

Model Composition in the Post-Tonal Classroom: Three Templates and Sample Realizations

By Derek J. Myler. Introduction by Zachary Bernstein.

Abstract

This resource provides three templates for model composition assignments that can be used in post-tonal theory courses at either an upper-level undergraduate or graduate level. They cover a composition engaging motivic development and symmetry, a composition based on set classes, and a serial composition. These templates could be used as the basis for assignments or in-class exercises, or they could provide models for how to address more open-ended prompts. Sample realizations of these templates are included.

Introduction

Below we present three templates for model post-tonal compositions. These templates could be used as the basis for assignments or in-class exercises, with students being asked to fill in the templates, or they could provide models for how to address more open-ended prompts. Sample realizations of these templates are also included; they can demonstrate to students how the templates (and the concepts they embody) can lead to creative, expressive, and interesting music. Annotations in the realizations draw attention to techniques used and the purposes motivating their deployment, and discussion points about each realization are provided. The templates and realizations were composed by Derek J. Myler while he was a teaching assistant for Model Composition and Post-Tonal Analysis, a course at the Eastman School of Music supervised by Zachary Bernstein.

Model Composition and Post-Tonal Analysis is the final semester of the undergraduate core theory curriculum at the Eastman School of Music. Typically taken by students in their third year, the course covers post-tonal aural skills, analysis of compositions drawn from a wide range of contemporary styles, and a selection of introductory post-tonal theoretical topics. Model composition is a prominent feature of the class—as it is throughout Eastman’s undergraduate theory curriculum—and serves several goals.¹ It engages students’ creativity and musicality, enabling a hands-on approach to the concepts we’ve been discussing theoretically and analytically. In-class performance and discussion of student compositions provide students the opportunity to showcase their performance expertise while giving the instructor a chance to draw attention to how theoretical concepts the course covers can enable musical expression. (If live performance is inconvenient or impractical, students may bring in electronic performances.)

Three compositions are assigned, spaced roughly equidistantly across the semester. The opening of the prompt for each assignment is as follows:

- Compose a short piece using techniques of either motivic development, symmetry and inversion, or both. You may use this opportunity to experiment with the whole-tone and octatonic scales. These scales are both transpositionally and inversionally symmetrical, and therefore work nicely within pieces featuring techniques of inversion.

¹ Aspects of this component of the course were originally borrowed from Robert Hasegawa, one of my predecessors in Model Composition and Post-Tonal Analysis.

- Write a piece that focuses on three to five different set classes of cardinalities 3–6. Choose set classes that sound sharply differentiated—that is, with highly contrasting intervallic content. Use these set classes for continuity and contrast within your piece: compose sections that you want to sound continuous and coherent by focusing on a single set class and create contrast by switching between set classes. The set classes you choose should be presented in a variety of transposed and inverted forms.
- The assignment is to compose a serial piece. There is no restriction on which serial techniques you use except this: whichever techniques you choose should be chosen thoughtfully. That is, you should have a plan behind why you move from one series form to the next.

Within each prompt, further guidance is provided about length, notation, and other practical considerations. Compositions analyzed in class that may be taken as sources of inspiration are also briefly discussed. Instrumentation is usually left open, and students tend to write for themselves or groups of their friends. Along with the compositions, students are asked to submit brief (~1 paragraph) “analyses” in which they explain the techniques their compositions deploy. In addition to helping students organize their thoughts, these analyses are a practical aid for assessment: the TAs or instructor can check to see that the students managed to achieve what they set out to achieve, and that the techniques they use are a suitable match for the assignment prompt.

These prompts are deliberately open-ended. They thus contrast with composition projects Eastman students are assigned in previous semesters, which are more constrained as to tonal language, style, instrumentation, and texture—e.g., students are asked to compose a parallel period in keyboard style, or a classical-style minuet for string quartet. Many students evidently find the open-ended nature of these assignments liberating: every semester, we receive compositions that are astonishingly creative, with students often finding ways to satisfy the requirements of the prompt using styles or genres we hadn’t anticipated. (An EDM track with palindromic and inversive symmetry sticks out fondly in memory.)

