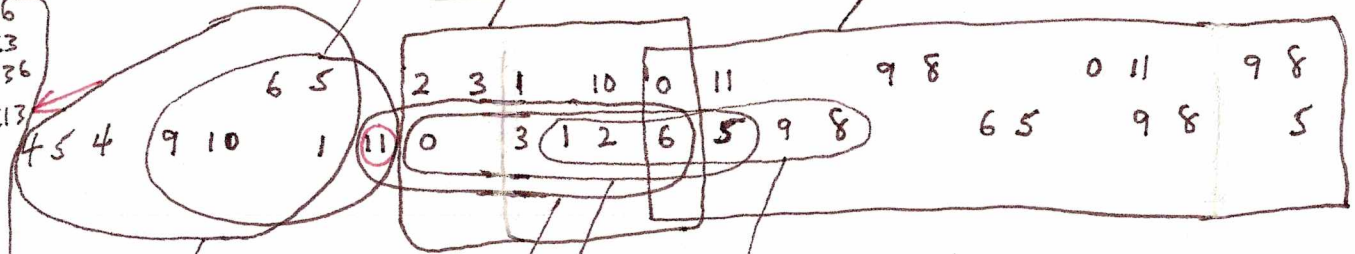
Principal Sets:

- 6-16
- {6-23
- 6-236
- ! 6-213
- 6-219
- 6-244
- 6-239

6-16: {5, 6, 9, 10, 11, 1}

6-239: {10, 0, 1, 2, 3, 6}

6-213: {5, 6, 8, 9, 11, 0}



6-244: {4, 5, 6, 9, 10, 1}

6-219: {1, 2, 5, 6, 8, 9}

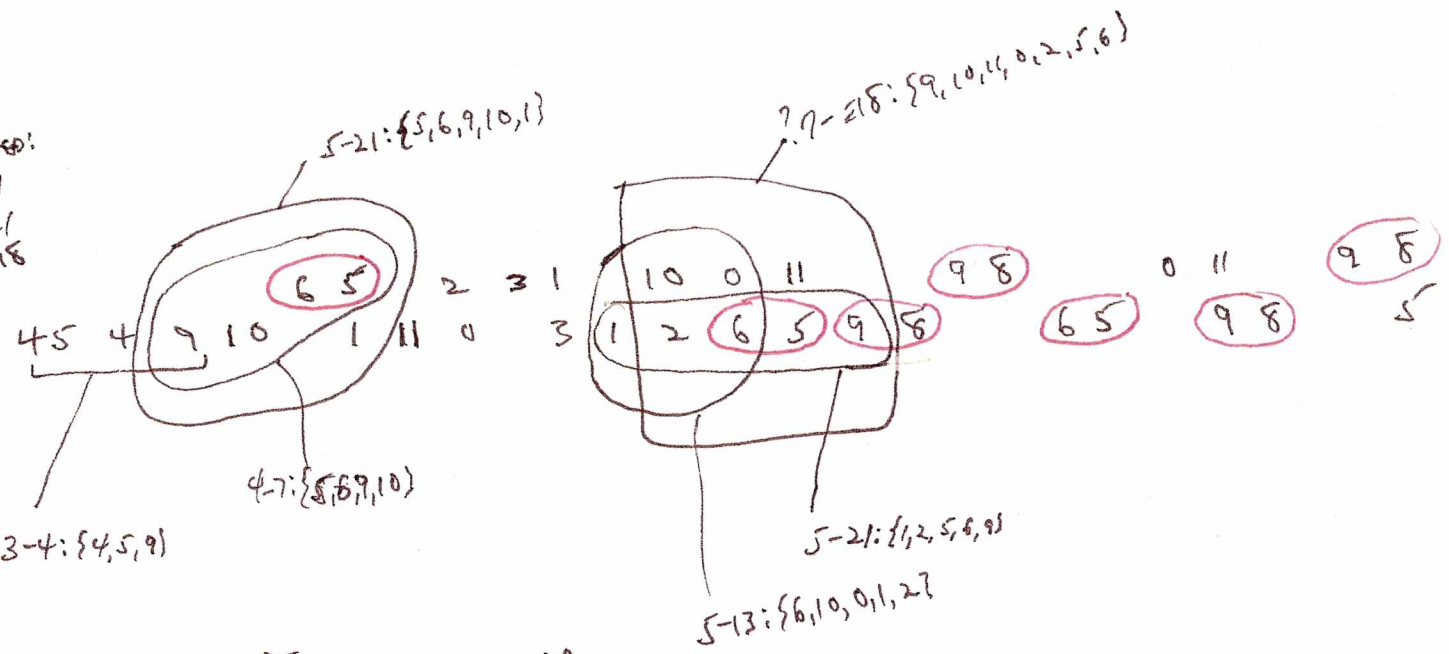
6-236: {0, 1, 2, 3, 5, 6}

6-23: {0, 1, 2, 3, 6}

Note 6-239 (6-210) and 6-213 (6-242)

Other Features:

- 4-7
- 5-21
- ? 7-218

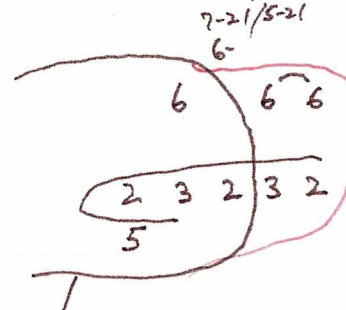


["canonic" section]

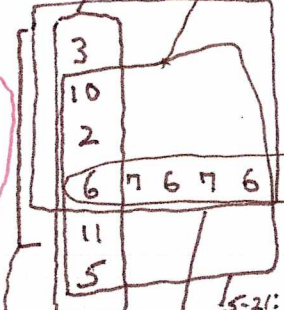
m. 41 (lacking 8, 9, 0, 1 - 4-7)

OP: 11/1 - 14
(HOT YET COMPLETE)

Principal Sets:
6-16
6-213 7-218
6-219
7-21/5-21
6-



6-213:
{2, 3, 5, 6, 8, 9}
linking set



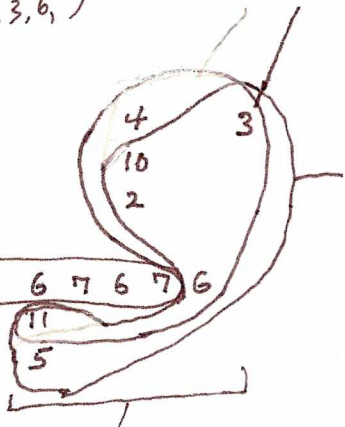
5-21: {6, 7, 10, 11, 2} embedded
5-21: {2, 3, 6, 7, 10} embedded

7-21: {10, 11, 2, 3, 5, 6, 7}
5-21: {7, 10, 11, 2, 3} with change to pc 7

6-219: {10, 11, 2, 3, 5, 6, 7}
6-219: {5, 6, 7, 10, 11, 2}

4-7: {2, 3, 6, 7}

6-219: {10, 11, 2, 3, 5, 6}



7-218: {10, 11, 2, 4, 5, 6, 7}

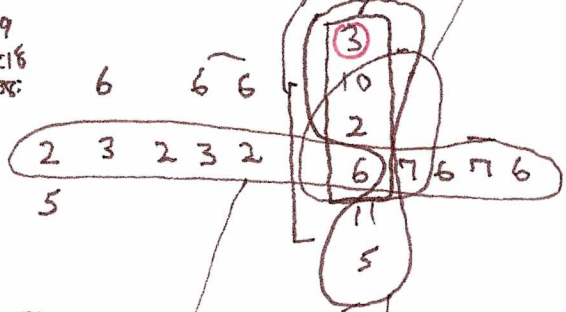
differs by one note
5-2/8 is common
under 7-218

good example of hexachordal association

good example of multiple forms of 5-21 within 7-21

Other Features:

4-7
4-19
5-218
5-238



4-19: {10, 11, 2, 6}

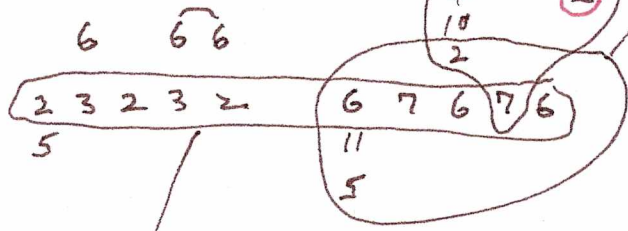
4-19: {2, 3, 6, 10}

4-19: {6, 7, 10, 2}

? 5-13: {2, 3, 4, 6, 10}

5-238: {2, 3, 4, 7, 10}

5-238: {11, 2, 5, 6, 9}



? 5-219: {2, 3, 5, 6, 10}

5-218: {10, 11, 2, 3, 5} the sustained chord

? 6-239: {2, 4, 5, 6, 7, 10}

? 5-13: {2, 3, 4, 6, 10}

? 6-16: {10, 11, 2, 3, 4, 6}

4-9: {2, 3, 6, 7}

4-7: {2, 3, 6, 7}

thematic trichords 3-3 and 3-4

8-7: {8, 9, 0, 1} => 3-3 FX
3-4 FX
and 3-11 FX

I

Mäßig (♩ = 66) 5-16: [4,5,7,8,11] CI (w/o a)

1 2 3 4 5

6-210 [4,5,7,8,11]

3-12

5-238 C 6-242

5-237

5-25 w/1 a# CII

6-239

6 7 8 rit. 9 langsamer 10 5-28 CII (w/o B)

6-217 p

6-236 [4,5,6,7,8,10]

5-31 CIII

5-25 w/o A# CII

5-2545-28: 6-222

11 Ex. 7 12 viel schneller 13

ppp

4-21 CII

mit Dämpfung (3. Pedal)

6-213 CII

4-2/4-2

6-16: [1,2,5,6,7,9]

7-31 CIII w/o b#

6-210: [1,1,2,3,5,6] Tto I

14 Die Tasten tonlos niederdrücken! 15 langsamer 16

Hca (d) (d.) 5-16 Aw I to I (d.)

4-19 H₁

sf ohne Ped...

p

ohne Ped...

sf

p

17 sehr langsam 18 19 20 21 22

5-237 b w 4 (T₁)

f

p

f

p

baw 9 [- - -] 5-28

6-23: [3,4,5,6,8,9]

4-2

4-2

CII 521

H₁

5-20 w/1: 6-2-0-8-9

CII

3

5

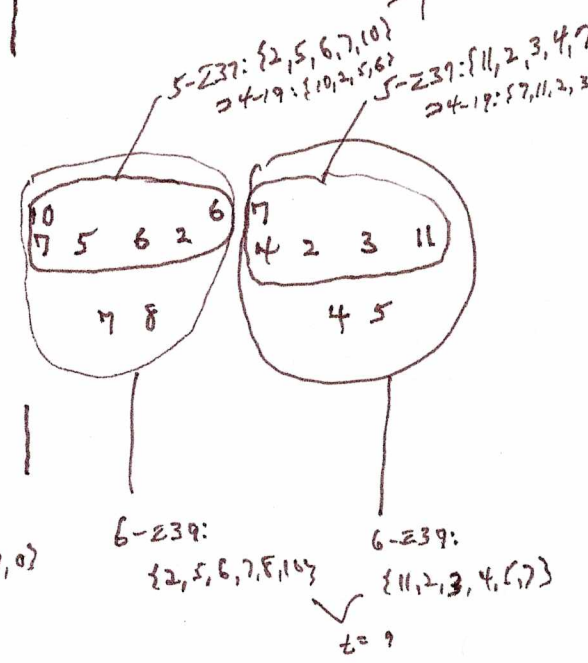
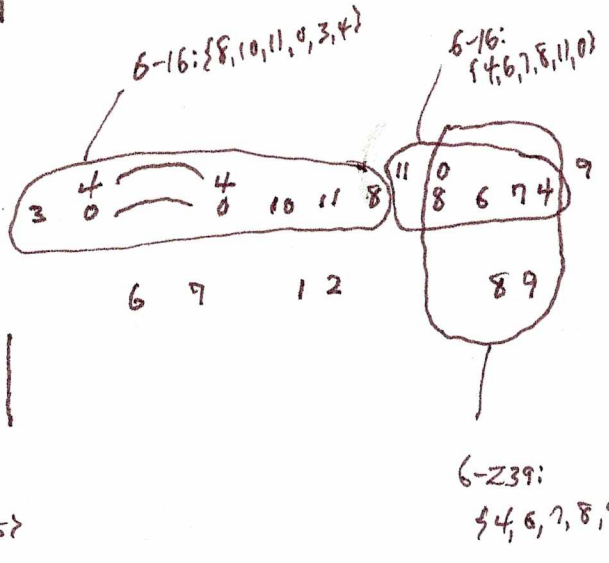
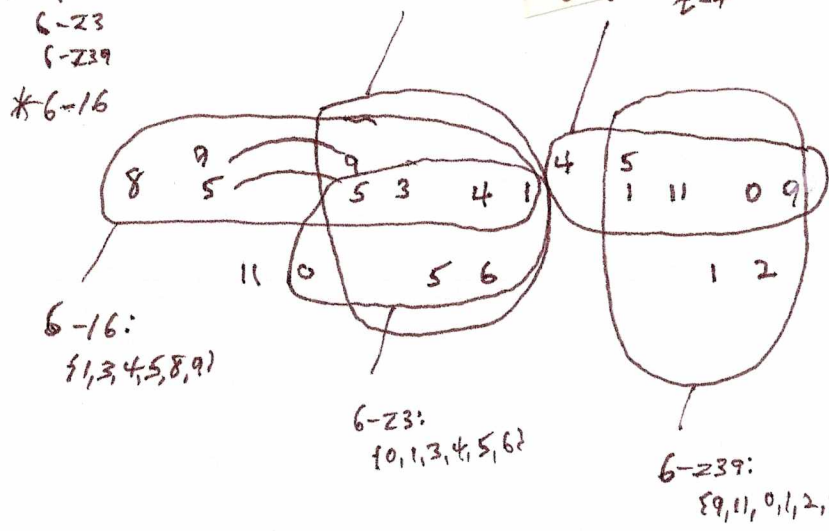
© 1910 by Universal Edition, Wien
renewed 1938 by Arnold Schönberg

m. 42 (lacking pcs 7, 10)
 Resembles m. 38 (1/2)

