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Principles of Pitch Organization in Scriabin's Early Post-tonal Period: The Piano Miniatures

KEYWORDS: Scriabin, piano miniatures, octatonic scale, acoustic scale, whole-tone scale, pitch substitution, genus transformation

ABSTRACT: Scriabin's post-tonal period, which begins around 1909 with *Feuillet d'album*, Op. 58, is defined by the subtle and sophisticated exploitation of some special non-diatonic sets and their pitch universes: (i) the acoustic scale: 0, 2, 4, 6, 7, 9, t (member of set-class 7-34), the parent scale of the *Mystic Chord*; (ii) the octatonic scale, Model A: 0, 1, 3, 4, 6, 7, 9, t (member of set-class 8-28); and (iii) 9-10: 0, 1, 2, 3, 4, 6, 7, 9, t (the nine-note superset that arises from the union of the acoustic and the octatonic scales). Close examination of the post-Op. 58 works allows us to partition the late style into two periods: early, from Op. 58 to Op. 69 inclusive; and late, from Op. 70 to the final creation, Op. 74. During his early post-tonal period, Scriabin developed a pitch organization method based on the interaction between the acoustic and octatonic scales within the constraints of their nonachordal common superset 9-10. This essay examines the specifics and the application of the acoustic-octatonic interaction in the composer's miniature pieces written in his early post-tonal period.

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Dedicated to the memory of Anthony Pople

[1.1] Scriabin's post-tonal period, which begins around 1909 with *Feuillet d'album*, Op. 58, is defined by the subtle and sophisticated exploitation of some special non-diatonic sets and their pitch universes: (i) the acoustic scale: 0, 2, 4, 6, 7, 9, t (member of set-class 7-34), the parent scale of the *Mystic Chord*;⁽¹⁾ (ii) the octatonic scale, Model A: 0, 1, 3, 4, 6, 7, 9, t (member of set-class 8-28); and (iii) 9-10: 0, 1, 2, 3, 4, 6, 7, 9, t (the nine-note superset that arises from the union of the acoustic and the octatonic scales).⁽²⁾ See Example 1. Close examination of the post-Op. 58 works allows us to partition the late style into two periods: early, from Op. 58 to Op. 69 inclusive; and late, from Op. 70 to the final creation, Op. 74. During his early post-tonal period, Scriabin developed a pitch organization method based on the interaction between the acoustic and octatonic scales within the constraints of their nonachordal common superset 9-10. Other pitch entities appear as well, but their functional role is supplementary until they are integrated into a coherent style in the Tenth Sonata, Op. 70, which marks the beginning of the composer's final period.

Example 1. Scriabin's primary pitch material



(click to enlarge)

[1.2] This essay considers Scriabin's method of pitch syntax in his early post-tonal period (1909–12) through the examination of miniature piano pieces. Since the composer was writing these to master his craft, they constitute valuable source material for the study of his pitch organization.⁽³⁾



pitch relationship between the acoustic (labeled as such for its similitude to the overtone series) and the octatonic scales.⁽⁴⁾ These closely related scales share a common hexachordal subset (6-Z23), which allows the remaining pitches-one, (2), D exclusively acoustic, the other two, D $(rac{b}{2})$ and E^{b} 3), (þ exclusively octatonic-to dictate the

Example 3. Generation of 9-10 from the union of the acoustic and the octatonic scales



(click to enlarge)

play of identity. Example 2 exemplifies central the motto in the composer's of method pitch organization. As can be seen, the acoustic and octatonic scales are connected efficiently through a variable second scale degree—2 in the acoustic and ^b2in the octatonic. The chromatic interplay occurs within distinct two harmonic structures, the

Mystic Chord (set-class 6-34) and its octatonic version, labeled Mystic Chord B (set-class 6-Z49), in which 2 and ^b2are realized as the ninth and the lowered ninth respectively. Since 2 and 4 2can be used to determine whether a segment of music is acoustic or octatonic, they are classified henceforth as the acoustic and octatonic indicators, respectively.

[1.4] Although there is more than one way to define the relationship between 9-10 the and acoustic and octatonic scales, Scriabin's compositional practice (which unequivocally the treats heptachord the and octachord as gestalts) allows us to view 9-10 as the union of pitch the content of its two subsets (Example 3).⁽⁵⁾ In fact, 9-10 is the only

nine-note of superset the octatonic scale and the smallest common superset of the latter and the acoustic scale. It constitutes the superset under the auspices of which the acoustic scale the and octatonic scale, Model А interpenetrate one another, and, additionally, its pitch constraints form the chromatic pitch gamut of the phrase units that

shape the musical surface.

[1.5] The pitch entities in Example 1 and all their subsets are treated not as abstract set-classes, but as specific ordered non-diatonic scales. "Ordered" means that a specific pitch center is imposed on which specific harmonies (*Mystic Chord*, *Mystic Chord* B, and their variants) are built. In Scriabin's early post-tonal period, both the acoustic and the octatonic scales have their pitch center on the pitch on which the *Mystic Chord* and *Mystic Chord* B, respectively, are built. This approach restricts the octatonic scale to one of its two rotations, semitone-tone, Van den Toorn's Model A. The correlation with the specific pitch centricity refers not only to the acoustic and the octatonic scales, but also to their subsets employed in the composer's early post-tonal œuvre.

[1.6] Scriabin's principles of pitch organization have preoccupied scholars from the first moment that his post-tonal works earned a place in the twentieth-century repertory. It is particularly in the work of M. Kelkel, Anthony Pople, and Fred Lerdahl that we find apt analytical descriptions of Scriabin's octatonic/acoustic (and thus 9-10) ventures.⁽⁶⁾



harmonic/modal types. The most significant of his observations is the proposed distinction between two harmonic and modal types. The Mystic Chord and Mystic Chord B correspond to the acoustic scale and the octatonic heptachord 7-31 respectively (Example 4).