Nonetheless, there are potential pitfalls in such open-ended composition assignments, and some students clearly need more structured guidance. Joseph N. Straus writes that “composition assignments are most effective when students are narrowly hedged in by clear guidelines, and often with some of the assignments precomposed.”² No doubt this is often true. For some students, the flexibility of these open-ended assignments may prove daunting, or may lead to unfocused, unproductive efforts. But since Model Composition and Post-Tonal Analysis is the culminating course of our undergraduate curriculum, and given the stylistic and technical diversity that is a constant theme of the course, I find it appropriate to leave these assignments relatively flexible.

But the templates included in this submission can serve as an aid to students who need it. If students have been itching to express themselves, the open-ended assignments provide an opportunity for them to do so. And for students who are more cautious, less confident in the material, or who for whatever reason would prefer a little more direction, the templates give them a structure that can get them started.

² Joseph N. Straus, “Ten Tips for Teaching Post-Tonal Theory,” in *The Norton Guide to Teaching Music Theory*, ed. Rachel Lumsden and Jeffrey Swinkin (New York: W. W. Norton and Company, 2018), 83.

Sample composition using motivic transformations for piano and melody instrument

This exercise is intended to give you an idea of some ways in which you might use the operations of pitch and pitch-class transposition and inversion to structure a short composition.

Theme 1

1. Compose a four-note motive drawn from a particular collection with a distinctive rhythm and contour. → 2. Transform the pcs of the motive by T_n , where n = the first pc interval of the motive. Vary the rhythm and contour. → 3. Transform again by T_n , where n = the second pc interval of the motive. → 4. Finally, transform again by T_n , where n = the last pc interval of the motive. Strive for a closing cadential gesture in the melody.

5. Begin accompaniment with chordal harmonies using the pcs of the first two measures. → 6. Continue accompaniment by swapping pitch content: use the pcs of m. 4 in the theme for the piano's m. 3 and vice versa.

7. In the right hand, invert Theme 1 symmetrically about some pitch axis (I_n^P) by reversing the direction of all pitch intervals. Supplement in the left hand and melody instrument with dyads reflecting prominent interval classes of the theme.

8. Compose a new theme (Theme 2), moving freely about a contrasting collection and in a contrasting texture. Present Theme 2 alongside a pc inversion of itself under I_9 . End m. 12 with a caesura.

9. Return to Theme 1, as a quasi-reprise in a sort of loose ternary. Cast the theme anew under T_{+n}^P for the melody instrument and T_{-n}^P for the piano accompaniment, where n = some particularly important pitch interval to the piece's overall structure and coherence.

Melody instrument

Piano

5

9

13

A potential realization of the exercise:

Theme 1

1. Compose a four-note motive drawn from a particular collection with a distinctive rhythm and contour.

2. Transform the pcs of the motive by T_n , where n = the first pc interval of the motive. Vary the rhythm and contour.

3. Transform again by T_n , where n = the second pc interval of the motive.

4. Finally, transform again by T_n , where n = the last pc interval of the motive. Strive for a closing cadential gesture in the melody.

(♩ = ca. 80)

Melody instrument

Piano

5. Begin accompaniment with chordal harmonies using the pcs of the first two measures.

6. Continue accompaniment by swapping pitch content: use the pcs of m. 4 in the theme for the piano's m. 3 and vice versa.

7. In the right hand, invert Theme 1 symmetrically about some pitch axis (I_n^P) by reversing the direction of all pitch intervals. Supplement in the left hand and melody instrument with dyads reflecting prominent interval classes of the theme.

8. Compose a new theme (Theme 2), moving freely about a contrasting collection and in a contrasting texture. Present Theme 2 alongside a pc inversion of itself under I_9 . End m. 12 with a caesura.

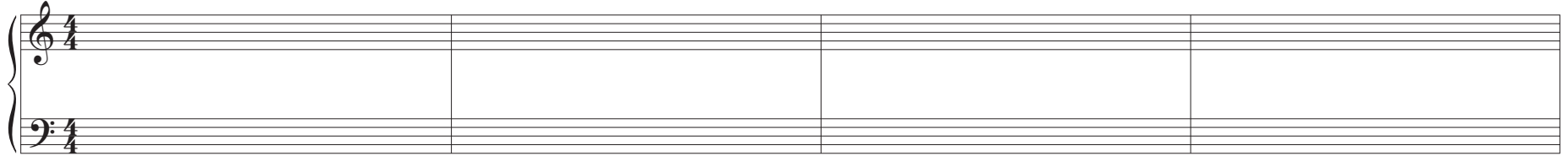
9. Return to Theme 1, as a quasi-reprise in a sort of loose ternary. Cast the theme anew under T_{+n}^P for the melody instrument and T_{-n}^P for the piano accompaniment, where n = some particularly important pitch interval to the piece's overall structure and coherence.

