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2004 Patricia Carpenter Emerging Scholar Award

Stravinsky's Discontinuities, Harmonic Practice, and the Guidonian Space in the "Hymne" from the *Serenade in A*

José António Martins

Once taken as a sign of artistic inconstancy and stylistic whim, discontinuities in Igor Stravinsky's neoclassical works have gradually become a primary focus of music analysis.[1] Generations of theorists have tried to reconcile Stravinsky's fragmented textures with the quest to hear coherent wholes, proposing analytical models that try to account for what Elliott Carter referred to as the music's "unified fragmentation."[2] Stravinsky's discontinuities operate not only on the surface of the music, but on large-scale levels as well. Surface-level discontinuities result from sudden changes of harmony, rhythm, melody, motive, and instrumentation. These "phenomenal" changes by themselves, however, are not incompatible with traditional notions of harmonic continuity, linearity, and coherence. Yet these surface-level changes often also signal large-scale discontinuities that result from the succession of contrasting and relatively self-contained sections or static blocks. It is the functional association of those blocks that more strongly undermines continuity at background levels and poses challenges to analysis.[3]

The harmonic motion that characterizes Stravinsky's neoclassical works has traditionally been understood as a primary factor for large-scale discontinuity. Though tonal materials are often conspicuous, the harmonic relations resulting from the superimpositions and juxtapositions of these materials within and across sections create nontonal harmonic syntaxes. In perhaps the most extreme reading of discontinuity in Stravinsky, Jonathan Kramer argues that the motion of tonal materials within sections is divorced from large-scale motion across sections. Kramer proposes that the foreground harmonic motion of "tonal" materials produces static, harmonically discontinuous blocks, which move by "nontonal means" at the background level.

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> Stravinsky was now ready to embrace the music most deeply involved with kineticism. He was able to strip tonal sounds of their kinetic implications and to freeze them in motionless nonprogressions. Still there is a background motion at work—the neoclassic pieces have beginnings, middles, and ends, although these gestures are created by other than tonal-triadic means. [In] the music of neoclassicism … the material implies a motion that never (or at least rarely) occurs *on its own level*. There is irony in this music: the tonal materials [within the self-contained sections] suggest movement, but they do not move; in the background the pieces do move, but by nontonal means.[4]

To compensate for the music's lack of traditional harmonic continuity, analytical strategies developed in the last few decades have focused on parameters other than harmony, proposing alternative associations among self-contained blocks. These strategies include the association and integration of dynamic levels and registers, the consistency of durational proportions, the composing out of linear pitch patterns, the establishment of pitch symmetries and polarities, and functional associations of rhythmic and motivic constituents.[5]

The present essay proposes a new framework for understanding the relationship between harmonic motion and discontinuity in Stravinsky's neoclassical works, by showing that harmonic relations at the small-scale levels are not divorced but reconciled with large-scale levels. In particular, it examines the harmonic practice of the "Hymne" from the *Serenade in A*, which is constructed in "typical" discontinuous blocks. Though harmonic relations in this movement are nontonal, I view harmonic areas within the blocks as consistent with relations among pitch collections across blocks. To this end, I introduce a music-transformational space, named *Guidonian space*, which coordinates all potential diatonic material and measures harmonic distance between closely related and distant diatonic areas, without assuming the presence of complete diatonic collections and the priority of pitch centers.[6] The structure of the Guidonian space is suggestively derived from the opening collection of the "Hymne" and renders a coherent reading of the entire movement, articulating aspects of both melodic and harmonic syntax.[7] Although I focus on a single movement, the methodological approach developed here is relevant to other neoclassical pieces of Stravinsky, as well as works by other composers such as Béla Bartók, Darius Milhaud, and Witold Lutosławski.[8]

Stratified Texture of the "Hymne"

In a classic essay on the music of Stravinsky, Edward T. Cone suggests that the discontinuous surface of the "Hymne" can be understood as a "subtle" alternation between two concurrent textural strata, since "the two [strata] develop the same material and are consequently always in close contact with each other."[9] Example 1 reproduces Cone's analysis of the first section of the movement, mm. 1–27.[10] The spatial layout of the example captures

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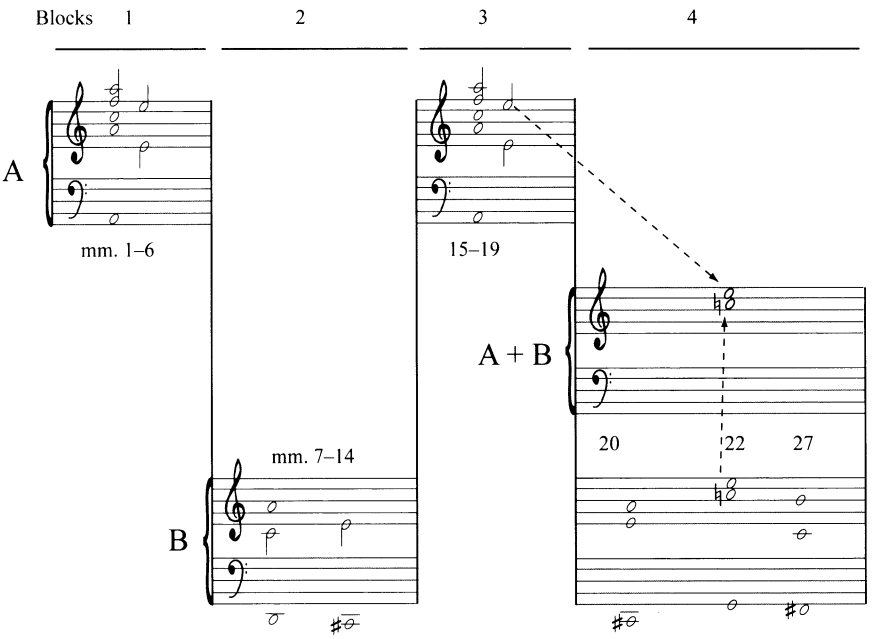
his analytical notions of "stratification," "interlock," and "synthesis." Vertical lines indicate discontinuities created by the juxtaposition of self-contained blocks. (I have highlighted each block with horizontal lines above the music.) According to Cone, the alternation between strata "A" and "B" establishes a tension created by their registral and dynamic split. This tension, however, is ultimately resolved in m. 22 by reaching a synthesis that combines strata A and B; in the example, Cone illustrates the synthesis by dotted arrows that converge the two strata into a single A + B stratum.[11]



Example 1. Cone's "stratification," "interlock," and "synthesis" for the "Hymne" in Stravinsky's *Serenade in A*, Section 1, mm. 1–27.

In the following, I examine the transformations of pitch material within, as well as across, discrete blocks to clarify how Cone's stratified texture affects the harmonic motion of the movement. The movement may be divided into three sections: mm. 1–29, 30–51, and 52–81. The three sections are characterized by different thematic material but conclude with similar cadential gestures. Each section is further stratified into smaller blocks, like those in Section 1 marked in Example 1. As the movement unfolds, the number of blocks per section is reduced: Section 1 has four blocks, Section 2 has two blocks, and Section 3 can be interpreted as a single continuous block.