[1.8] Pople's of study the Prelude, Op. 67, No. 1 presents a well-buttressed effort to decode Scriabin's peculiar octatonic practices, especially in conjunction with 9-10, which Pople treats as a new normative set (click to enlarge)

"regarded as being composed-out against the normative background of the octatonic set [0,1,3,4,6,7,9,10]. "⁽⁷⁾ Similarly to Pople, Lerdahl also correlates the octatonic scale with 9-10, but in addition he brings the acoustic scale to the fore. His analysis of Op. 67, No. 1 offers a precise description of the relationship between the three scales and their role in Scriabin's method of pitch-organization .(8)

[1.9] The most significant aspect with regard to the history of the acoustic scale and 9-10 is not so much the lack of acknowledgment, but the failure to realize the specifics of the dialectic between the acoustic and the octatonic scales, not least of the chromatic interplay between $2/\sqrt{2}$.⁽⁹⁾ This is a result of widespread misconceptions

that have their roots in essentially two factors: (i) the excessive weight placed on the whole-tone scale as pitch material in Scriabin's post-tonal period, and (ii) the failure to associate the *Mystic Chord* with the acoustic scale itself. Perhaps the overabundance of whole-tone dominants in late nineteenth-century music brought about such misconceptions; certainly, Scriabin's œuvre in 1903–9 abounds in dominants with lowered or raised fifths. Nevertheless, the whole-tone scale's prominent appearance in the composer's transitional period does not justify regarding it as a determinant of pitch organization in the post-tonal style. More to the point, the acoustic scale appears no less prominently in the transitional period.

[1.10] This structure, for example, saturates the musical surface in the outer sections of the Scherzo, Op. 46, a work well into the composer's transitional period. Example 5 shows measures 1-4, which articulate two T_7 related phrases. Apart from the downbeat of measures 2 and 4, the music unfolds а succession of a single of dominant type harmony, a dominant seventh with a raised eleventh (set class 5-28), structure a prophetic of the





(click to enlarge)

Mystic Chord (the E^{\ddagger} at the last eighth-note of the incomplete introductory measure and the B^{\natural} at the last eighth-note of 2 measure are non-harmonic notes). The particular excerpt is an early example of Scriabin's later practice of articulating dominant-type chords where the root is also tonic. Vital to our present considerations is the full appearance of the scale exactly at the downbeat of measures 2 and 4: C acoustic and G acoustic respectively. These are points of structural significance, because they constitute the boundaries of the first two phrases, a

momentary goal of what precedes them. The presence of C and G acoustics as the pitch source of these structurally significant harmonies is surely not accidental; it corroborates the emerging prominence of the acoustic scale the composer's in music.

Issues of pitch organization

The octatonic scale

[2.1] The octatonic scale is invariant at four distinct transposition al levels: T_0 , T_3 , T_6 , and T_9 will keep the pitch content of the scale The intact. symmetrical



Example 7. Octatonic scale, array of harmonies

properties of the scale are transferred within 9-10 as well: it remains the symmetrical component of its superset, which is itself an asymmetrical entity. In fact, the cyclical application of T_3 to 9-10 yields quite interesting results that merit attention. It keeps the octatonic component within 9-10 invariant. However, it brings forth a pitch, new



the second scale degree of the acoustic component, which is an extremely important technical in detail Scriabin's compositiona approach. 1 See Example 6. This means that while the cyclical transposition of any 9-10 by interval-class 3 will keep a single form of the octatonic scale intact, at the same time it will yield four distinct 9-10s

and four distinct acoustic scales. These provide а pitch "new" each at transposition, which is none other the than acoustic indicator. In addition, the three acoustic indicators found in the T_3 , T_6 , and T_9 forms of the original T_0 of 9-10 are the three pitches that, when added to 9-10, bring the about complete chromatic aggregate.

[2.2]

Scriabin's method of pitch organization makes exclusive use of the octatonic scale, Model A, the rotation of 8-28 able to provide and major minor triads (as well as other tertian harmonies) built on the first note of the scale, which also lines up as closely as possible with the canonical ordering of the acoustic scale. Of the many harmonic

structures built on the tonic of the octatonic scale, Model A, Scriabin favors specific dominant-typ e, yet tonally non-function al, extended and altered harmonies: more specifically, Mystic Chord B, its variants, and some pentachordal subsets. See Example 7.(10)

The acoustic scale

[2.3] The acoustic scale is a transpositionally asymmetrical entity; it is not invariant under any transposition. Its value in Scriabin's pitch-syntactic routines lies in its close pitch relationship with the octatonic scale, and in that it contributes the only non-octatonic pitch within 9-10, the acoustic indicator.

[2.4] In addition to the variety of harmonic structures available within its harmonic depository, the acoustic scale exhibits an explicit functional distinction among its seven scale degrees. Scriabin, nevertheless, focuses on a single scale degree, the tonic, and, similar to what he does with the octatonic scale, utilizes only specific dominant-type extended and



altered structures, namely, the Mystic Chord specific and variants. See 8. Example The role of the Mystic Chord is essential, only not because of its special status in the composer's method of pitch organization, also but because the acoustic and octatonic (especially Mystic Chord B) structures featured in Scriabin's post-tonal œuvre are directly related to it.