Sample composition with pitch-class sets for keyboard

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Intro

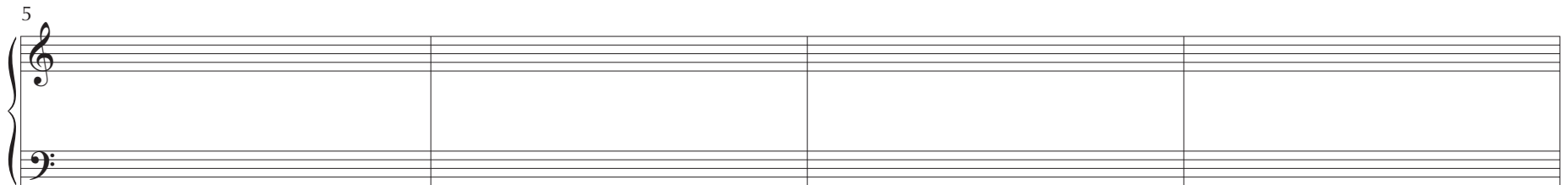
mm. 1–4: Choose 2–3 set classes generated by complete or partial interval cycles. Present them first in chordal, harmonic textures to establish a sound-world of source collections for the piece; find common tones to provide links between sets; in m. 3, transform the sets of the opening bars by I_n , where n = an index number that will not return the same pitch classes under inversive symmetry for any complete-cycle sets.



A

mm. 5–6: Introduce a motive derived from mm. 1–4 and develop.

mm. 7–8: Select a significant pitch axis and invert.



B

mm. 9–12: Choose 2–3 set classes that obviously contrast in interval content from A. Create a contrasting texture by devising a contrapuntal lattice that focuses on vertical presentations of important subsets of a set class.



A'

mm. 13–16: Return to original set classes and A material. Present inverted motives of mm. 5–8 together, transposed according to some structurally significant plan. Close with material from the introduction.



Intro

Adagio (♩ = 60)

mm. 1–4: Choose 2–3 set classes generated by complete or partial interval cycles. Present them first in chordal, harmonic textures to establish a sound-world of source collections for the piece; find common tones to provide links between sets; in m. 3, transform the sets of the opening bars by I_n , where n = an index number that will not return the same pitch classes under inversive symmetry for any complete-cycle sets.

Musical score for the Intro section (measures 1–4). The score is in 4/4 time, Adagio (♩ = 60). It features a piano (mp) texture with a key signature of one sharp (F#). The music consists of chordal textures in measures 1 and 2, followed by a transformation in measure 3, and a final chord in measure 4. Dynamics include mp and sfz.

A

mm. 5–6: Introduce a motive derived from mm. 1–4 and develop.

mm. 7–8: Select a significant pitch axis and invert.

Musical score for section A (measures 5–8). The score is in 4/4 time. Measures 5–6 introduce a motive (mf) and develop it (p). Measures 7–8 select a significant pitch axis and invert it (mf, p). Dynamics include mf and p.

B

mm. 9–12: Choose 2–3 set classes that obviously contrast in interval content from A.

Create a contrasting texture by devising a contrapuntal lattice that focuses on vertical presentations of important subsets of a set class.

Musical score for section B (measures 9–12). The score is in 10/8 time. Measures 9–12 create a contrasting texture (leggiero mp) by devising a contrapuntal lattice. Dynamics include mp and cresc.

A'

mm. 13–16: Return to original set classes and A material. Present inverted motives of mm. 5–8 together, transposed according to some structurally significant plan.

Close with material from the introduction.

Musical score for section A' (measures 13–16). The score is in 4/4 time. Measures 13–16 return to original set classes and A material, presenting inverted motives of mm. 5–8 together, transposed according to some structurally significant plan. Dynamics include f, mp, sfz, and p.