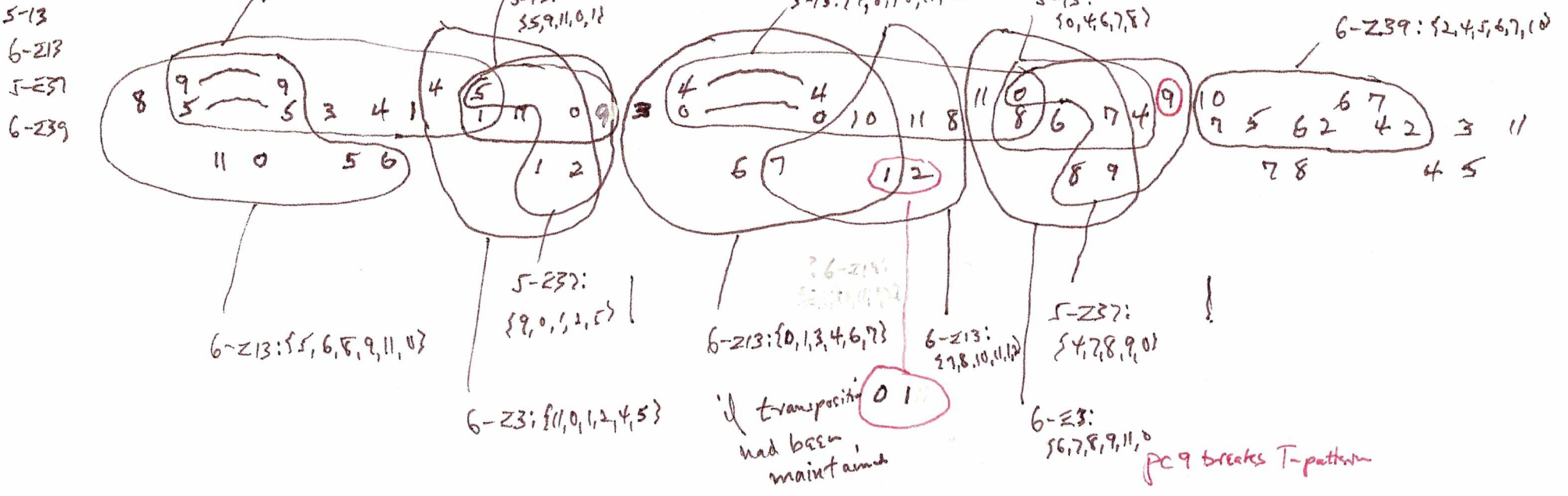
m. 43 (lacking pcs 3, 5)
 Transpositional of m. 42: $t=7$
 but with 2 exceptions - see below

m. 44 (lacking pcs 9, 0, 1)

Principal sets

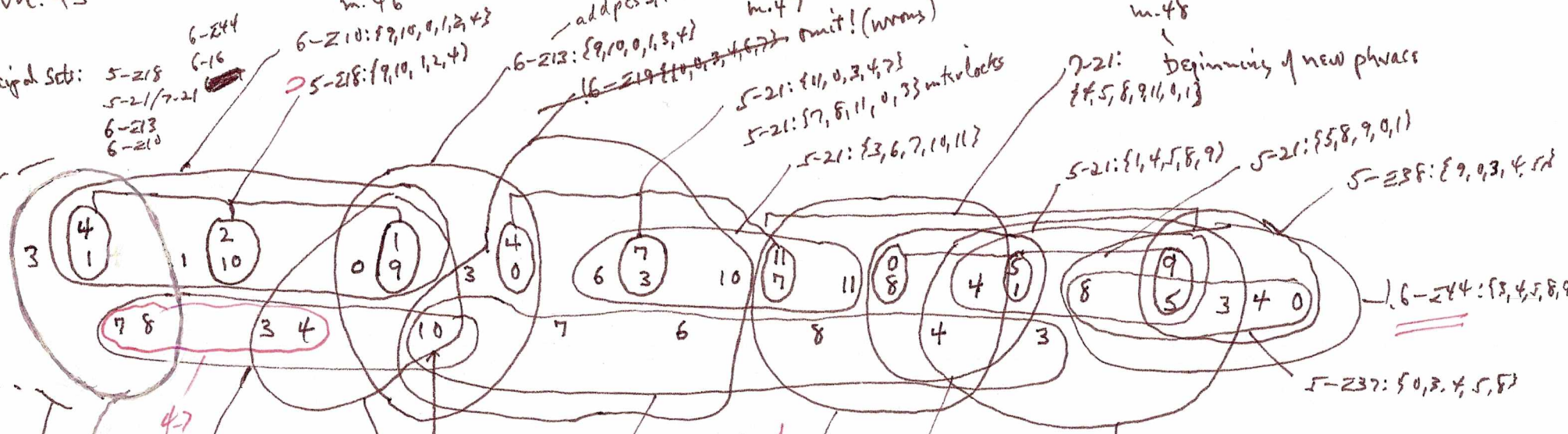


Other Features



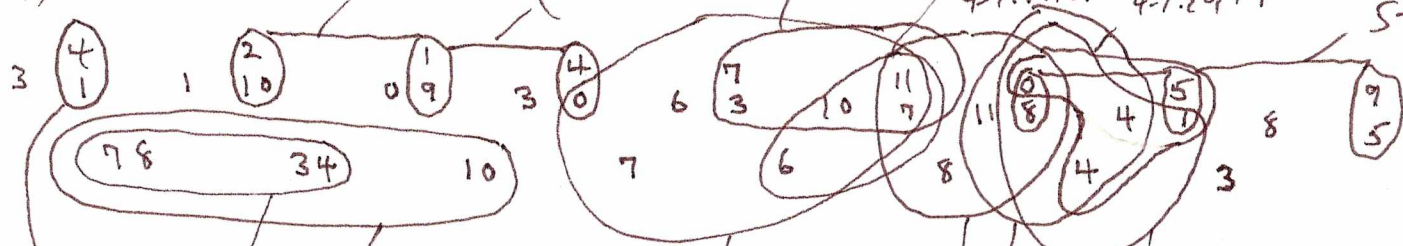
m. 45

Principal Sets:



Other Features:

- 4-7 6-244
- 4-19 7-217
- (4-17)



The only minor 3rd in the upper voice of this section

4-7: {3, 4, 7, 8} ref. to theme

6-244: {3, 6, 7, 10, 11, 0} 7-217: {6, 7, 8, 10, 11, 0, 3}

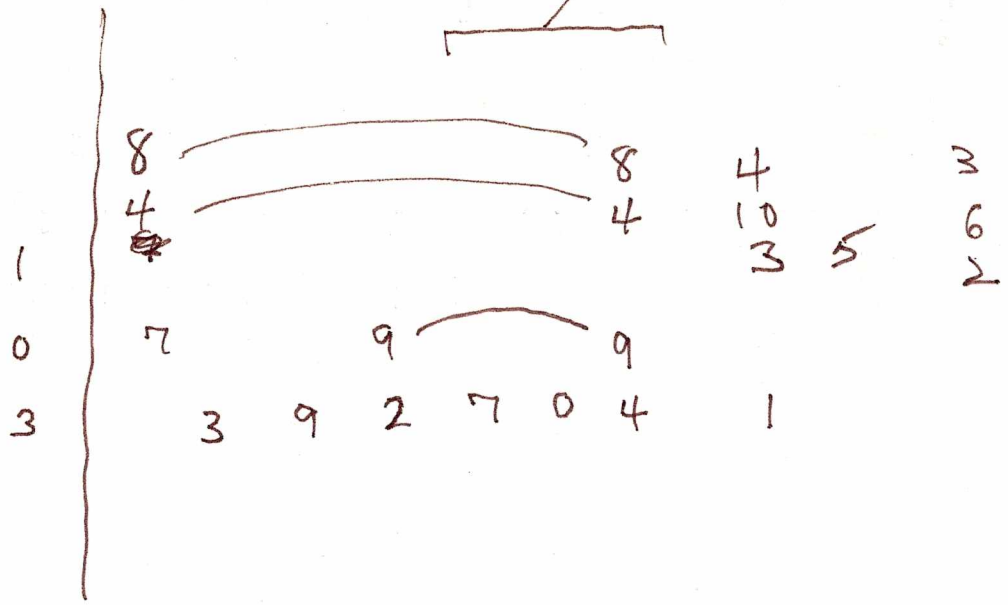
Article

3 successive periods in upper: S-218, S-21, S-217

Notes explicit from S-218 within 6-210

NOT 6 11 (5)

S-E37



NOT YET COMP
0p. 11/1-18

(m. 50)

Pseudo origins
wopes 10, 11, 5, 6

m. 51
[6-244: {5, 8, 9, 1, 4}]

begins song
16-210 in
IT₁₁

m. 52

T₁₀

T₁₁

Principal sets:

- 5-217
- [6-23]
- 6-210
- 6-213
- 6-16
- 6-219/44

5-217: {0, 1, 3, 4, 8}

6-210: {2, 3, 5, 6, 7, 9}

6-210: {2, 4, 5, 6, 8, 9}

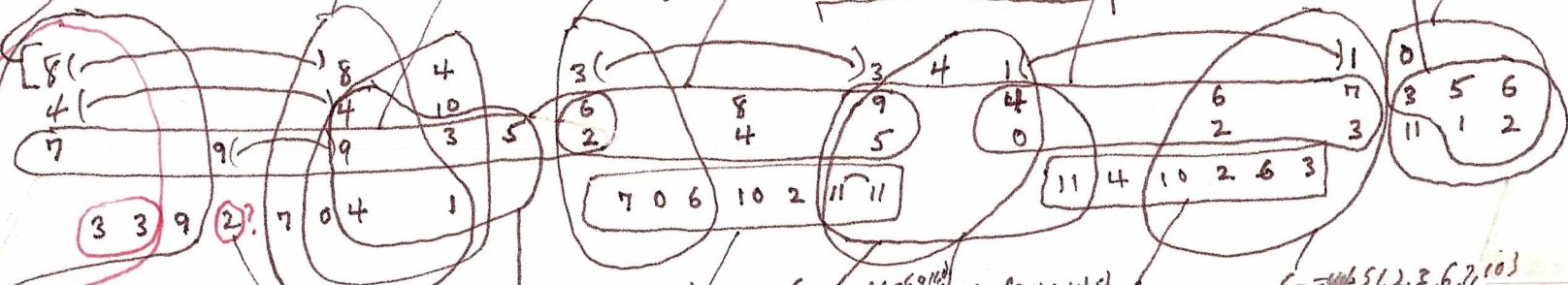
6-210: {0, 2, 3, 4, 6, 7}

6-210: {1, 1, 2, 3, 5, 6}

[6-23: {0, 1, 2, 3, 5, 6}]