The

correspondenc e between the voicing of the acoustic and the octatonic structures is probably а result of the special emphasis given to the Mystic Chord the as emerging harmonic foundation in the composer's routines for pitch organization.⁽¹ 1)

[2.5] The acoustic and octatonic scales interact with one another by way of common subsets, a vital technical attribute in Scriabin's method of pitch organization. This approach promotes parsimonious voice-leading, which (i) ensures the smooth transformation from one scale to the other and (ii) permits the direct conflict between the members of the chromatic dyad formed by the acoustic and the octatonic indicators ($\hat{2}$ and $\hat{b}\hat{2}$, respectively). However, it ought to be said that the interaction between the acoustic scale and the octatonic scale, Model A is not limited to the

interpenetration of a heptachord and an octachord that share a common hexachordal subset. It is rather an interaction between two pitch genera that involves the specific subsets referred to above and some specific common tetrachordal subsets (displayed in Figure 1 below) under the auspices of the common superset 9-10.





acoustic genus		octatonic genus	common subsets
6-34: Mystic Chord	$\hat{2} \leftrightarrow \flat \; \hat{2}$	6-Z49: Mystic Chord B	5-28: Dom 7, \$11, 13, 5 omitted
6-34: Mystic Chord variant	$\hat{2} \leftrightarrow \flat \; \hat{2}$	6-30: Mystic Chord B variant	5-28: Dom 7, #11
6-33: Mystic Chord variant	$\hat{2} \leftrightarrow \flat \; \hat{2}$	6-Z50: Mystic Chord B variant	5-25: Major triad, #11, 13
5-34: Sixth, 9, #11	$\hat{2} \leftrightarrow \flat \; \hat{2}$	5-32: Sixth, 59, #11	4-27: Half-dim 7
5-34: Dom 9	$\hat{2} \leftrightarrow \flat \; \hat{2}$	5-29: Dom 7, 59	4-28: Dom 7
5-24: Major triad, 9, #11	$\hat{2} \leftrightarrow \flat \; \hat{2}$	5-19: Major triad, 59, #11	4-Z29: Major triad, #11
5-33: Dom 9, #11, 5 omitted	$\hat{2} \leftrightarrow \flat \hat{2}$	5-28: Dom 7, 59, #11 5 omitted	4-25: French 6th

(click to enlarge)

[2.6] How, then, do the peculiar interrelationships in the octatonic/acoustic universe make themselves available in Scriabin's model of pitch organization? The inspection of Scriabin's approach to harmony places the *Mystic Chord* (6-34) and its octatonic version (6-Z49) at center stage. Both of these harmonies remain basic to the composer's harmonic palette and constitute the central point of harmonic reference in the early post-tonal style. All the other harmonic structures deployed are directly related to this harmonic core. Several hexachordal variants are encountered: two related to the *Mystic Chord* (6-34, 6-33), two related to *Mystic Chord* B (6-30, 6-Z50), and one common to both (6-Z23). Specific pentachordal substructures are also articulated when the several forms of the *Mystic Chord* appear as incomplete sonorities. Harmonic structures with fewer than five pitch members are deployed

sparingly, if at all. These structures may appear, usually in the left hand, before other chord members enter melodically in the right hand to form (by integrating the vertical with the horizontal) one or another of the composer's trademark harmonies.

[2.7] The two pitch genera, as mentioned above, interact primarily through common structures. Figure 1 shows the specific details of this procedure. Column 1 lists the acoustic structures. The column next to it displays the corresponding octatonic structures. The last column shows the common acoustic/octatonic subsets that act as mediators in the specific interaction process. All the harmonic structures in columns 1 and 2 include the acoustic/octatonic indicator $(2/\sqrt{2})$, which is missing from the common acoustic/octatonic subset. Scriabin handles the $2/\sqrt{2}$ dialectic very subtly. His harmonic structures unfold via the integration of the vertical with the horizontal, which constitutes a stylistic norm. However, the left hand deploys, more often than not, a harmonic skeleton that rotates the root (1), third (3), seventh ($\sqrt{2}$), and raised eleventh ($\sqrt{4}$). This allows one of the upper voices to conduct the chromatic interplay between the acoustic and octatonic indicators.

[2.8] Scriabin's treatment of these pitch phenomena in relation to pitch organization prompts the following general observations:

- i. The phrase structure is organized in chunks of music that constitute self-contained "blocks" in which the acoustic/octatonic structural associations are articulated on a single pitch center. (These "blocks" form motivic segments or entire phrase units.) Motivic and thematic designs, as well as the contrapuntal network that assures their interconnection, tend to emphasize the melodic argument between the two members of the $2/b^2$ chromatic dyad.
- ii. There are four fixed scale degrees that are almost always present: 1, 43,
 #4, and \$7. There are two other fixed scale degrees whose presence is

more irregular: 3and **6**. There is one variable scale degree: 12or **1**2. In addition, if 12s used, 12s and 12s used simultaneously with **1**3.

iii. These "blocks" are usually transposed by either one of the two fundamental intervals (or their multiples) within the acoustic and the octatonic genus: ic-2 and ic-3 respectively. Ultimately, a work's transposition structure is used as a means to promote the presence of the acoustic scale, the octatonic scale, and 9-10, at the deepest levels of structure. Scriabin's transpositional levels tend to avoid the three pitches not present in the pitch content of 9-10 (and, by convention, in the pitch content of the acoustic and octatonic collection as well), i.e. scale degrees 4, 7 and 45. The first two, in particular, are avoided because they have the potential to erode the peculiar aural characteristics of the composer's harmonic structures: the lowered seventh and the raised fourth. Scale degree **\$** is something of a special case. It bears no threat to Scriabin's peculiar sound quality; in fact, the raised fifth may enrich dominant-type harmonies in fruitful ways. It can be seen appearing at deeper levels of structure, if not as a means to corroborate the surface articulation of the whole-tone scale, then as a source of a deeper-structure chromatic conflict. For example, Op. 67, No. 1 and Op. 59, No. 2 present a

transposition structure that promotes the presence of $G_{P-G} = A_{P-A} = B_{P-A} = C - E_{P-F}$ (member of the 9-10 subset 7-10) and $C - C_{P-F} = -F_{P-F} = -G - A$ (member of the octatonic subset 6-30), respectively at deeper levels of structure.⁽¹²⁾ Op. 69, No. 1 promotes $C - C_{P-F} = -E_{P-F} = -G - G_{P-F} = -B_{P-F}$ (member of 8-27), which may be partitioned into the octatonic heptachord (7-31) plus $G_{P} = (P_{P-F})$. Here, the presence of $P_{P-F} = -G - G_{P-F} = -B_{P-F}$ (More on the surface articulation of the whole-tone pentachord (5-33). (More on the articulation of 5-33 in Op. 69, No. 1, below.)

iv. The persistence with which the specific dialectic between the acoustic and the octatonic scales appears in the composer's early post-tonal period suggests a remarkable syntactic unity. Moreover, the acoustic scale, the octatonic scale, Model A, and 9-10, as well as the *Mystic Chord* and *Mystic Chord* B, become conventionalized in the composer's early post-tonal period through continual usage.