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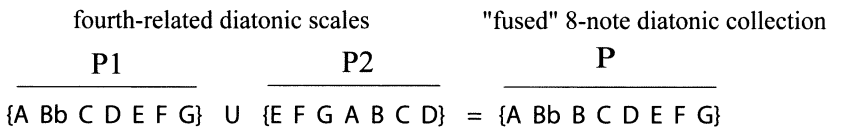
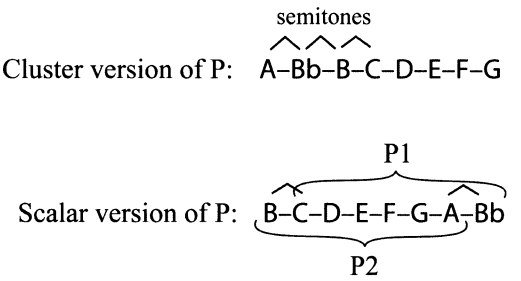
The Eight-Note Diatonic Collection and the First Section

The harmonic content of the opening block in mm. 1–6 consists of an eight-note collection {B♭, B, C, D, E, F, G, A}. This collection provides pitch relations relevant for the melodic space of the entire first section and, as we will see later, it is also relevant for the harmonic space of the entire movement.[12] Example 2a interprets the eight-note collection (P) as the union of two fourth/fifth-related diatonic collections, marked P1 and P2.[13] Example 2b shows two ways of notating P: a "cluster" version that bunches all the semitones together as in a prime-form representation, and a scalar version that places the diatonic semitones of B–C and A–B♭ at the extremities of an ordered pitch-class set. The scalar version maximizes common tones between subsets P1 and P2, and it yields a non-octave repeating pattern that is diatonic at the contiguous local level. Both versions are suggested by the musical surface of the opening block: the cluster version is hinted at in the left-hand accompaniment, and the scalar version is suggested by the contour of the right hand's melodic descent.



Example 2a. The opening eight-note diatonic collection, mm. 1–6.



Example 2b. Cluster and scalar arrangements of the eight-note diatonic collection.

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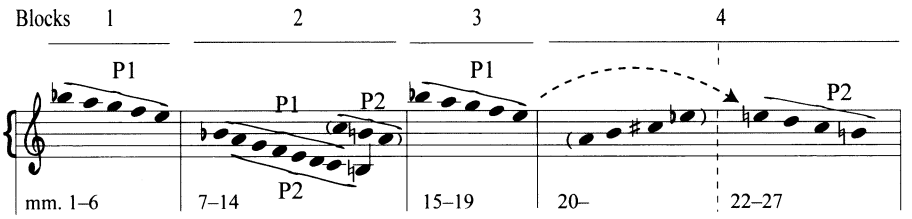
The melodic profile of the entire first section (mm. 1–27) is governed by the scalar version of the eight-note collection. Following Cone's stratification, Example 3 displays scalar profiles for the melodic descents in each of the four blocks. Scalar versions of subset P1 are made explicit in Blocks 1 and 3 where B♭5 descends to E5. At Cone's point of synthesis in m. 22 (Block 4), P2 retakes E5 from the register where it had been left off (in mm. 6 and 19) and now descends to B♮4 where it completes a scalar arrangement of P.[14] The point of melodic convergence in m. 22 thus signals the midpoint of a large-scale linear descent from P1 to P2, encompassing the entire scalar version of the eight-note collection. In turn, the descent of P1 followed by P2 across the blocks parallels a smaller-scale descent that takes place within Block 2 (mm. 7–14) where it occurs an octave lower.[15]



Example 3. Melodic lines unfold scalar versions of the eight-note diatonic collection in Section 1, mm. 1–27.

The Eight-Note Diatonic Collection and the Guidonian Space

The scalar version of the eight-note collection establishes a recurrent intervallic pattern of semitone–tone–tone (S–T–T), as illustrated in Example 4a. The recurrence of this pattern invites us to extend it beyond the boundaries of the original eight-note collection, gradually entering new chromatic territory. The resulting space is the complete cycle shown in Example 4b. I call this cycle the *Guidonian space* (or simply G-space), given that it efficiently embeds the three medieval hexachords—soft, natural, and hard. The scalar range of the eight-note collection thus outlines a "diminished octave," B–B♭ (Example 4a), a relation that, in medieval hexachordal theory, involves a shift or mutation between hard and soft hexachords and is referred to as a "false relation," or *mi contra fa*.[16]

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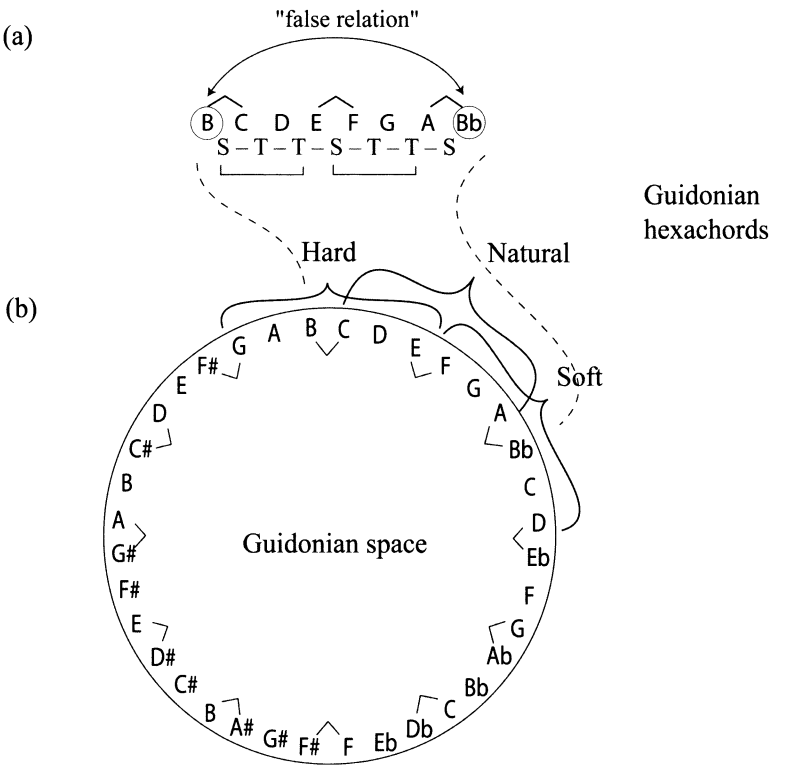
The Guidonian cycle is a string of thirty-six equally-tempered pitch classes under enharmonic equivalence, so that the intervallic pattern of S–T–T features parallel perfect fourths throughout the space. A result of such an intervallic pattern is that the G-space uniquely embeds all twelve semitones, which are distributed equidistantly throughout the cycle. This suggests that, like in hexachordal theory, the semitone signals unique locations in the G-space (marked by wedges in the example). We can conceive of the space as generalizing the hexachordal arrangement, weaving together the twelve hexachords (as well as the twelve diatonic collections) in a continuous string that overlaps the common tones of neighboring hexachords.[17] The space thus captures and uniquely places diatonic scale-segments, though without the need to mediate segments through complete diatonic collections or invoking traditional labeling systems. Finally, since it is a pitch-class space, its continuous fabric interacts with register, but is not restricted by it; nevertheless, since it is also a scalar space, its analytical applications are most potently realized in register.



Example 4a. Recurrent intervallic pattern of the opening eight-note collection (scalar version). *Example 4b.* The Guidonian space: embedding of hard, natural, and soft hexachords.