A potential realization of the exercise:

Derek J. Myler // Post-tonal theory

Intro

Adagio (♩ = 60)

mm. 1–4: Choose 2–3 set classes generated by complete or partial interval cycles. Present them first in chordal, harmonic textures to establish a sound-world of source collections for the piece; find common tones to provide links between sets; in m. 3, transform the sets of the opening bars by I_n , where n = an index number that will not return the same pitch classes under inversive symmetry for any complete-cycle sets.

(0369)
[004002]

(048)
[000300]

A

mm. 5–6: Introduce a motive derived from mm. 1–4 and develop.

ic3/4 motive

mm. 7–8: Select a significant pitch axis and invert.

B

mm. 9–12: Choose 2–3 set classes that obviously contrast in interval content from A.

Create a contrasting texture by devising a contrapuntal lattice that focuses on vertical presentations of important subsets of a set class.

(0127)
[210021]

(016)
[100011]

A'

mm. 13–16: Return to original set classes and A material. Present inverted motives of mm. 5–8 together, transposed according to some structurally significant plan. Close with material from the introduction.

Sample composition in twelve-tone serialism

for voice and piano

Your task is to compose a twelve-tone serial setting for voice and piano of “Made Shine” by the American modernist poet and scholar Josephine Miles.

— — —

Josephine Miles, “Made Shine” (1939)

This face had no use for light, took none of it,
Grew cavernous against stars, bore into noon
A dark of midnight by its own resources.

Yet where it lay in sleep, where the pillow held it
With the blind plaster over it and the four walls
Keeping the night carefully, it was undone.

Sixty-watt light, squared to a window frame,
Across a well of air, across wind and window
Leaped and made shine the dark face in its sleep.

— — —

Before beginning your composition, consider such issues as:

- Text declamation. (Note that most lines contain 11 or 12 syllables.)
- Form. (How will you organize your setting? Are there clues in the narrative structure?)
- Opportunities for text painting. (Can well-placed musical gestures support the text?)

Next, determine the opening form of your series (P_n).

Then, transpose P_n to P_0 and build a matrix as a resource for your composition.

Here are some additional items to consider as you work through your setting:

- How will you decide which series forms will follow others? Can you consider voice leading between phrases? Similar harmonic content? Audible transformations of motives?
- How will you structure harmonies in the piano? Can you develop any non-adjacent motives that might emerge from the series in a harmonic texture?
- Can you creatively partition your series into subsegments and juxtapose these smaller structures in novel ways?
- Can you find any opportunities to take advantage of invariance in your composition? (Hint: if your series contains any transpositionally or inversionally symmetrical segment, performing the appropriate transposition or inversion upon the series will hold that segment invariant.)

Made Shine

Josephine Miles (1939)

(♩ = 60)

This face had no use for light, — took none of it, Grew ca-ver-nous a-against stars, —

— bore in - to noon A dark of mid - night by its own re-sour - ces. —

Yet where it lay in sleep, where the pil-low held it With the blind plas - ter o-ver it

mf

p

11 and the four walls Keep - ing the night care - ful - ly, it was un -

cresc. *f*

14 done. Six - ty-watt light, squared to a win - dow frame, A - cross a well of air, a -

mf *cresc.*

18 cross — wind and win - dow Leaped — and made shine — the

f *mf*

21 dark face — in its — sleep. —

rit.

Made Shine

Josephine Miles (1939)

Analytical notes on ternary form (A: mm. 1–7; B: mm. 8–14; A': mm. 14–23):

- Supports narrative action, with B section at m. 8 highlighting shift to sleep
- Sections defined in part by textural contrast (leaping contour of A sections vs. static B section)
- Also supported by clear piano reprise at m. 14, number of series forms presented (6 vs. 3), serial content (A sections begin with P_{10}/R_{10} in voice), descending minor third cadences in A sections (end of first system in A and last series in A'), and by pc 11 closing each A section