[2.9] Let us see how this approach works in practice. The opening phrase (mm. 1–3) of the *Poème-Nocturne*, Op. 61 immediately introduces a subtle dialectic between the acoustic and the octatonic genera within the pitch constraints of superset 9-10. See Example 9. (Henceforth, we assign 0 to the pitch center of the original phrase unit.) Scriabin introduces chromaticism in terms of the chromatic dyad formed by the acoustic and octatonic indicators, E^{\downarrow} and $E^{\downarrow}_{\downarrow}$, respectively. Both substitute for each other above a recurrently arpeggiated D^{\downarrow} *Mystic Chord* variant (5-28: $D^{\downarrow}_{-}F-G-B^{\downarrow}_{-}$). Since Scriabin keeps an incomplete D^{\downarrow}_{-} *Mystic Chord* as a common octatonic/acoustic subset in the left hand, the introduction of E^{\downarrow}_{-} in measure 1 yields *Mystic Chord* B on D^{\downarrow}_{-} whereas E^{\downarrow}_{-} (m. 2) yields the *Mystic Chord* on the same pitch center.

Identical [2.10] acoustic/octatonic interpenetrations occur in the subsequent phrase at measures 4–7, a modified T_2 transposition of the original phrase unit (see







(click to enlarge and see the rest)

Example 9).		
However, this		
time the		
incomplete		
introductory		
measure of the T_0		
unit becomes a		
full measure with		
the addition of a		
Mystic Chord B		
variant whose		
pitches, despite		
the		
orthographical		
inconsistency, are		
drawn		
exclusively from		
E b octatonic,		
Model A: E – F		
-F # -A-B ♭ -C #		
(6-Z50). The		
raised ninth (F#)		
of this formation		
gives way to the		
lowered ninth		
(F_{b}) at measure 5		
to begin the $2/2$		
conflict in terms		

of F/F^{\flat} . As in the opening phrase unit, and even more intensified because of the distinct octatonic harmony of measure 4, the music promotes the perpetual alternation of the acoustic and octatonic "blocks." The chromatic interplay between the acoustic/octatonic indicators emerges gradually as a structural issue; notice the melodic punctuation that emphasizes these two tones. The initial Ebb comes with a fermata, as does the $F \not\models at$

measure 5, the analogous pitch in the T_2 transposition of the opening phrase (mm. 4-7).

Voice-leading parsimony: a model of interaction

[3.1] The treatment of the acoustic and octatonic scales in Scriabin's method of pitch organization conforms to а broader network of set interaction based on voice-leading parsimony between closely related set-pairs of equal and unequal rank. This procedure promotes genus transformations by way of pitch substitution, pitch **Figure 2**. Substitution-based interaction: network of set interrelationships, from Callender (1998, Fig. 11, p. 227)⁽¹⁴⁾



(click to enlarge)

addition/omission, pitch and The splitting. abstract relationships between Scriabin's preferred scales discussed below are presented in Clifton Callender's study of the composer's voice-leading routines.⁽¹³⁾ Consider Figure 2 (Callender's Figure 11), which epitomizes the technical specifics of this relational network in terms of the composer's primary scales and three important subsets: 7-31, 6-34 (Mystic Chord), and 6-Z49 (Mystic Chord B). Horizontal

connections

involve set-pairs of equal cardinality, which the **P**1 form relation with one another. As we see from the three P1-related pairs (6-35/6-34, 6-34/6-Z49, 7-34/7-31), transformations between them require nothing more than a single chromatic alteration (or pitch substitution). See Figures 2 and 3. A single pc is subjected to alteration by ± 1 semitone to yield its substitute and effect the scalar transformation.

Figure 3. Voice-leading between P1-related sets

6-35: {0 2 4 6 8 t}	6-Z49: {0 1 4 6 9 t}	7-31:{0 1 4 6 7 9 t}
Scale degree: 1 2 3 #4 #5 1/7	1 1 2 3 #4 6 17	1 2 3 #4 5 6 7
<u>1</u>	Ţ	Ţ
6-34: {0 2 4 6 9 t}	6-34: {0 2 4 6 9 t}	7-34: {0 2 4 6 7 9 t}
Scale degree: 1 2 3 #4 6 1/7	1 2 3 #4 6 107	1 2 3 #4 5 6 57

(click to enlarge)

Example 10a. Scriabin, Poème, Op. 69, No. 1,

measures

[3.2] The first two

of

Poème-Nocturne, Op. 61 (Example 9 above) are a paradigm of this kind of interaction; they exhibit а transformation from 6-Z49 (Mystic Chord B on D_{\flat}) to 6-34 (Mystic Chord on D) through the substitution of E by $E \triangleright$. A similar interaction between 6-34 and 6-Z49 occurs in Op. 69, No. 1 as well. See Example 10a. Measures 1 - 2juxtapose the Mystic Chord and its octatonic version on

mm. 1–6



(click to enlarge and see the rest)

Example 10b.Scriabin, Poème, Op. 69, No. 1,

mm. 1–5,

acoustic/whole-tone interaction



(click to enlarge)