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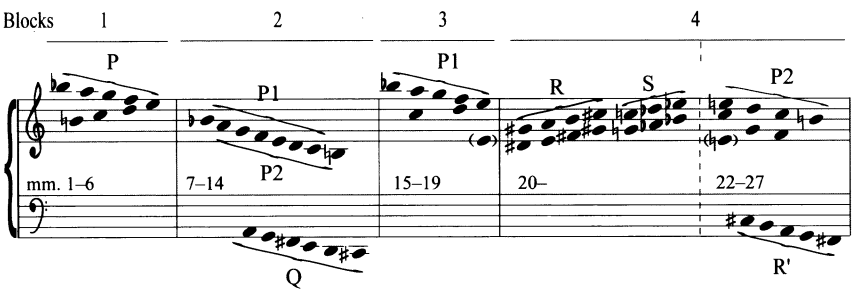
The Guidonian Space and Harmonic Motion in Section 1

Given that the Guidonian intervallic pattern can be used to organize the large- and small-scale aspects of the first section's melodic design, we may ask whether it can also model its harmonic relations. The reduction shown in Example 5a reflects the main pitch material for the first section, "filling in" the melodic skeleton outlined in Example 3. This segmentation results from abrupt juxtapositions of different pitch collections and some superimpositions of collections differentiated by contrapuntal means. The example represents the collections mostly in scalar fashion, suggesting that it is analytically useful to conceive of their musical deployment as ordered pitch classes or scalar segments. The juxtaposition of contrasting segments occurs mostly in Blocks 3 and 4, as the temporal succession labeled P1, R, S, and P2; the superimpositions are created primarily by new material introduced by the bass at the end of Block 2 (labeled Q in mm. 13–14) and at the end of Block 4 (labeled R'—a sub-segment of R—in mm. 26–27).[18]



Example 5a. Main pitch-class segments in Section 1, mm. 1–27.

The segmentation shown in Example 5a gives rise to harmonic relations between juxtapositions and superimpositions of the quasi-diatonic segments. Given the semitonal embeddings within all the segments, Example 5b projects each segment at unique locations in G-space and shows that the harmonic relations developed throughout Section 1 are coherently arranged in the space. After centering on segment P in Block 1, the local linear progression from P1 to P2 within Block 2 moves in a counterclockwise direction. Then, at the end of Block 2, segment Q (superimposed in the bass) continues this counterclockwise motion in G-space. In other words, Q sounds simultaneously with P2 to create a "vertical" harmonic relation, which in turn extends the previous "horizontal" relation (from P1 to P2). Block 3 repeats the opening segment (focusing now on

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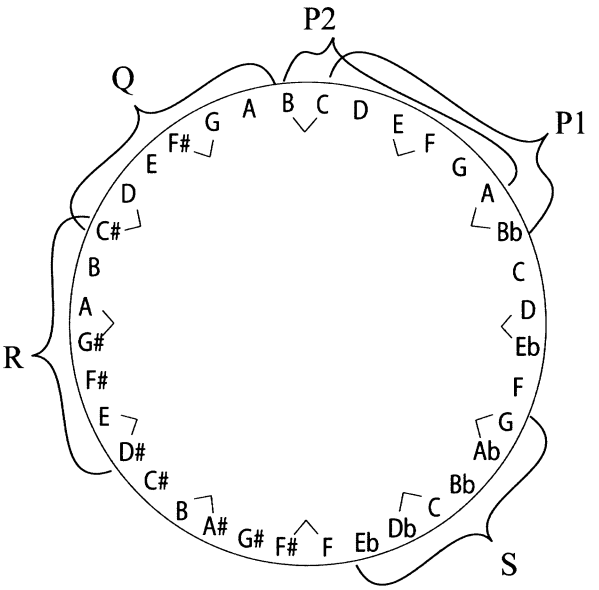
P1), and Block 4 introduces R, a new segment.[19] Like Q, segment R continues the previous counterclockwise motion in G-space, using the contiguous space where segment Q left off.[20] Notice that R is articulated in parallel fourths in the right hand, which coincides with and makes explicit the G-space's intervallic structure of parallel fourths. Then, before reaching the final P2 that closes the harmonic motion at the end of Section 1, there is a brief "modulatory" twist to segment S, which is mapped into a somewhat distant region of G-space.



Example 5b. Main segments of Section 1 projected in Guidonian space.

Measuring Harmonic Motion in Guidonian Space: The MUT *Operation*

The pitch transformations among the main segments of Section 1, as shown in Example 5b, suggest a large-scale harmonic motion that is captured by the overall path in Guidonian space. But to better understand how the harmonic relations are defined, we need to develop ways of measuring more precisely the "modulations" among the different segments. Since musical distances are not measured in absolute terms but depend on the space in which they are measured,[21] we can use the G-space as a framework to measure harmonic distances.

Minimal changes of harmonic context in G-space involve the semitonal voice-leading motion between notes that stand in a chromatic "false

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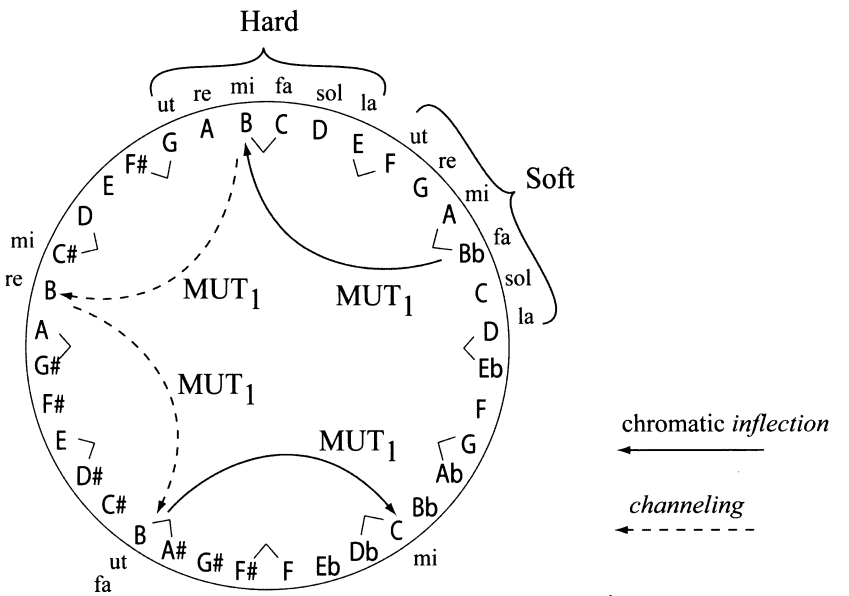
relation" while surrounding notes remain intact. This motion is best captured by an operation similar to the process of *mutation* between soft and hard hexachords and is accordingly named MUT.[22] Mutation thus creates either a chromatic inflection (*mi contra fa*) or no note change. Example 6a exemplifies through a series of MUT operations: MUT_1 sends B♭ within the soft hexachord to B♮ in the hard hexachord (solid arrow), which amounts to mutating *fa* into *mi*. The operation MUT_1 thus inflects chromatically B♭ to B♮ and corresponds to a move of seven contiguous counterclockwise "steps" in the space. Continuing to apply MUT_1 to B♮, however, retains the pitch class as it is now sent to another B♮ (dotted arrow), which amounts to transforming *mi* into *re*. I call this process *channeling*, as opposed to the previous chromatic *inflection*.[23] Continuing, another MUT_1 retains pitch-class B♮ as it is now sent from *re* into *ut*. Applying applying another MUT_1, however, inflects pitch-class B♮ to C since again it corresponds to mutating *fa* into *mi*.

In sum, applying consecutive MUT_1 operations to a note amounts to alternating one chromatic inflection with two channelings. Both inflections and channelings move a note by seven counterclockwise contiguous "steps" in the space, changing minimally its harmonic context. The direction and length of the move can be further specified. Accordingly, MUT_{-1} yields a move of seven clockwise steps; MUT_2 yields a motion of fourteen counterclockwise steps; MUT_3 yields a motion of twenty-one counterclockwise steps, and so on. If the direction of the mutation is not specified, we may simply write $MUT_{|x|}$.