5-218: {0, 2, 3, 6, 7}

7-13: {6, 7, 8, 10, 2}



(6-244) 6-219: {0, 1, 3, 4, 7, 8}

5-237: {4, 7, 8, 9, 0}

6-16: {1, 3, 4, 5, 8, 9}

6-16: {6, 7, 10, 11, 0, 2}

6-219: {4, 5, 6, 8, 10}

6-16: {9, 10, 11, 4, 5}

6-244: {5, 1, 2, 3, 6, 7, 10}

? ~~6-256: {9, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 0, 1, 2, 3, 4}~~

6-213: {9, 10, 0, 1, 3, 4}

7-238: {8, 9, 10, 0, 1, 2, 4}

4-19: {8, 9, 0, 4}

5-218: {0, 2, 3, 6, 7}

7-21: {0, 1, 3, 4, 5, 8, 9}

Other features:
3-3 reversed in 5-21

articles

- 4-7
- 4-19
- 5-13
- 5-218
- 5-21/7-21
- 5-237
- also vertical
- Enriched on top

ES

A-D ES-G

3-4: {3, 4, 5}

4-19: {8, 9, 0, 4}

5-13: {9, 6, 8, 4, 5}

3-3: {0, 1, 4}

5-21: {4, 5, 8, 9, 0}

5-21: {11, 2, 3, 6, 7}

4-19: {11, 3, 6, 7}

4-19: {11, 0, 3, 7}

5-218: {11, 1, 2, 5}

5-21: {0, 3, 4, 7, 8}

4-7: {3, 4, 7, 8}

5-232: {4, 7, 8, 9, 0}

4-7: {1, 2, 5, 6}

4-19: {6, 10, 11, 2}

5-13: {10, 11, 0, 2, 6, 7}

4-7: {4, 5, 8, 9}

4-7: {11, 0, 1, 4}

5-13: {2, 3, 6, 7, 10}

5-21: {2, 3, 4, 6, 10}

4-7: {1, 1, 5, 6}

4-7: {2, 3, 6, 7}

? 5-238: {9, 10, 1, 2, 5, 9, 0, 3, 4, 5}

pc2 in m. 50?

m. 50 is problematic

m. 53 **REPRUE** m. 54 no p.c.o

The problematic nts: C# or B#? - must be C# (C# on m. 5)

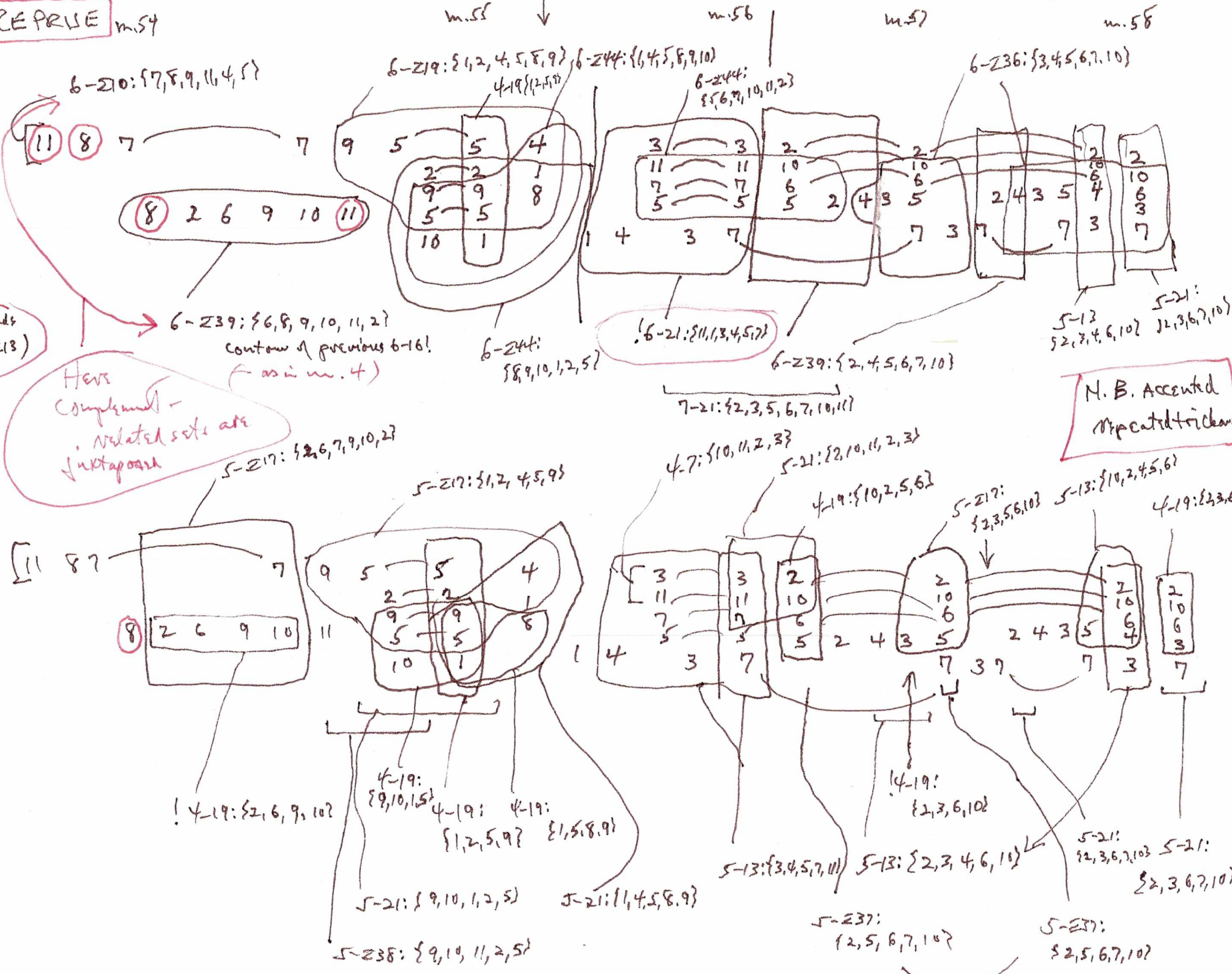
op. 11/1 - 19

- PRINCIPAL SETS
 4-19
 6-210 (thema)
 6-239
 6-219/44
 6-236
 ! 6-21

(all the hexachords except 6-213)

Here complement-related sets are juxtaposed

- Other Features:
 4-7
 4-19
 5-13
 5-21
 5-217
 ! 5-237
 ! 5-238



N.B. Accepted repeated trichord

Schoenberg, Op. 11/1 initial
 Rhythmic features of the theme
 which are developed to unify
 the opening music

44

5-235 (C-A-B-E-G)
 5-238 (IT6) invariants 7,11 have duration of b^2
 E partitioned by b^2 ; i.e. 3 of d
 b^1 partitioned by d^1
 a (crests)
 6-239 (complement of initial melodic theme)
 b dyad of a
 b (as before)

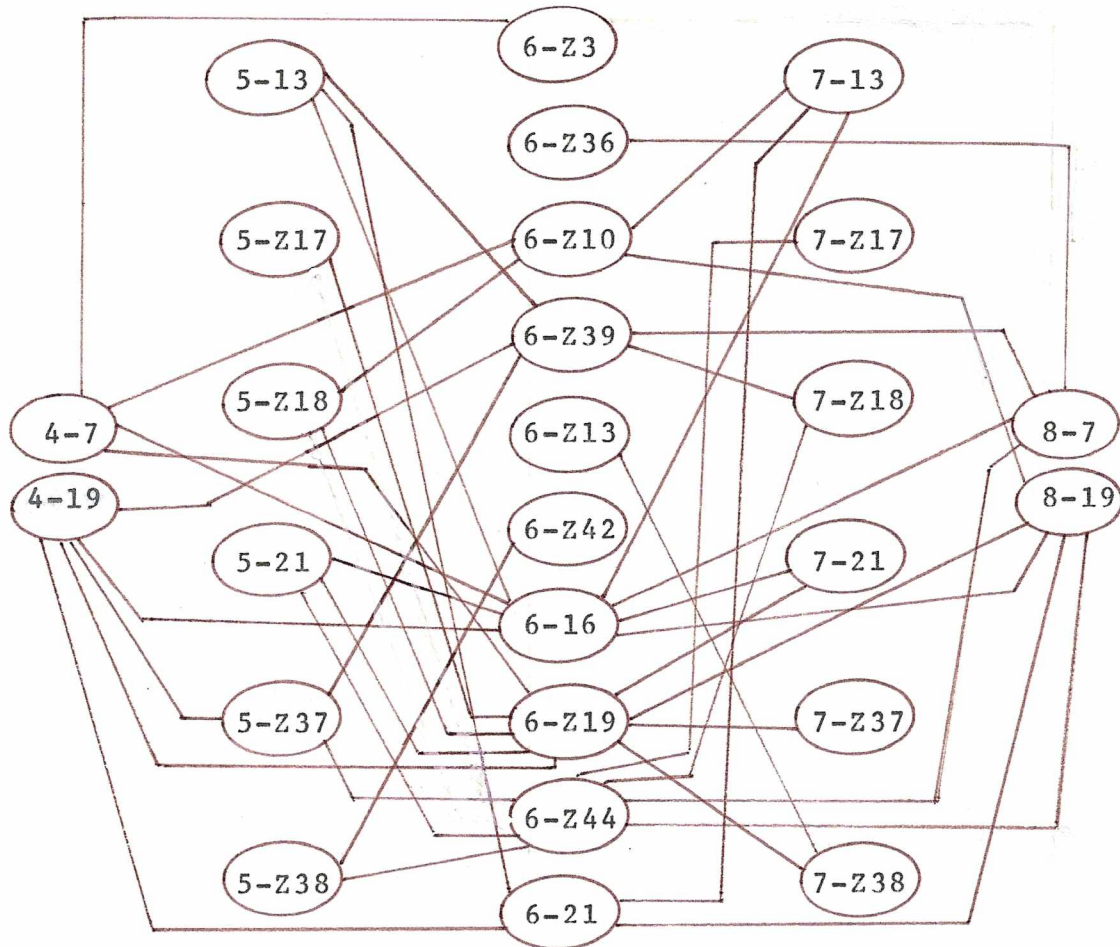
E partitioned by b^2 (as before)
 R(b)
 duration of $E+d^1$
 5-238: new form created by $db-cg$

Other correspondences:

19 R(E) dyad of m. 4
 b (condensed T1 of m. 4)
 10 6-236
 17 6-23
 rhythm originally associated with 6-16 now appears with new set
 and, modified to incorporate b^1 , with its complement [Trichord types are the same in both]

A complete study of the rhythmic structure of the movement would account for the fast notes, 32nds, as multiples of the b^1 and d^1 cells (i.e., $1/4 \times 1/8 = 1/32$)

Inclusion Relations



3-3 is contained in:

6-Z3
6-Z36
6-Z10
6-Z39
6-Z13
6-Z42
6-16
6-Z19
6-Z44
6-21

3-4 is contained in:

6-Z3
6-Z36
6-Z10
6-Z39
6-Z42
6-16
6-Z19
6-Z44
6-21

3-6 is contained in:

6-Z3
6-Z36
6-Z10
6-Z39
6-16
6-21

3-8 is contained in:

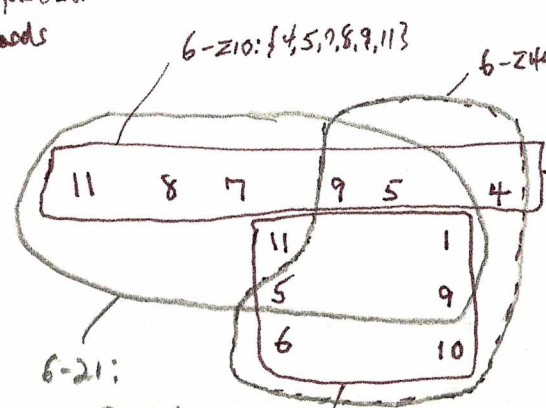
6-Z3
6-Z36
6-Z10
6-Z39
6-Z13
6-Z42
6-16
6-Z19
6-Z44
6-21

3-12 is contained in:

6-16
6-Z19
6-Z44
6-21
6-Z39

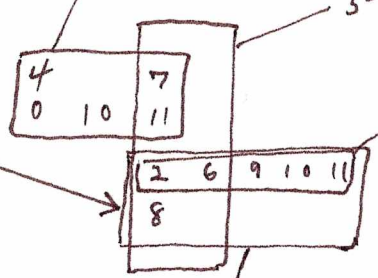
m.1
Principal Sets
Hexachords

6-210/39, 6-16, 6-219/44, 6-21, 5-237, EsCHREG



6-244 (the signature):
{4,5,6,9,10,13}

m.4
Principal sets

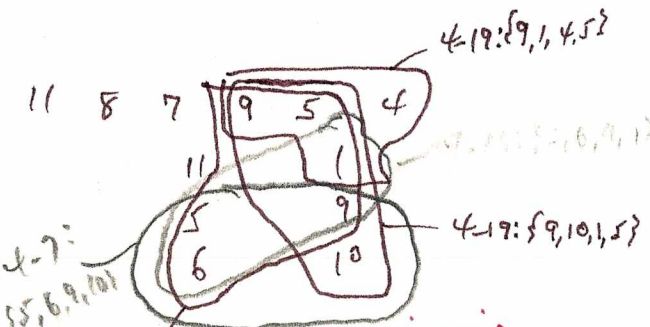


6-239: {6,8,9,10,11,2}
= T8 (6-210)

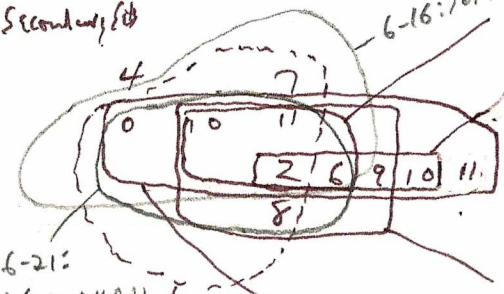
5-237:
{6,8,10,11,2}
+ pc 5 would be 6-244
c 6-244 & 6-239

← Later 5-217 represents
7-237 in develop.