Example 11. Scriabin, Etrangeté, Op. 63, No. 2

C via the melodic conflict between 2/b2 in terms of D and , D respectively: C–**D**–E–F **#** –A–B **↓** \rightarrow C-D \mid -E-F \ddagger $-A-B^{b}$. T_4 (mm. 5–6) juxtaposes the *Mystic* Chord and Mystic *Chord* B on E. There exist also transformations between 6-34 and the second set with which it forms the P1-relation, 6-35 (Example 10a and 10b). The 6-35 on A þ 6 (A $-\mathbf{B}$ $-C-D-E-G^{\downarrow})$ —actua whole-tone lly a version of the *Mystic* Chord—of measure 3 is replaced, via the substitution of C with C[#], by 6-34 (*Mystic* Chord) on E (E-F#



(click to enlarge and see the rest)

Figure 4. Voice-leading between S-related sets

a)	b)	c)
6-35: {0 2 4 6 8 t} Scale degree: 1 2 3 #4 #5 \$7	6-34: {0 2 4 6 9 t} 1 2 3 #4 6 \$7	7-34: {0 2 4 6 7 1 2 3 \$4 5
<u>‡</u> ±	±±	±±
7-34: {0 2 4 6 7 9 t}	7-31: {0 1 3 4 6 9 t}	8-28: {0 1 3 4 6
Scale degree: 1 2 3 #4 5 6 57	1 52 53 ³ 3 #4 6 57	1 52 53 33 #4

(click to enlarge)

-G = -A = -C = -D.⁽¹⁵⁾

Another such transformation occurs between the C Chord Mystic of measure 2 and the 6-35 of the following measure, but the octatonic indicator D b obscures the of clarity the particular association.

[3.3] Vertical set connections in Figure 2 involve sets related by inclusion. This means that their interconnections do not require any pitch inflections, but are carried out by pitch addition or pitch omission. Sets connected vertically are representatives of the same pitch genus, be it octatonic or acoustic. The decision as to which

set (the inaugural set or specific subsets) is used at the musical surface relies on contextual requirements. The octatonic heptachord the first of two of measures Etrangeté, for example, is succeeded by 6-Z49, which eliminates $\frac{1}{2}$ (E^{\downarrow}) , to render the upcoming acoustic/octatonic interaction possible (Example 11). [3.4] Sets connected

diagonally (from the upper left to the lower right corner) form the S-relation, which involves sets with a cardinality difference of ± 1 (see Figure 2 above). S splits a pc to yield its upper and lower chromatic neighbors and vice versa. Three (6-35/7-34, pairs 6-34/7-31, and 7-34/8-28) are S-related to one another. Figure 4 demonstrates the abstract manifestation of this type of interpenetration. However, due to his approach to pitch organization, Scriabin does not particularly exploit the S-relation in the miniatures of his early post-tonal period. As seen in Figure 4, the S-relation involving the pairs 6-34/7-31 and 7-34/8-28 requires the presence of $\frac{1}{2}$ and $\frac{1}{3}$ in the octatonic structures. Given the fact that the articulation of $\frac{1}{3}$ prevents the

construction of common acoustic/octatonic subsets, the simultaneous appearance of \$2and \$3(instead of \$2and \$3) becomes a much less viable option.⁽¹⁶⁾

[3.5] What Scriabin promotes instead is the combination of vertical (inclusion) and horizontal (P1) motion shown in Figure 2. This operation involves sets with a ± 1 difference in cardinality and incorporates the $2/b^2$ interaction, but instead of the S-relation, we observe the combination of pitch substitution and pitch addition/omission. Pitch substitution and omission may be seen at measure 3 in *Etrangeté*, Op. 63, No. 2 (Example 11 above). Here, the octatonic heptachord (7-31) of the first two measures prepares the ground for the upcoming interaction with the acoustic genus. Measures 1–2 unfold 7-31 on C (C Mystic Chord B + pitch D[‡]) and its T_9 form (A Mystic Chord B + pitch C), respectively. The first beat of measure 3 restores the original T_0 form but without E_{p}^{\downarrow} , which is the only pitch whose exclusively octatonic orientation could jeopardize the upcoming interpenetration—it is certainly not accidental that the reduction from 7-31 to 6-Z49 occurs immediately before the octatonic/acoustic dialectic begins. Scriabin, then, promotes the brief oscillation between octatonic and acoustic structures. Mystic Chord B (6-Z49: C-D –E-F $-A-B^{\flat}$) interacts with the acoustic pentachord 5-33 (C-D^{\natural}-E-F^{{\sharp}}-B^{\flat}), enforcing pitch substitution (D^{\natural} replaces D^{\flat}) and pitch omission (the A from 6-Z49 is removed in 5-33).(17)

[3.6] An important issue as to the nature of the pitch interrelationships within 9-10 emerges at this point. Does the music effect the juxtaposition of the acoustic and the octatonic scales by means that promote pitch substitution in terms of 2 and 2 or does it suggest combination (the deployment of 9-10 as a gestalt and not as the mere sum of the union of the acoustic and the octatonic scales)? Scriabin's persistent use of chromatic dyads as the means to achieve scalar transformation places the principle of pitch substitution at center stage. The interaction between the acoustic and the octatonic scales is conducted primarily through the $2/\frac{1}{2}$ chromatic dyad as it emerges within the framework of specific harmonic formations. Reference to harmonic membership implies that the specific interactive process is fundamentally a contrapuntal phenomenon in which the $\frac{9}{2}$ of *Mystic Chord* B and of any *Mystic* Chord B variant substitutes for the 49 (42) of the Mystic Chord and of any Mystic Chord variant and vice versa. Thus, this chromaticism is structural.⁽¹⁸⁾ Remarkably, Scriabin uses $2/b^2$ chromaticism exclusively. Decorative "non-diatonic" chromatic tones (pitches that fall outside the domain of 9-10) are deployed sparingly; one such instance occurs in Op. 59, No. 2, where the passing tone B at the downbeat of measure 2 resolves to B_{\flat}^{\flat} , a member of the governing 9-10 on C.