Example 6a. The MUT operation.

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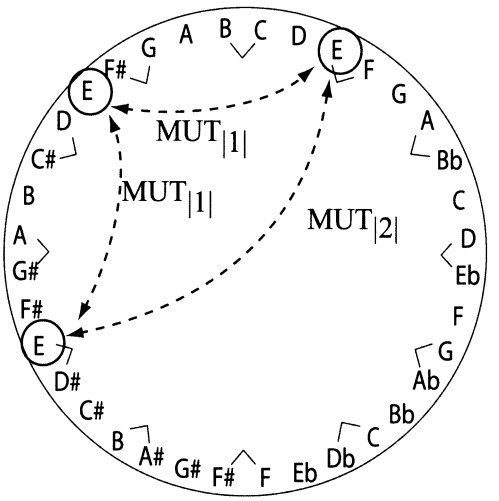
The channeling operation thus connects the three occurrences of a given pitch class in G-space, and each occurrence is uniquely defined by one of three possible intervallic relations it forms with adjacent notes: (1) it has a S (semitone) "above" and a T (tone) "below"; (2) its has a S "below" and a T "above"; or (3) it has a T both "above" and "below."[24] This captures some interesting spatial resources of the G-space, since the pattern T–S always refers to the most clockwise location of a given pitch class, the pattern S–T to its most counterclockwise location, and T–T refers to its "middle" location. Example 6b focuses on the three representations of pitch-class E in G-space (circled in the example). Accordingly, the pattern D–E–F refers to its clockwise location, the pattern D♯–E–F♯ to its counterclockwise location, and D–E–F♯ to its "middle" location. Therefore, a change of stepwise intervallic adjacency for a given note implies its spatial mutation and corresponds to a modulating motion that can be measured by MUT. As shown in the example, the distance between the clockwise location of E and its counterclockwise location is $MUT_{|2|}$, and the distance from either of these to its "middle" location is $MUT_{|1|}$.



Example 6b. The three representations of pitch-class E♮ in G-space.

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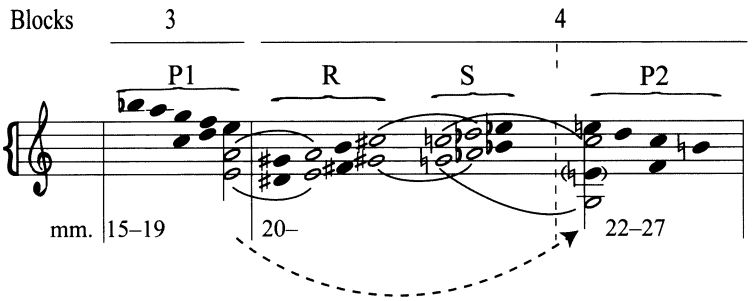
MUT can now be used to better discuss the passage leading to Cone's moment of synthesis. Example 7a displays a sequence of abrupt modulations from P1 at the end of Block 3 (m. 19) to the arrival of P2 in Block 4 (m. 22). This passage is framed by two salient moments articulated by the octave E4–E5 in the right hand; these notes have a stem in the example. Adjacent segments have at least two pitch classes in common, which are displayed with open noteheads and tied between collections. Notice that the common tones have reversed semitonal associations: for example, in P1, pitch-classes A and E are a semitone below B♭ and F respectively, and in turn become associated with G♯ and D♯ in segment R. The same semitone relations occur from R to S and S to P2.[25]



Example 7a. Reversal of semitonal associations between common tones in adjacent segments.

One can account for the reversal of semitonal associations since MUT can be used to measure the harmonic distance between the segments' common tones. Example 7b shows that common tones in the progression P1, R, S, and P2 are distributed at MUT_2 from each other. Applying MUT_2 to a given collection keeps two pitch classes intact (circled in the example) while the remaining pitches are transposed up one semitone and, in doing so, sends the segments to relatively distant parts of the space. We can now posit that the large-scale linear motion from P1 to P2—discussed in Example 3 and suggested by the dotted arrow in Example 7b—also embodies a large-scale harmonic motion. In fact, when the motion finally returns to P2 in m. 22, it not only completes a *linear* path from P1 to P2, but it completes a coherent *harmonic* cycle as well, structured by a series of MUT_2 transformations.

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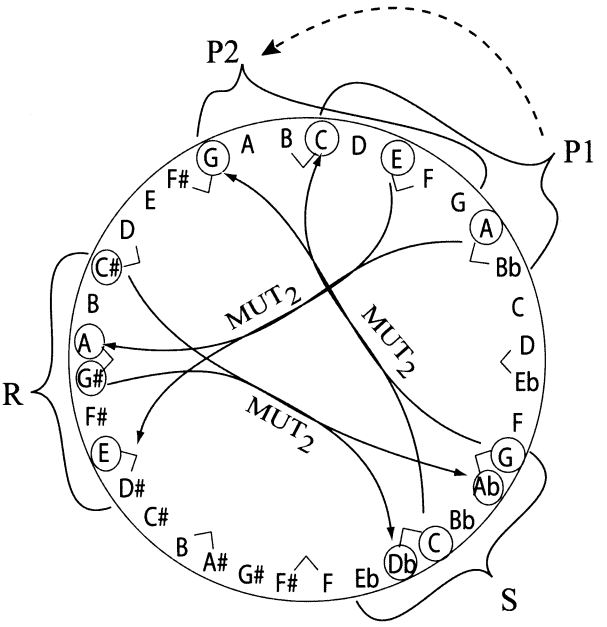

Example 7b. Transformations between segments P1, R, S, and P2 are structured by MUT_2. Common tones between adjacent segments are circled.

Cadential Gesture for Section 1

The trilling cadential gesture in mm. 28–29 that concludes the first large-scale section cannot be mapped in any contiguous region of the G-space given that the space's structure has no consecutive semitones to accommodate the melodic top voice of adjacent half steps F–E and D♯–E.[26] However, these two isolated semitones can be accounted for in light of previous material. The solid arrows in Example 8a suggest that the F–E semitone (labeled as P') recreates the semitonal upper neighbor to pitch E5 (Cone's point of synthesis). Similarly, the D♯–E semitone (labeled as R', m. 29) seems to extend (albeit in a different register) the space of the previous superimposed bass to complete R' (mm. 26–27), and the F♯–G semitone in the bass (labeled as Q') can be tucked into the "other" end of P2, into the "territory" of segment Q.