Pc Set 4-19



Secondary set

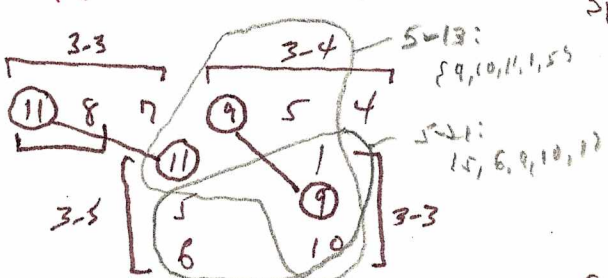


> determine set succession

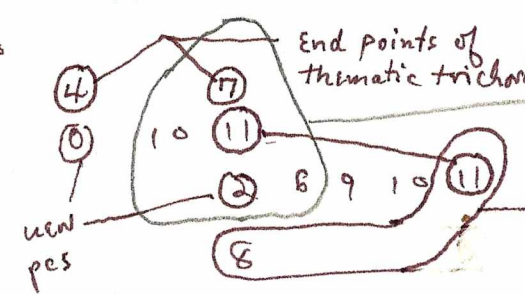
Contains
only
3-3 and
3-4
→ not
to
them
throughout

Common to all 3: {9,1,5} 3-12

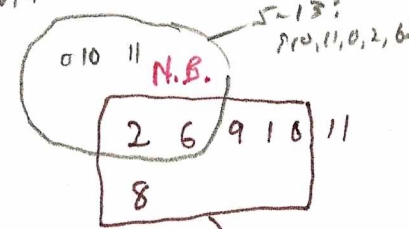
Doublings
and Trichords
5-13
5-21



Special pcs



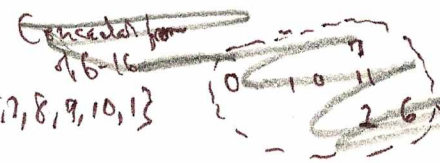
first dyad
in 6-210
combined with
pc 7 to form
thematic trichord 3-3



Concealed form
of 6-210



6-239: {5,7,8,9,10,13}



6-16: {6,7,10,11,0,2}

(num. 13-14)
% occurrences in
arg. - 2

Intervallic Similarity Relations

Hexachords

[433221]	6-Z3/36	
[333321]	6-Z10/39	
[324222]	6-Z13/42	
[322431]	6-16	
[313431]	6-Z19/44	
[242412]	6-21	

Pentachords

[221311]	5-13	
[212320]	5-Z17	
[212221]	5-Z18	
[202420]	5-21	
[212320]	5-Z37	
[212221]	5-Z38	

4-7 and 4-19 are in R2

Similarity Relations for Hexachords
(limited by significant structural pentachords)

Rp

6-Z10 & 6-Z19 (5-Z18) 6-Z39 & 6-21 (5-13) 6-16 & 6-Z44 (5-21)
6-Z39 & 6-Z44 (5-Z37) 6-16 & 6-21 (5-13) 6-Z42 & 6-Z44(5-Z38)
6-Z39 & 6-16 (5-13) 6-16 & 6-Z19 (5-21)

Inclusion relations for the two tetrachords:

4-19 is contained in 6-16, 6-Z19, 6-21, 6-Z39, 6-Z44

4-7 is contained in 6-Z3, 6-Z10, 6-16, 6-Z19, 6-Z44

Similarity relations for pentachords

Rp 5-13 & 5-Z17 (4-19) ~~5-21 & 5-Z37 (4-19)~~
5-13 & 5-21 (4-19) 5-21 & 5-Z37 (4-19)
5-Z17 & 5-21 (4-19) 5-Z18 & 5-21 (4-7)
5-13 & 5-Z37 (4-19)

Comments on Rp *for hexachords*

Omitted: 6-Z3, 6-Z36, 6-Z13,

Comments on Rp for pentachords:

omitted: 5-Z18, 5-Z38

Example 1: The Six Hexachords and Their Complements:
Initial Thematic Statements

6-Z36/3
[433221]

⑩

⑭

6-Z10/39
[333321]

①

⑧

6-Z42/13
[324222]

⑦

⑫

6-16
[322431]

②

6-Z44/19
[313431]

②

⑩

6-21
[242412]

⑨

Schoenberg on Op. 11

Style and Idea

79

86

110

485

"My Evolution"
1949 p. 79: "May I venture to say that, in my belief, even works of my third period as, for example, the Three Piano Pieces, Op. 11, or the Five Orchestral Pieces, Op. 16, and especially Pierrot Lunaire, Op. 21, are relatively easy to understand today".

"My Evolution"
" p. 86: "This first step [] occurred in the Two Songs, Op. 14 and thereafter in the Fifteen Songs of the Hanging Gardens and in the Three Piano Pieces, Op. 11."

"My Technique and Style"
c. 1950 p. 110: "The most decisive steps forward occurred in the ~~xxxx~~ Two Songs, Op. 12 [i.e., 14], and in the Three Piano Pieces, Op. 11.

p. 485 [~~the complaint about Webern~~]: ~~not relevant~~

Segmentation

Registral adjacency is the fundamental requirement on set formation. Cite Hasty in IJMT.

Partially occluded ~~the~~ elements may be included, depending upon set-class membership (see below), but fully occluded elements are not - although in a multiple timbre work, under other / additional conditions they might.

Discussion of the little trichordal kernels through out - e.g., 3-3 and 3-1 - as they impinge upon and direct the voice-leading. Would impinge upon the reader's patience, which is already ^{with some cases} ~~overlaid~~ ^{analytical} by the unfamiliar symbols and symbols.

Wittlich article

1. Use of set listing (prime form) instead of set name. Why? Advantages?
2. Segmentation: missing 4-19 in thematic statement-- significance of invariants and non-invariants
3. Perle's segmentation of the opening
4. Wittlich's transposition indices. ~~xxxxxxx~~ Analytical significance?

B_3 in Ex. 5 is 8,9,0,1,2,4

B_0 in Ex. 1 is 5,6,9,10,11,1

invariants: 9,1

Brinkman's pitch analysis p. 62ff.

motivic, with frequent references to das tonale Idiom
detailed observations on rhythmic structure/organization

e.g.

detailed analyses: ~~■~~ 3 separate analyses of mm. 1-11
from different vantage points.

In the third analysis (p. 77ff). B. deals with the
tonal Gestalt of the theme, specifically with offshots
of its 5th span B-E. Also with the role of Eb as ~~primary~~ tonal center.
N.B. special role of Bb in m. 11 as upper fifth of Eb in next
measure.

N.B. Maegaard's Analysis:

1972 after publ. of Brinkmann

p. 28 of Notenbeilage

6-239 in m. 4
6-210: {4,5,7,8,9,11}

4-19: {9,11,4,5} as in m. 14!

6-15: {4,7,8,10,11,12} m. 12

also non-conv. form: {10,11,2,6}

Musical notation for measures 1-10. Includes notes, accidentals, and annotations such as 3-3, 4-19, 5-238, and 6-213. Circled notes and lines connect related annotations across staves.

Musical notation for measures 11-15. Includes notes, accidentals, and annotations such as 6-21 in R of RP with 6-210, 6-21, 4-2, and 6-236.

Musical notation for measures 16-20. Includes notes, accidentals, and annotations such as 6-238: {5,6,7,10,11}, 6-213: {8,9,11,0,2,3}, and 6-236: {6,7,8,9,10,11}.

⊗ Eb completes 12-note aggregate (remarked by Webern)

Musical notation for measures 21-25. Includes notes, accidentals, and annotations such as 6-16: {1,2,5,6,7,9}, 5-13: {5,6,7,9,11}, and 6-239: {1,3,4,5,6,9}.

Musical notation for measures 26-30. Includes notes, accidentals, and annotations such as 6-21: {6,8,9,10,0,2}, 6-236: {0,3,4,5,6}, and 6-239: {7,10,11,0,3}.

Musical notation for measures 31-35. Includes notes, accidentals, and annotations such as 6-21: {7,8,9,10,1,4}, 5-21: {1,0,11,2,3,6}, and 6-20: {2,5,6,7,10,11}.

Musical notation for measures 36-40. Includes notes, accidentals, and annotations such as 6-21: {0,2,3,4,6,8}, 4-19: {8,0,3,4}, and 6-16: {11,0,3,4,5,7}.

Musical notation for measures 41-45. Includes notes, accidentals, and annotations such as 6-16: {8,9,0,1,2,4}, 6-16: {6,7,10,11,0,2}, and 6-242: {6,7,8,9,0,3}.

Musical notation for measures 46-50. Includes notes, accidentals, and annotations such as 6-210, 6-242: {1,4,7,8,9,10}, and 6-16: {2,8,9,11,0,7}.

thus "compressed"

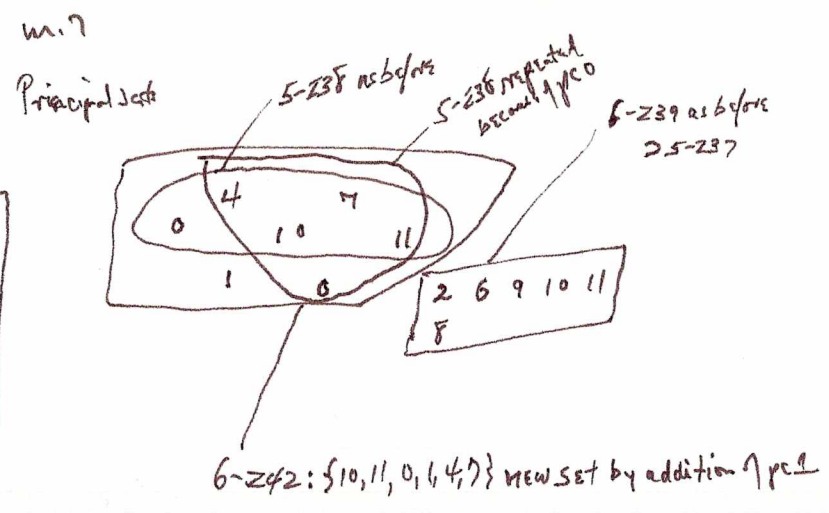
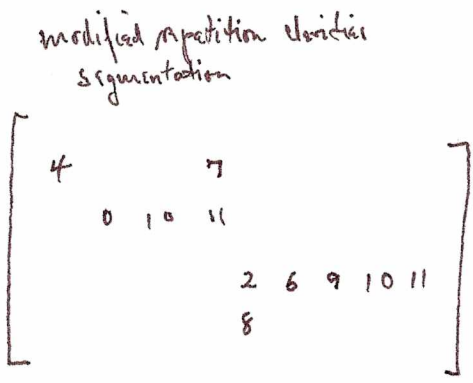
Beats Return of melodic theme - trichords reversed

Handwritten musical notation on a grand staff with various annotations:

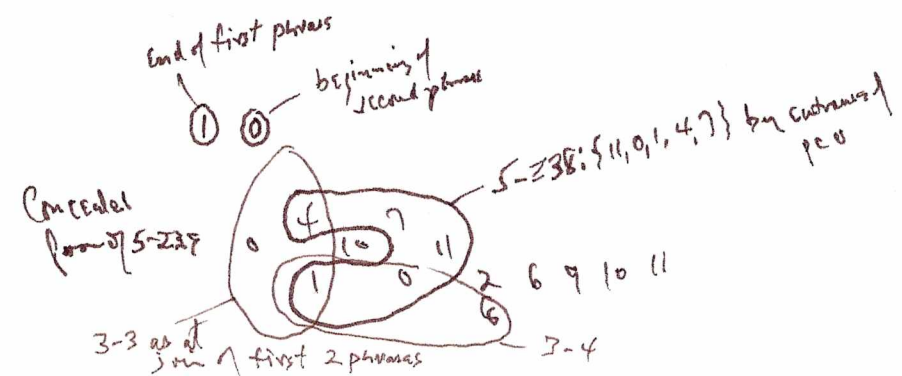
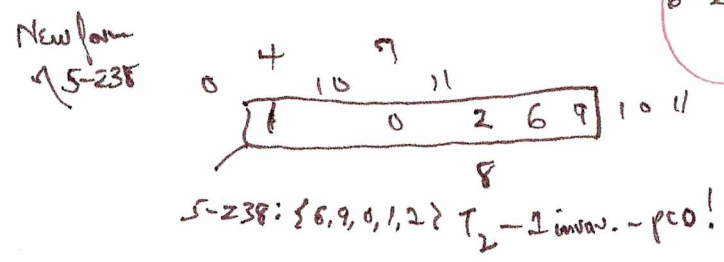
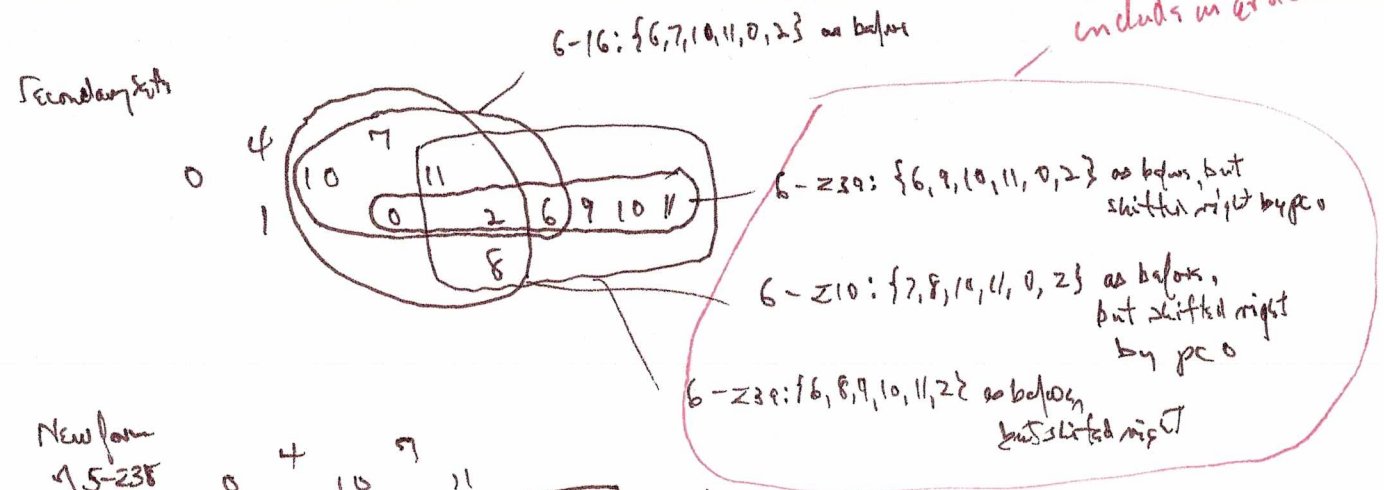
- Annotations:**
 - 6-16: {1,2,5,6,7,9}
 - 6-213: {1,2,4,5,7,8}
 - 5-217 (Stems) {0,1,3,4,8}
 - 6-210: {2,3,5,6,7,9}
 - 6-210: {2,4,5,6,8,9}
 - 6-210: {0,2,3,4,6,7}
 - 6-210: {1,1,2,3,5,6}
 - Return of theme in original
 - 6-210: {4,5,7,8,9,11}
 - 4-19: {10,2,5,6}
 - 5-237: {2,5,6,7,10}
 - 4-19: {10,2,5,6}
 - 5-21: {1,2,3,5,6}
 - 5-23: {0,1,2,3,5,6}
 - 6-236: {0,1,2,3,4,7}
 - 4-19: {2,3,4,10}
 - 5-13: {10,11,0,2,6}
 - 6-16: {5,7,10,11,0,2}
 - 6-16: {10,11,2,3,4,6}
 - 6-239: {6,8,9,10,11,2}
 - 5-21: {9,10,12,5}
 - 5-21: {0,1,4,5,8}
 - 4-19: {0,4,5,8}
 - 5-13: {3,4,5,7,11}
 - 5-21: {2,3,6,7,10}
 - 5-13: {5,6,7,9,1}
 - 6-21: {5,11,0,1,8,5}
 - 5-21 contains 4-19 2x
- Other notes:**
 - first (conceded) return
 - See Com in p. 11, p. 70
 - See Perle's comment, p. with B# in 5-21, otherwise 4-17!
 - Corrected to C# in Gesamtausgabe
 - must be B#
 - no in m. 4
 - m. 14 - with 4-19 harmonies

Handwritten musical notation on a grand staff with various annotations:

- Annotations:**
 - 6-236: {5,6,7,8,9,0}
 - 6-23: {1,2,3,4,5,7}
 - m. 9
 - 6-21: {5,7,8,9,11}
 - 6-21: {2,5,7,8,9,11}
 - 5-7: {2,3,4,8,9} - prepares for second piece
 - 4-8: {8,9,1,2}
 - 5-23: {8,9,10,11,2}
 - 6-243: {1,2,3,6,7,9}
 - 6-219 m. 12
 - 6-23: {5,7,8,9,10,11}
 - 6-7: {2,3,4,5,9,11}
 - 6-21: {5,11,2,6}
 - from m. 12 (?)
 - Beats
 - 3-4 2x: {8,9,1,9,1,2}
 - 6-210: {1,3,4,5,7,8}
- Other notes:**
 - e = 4 was wrong
 - more. Substit in 4-6
 - {1,11,2,6}



WRITE-UP: STRESS role of
 Pass aged in
 set formation &
 duplication



article

other tricks
 3-3: 7 + (0, 11)
 0, 1, 4 - joins
 first 2 phrases

SCHOENBERG, OP11/1 (TENTATIVE SET-COMPLEX TABLE)

3-3 3-4 3-5

4-2	KH	K	K										
4-5	K	KH	KH										
4-16	K	KH	KH										
4-19	KH	KH	K	4-2	4-5	4-16	4-19						
5-13	KH	KH	KH	KH	KH	K	KH						
5-Z17	KH	KH	K	K	K		KH						
5-21	KH	KH	K	K	K	K	KH						
5-Z37	KH	KH	K	K		K	KH						
5-Z38	KH	KH	KH	K	KH	K	K	5-13	5-Z17	5-21	5-Z37	5-Z38	
6-Z3/36	KH	KH	KH	KH	KH								
5-Z10/39	KH	KH	KH	KH	K	K	K	K				K	
5-Z13/42	KH	K	KH		K								K
6-14	KH	KH		KH			KH		KH	KH	KH		
6-15	KH	KH	KH	KH	KH		KH	KH		KH		KH	
6-16	KH	KH	KH	KH	KH	KH	KH	KH		KH			
6-Z17/43	KH	KH	KH	K	KH	KH	K	K					K
6-Z19/44	KH	KH	KH		K	K	KH		K	KH	K	K	
6-21	KH	KH	KH	KH	KH		KH	KH					

Generation of Additional Hexachords from Tri-chord subsets of 6-2-10/6-2-39

6-16 from 3-3 + 3-5 (See m 1-3)

6-15 from 3-1 + 3-3 (Compare m 4 with m 1-3)

6-2-42 from 3-1 added to subset of 6-15 (5-2-38)
(Compare m 7 with m 4)

→ 6-2-13

6-21 from rhythm + contours of m 1-3
and 3-8 + 3-1 (Compare m 9-11 with m 1-5)

6-2-36 from 3-6 + 3-8 (Compare m 10-11 with m 2, 4)

→ 6-2-3

012 / 6 7 10 0 1 2
0 1 + 6 7 8
0 1 2 + 7 8

SCHOENBERG: OP. 11/1
Dein Madchen

5

3

I

Mäßig (♩=66)

6-2-10(39)

6-15

6-16

6-2-39(10)

p

3

I

Mäßig (♩=66)

4-11

5-2-38(18)

5-2-38(18)

5-2-37(17)

p

3

I

Mäßig (♩=66)

3-1

3-5

3-3

3-3

3-8

3-5

3-3

3-8

3-1

3-8

3-1

p

6-2-42(13)

6-21

REPEAT - m. 45⁷

rit. , langsamer

REPEAT m 45

3-1

10

6-2-36(3)

7

rit. , langsamer

10

3-8 3-8 3-3 3-1

3-6 3-8

M 12-13

¹² viel schneller

ppp

mit Dämpfung (3. Pedal)

m 12

m 13

(in order of appearance rhythmically)

11 0 11 3 9 2 8 0 4 1 | 10 9 8 7 6 3 3 1 5 2 3 1 2 7 9 4 6 2 5

6-2-13(42) | 6-2-36(3) | 6-2-39(10) | 5-2-37(17) |

6-16 | 7-13 | 7-9 |

6-21 | 6-2-10(39) | 7-2-17(37) |

6-15 |

6-15 |

6-2-42(13) |

6-2-36(3) |

m 13

also-



3-3 | 3-3

4-2 | 4-2

3 5 2 1 | 7 9 6 5

7-13 |

6-16 |

5-13 |

RE. measures 13-14

The following are in 7-13, but not contiguously formed:

$$6-21: \{1, 3, 5, 6, 7, 9\}$$

$$6-15: \{1, 2, 3, 5, 6, 9\}$$

$$6-2-10: \{2, 3, 5, 6, 7, 9\}$$

6-16 is found in 7-13, and is contiguously formed.

The following are within 7-2-17(37):

$$5-2-37(17) \{1, 4, 5, 6, 9\}$$

$$5-2-38(18) \{4, 5, 6, 9, 0\}$$

$$\{6, 9, 0, 1, 2\}$$

14 Die Tasten tonlos niederdrücken! *langsamer* 5-21

Handwritten annotations for measures 14-16:
- Measure 14: circled notes, *sf*, *ohne Ped...*, *5-13*, *5-2-37(11)*
- Measure 15: circled notes, *sf*, *ohne Ped...*, *6-15*, *5-2-17(37)*
- Measure 16: circled notes, *sf*, *ohne Ped...*, *6-15*, *4-19*

6-21

17 *sehr langsam* 18 19 20

Handwritten annotations for measures 17-20:
- Measure 17: circled notes, *sf*, *7-2-17(37)*
- Measure 18: circled notes, *sf*, *6-2-3(36)*
- Measure 19: circled notes, *f*
- Measure 20: circled notes, *f*, *(compare, m 9-11)*

Handwritten musical score for two staves. The top staff is marked "Mäßig" and the bottom staff "rascher". The score includes measures 25, 26, 27, and 29. Handwritten annotations include "6-21" above measure 27 and below measures 26 and 29. A "p" (piano) dynamic marking is present in both staves. A red bracket is drawn under the first few notes of the bottom staff.

also 4-19!

Handwritten musical score for two staves, similar to the first one. The top staff is marked "Mäßig" and the bottom staff "rascher". The score includes measures 26, 27, and 29. Handwritten annotations include "5-2-17(37)" above measure 27 and below measures 26 and 29. A "p" (piano) dynamic marking is present in both staves. A large arrow is drawn from the right side of the bottom staff, pointing back towards the beginning of the piece.