[3.7] Two technical details show that pitch substitution constitutes a fundamental feature of Scriabin's method of pitch organization: (i) in his approach to voice-leading, the acoustic and octatonic indicators are always treated as adjacencies in the same voice; and (ii) certain pitches are selectively and systematically omitted from the pitch content of adjacent, transpositionally related, phrase units . Let us see how this is practiced in Op. 61 (Example 9 above). The sum of the pitches of T_0 yields the 9-10 octachord 8-27: Db-Ebb-Eb-()-F-G-Ab-Bb-Cb. Et (b3) is missing, a fact which serves the composer's intentions in two ways. First, it clears the path for the desired cross-collectional interaction. Et is a pitch that would erode any acoustic/octatonic interpenetration. Had it been present, it would not have been possible to articulate an acoustic "block." Secondly, its absence in one transposition (T_0) only serves to

emphasize its prominence as a member of the structural chromatic dyad in the following one. As shown in Example 9 above, the $E^{\frac{1}{2}}$ missing from T_0 emerges as the octatonic indicator in the chromatic dyad $F-F^{\frac{1}{2}}$ of T_2 (mm. 4–7): $E^{\frac{1}{2}}-F^{\frac{1}{2}}-F^{\frac{1}{2}}-F^{\frac{1}{2}}$ -G-A-B^{$\frac{1}{2}$}-C-D^{$\frac{1}{2}$} (T_2 adds a harmonic structure at the downbeat of measure 4 that features the missing pitch of the localized transposition of 9-10, F^{$\frac{1}{2}$}). Furthermore, observe Scriabin's enharmonic spellings. The octatonic indicator asserts itself as the indisputable inflection of its acoustic counterpart: $E^{\frac{1}{2}}$ to $E^{\frac{1}{2}\frac{1}{2}}$ in T_0 , F to F^{$\frac{1}{2}$} in T_2 and G to G^{$\frac{1}{2}$} in T_4 .

[3.8] The	Table 1 . Scriabin, Poème, Op. 69, No. 1	1, mm. 1–6
emphasis on the	T_0	T_2
conflict	Scale degree 1 ≥2 ≥3 3 ≠4 5 6 ≥7 1 ≥2	2 ≒2 ⊧3 3 #4 5 €
between the two	Pitch content C-D-D-D-E-E-F=-G-A-B D-E	▶ -E ^{\$} -F-F‡-G‡-A-B
modal	Harm. status 1 1/9 9 1/3 3 #4 5 13 1/7 1 1/9	9 533 #4 5 13
indicators	T_0	T_3
emerges as a	Scale degree 1 62 2 3 3 24 5 6 57 1 5	2 42 53 3 #4 5 6
crucial	Pitch content C-Db-D ^t -Eb-E ^t -F#-G-A-Bb Eb-F	∕⊳-F ^t -G⊢G ^t -A-B⊱
compositional	Harm. status 1 59 9 53 3 #4 5 13 57 1 5	99 13 3 14 5
device. In fact,		
inspection		
reveals that, in	(click to enlarge and see the rest)	
his effort to		
allow at least	Example 12 . Scriabin, Masque, Op. 63, No.	o. 1, mm. 1–4
one of the two		
modal		
indicators to		
appear as a		
"new" pitch,		
Scriabin		

enforces a plan that promotes the correlation between pitch content and transposition interval. See Table 1. In the T_3 , T_6 , and T_9 operations, the acoustic indicator (2) is not present in the original (T_0) form of 9-10; it always articulates itself "new" as a pitch, as does the octatonic indicator ($\frac{1}{2}$) in T_4 . (The acoustic indicator is, in fact, the only pitch, new which is why ic-3 transpositions have a privileged status



(click to enlarge)





(click to enlarge)

Scriabin's in post-tonal period.) However, in the case of T_2 , both the acoustic and octatonic indicators are present in the T_0 form and one or both need to be removed in order to achieve the specific melodic emphasis. Given that $\flat 3$, as noted above, is the only pitch that could jeopardize the acoustic/octaton ic (via 2/\$2) interaction, its omission is preferred over the omission of the acoustic indicator (in *T*₂), which stands for the third of the Mystic Chord in the original T_0 form.

[3.9]

Poème-Nocturn e, Op. 61, Op. 63, No. 2, the prelude from Op. 59, and Op. 69, No. 1 exemplify this approach. Poème-Nocturn e begins with 9-10 the octachord 8-27 on Db: Db-Ebb þ –E $-(\mathbf{F}^{b})-F-G-A^{b}$ $-B \not\models -C \not\models$. This T_0 phrase unit is replaced by 9-10 on E^{\downarrow} , T_2 : $E \flat - F \flat - F \flat - G \flat$ -G -A-B

-C-D . See Example 9 above. The octatonic indicator in T_2 , Fb, is missing T_0 . from It would have been possible to exclude F¹ (¹ 3), the acoustic indicator, instead of F_{\flat} . However, Scriabin would then erode the ground on which these subtle interrelationship s are built, i.e. the Mystic Chord, which, in the absence of its third (F¹ in T_0), loses identity and meaning.

[3.10] However, in Op. 63, No. 1 the change to a different transposition interval (ic-3) dictates a different approach. See Example 12. acoustic The indicator in T_3 is, by convention, a "new" pitch (it is the only pitch in T_3 missing T_0). from Hence, in order to find common harmonic ground between the acoustic and octatonic the scales, Scriabin simply removes the other exclusively octatonic pitch $E \not\models (\not\models 3)$ from T_0 . The melodic emphasis on the $2/b^2$ chromatic dyad would have been more salient had E, 4 3, been missing from T_0 . However, as in the case of Poème-Nocturn e, that would have eroded the harmonic quality of the Mystic Chord.