The top voice's "double-neighbor" figure F–E–D♯–E in the cadential gesture (mm. 28–29) creates a melodic wedge centering on E5. This melodic centricity is reinforced by the harmonic relations created by the Guidonian projections of the cadential material. Example 8b shows that the cadential pitch segments involve the three representations of pitch-class E♮ in the space; the three instances are circled in the example. As such, the

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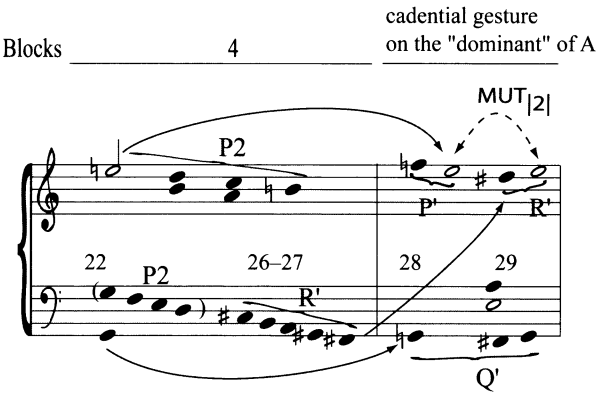
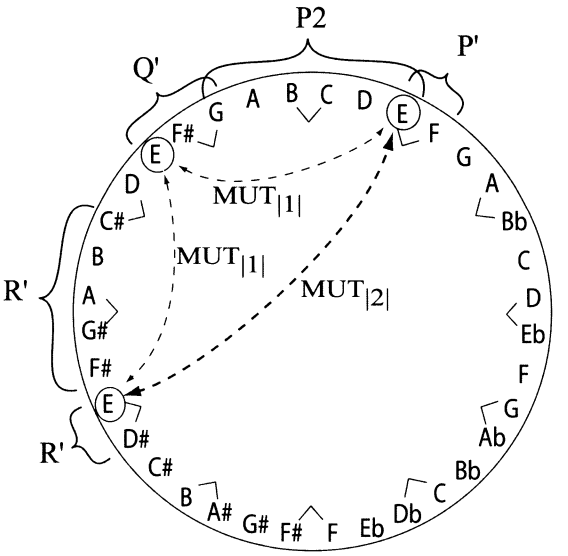


Example 8a. Reduction of the cadential gesture for Section 1, mm. 28–29.

melodic semitones F–E and D♯–E define the most clockwise and counterclockwise occurrences of pitch-class E in the space, and they are related by $MUT_{|2|}$ (larger arrow); the remaining occurrence of E (located by its adjacency to F♯–G) is given by the left hand and is related by channeling to the other two occurrences of E (smaller arrows). In other words, Stravinsky gives us an original way of articulating a cadence on "E," which not only relates closely to the main segments of the section, but also seems fitting as the "dominant" of A, thus creating a tonal analogy that reinforces the alleged "axis" of the *Serenade*.[27]



Example 8b. Guidonian representation of the cadential gesture.

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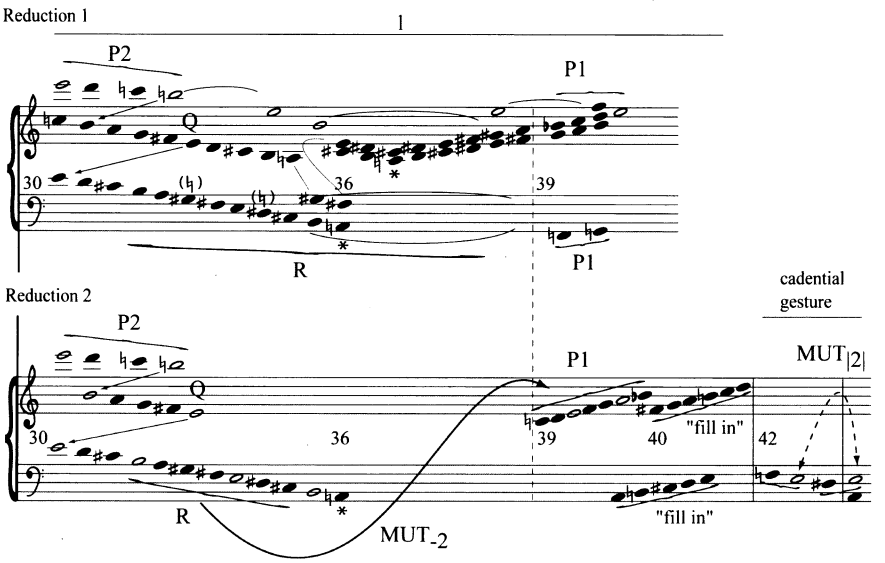
Section 2

The second large-scale section of the "Hymne," mm. 30–51, is divided into two large blocks, each punctuated by a similar cadential gesture on the "dominant" of A in mm. 42 and 51. As shown in Example 9a, the first block—spanning from mm. 30–41—reverses the progression of the previous section: it opens with a melodic restatement of P2 in the upper voice, and at m. 39 the melody outlines P1. The example presents two reductions for the passage: Reduction 1 is closer to the surface and accounts for a counterpoint of descending lines; Reduction 2 eliminates repetitions of the same linear pattern in different voices to clarify the overall stepwise progression and completes the passage from mm. 39–42.

The surface counterpoint starting in m. 30 involves multiple voices, which can be reduced to a three-voice counterpoint as shown in Reduction 1. Notice that each of the three voices descends through a recurrent intervallic pattern of T–T–S, but they start at different points in the pattern so that they are out-of-phase with each other. The arrows connecting the three voices indicate equivalent notes in the stepwise descent. Reduction 2 eliminates replications of the same stepwise pattern in different voices, showing that the material starts in the harmonic region of P2 and gradually inflects to sharper diatonic regions.



Example 9a. Phrase staggering in the first block of Section 2, mm. 30–42.

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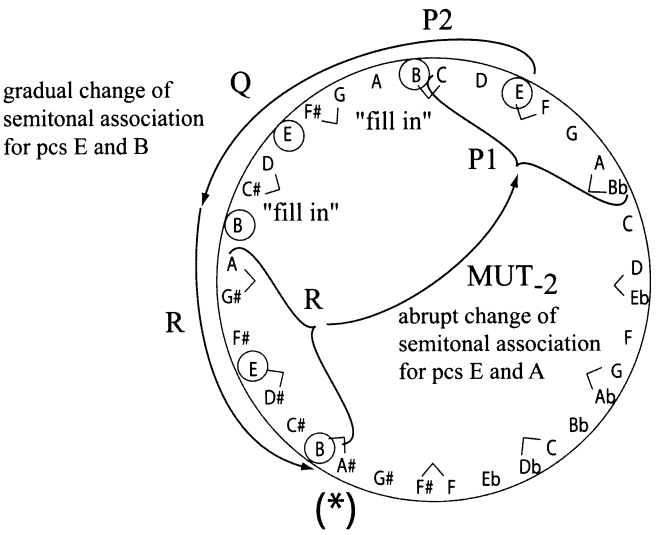
The out-of-phase counterpoint created by the superimposition of voices is akin to the notion of "phrase-staggering" proposed by Lynne Rogers. This technique describes the concurrent motion of layers attaining the same goal at different moments.[28] Reduction 1 shows that the two lower voices descend to A♮2, marked with an asterisk (m. 36, first and second beats respectively).[29] After this diatonic region is attained (mm. 36–38) there is an abrupt modulation—though without creating a gestural discontinuity—to P1 in m. 39.

Example 9b examines the projection of this block's material in G-space. Markings outside of the space refer to the passage up to the arrival on A♮ (m. 36), whereas markings inside the space refer to the remaining passage up to the cadential gesture (m. 42). The example shows that the long stepwise descent staggered in different voices perfectly fits the G-space. Starting on E♮ at its clockwise location, the pattern gradually moves counterclockwise, passing through the regions corresponding to Q and R. During this descent, most notes are chromatically raised, except for E♮ and B♮, which are left unchanged throughout. These two pitches are notated with open noteheads in the reductions of Example 9a and are featured prominently by the top voice. As a result, we can hear the passage as a slow modulation, gradually changing the semitonal associations for E♮ and B♮ (circled in Example 9b).



Example 9b. Guidonian projections for Section 2, Block 1.