Each imitative line complete forms 7-9 to these points

Top line only:

6-2-42(13) 6-244

6-2-39(10)

6-16

28 *rascher* *p* *f* *langsam* 29 6-16

6-16 ←

6-21

including "E"

5-30 ⊂ 6-16

w/o "E"

"B" to "A" 5-13

~~0 7 8 9 0~~

v1 ~~4 5 6 9~~

m. 29 (part)

6-2-3(36)

9 2 1 0

7: 8 9 3 7 9

7: 11

omit pc 2

6-2-10(39)

omit pc 2+1

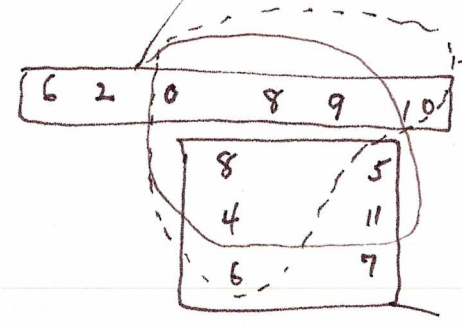
6-15

M.9

6-21 in R₀ & R_p with 6-210 & 6-239 — The relation w/ 6-239 is strong;
 Common subset in 5-13: {6, 8, 9, 10, 2}

Rectangularly identical to subject. Lects per 1, 3
 New surface — subsurface repeats thematic sets!
 // new set 6-21: {6, 8, 9, 10, 0, 2} — 6-21 is derived from 6-239
 from thematic segments

Principal sets

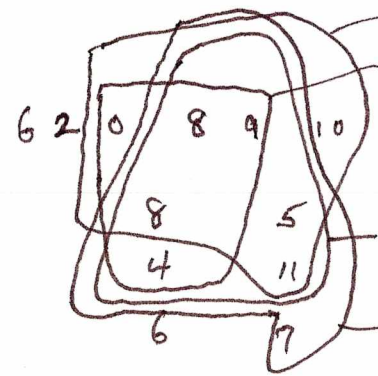


6-21: {4, 6, 8, 9, 10, 0} IT₆
 inv. 5-13: {2, 6, 8, 9, 10}
 not a contiguous subset

IT₁₁ of first statement: inv. 8, 9

6-219: {4, 5, 8, 9, 11, 0}
 6-236: {4, 5, 6, 7, 8, 11}
 [6-23 in mem. 17-18!]

Secondary sets



6-236: {4, 5, 8, 9, 10, 11, 0} IT₄ of main form
 4-19: {8, 9, 0, 4} — Common lect. 6-21 and 6-219

5-218: {4, 5, 8, 9, 11} Z-compos of 5-238!

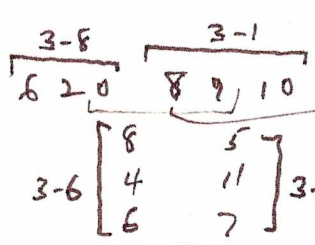
writes-up!

6-210: {4, 5, 7, 8, 9, 11} 5-218
 Same form as subject!

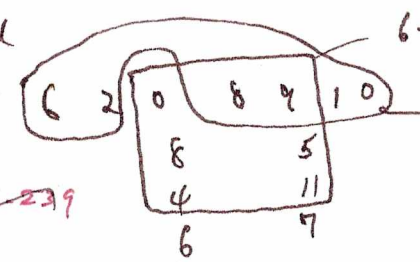
articles

included among principal sets

Trichords



5-13 and 6-219:



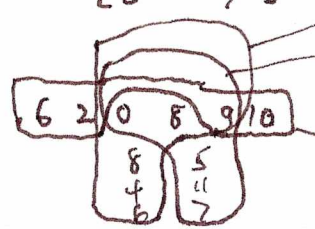
6-219: {4, 5, 8, 9, 11, 0}

5-13: {6, 8, 9, 10, 2}

same as contiguous form in 6-239 — inv. 4-

PCS 11, 0 are the variable element

Concluded



4-19: {2, 8, 9, 10} as in previous phrase — articles done

i.e. 5-13 is the pentachord that consists 6-21 and 6-239

Handwritten musical score for measures 30-32. The top staff is in treble clef with notes circled and labeled with chord numbers: 6-16, 6-16, 5-13, 4-4, and 4-11. The bottom staff is in bass clef with notes grouped by brackets labeled 3-5 and 3-5. A 'pp' dynamic marking and a 'vln.' label are present.

m30-32 (part)

Handwritten guitar tablature for measures 30-32. It shows fret numbers on a six-string staff with various chord diagrams and interval markings. A 'parts omitted' section is indicated at the start of measure 30.

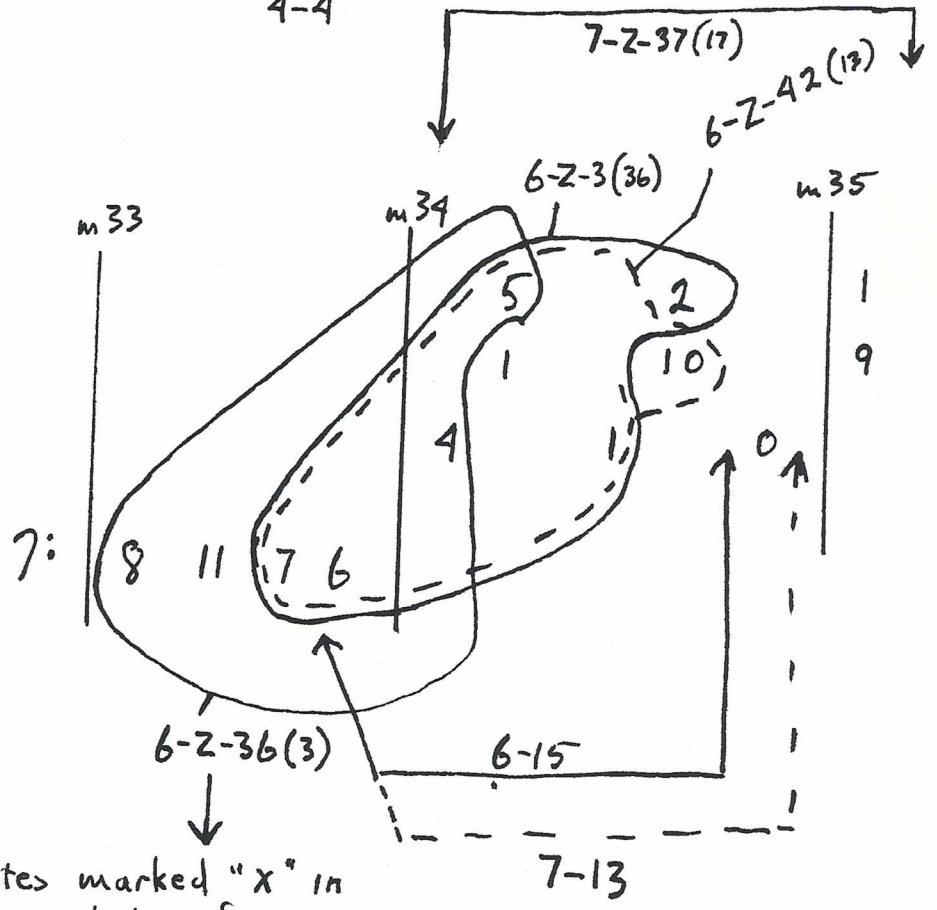
Measure 30: parts omitted, 7 0 11 10, 8 9 3, 5-2-38(18), 6-15, 6-2-39, 6-2-44, 5-2-18(37), 7-2-18.

Measure 31: 6 7 1, 7-2-38(18), 7: 0 2 10.

Measure 32: 10 9.

Handwritten musical score for piano, measures 31-35. The score includes dynamic markings like 'pp' and 'A3', and performance instructions like 'fließender'. Handwritten annotations include '4-4' and circled sections of notes.

m 33-34



Notes marked "x" in score at top of page are duplicated in this set, + could be included in it.

3-1 3-3 3-4 3-5 3-6 3-8 3-11 3-12

4-2	Kh	Kh	K	K	Kh	K	K	K
4-4	Kh	Kh	Kh	K	K	K	K	K
4-5	Kh	K	Kh	Kh	K	Kh	K	K
4-11	K	K	Kh	K	Kh	K	K	K
4-19	K	Kh	Kh	K	K	K	Kh	Kh

4-2 4-4 4-5 4-11 4-19

5-6	Kh	Kh	Kh	Kh	K	Kh	K	K	K	Kh	Kh		K
7-9	Kh	Kh	Kh	Kh	Kh	Kh	K	K	Kh	K	Kh	Kh	K
7/5-13	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	K	Kh	K	Kh
7/5-2/17	K	Kh	Kh	K	K	K	Kh	K	K	K	K	K	Kh
5-2-18	K	Kh	Kh	Kh	K	Kh	Kh	K	K	K	K	K	K
5-30	K	Kh	Kh	Kh	Kh	Kh	Kh	Kh	K	K	K	K	Kh
5-2-37	Kh	Kh	Kh	K	K	K	Kh	Kh	K	Kh		K	Kh
5-2-38	Kh	Kh	Kh	Kh	K	Kh	Kh	K	K	Kh	Kh	K	K

5-6 7-9 (7) (7) 5 5 5
5-13 5-2/17 2-18 5-30 2-37 2-38

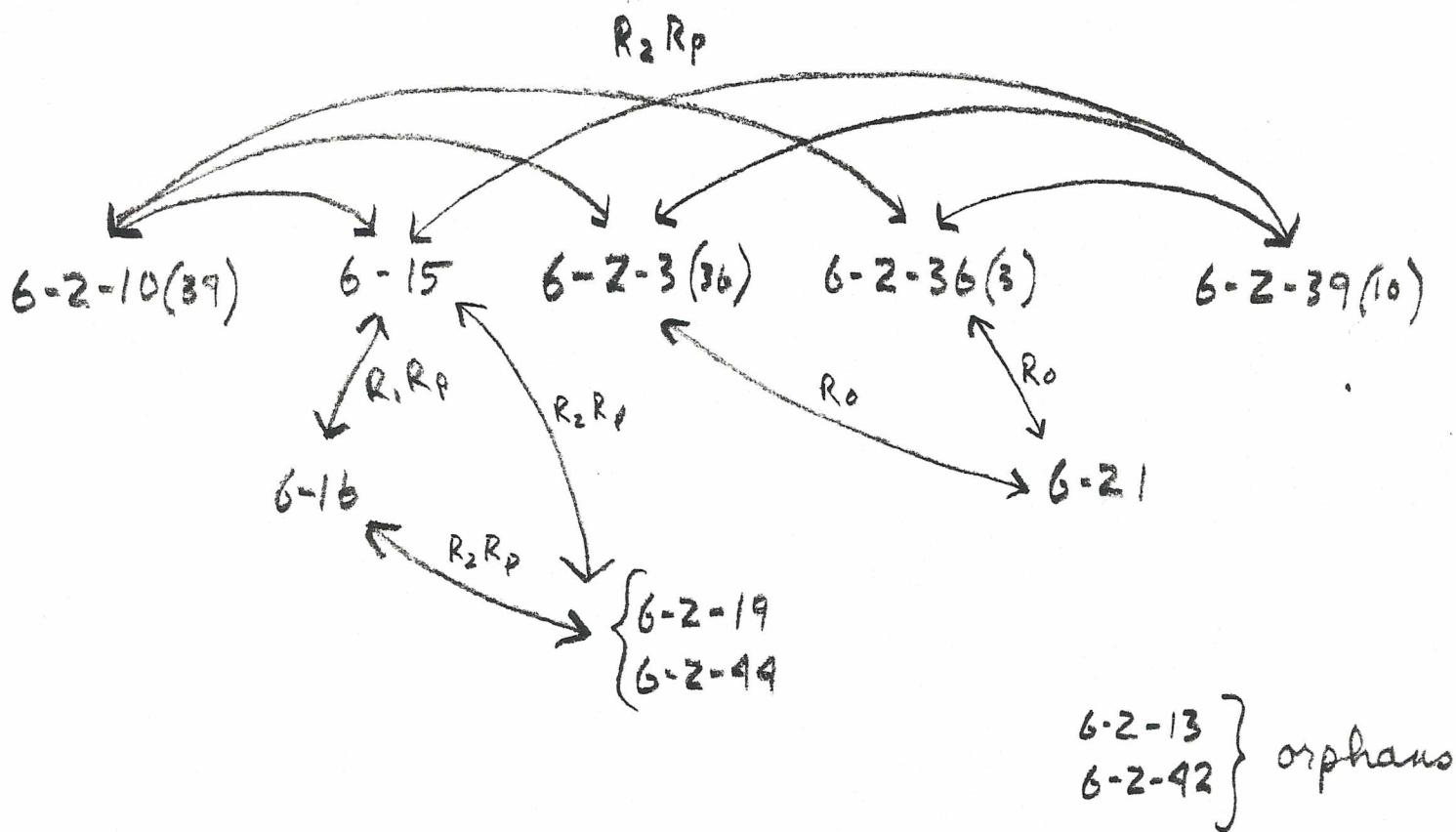
6-2-3/36	Kh	Kh	Kh	Kh	Kh	Kh	K		Kh	Kh	Kh	K		K							
6-2-10/39	Kh	Kh	Kh	Kh	Kh	Kh	Kh	K	Kh	Kh	K	Kh	K			K		K		K	
6-2-13/42	K	Kh	K	Kh		Kh	Kh			K	K									K	
6-15	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh			Kh				Kh	
6-16	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh		Kh	Kh			Kh				
6-21	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh	Kh		Kh	Kh	Kh		Kh	Kh					
6-2-19/44	K	Kh	Kh	Kh		Kh	Kh	Kh		K	K		Kh	K			K	K		K	K