	I_0	I_2	I_5	I_4	I_{10}	I_7	I_9	I_3	I_1	I_{11}	I_6	I_8	
P_0	0	2	5	4	10	7	9	3	1	11	6	8	R_0
P_{10}	10	0	3	2	8	5	7	1	11	9	4	6	R_{10}
P_7	7	9	0	11	5	2	4	10	8	6	1	3	R_7
P_8	8	10	1	0	6	3	5	11	9	7	2	4	R_8
P_2	2	4	7	6	0	9	11	5	3	1	8	10	R_2
P_5	5	7	10	9	3	0	2	8	6	4	11	1	R_5
P_3	3	5	8	7	1	10	0	6	4	2	9	11	R_3
P_9	9	11	2	1	7	4	6	0	10	8	3	5	R_9
P_{11}	11	1	4	3	9	6	8	2	0	10	5	7	R_{11}
P_1	1	3	6	5	11	8	10	4	2	0	7	9	R_1
P_6	6	8	11	10	4	1	3	9	7	5	0	2	R_6
P_4	4	6	9	8	2	11	1	7	5	3	10	0	R_4
	RI_0	RI_2	RI_5	RI_4	RI_{10}	RI_7	RI_9	RI_3	RI_1	RI_{11}	RI_6	RI_8	

A ($\text{♩} = 60$) melodic 0–10 (m7) motive

P_{10} This face had no use for light, — took none of it, RI_5 Grew ca-ver-nous a-against stars, —

parallel m7s as non-adjacently developed motive (quasi-tonal) →

tetrachord held invariant under I_3

RI_6 *mf* (etc.) RI_4

inverted m7

RI_{11}

another voice-leading invariant

inverted m7 back to opening pcs of I_1

not D! (voice vs. piano) 8 9 10 11 12

I_7 still E_b after not-D detour? $C?$

quartal: $F\#?$ $B?$ → becomes B-centric

B_3 as common tone into vocal entrance →

B

P_{11} Yet where it lay in sleep, where the pil-low held it With the blind plas-ter o-ver it

R_{10} *p*

splitting up dyads begins process of partitioning →

11

and the four walls Keep - ing the night care - ful - ly, it was un -

11

R₉ *cresc.*

tetrachords partitioned registrally into three voices

f

14

done. Six - ty - watt light, squared to a win - dow frame, A - cross a well of air, a -

14

A'

R₁₀ **L₂** **R₁₁** *cresc.*

text: more "square"

transition

R₁₃ *mf*

freer order...

18

cross wind and win - dow Leaped and made shine the

18

R₁₁ **P₃** *f* *mf*

text: leap

disordered to retain opening 0-10 motive

continues parallel m7s

also disordered, 1) to match vocal series presentation and 2) to provide common-tone G between phrases

21

dark face in its sleep.

21

rit.

Model Composition in the Post-Tonal Classroom: Three Templates and Sample Realizations

Analytical Discussion Points

To facilitate group discussion of the sample realizations with an eye toward giving students ideas they can deploy in their own compositions, we present below some starting points for engaging students in analytical conversation.

Composition 1, Motivic Development

- Phrase 1 (mm. 1–4):
 - The template asks the students to compose a motive and develop it in both melodic and harmonic configurations. How can we understand the melody of mm. 2–4 as an outgrowth of the motive in m. 1? (Identical pitch-class intervals; some common pitch intervals—note the rising semitone ending mm. 1, 2, and 4; selected shared rhythmic and metric elements.)
 - How does the closing gesture suggest a cadence? (“Diatonic” double neighbor motion, the completion of an arch contour that rises to m. 3 and falls in m. 4.)
 - What elements of voice leading from common-practice conventions inform the harmonic layout of mm. 1–2? (Common tones, steps, small leaps.)
 - As a natural consequence of the transpositional plan, students may notice a large-scale motivic parallelism that emerges across the first phrase. (Compare the downbeats of mm. 1–4 and the motive in m. 1.)
- Phrase 2 (mm. 5–8):
 - What pitch axis was chosen for the inversion in the second phrase? Why? ($F\sharp_4$; allows for melody to again begin and end on C.)
 - Note the rhythmic dialogue between the melody instrument and the inverted theme. What interval class is the focus of this new countermelody and the additional left-hand accompaniment? (The focus on ic 3 contributes to tertian sound of the composition.)
- Phrase 3 (mm. 9–12):
 - The template for this phrase combines an open-ended direction (compose a new theme with a contrasting collection) with a strict one (transform that theme under I_9), but also includes a prompt to help students think about formal concerns (they should write a contrasting theme that ends in a caesura). How do the collections in this phrase create contrast with the collections of the opening motive? ((0137) vs. whole-tone; the former is all-interval and non-scalar, the latter is a familiar scale focused on a single interval.) Why would a caesura be desirable at the end of this phrase? (It rounds off the theme and creates dramatic expectation for the return of Theme 1.)
- Phrase 4 (mm. 13–16):
 - The melody instrument is transposed by +1 and the piano by -1. Why is this a significant pitch interval in the realization? (+1 is the last pitch interval of the motive and lends “leading-tone,” quasi-cadential character to the motive’s closing gesture; ic 1 is also a prominent differentiating interval between the opening and contrasting collections.)