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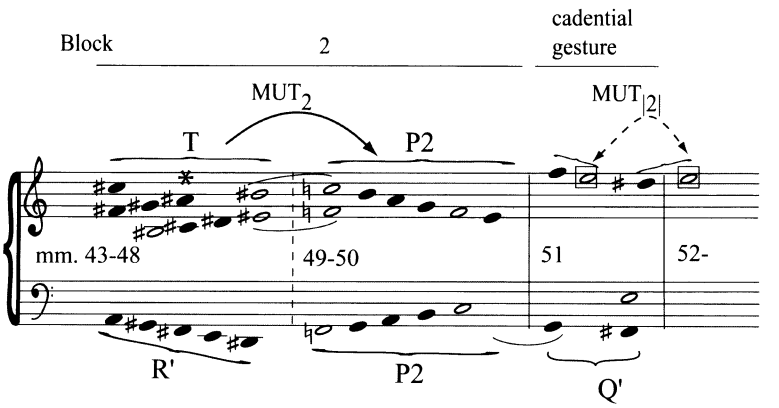
The long descending Guidonian pattern is broken by the final arrival of A♮ in m. 36. Thus the arrival of A♮ signals both the end of the line's descent and the break of the Guidonian pattern. Example 9b shows that an A♯ (marked by an asterisk in parentheses) would continue the pattern. Instead the voices reverse the melodic direction and reach P1 (m. 39) in an abrupt modulation, which nevertheless retains the gestural and rhythmic flow projected by the previous R collection (mm. 36–38). This modulation from R to P1 reverses the semitonal associations of the common tones (E♮ and A♮) between the collections, that is, from D♯–E and G♯–A to E–F and A–B♭. This semitonal reversal sounds prominently in the upper voices (m. 39) and is captured by MUT$_{-2}$ in Example 9b (as indicated inside the G-space). The abrupt modulation creates a harmonic gap, which is finally "filled in" by the remaining passage, mm. 40–41. (This is shown by the "fill in" segments marked in Example 9b.)

Like in the previous section, the cadential gesture centering on E♮ (m. 42) is also attained by the "double-neighbor" figure F–E–D♯–E. Notice that these semitones stand in almost symmetrical positions within the Guidonian space covered in the previous block; in fact, semitone A–B♭ in P1 would be balanced by A♯–B—marked by the asterisk where the pattern was broken. One could say this slight imperfection motivates the pitch content of the following block in the section.

Example 10a shows a pitch reduction for the second block in Section 2, mm. 43–52. In this block, I interpret the layers played by both hands as the superimposition of different collections (marked T and R'). This is not to make a case for bitonality—as collections share many pitch-classes—but merely to point out the different linear contexts of some differentiating pitches. For instance, in the left hand, A♮ appears within the segment A–G♯–F♯, and in the right hand A♯ appears within F♯–G♯–A♯.[30] The projection of these collections in G-space, as shown in Example 10b, shows that segment T is mapped on the space adjacent to where the Guidonian pattern was broken in the previous block, starting with A♯ (marked by the asterisk).



Example 10a. Pitch reduction for Block 2, Section 2.

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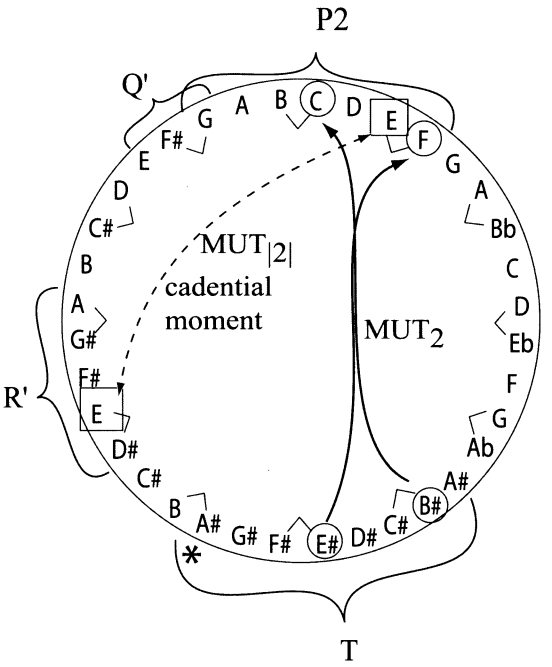

Example 10b. Projection of Block 2, Section 2 in Guidonian space.

Although T creates a strong harmonic contrast with the ensuing P2 (mm. 49–50), the rhythmic flow creates an almost seamless transmutation from T to P2.[31] As in previous moments, an abrupt modulation is achieved by reversing the semitonal adjacencies of common tones (B♯ and E♯ notated as open noteheads in Example 10a). In fact, Stravinsky facilitates the mutation by tying over B♯ to C♮ in mm. 48–49 and placing the "seam" in the soprano while E♯ becomes F in the contralto. Finally, the block—or rather the entire second section—is punctuated by another variant of a cadence on "E," this time strongly articulated, resembling the cadential gesture closing Section 1. The constitutive semitones F–E and D♯–E are also derived from previous material, i.e., P2 and R', which had been lurking in the left hand at the beginning of the block.

Section 3

The third and final large-scale section (mm. 52–77) unfolds as one continuous block with long passages of pandiatonicsm. The entire block is punctuated by a longer cadential gesture, mm. 77–81. Example 11a shows that the continuous block has two modulatory twists from the white-note collection P2, to collections V and T, starting in mm. 64 and 68 respectively.

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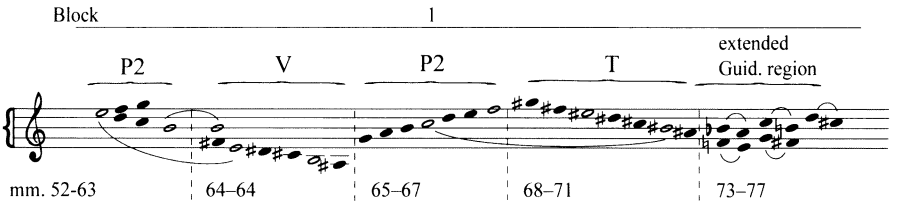
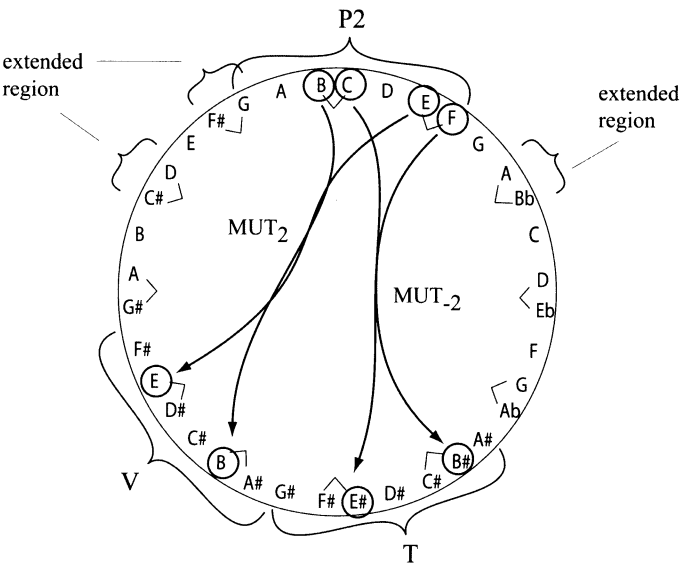


Example 11a. Pitch reduction for Section 3.

These twists are consistent with the modulatory techniques developed throughout the movement: abrupt modulations exploring the reversal of semitonal associations between common tones of juxtaposed collections. Here, however, each of the twists reverses the associations in different directions. In other words, each modulation retains one common note from each semitone B–C and E–F (embedded in P2) and reverses its semitonal association. Common tones are notated as open noteheads in Example 11a.