[3.11] In contrast, in the Prelude, Op. 59, No. 2, $43in T_0$ missing is (Example 13). Yet that particular work is something of a special case. It is Scriabin's first work to incorporate the octatonic scale; hence, it is not fully in line with later works with respect to harmony and transpositional For structure. one thing, the harmonic structures do not conform to interactive the specifics displayed in Figure 1 above. The emergence of the exclusively in T_{0}), combined with the absence of $43(E4 in T_0),$ deprives the articulated harmonies of their dominant quality. This creates an aural atmosphere that is peculiar to the piece. In addition, the transpositional structure is more rigid than of that subsequent works. The A section of the rondo design (ABABA) is governed by the transposition of the initial phrase unit through the minor-third cycle, promoting the systematic unfolding of the acoustic indicator: D in T_0 , F in T_3 , G in T_6 , and B in T_9 :

$$T_{0}: C-D^{\flat}-D^{\flat}-E^{\flat}-F^{\sharp}-G-A-B^{\flat}$$
$$T_{3}: E^{\flat}-F^{\flat}-F^{\flat}-G^{\flat}-A-B^{\flat}-C-D^{\flat}$$



[3.12] Now consider T_4 . Opus 69, No. 1 (Example 10a above) provides a paradigmatic example of how this particular operation lays emphasis on the $2/b^2$ chromatic dyad. Measures 1–8 involve two T_4 -related four-measure phrases. What interests us here is the first half of each phrase, which unfolds the acoustic/octatonic interplay on pitch centers C and E, respectively. T_0 (mm. 1–2) carries the 9-10 heptachord 7-26 (C–Db-Db=-E-F=-A-Bb) formed by the common acoustic/octatonic pentachord 5-28 and the acoustic/octatonic indicators D/Db, respectively. The T_4 of measures 5–6 unfolds as E-F-F=-G=-A=-D (7-26 formed similarly to T_0). Missing from T_0 by convention (Å represents one of the three pitches absent from 9-10), the octatonic indicator F^{\ddagger} articulates itself as a "new" pitch, and although the two T_4 -related phrases are not adjacent (mm. 3–4 carry the interpolation of the whole-tone pentachord 5-33), the effect is still audible.

[3.13]TheconcludingstagesofPoème-Nocturne, Op. 61 providefurther evidenceofthecompositionalvalue of the 2/b2chromaticism;measures 159–72





(click to enlarge and see the rest)

bring about a perpetual oscillation of acoustic and octatonic "blocks." The Mystic Chord on D b of measure 159 initiates the dialectic with a Mystic Chord B variant (6-Z50: D b -E b b -F-G-A -B), the latter configured so as to maintain focus (through voice-leading) on the E_{P}/E_{P} structural chromatic dyad (Example 14). [3.14] To further intensify the effect, Scriabin deprives the octatonic indicator of its

Figure 5.

Measure 1: $6-34 \rightarrow 7-31$	Measure 2: 6-34 → 7-31
Measure 3: 6-21 → 7-31	Measure 4: 6-Z50
Measure 5: 6-21 → 7-31	Measure 6: 5-19 → 7-31
Measure 15: 8-27 → 6-30	Measure 16: 7-31 → 6-30

(click to enlarge)

harmonic clothing: in the six last measures, E b b alone interacts with the acoustic "block." This particular tone, which is the lowered ninth of a chord with a strong very octatonic orientation, maintains enough harmonic weight from its membership in the Mystic Chord В variant of measures 160-62 and 164-66 to effect a change of genus. The closure manifests the structural role of the present chromaticism.

[3.15] In

the contrast, Prelude, Op. 67, No. 1 features that segments resort to combination. Pople demonstrates that the vast majority of the proposed segments are governed by superset 9-10 or by specific 9-10 subsets.⁽¹⁹⁾ Our concern here is with the pitch content and pitch interrelationships in terms of the acoustic and octatonic scales within each segment. Measures 1-6 and 15–16, taken samples as (every measure constitutes a segment here),

present the following set successions (Example 15):

Example 15a. Scriabin, Prelude, Op. 67, No. 1, mm. 1–6. Based on Pople⁽²⁰⁾

Example 15b. Scriabin

67, No. 1, mm.



⁽click to enlarge and see the rest)



[3.16] The first six segments (mm. 1–6) are governed by the T_0 form of 9-10: $G \not\models -G \not\models -A \not\models -A \not\models -A \not\models -D \not\models -E \not\models -F \not\models$. Note that, in Op. 67, No. 1, the acoustic indicator ($A \not\models$ in T_0) is the pitch that initiates every transposition of 9-10 ("each statement of this extra pc, at whatever transposition of 9-10, initiates melodic motion").⁽²¹⁾ Measures 1 and 2, which are identical, are governed by 9-10 itself, and measures 3–6 are governed by 9-10 subsets: measures 3 and 5 by 8-12, measure 4 by 6-Z50, and measure 6 by 7-31, all at T_0 .⁽²²⁾ Measures 15 and 16 are governed by 8-27 and 7-31 at T_{10} (Example 15b). Two of the eight units (mm. 1 and 2) seem to conform to the principle of pitch substitution: they juxtapose 6-34 with 7-31, two distinct acoustic and octatonic subsets. The acoustic/octatonic indicators may not be adjacent, but Scriabin's voice-leading keeps them in the same voice. Three segments feature either a single octatonic subset (6-Z50 at m. 4), or successions of octatonic subsets: 5-19 \rightarrow 7-31, 7-31 \rightarrow 6-30 at measures 6 and 16, respectively. However, the remaining segments present something worthy of special attention: acoustic/octatonic hybrids, set-types

6-21 and 8-27, especially the latter, which articulates $\frac{1}{2}$ (F) and $\frac{1}{2}$ (F[#]) in the same harmonic structure *simultaneously*. These segments feature structures that are subsets of 9-10 but *not* of 7-34 or 8-28. Here, the organization of pitch structure points to combination. Note that the presence of these hybrids is not exhausted in measures 3, 5, and 15. 6-21 and 8-27 appear twelve and four times, respectively, throughout the score.⁽²³⁾

[3.17] A similar approach is encountered in Op. 59, No. 2. See Example 13 above. T_0 (the opening phrase unit at mm. 1–5), utilizes the 9-10 octachord 8-18: C–C#–D–E–F#–G–A–B (the B is a non-harmonic tone). The acoustic indicator, D in the opening (T_0) phrase unit, unfolds within a harmonic framework that includes i 3(Ei) instead of the octatonic indicator D: C–D–Ei–G–Bi.⁽²⁴⁾ The latter appears in the following beat surrounded by C, the pitch center of the initial T_0 phrase unit. This scheme repeats itself in the subsequent transpositions of the primary phrase unit. The presence of the exclusively octatonic pitch E_i , along with the registral separation of the acoustic and octatonic indicators, rules out pitch substitution in favor of combination.