SET COMPLEX

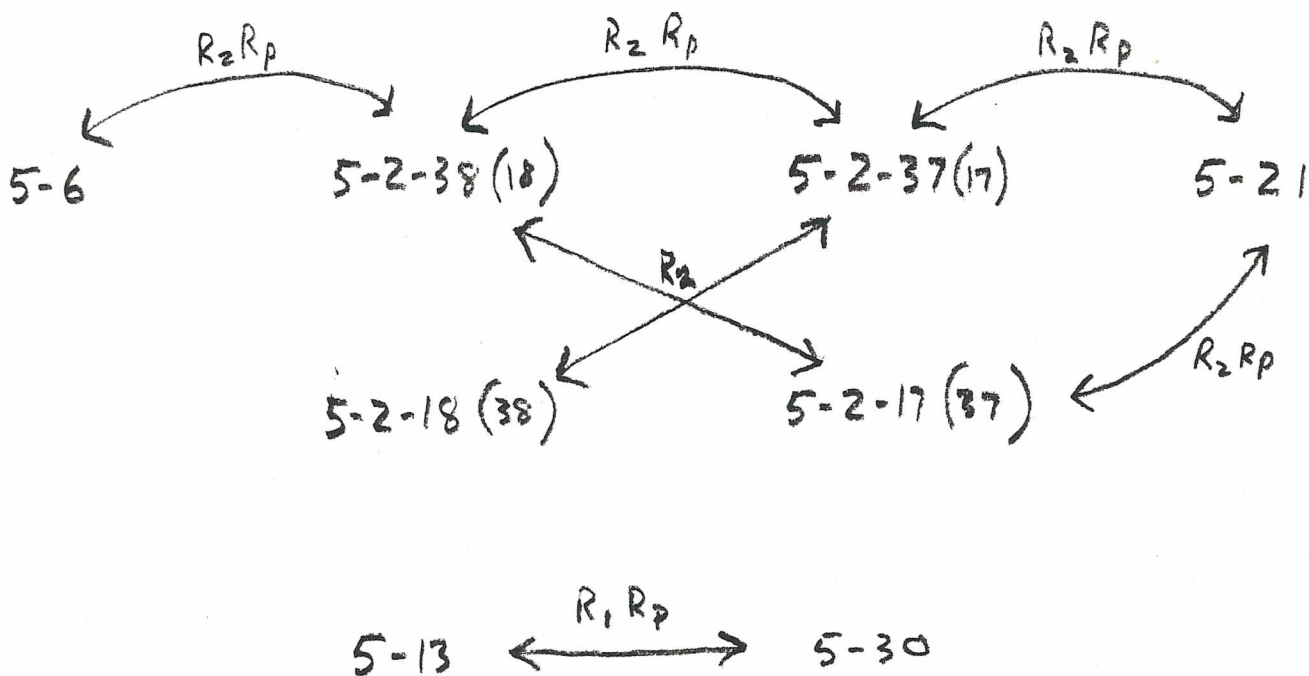
Schoenberg op 11 / 1

Similarity Relations — Cardinal 6

Schoenberg (14)
ap 11/10



Cardinal 5

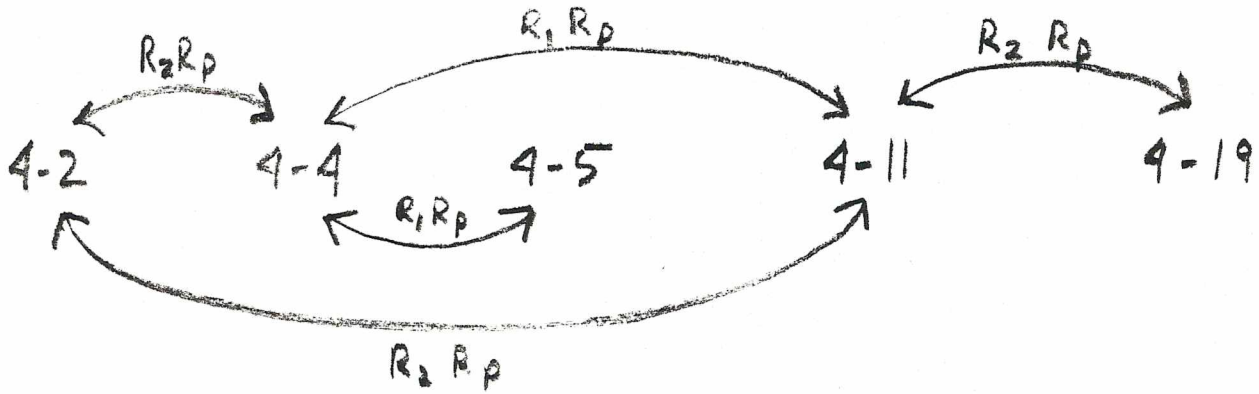


Similarity Relations

Cardinal 4

Schoenberg op 11/1

15



Handwritten musical score for the first system, measures 1-12. The notation includes treble and bass clefs with various notes and rests. Circled groups of notes are annotated with set numbers and pitch classes.

Annotations include:
 6-210: {4,5,7,8,9,11}
 5-238: {4,7,10,11,0}
 6-242: {10,11,0,1,4,7}
 6-21: {6,8,9,10,0,2}
 6-213: {8,9,11,0,2,3} m.7
 6-217: {8,9,0,2,3,4} m.31,62
 6-16: {8,9,0,1,2,4}
 6-21: {8,10,0,1,2,4}
 6-15: {8,9,10,0,1,4} (2x) m.4,19
 6-242: {7,8,9,10,1,4}
 6-236: {6,7,8,9,10,12}

Other notes: "Also 2 interacting forms of 4-2 in upper voice", "Also 2 interacting forms of 4-2 in upper voice", "6-16 > 4-19 2x: {5,6,9,11} {9,10,1,5}", "6-16: {5,6,9,10,11,1}", "5-13: {9,10,11,1,5}", "5-21: {5,6,9,10,11}", "5-237: {6,9,10,11,2}", "6-239: {6,8,9,10,11,2}", "6-239: {6,9,10,11,0,2}", "4-19: {2,6,9,10}", "6-236: {4,5,6,7,8,11}", "also 6-236: {3,6,7,8,9,10} extending through E^b of next phrase".

Handwritten musical score for the second system, measures 13-24. Similar notation to the first system with annotations.

Annotations include:
 4-19: {9,1,4,5}
 3-3: {8,9,0}
 4-2: {8,9,10,0}
 5-237: {7,10,11,0,3}
 5-21: {11,2,3,6,7}
 5-21: {3,6,7,10,11?}

Other notes: "3 forms of 4-19", "5-13: {9,1,3,4,5}", "6-15: {1,4,5,7,8,9}", "5-237: {1,2,4,5,9}", "5-21: {1,4,5,8,9}", "5-237: {1,4,5,8,9}", "5-21: {9,0,1,4,7}", "6-23: {3,4,5,6,8,9}", "6-15: {8,9,10,0,1,4}", "7-21: {3,4,7,8,10,11,0}", "6-242: {7,8,9,10,1,4}"

Handwritten musical score for the third system, measures 25-33. Similar notation with annotations.

Annotations include:
 6-21: {3,5,6,7,9,11}
 6-21: {0,2,3,4,6,8}
 6-21: {7,9,10,11,1,3}
 6-16: {11,0,3,4,5,7}
 6-239: {11,2,3,4,5,7}
 6-16: {8,9,0,1,2,4}
 6-16: {8,9,0,1,2,4}
 6-16: {6,7,10,11,9,2}
 6-16: {8,9,0,1,2,4}
 6-16: {6,7,10,11,9,2}
 6-242: {6,7,8,9,0,3}
 6-16: {8,9,0,1,2,4}
 6-16: {6,7,10,11,9,2}
 6-242: {1,4,7,8,9,10}
 ? 6-217: {6,7,10,0,1,2}
 4-19: {3,4,7,11}
 4-19: {11,3,6,7}
 4-19: {8,0,3,4}
 4-19: {3,7,10,11}
 4-19: {11,0,3,7}
 4-19: {7,8,11,3}
 6-16: {11,0,3,4,5,7}
 5-13: {7,8,9,11,3}
 4-19: {8,9,0,4}
 6-244: {0,3,4,7,8,9}
 3-3
 3-4
 theme compressed

SET-COMPLEX RELATIONS

AND 5-28/5-27

4-2 4-16 4-19

5-13 Kh K Kh

5-21 K K Kh

5-27 K Kh

5-237 K K Kh

5-238 K K K 5-13 5-21 5-27 5-237 5-238

NB. 6-23/36 Kh

6-210/39 Kh K K K K

NB. 6-213/42

6-15 Kh Kh Kh Kh Kh Kh

6-16 Kh Kh Kh Kh Kh Kh Kh

6-217-43 Kh K K K K

6-21 Kh Kh Kh

? 6-19/6-21 K Kh Kh K K K

? 6-14 Kh Kh Kh Kh Kh

Nexus sets 4-2

4-2

5-238

Lacking 3-3,
3-4, 3-5

includes 4-5?
(w. 15)

SIMILARITY RELATIONS

4-2 4-2

4-2 4-2

4-4 R₂, R₃, R₄, V-4

4-19 4-19

5-13 5-13

5-21 5-21

5-20 R₁, R₂ 5-20

5-237 R₁, R₂ 5-237

5-238

5-237

R₂, R₃, 5-238

6-23 6-23

6-236 6-236

6-210 R₂, R₃, R₄, R₅ 6-210

6-239 R₁, R₂, R₃, R₄ 6-239

6-213

6-213

6-212

6-212

6-15

R₁, R₂, R₃, R₄

6-15

6-16

R₁, R₂ 6-16

6-217 R₀ R₀, R₁

R₁, R₂ 6-217

6-213 R₀, R₁ R₀

R₁, R₂ 6-213

6-219

R₂, R₃ R₂, R₄ 6-219

6-214

R₂, R₃ R₂, R₄ 6-214

6-20

6-20

6-21 R₀ R₀ R₀, R₁, R₂

R₀ 6-21

6-21 R₁ R₁, R₂, R₃, R₄

6-214

6-216

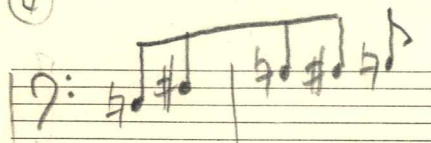
R₁, R₂ R₁ R₀, R₁

6-216

Schoenberg, Op. 11/1

Complement relations

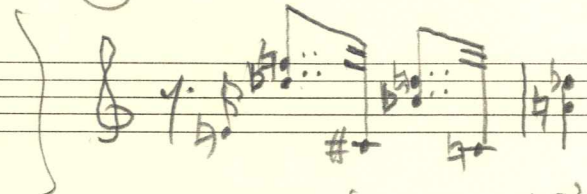
(4)



(repeated figure) 5-237: {6, 9, 10, 11, 2}

beginning of second section

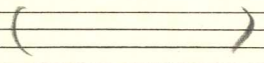
(34)



t=9 →

7-237: {9, 10, 0, 1, 2, 4, 5}

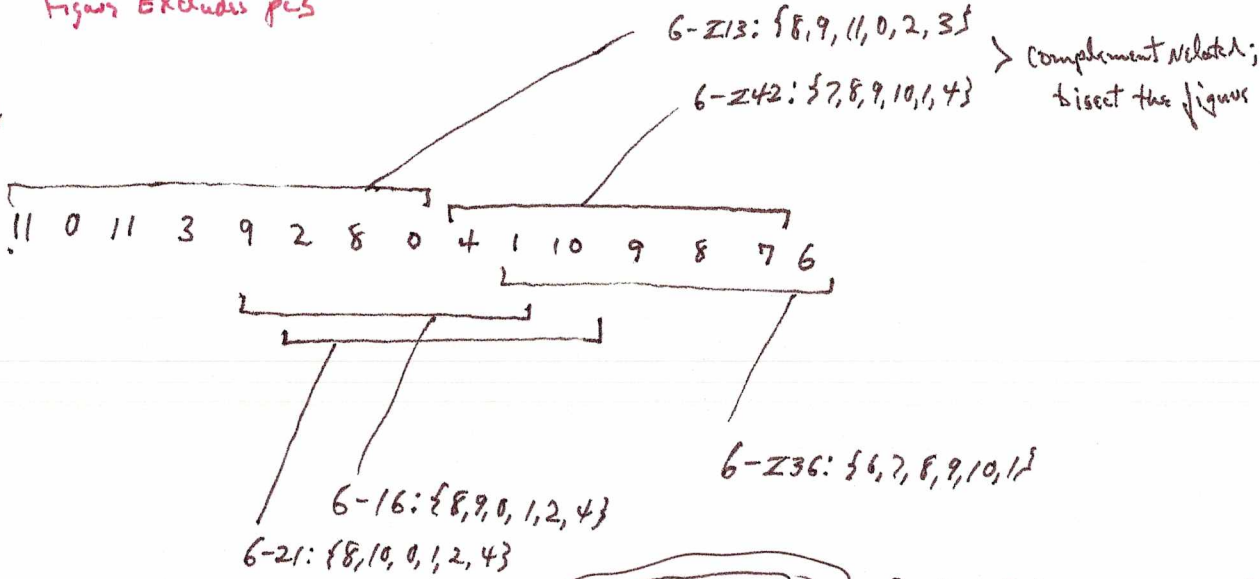
(5-237 here is 9, 0, 1, 2, 5)



m. 12 Only sets stated already are shown.