As shown in Example 11b, the first move from P2 to V retains B♮ and E♮ (associating them to A♯ and D♯), and the later, the longer twist to T, retains C♮ and F♮ (associating them to C♯ and F♯). In sum, the two twists inflecting into chromatic space in Section 3 are symmetrical transformations structured by MUT_2 and MUT_{-2}. The third section ends (mm. 73–77) by articulating a few semitones that "extend" the region of P2 into the territory of P1 and Q.



Example 11b. Guidonian projections of modulatory twists in Section 3.

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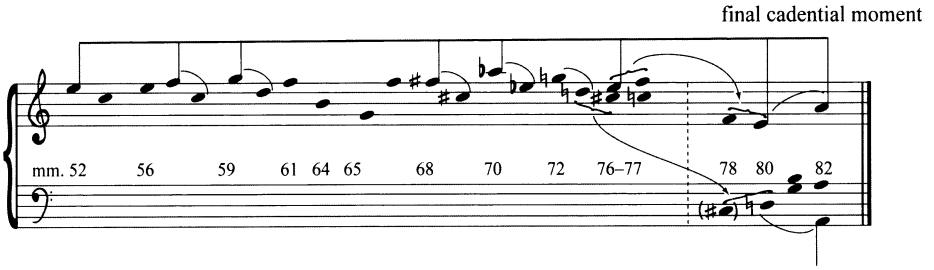
Melodic Contour and the Final Cadential Gesture

The motivic gestures of the modulatory twists, discussed in Example 11, are integrated into a large-scale melodic contour encompassing the entire Section 3, shown in Example 12a. The melodic projection gradually sets up an overall ascent from E5 in m. 52 up four semitones to A♭5 in m. 70, filling up the chromatic space. In light of this slow melodic ascent, it is suggestive to hear the closing perfect fourth E–A (mm. 80–81) as the completion of that melodic ascent, albeit in the "wrong" register.[32]



Example 12a. Large-scale melodic contour in Section 3 and the symmetrical split at the last cadential gesture.

At cadential moments throughout the movement, the melodic pair F–E and D♯–E creates centricity on "E." This seems to be once again the chosen course in the preparation for the final cadential gesture in mm. 78–79 (F–E in the soprano and E–D♯ in the bass). In m. 80, however, the course is "corrected" from D♯ to D♮, which had been "appealed to" by the previous C♯s in mm. 76 and 78–79 (highlighting the stepwise connection A–B–C♯–D). In Example 12b, I suggest that the closing gesture involves the three Guidonian locations for A♮. The closing ascending perfect fourth E–A and its corresponding descending fourth D–A in the bass (mm. 80–81) project A♮ in its clockwise and counterclockwise locations respectively, at MUT|2| from each other. This is due to the unique locations of the semitonal pairs F–E and C♯–D (mm. 78–80) involved in the symmetrical fourths. The penultimate chord of the piece articulates segment G–A–B, that is, the "middle" location for A♮ in Guidonian space. Thus at last, the movement has its cadence not on the "dominant," but on "A"—the axis of the *Serenade*.

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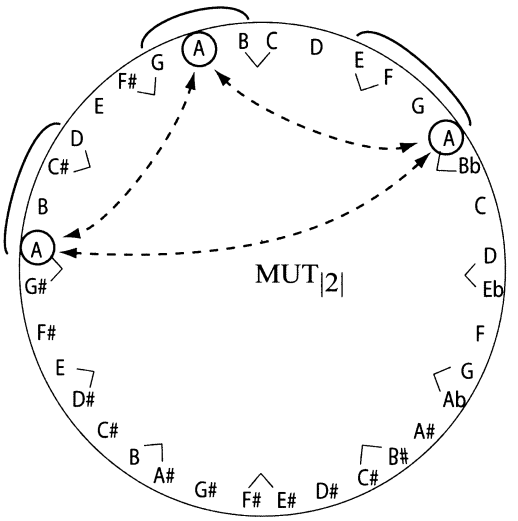

Example 12b. Projections of the final cadential gesture on the axis "A."

Conclusion

By modeling melodic and harmonic relations of diatonic segments without relying on the a priori presence of complete collections or traditional tonal syntax, the Guidonian space emerges as an efficient framework to address both small- and large-scale pitch relations in the "Hymne." The space provides a measure for harmonic distance between diatonic segments, which is analytically expressed as the gradual or abrupt change of semitonal associations between the segments' common tones.[33] Although background discontinuities in the movement (and in Stravinsky's neoclassical works in general) are often attributed to the lack of traditional harmonic syntax across blocks (Kramer's self-contained "moments"), this methodology reconciles intra- and inter-block harmonic relations, clarifying how gradual and abrupt harmonic changes shape the movement's formal aspects.[34]

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NOTES

I am grateful to Dmitri Tymoczko, Philip Stoecker, and Poundie Burstein for their valuable comments and suggestions on earlier versions of this paper.

1. Adorno's critical assessment of Stravinsky is instructive in this regard: "Stravinsky had hosts of followers and imitators, but hardly any pupils and certainly no school … . Every bar of Stravinsky's music is the product of stylization. It is possible no doubt to be immersed in a style, but it is not possible to learn one, least of all a style based on whim; that can only be copied." Theodor Adorno, "Stravinsky: a Dialectical Portrait," in *Quasi una Fantasia: Essays on Modern Music*, trans. Rodney Livingstone (London: Verso, 1992), 158.

2. Elliott Carter, *The Writings of Elliott Carter: An American Composer Looks at Modern Music*, ed. Else and Kurt Stone (Bloomington: Indiana University Press, 1977), 301.

3. The problem of discontinuity in Stravinsky has been the focus of much analytical work starting with the pioneering study of Edward T. Cone, "Stravinsky: The Progress of a Method," *Perspectives of New Music* 1, no. 1 (1962): 18–26. See note 5 below.

4. Jonathan Kramer, "Moment Form in Twentieth-Century Music," *The Musical Quarterly* 64, no. 2 (1978): 187–88. Original italics. Kramer's comments refer to Stravinsky's neoclassical approach to pitch materials starting in the 1920s with the composition of *Symphonies of Wind Instruments*. In this and subsequent writings, Kramer advances the idea that, in the music of Stravinsky, small sections (or blocks) disconnected from their neighbors are early examples of "moments," a compositional strategy that reached their fullest expression with the "moment form" works of Stockhausen and Boulez.

5. For analytical strategies involving the association and integration of dynamic levels and registers see Cone, "Stravinsky." For consistency of durational proportions, see Kramer, "Moment Form," 174–94. For the composing out of linear pitch patterns, see Joseph Straus, "A Principle of Voice-Leading in the Music of Stravinsky," *Music Theory Spectrum* 4 (1982): 106–24; and Straus, "The Problem of Coherence in Stravinsky's *Serenade en la*," *Theory and Practice* 12 (1987): 3–10. For the establishment of pitch symmetries and polarities see, for example, Marianne Kielian-Gilbert, "Relationships of Symmetrical Pitch-Class Sets and Stravinsky's Metaphor of Polarity," *Perspectives of New Music* 21, nos. 1/2, (1983): 209–40. And for associations of rhythmic and motivic constituents, see Christopher Hasty, "On the Problem of Succession and Continuity in Twentieth-Century Music," *Music Theory Spectrum* 8 (1986): 58–74. Given the multiplicity of strategies theorists have proposed to associate discontinuous textures (whether those of Stravinsky or of more radical composers), one could argue that any compositional effort to create a definite discontinuity is doomed to fail.