Composition 2, Pitch-Class Sets

- Phrase 1 (mm. 1–4):
 - Observe how partial and complete C3 and C4 collections ((036), (0369), and (048)) are developed and combined across the phrase—separated in time and register in m. 1, but increasingly interwoven throughout the phrase. How does m. 4 reflect these collections?

- (Melodic notes D-F#-B $\flat$ are (048), harmonic notes supporting B $\flat$ are (036) and combine with F# to create (0369)).
- Is there any logic to the voice leading in mm. 1–4? (Common-pc relationships [e.g., B $\flat$ connections in mm. 1–2], stepwise motion in left hand [e.g., descending third across mm. 1–2 from D–F# to C–E, descending sixth across mm. 2–3 from A–F# to A $\flat$ –F].)
 - Do the sets used in m. 4 carry any quasi-tonal significance? (They resemble a half cadence—note that the measure arranges (0369) and (048) into a root-position dominant 13th chord.)
 - Phrase 2 (mm. 5–8):
 - How is the motive derived from the source sets of mm. 1–4? (Melodic focus on ics 3/4.)
 - Discuss “middle C” as a particularly pianistic axis of inversion in mm. 7–8, as well as forecasting the C-centric closing gesture.
 - Phrase 3 (mm. 9–12):
 - To the left of the staves in Phrase 1 and Phrase 3, ic vectors are listed to display contrasting interval content between set classes. What are the differences between the A-section and B-section set classes? (Emphasis on ics 3/4 vs. ics 1/2; absence of ic 5 in A-section sets.)
 - Discuss the contrapuntal process by which (016) and (027), a subset of (0127), are produced as vertical combinations in m. 12, while melodic instances of (0127) are sequenced in the upper voice.
 - Phrase 4 (mm. 13–16):
 - Why is the canonic reprise of the A motives transposed T₃ and T₄, as shown to the left of the staves? (To reflect set-defining ics 3 and 4.)

Composition 3, Serialism

(The annotated copy of the score already contains much information that will be helpful for analytical discussion. Here we offer a few broad questions for group consideration.)

- Does there seem to be any voice-leading logic governing the choices of series forms in the setting, such as invariance?
 - Some examples of invariance:
 - Prominent common tones (mm. 7–8: voice RI₁₁/piano I₇ to voice P₁₁; mm. 13–14: voice P₁₁ to piano RI₃)
 - Shared dyads (e.g., mm. 13–14: piano R₉ [partitioned ops 8/12] to piano RI₃)
 - Shared tetrachords (mm. 2–3: voice P₁₀ to voice RI₅)
- In what ways are twelve-tone serialism and tonality in dialogue?
 - Some examples:
 - The A section (mm. 1–7) stakes out various “diatonic” zones through a combination of the quasi-dominant m7 motive presented as verticalities and mostly cooperative collections in the voice. (F, E, and E $\flat$ in mm. 1–3; F# to B in mm. 6–7; confirmation of B with octaves in m. 7. See annotations throughout this section that indicate possible local tonal centers.)
 - The close of the A’ section (mm. 21–23) can be heard as suggesting a plagal cadential motion in A major (with brief Lydian inflection).
- For what reasons does the realization disorder selected series forms?
 - Some examples:
 - m. 18: To effect a scalar gesture.
 - m. 19: To connect phrases by common tone.
 - m. 20: To reflect a main motive (m7 leap between pcs 0 and 10).