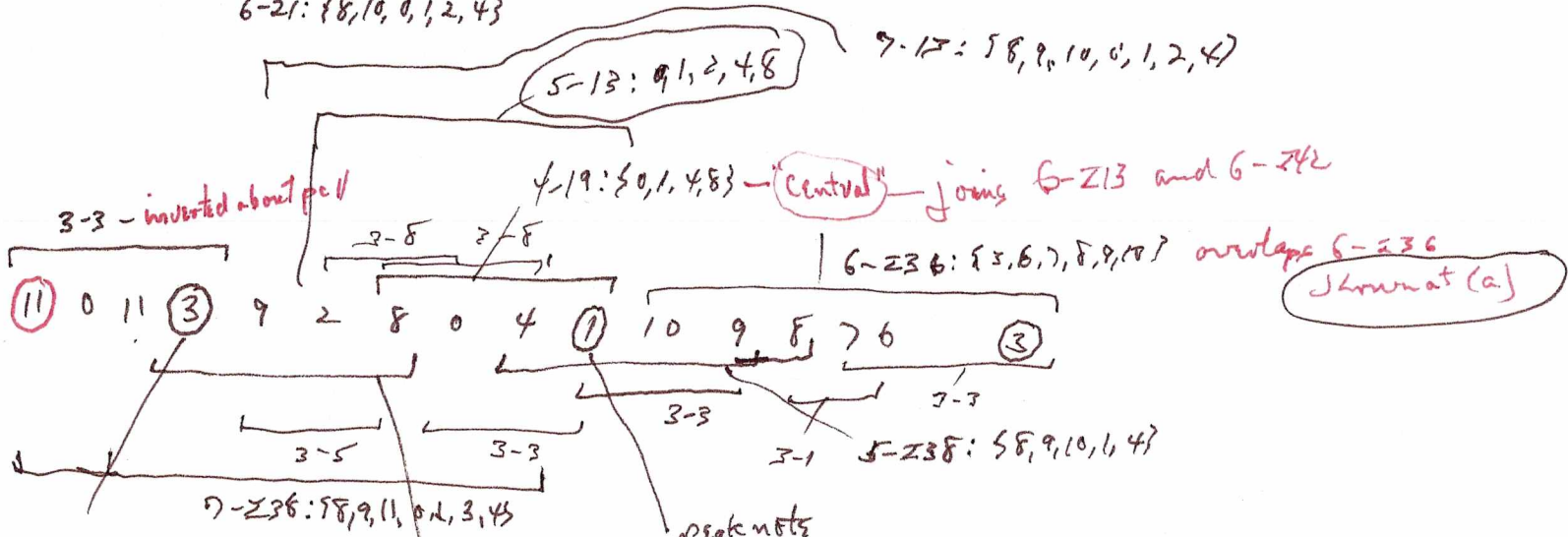
Figures excludes pcs

Principal Sets



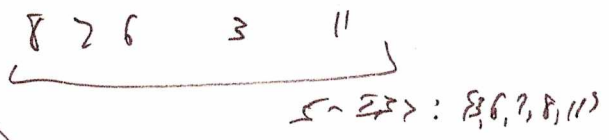
23 F1
01 67

Other sets and pcs



Es completes chromatic (Webern)

final vertical (Pevky)
preparation for next movement

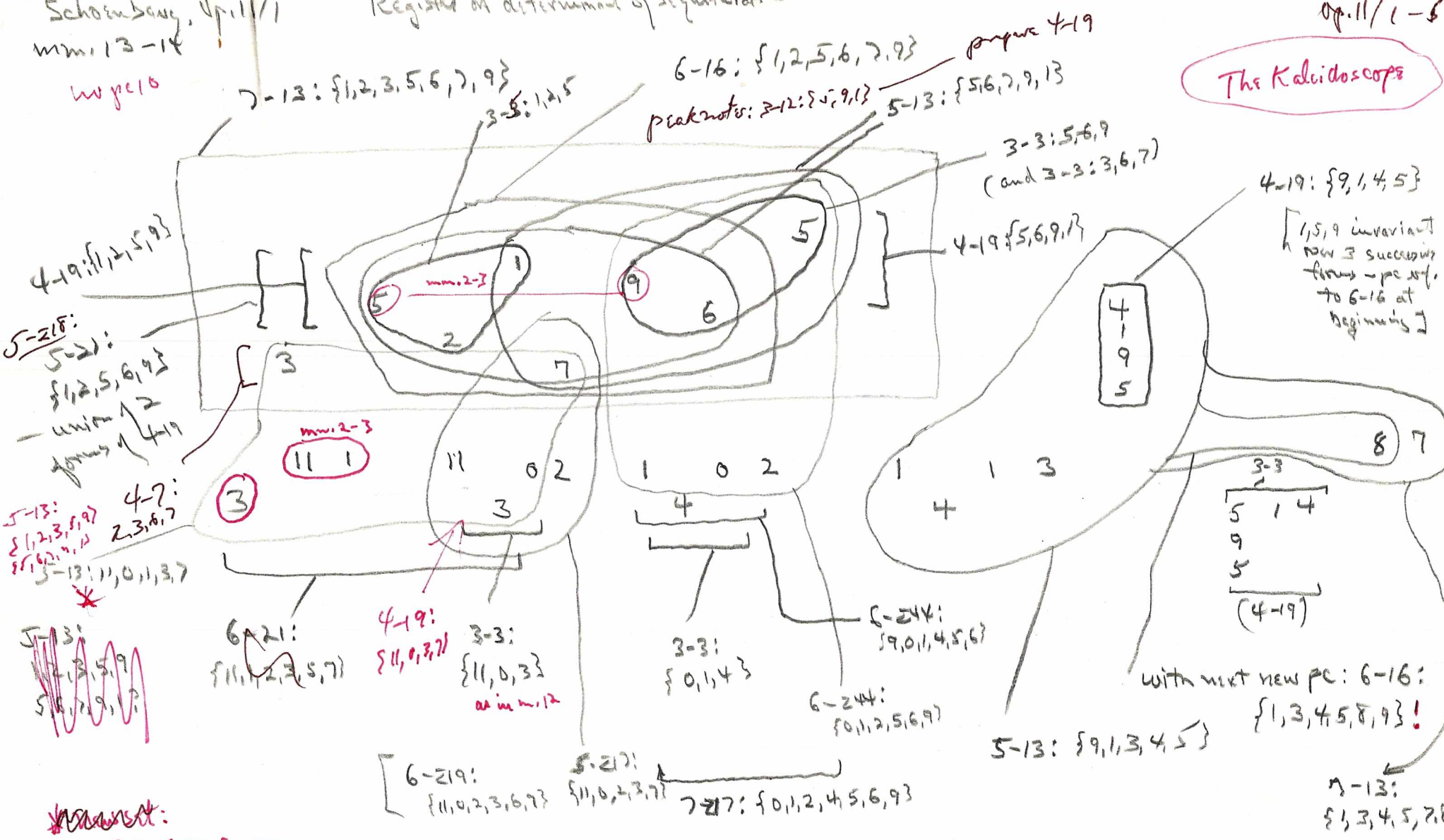


Schoenberg, April 11
mm. 13-14
Wypelb

Register of determinant of permutation

Op. 11/1-5

The Kaleidoscope



~~Wypelb~~
* C 6-16, 6-21, 6-239

in 7-13, but not contiguous form

6-21: {1, 3, 5, 6, 7, 9}

6-15: {1, 2, 3, 5, 6, 7}

6-210: {2, 3, 5, 6, 7, 9}

6-21: {5, 6, 7, 9, 0, 1}

5-232: {1, 4, 5, 6, 9} (within 7-21)

5-236: {4, 5, 6, 9, 0}

5-238: {6, 9, 0, 1}

[5-13 in "thematic" 6-16 in {9, 10, 11, 1, 5}]
not a contiguous subset

no pc 8, 10

7-13: {1, 2, 3, 5, 6, 7, 9}

5-21: {1, 2, 5, 6, 9} union {2, 4, 19}

5-13: {5, 6, 2, 9, 13}

6-44: {0, 1, 2, 5, 6, 9}

6-16: {1, 2, 5, 6, 7, 9}

~~6-21: {4, 5, 6, 7, 9, 11}~~

~~6-19: {0, 1, 4, 9, 11}~~

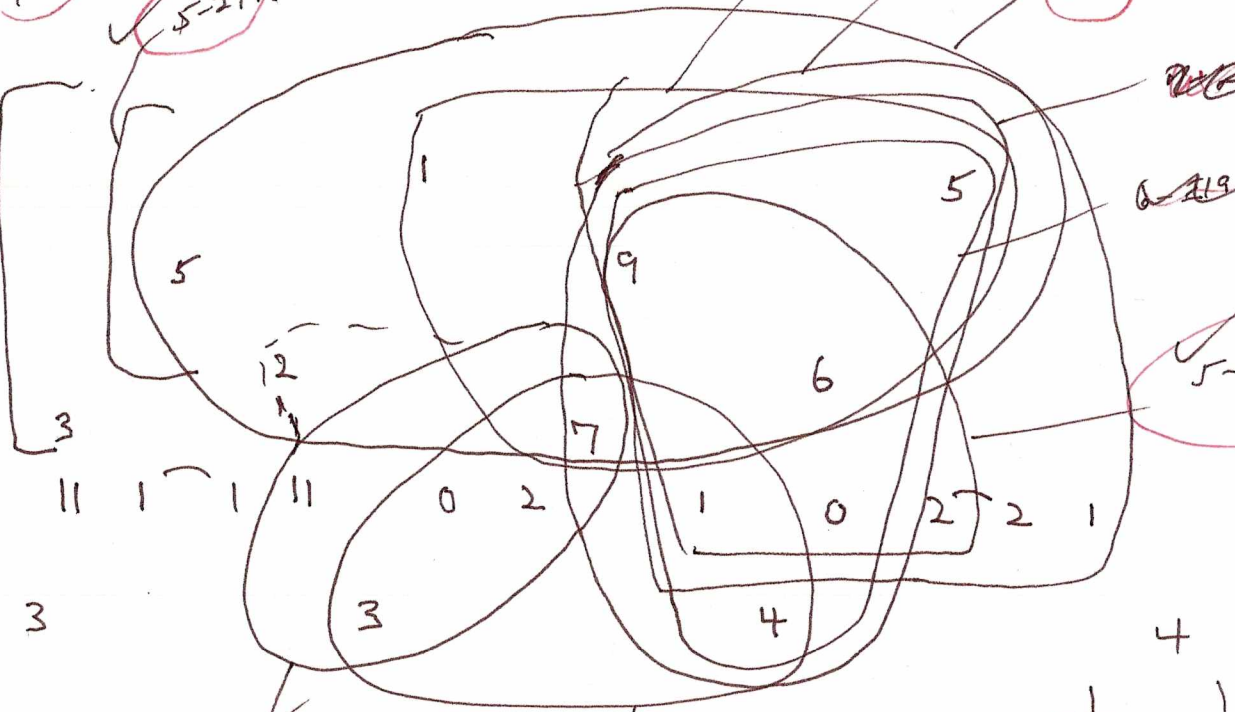
5-238: {6, 9, 0, 1, 2, 3}

5-217: {1, 0, 2, 3, 7}

~~6-218~~
6-236: {0, 1, 2, 3, 4, 7}

7-211: {0, 1, 2, 4, 5, 6, 9}

- (a) 7's and 6's and 5's
- (b) ~~8's and 3's~~



Tetrachords - regular determination