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Christopher Hasty argues along these lines: "The relation of events may be more or less comprehensible depending on our experience, the level of attention, the type and degree of organization we are presented with, or more accurately, the integration of all these factors. But in principle, the possibility for making connections is always there, whether we are listening to traffic or for the hundredth time to a Mozart minuet as a new experience." Hasty, "On the Problem," 62.

6. I refer to music-transformational spaces in the sense discussed by Edward Gollin, "Representations of Space and Conceptions of Distance in Transformational Music Theories" (Ph.D. diss., Harvard University, 2002).

7. As addressed below, the term "Guidonian" refers to the efficient embedding of the three Guidonian hexachords in a given space. I discuss the space's structural features and analyze the opening section of the "Hymne" in Chapter 3 of my dissertation. See José António Martins, "The Dasian, Guidonian, and Affinity Spaces in Twentieth-Century Music" (Ph.D. diss., University of Chicago, 2006), 73–119.

8. For analyses of music of Bartók, Milhaud, and Lutosławski using the framework of the Guidonian and related spaces, see Martins, "Dasian, Guidonian, and Affinity."

9. Cone, "Stravinsky," 23.

10. Example 1 reproduces a part of Example 2 taken from Cone, "Stravinsky," unpaginated folio inserted between pp. 20 and 21.

11. Cone, "Stravinsky," 19–20. For a perceptive critique of Cone's analytical model see Alexander Rehding, "Towards a 'Logic of Discontinuity' in Stravinsky's *Symphonies of Wind Instruments*: Hasty, Kramer, and Straus Reconsidered," *Music Analysis* 17, no. 1 (1998): 39–65.

12. The eight-note collection (informally addressed as the eight-note diatonic collection) is a member of set-class 8-23[0123578A]. Richard Hermann identifies this set as a "reference" harmony for the movement, but concludes that "a conventional unordered set-theoretic analysis is not as revealing as we might hope for," in "Thoughts on Voice-Leading and Set-Theory in 'Neo-Tonal' Works: The 'Hymne' from Stravinsky's *Sérénade en La*," *Theory and Practice* 12 (1987): 33. Set-class 8-23 is a characteristic Stravinskian collection, pervasive in numerous other pieces. For an interesting discussion of this collection in Stravinsky and its relationship to the octatonic collection, see Paul Johnson, "Cross-Collectional Techniques of Structure in Stravinsky's Centric Music," in *Stravinsky Retrospectives*, ed. Ethan Haimo and Paul Johnson (Lincoln: University of Nebraska Press, 1987), 55–75.

13. Analysts have noted some degree of polytonality in these opening measures by associating B♮ and B♭ to alternating A-minor and F-major triads respectively. Paul

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Johnson discusses some pitch polarities that result from Stravinsky's use of set-class 8-23 in "Cross-Collectional." Also see Arthur Berger, "Problems of Pitch Organization in Stravinsky," *Perspectives of New Music* 2, no. 1 (1963), especially pp. 17–18.

14. Richard Hermann notes this large-scale connection and pattern completion in "Thoughts on Voice-Leading," 46.

15. In mm. 13–14, the melody C5–B4–A4 touches the higher register (C5), but it fails to descend from E5.

16. See for example Eric Chafe, *Monteverdi's Tonal Language* (New York: Schirmer Books, 1992), 24.

17. In Guidonian space, a diatonic region extends through a contiguous major ninth, within which both parallel octaves and fourths are maintained. The medieval conception of this intervallic pattern is discussed in Norman Carey and David Clampitt, "Regions: A Theory of Tonal Spaces in Early Medieval Treatises," *Journal of Music Theory* 40, no. 1 (1996): 130–31.

18. Several notes are omitted in this reduction to simplify the segmentation, although they could also be accounted for in the ensuing Guidonian analysis: D and A♯, left hand in mm. 20–21, and A♯, right hand in m. 27.

19. Straus hears a large-scale unfolding of the neighbor figure A–B♭–A in the bass (mm. 1–19), which parallels the opening local gesture in the top voice (in m. 1–2). See Straus, "Problem of Coherence," 6–7.

20. The relation between segments Q and R is reinforced by the fact that the A-major triad opening Block 4 (in m. 20) picks up the exact register it was left off at the end of Block 2 (in m. 14).

21. This point is made by David Lewin and formalized as Generalized Interval Systems in *Generalized Musical Intervals and Transformations* (New Haven: Yale University Press, 1987).

22. The operation MUT is formally defined in Martins, "Dasian, Guidonian, and Affinity." See especially sections 3.3 and 4.3.

23. Notice, however, that pitch-class C♮ (adjacent to B♮ in the semitone B–C) is in turn inflected to C♯, as it corresponds to a mutation of *fa* into *mi*.

24. In Guidonian space, "above" refers to clockwise and "below" refers to counter-clockwise direction.

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25. The semitone reversal is only partial from S to P2, since F♯ is not included in P2. But see the discussion on the cadential moment (mm. 28–29) below.

26. The cadential gesture is also highlighted by the rhythm of dotted-quarter notes, used for the first time in the movement.

27. Concerning the axis of the *Serenade*, see Igor Stravinsky, *Autobiography* (New York: Simon and Schuster, 1963; reprint, New York: W. W. Norton, 1962), 124. Also, it strikes me that the "double-neighbor" figure F–E–D♯–E resembles the double "leading tone" resolution of augmented-sixth chords, resolving to the dominant.

28. Lynne Rogers, "Phrase-Staggering in Stravinsky's *Dumbarton Oaks* Concerto" (master's thesis, University of Washington, 1980). See especially Chapter 4.

29. In the lower voice, the natural signs within parentheses above notes G♯ and D♯ indicate occasional inflections to G♮ and D♮ (mm. 34–35), but both are immediately restored.

30. The segment A–G♯–F♯ is temporarily shifted to the right hand in mm. 47–48.

31. The union of T and P2 achieves aggregate completion.

32. Cone considers this transfer of register as a manifestation of "synthesis," thus contributing to the overall coherence of the movement in "Stravinsky: the Progress of a Method," 23. The reading of a final synthetic moment would also seem to be in conformance with Stravinsky's "logic of discontinuity," as discussed by Rehding, "Towards a 'Logic'," 39–65.

33. The noted parallels between the constructivist aspects of Cubist visual artists (shifts in perspective and the superimposition of different planes) and Stravinsky's discontinuous surfaces invite us to examine both what is retained as well as what is changed across surfaces (spatial and temporal). For a discussion of the parallels between Cubism (Picasso in particular) and Stravinsky's neoclassicism, see Jonathan Cross, *The Stravinsky Legacy* (Cambridge: Cambridge University Press, 1998), especially Chapter 2.

34. My claims about the harmonic coherence of the piece and the derivation of the Guidonian space from the opening eight-note collection (albeit for pedagogical purposes) suggest a close relationship between materials and analytical system. This relationship contrasts with Adorno's critique of Stravinsky's neoclassicism as an artificial "style without inner bonds (*Bindung*), in either a technical or metaphysical sense." Adorno, "Stravinsky: a Dialectical Portrait," 156–57. At the same time, to use the Guidonian as a pitch space to address an entire piece is not to make essentialist claims regarding Stravinsky's harmonic language, but rather to suggest to the analyst/listener a conceptual framework with which to relate different materials. For a critique of essentialist accounts of Stravinsky's harmonic

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language, see Dmitri Tymoczko, "Stravinsky and the Octatonic: A Reconsideration," *Music Theory Spectrum* 24, no. 1 (2002): 68–102.

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