[3.18] We may draw the following conclusions regarding Scriabin's approach to pitch organization. Pitch substitution, and thus structural chromaticism in terms of the chromatic dyad $2/\frac{1}{2}$, plays the leading role in Scriabin's pitch-syntactic routines. However, combination also has a significant role to play. In addition, one sees phrase units formed by unadulterated octatonic or acoustic structures.

[3.19] Pitch substitution involves either "blocks" that bear the distinctive aura of their parent scale (i.e., Op. 61, mm. 159–72) or structures that are subsets of both 7-34 and 8-28, which leave the play of identities to the acoustic/octatonic indicators (i.e., Op. 61, mm. 1–7, Op. 69, No. 1, mm. 2 and 6). This invites a welcome dialectic that produces a well-controlled, subtle, perpetual change or mixture of "color." In that sense, chromaticism, subtle as it is, acts not only as an agent of modal mutation, but

above all as a primary compositional determinant with respect to the idea of development, the idea of "change" and "progress."

Pitch material and form

[4.1] With the exception of Op. 61, all of the piano miniatures that Scriabin wrote in the early post-tonal period are cast in part forms: binary, ternary, and rondo. With regard to large structure, these forms exhibit two primary formal functions: (i) development (embedded within the motion away from and back to the primary "tonality"), which includes motivic and thematic development to varying extents, and (ii) contrast, which depends largely on harmonic and tonal/modal "change." In the tonal era, "change" was principally accommodated by the modulation from one tonal center to another, subject to context. In twentieth-century music, composers also relied on cross-collectional interaction, which usually involves more than two scales and, more importantly, provides an effective means to emphasize the individual "color" imposed by each scale's unique interval content. The correlation between genus and formal unit is an important form-determining device, as exemplified in Richard Park's analytical work on Debussy.⁽²⁵⁾ In the piano prelude *Feuilles mortes*, for example, "each formal unit is associated with one or another genus."⁽²⁶⁾ However, in contrast to composers such as Debussy, Stravinsky, Bartók, and Ravel, Scriabin does not shift between scales at the beginnings of new sections. His "modulations" rarely pursue the distinction of character between formal boundaries that are found so often in early twentieth-century repertories. Instead, he largely relies on a subtle cross-collectional dialectic on a single pitch center within the phrase unit that is accommodated by pitch invariance and intensified by $2/b^2$ chromaticism.

[4.2] In addition, at the local level, decorative chromatic tones appear very sparingly. One of these is the B (mm. 2 and 4) in the Prelude, Op. 59, No. 2 (see Example 13 above), which is an accented passing tone that falls out of the pitch domain of the local reference scale. The insertion of chromatic tones within principal melodic statements, not to mention modulatory passages of any kind, has for centuries been an extremely resourceful means of elaboration in modal, tonal, or post-tonal contexts. On several occasions, if not in several styles, it has also been a structural arbiter of such basic musical parameters as harmony, phrase structure and form.⁽²⁷⁾ Thus, constraining the pitch content of each phrase to a maximum of nine pitches has a radical effect on musical meaning. In one sense, Scriabin not only employs limited pitch resources (single-type harmonies on a single scale degree), he also appears to deprive his music of the widely applicable techniques of pitch elaboration that would compensate for any loss of interest.

[4.3] Why then does Scriabin refrain from such a powerful compositional resource? In fact, he does not. The lack of a correlation between genus and formal unit and the absence of the chromatic aggregate within the local phrases are balanced by a subtly articulated transpositional modus operandi that exploits pitch content and transposition interval to ensure the presence of either the acoustic or the octatonic indicator as "new" pitches at the various transpositions of the original phrase unit. At the same time, the $2/p^2$ melodic argument is imbedded very carefully within a sophisticated motivic network in ways that perpetually maintain melodic emphasis.

[4.4] In addition, while the pitch total of phrase transpositions very rarely exceeds the pitch gamut of 9-10, Scriabin's approach allows the music ultimately to unfold the chromatic aggregate in a procedure that operates beneath the musical surface. The whole operation spans longer chunks of musical time, in which the acoustic indicator provides the three missing pitches at T_3 , T_6 , and T_9 ; occasionally, such chunks govern an entire composition, as in the case of Op. 59, No. 2. Structural chromatic aggregate, offers an effective means to overcome the constraining aspects of Scriabin's pitch resources. To continue with the same line of thought, the occasional interpolation of whole-tone "blocks" invites a welcome change of "harmonic color."

[5.1] The present article proposes an analytical model as a means to decode the methods of pitch syntax practiced by Scriabin in his early post-tonal period. It aims to present an ample and coherent exegesis of the many peculiarities that characterize

Scriabin's musical idiom. The development of this particular analytical model has been based on its consistent manifestation in the miniature piano pieces between Opp. 59 and 69, inclusive. Inspection reveals that Scriabin persistently insists on the specifics of the acoustic/octatonic argument. One can observe it saturating the musical surface in Op. 59, Nos. 1 and 2, Opus 61, Op. 63, Nos. 1 and 2, Op. 65, No. 2, Op. 67, No. 1, and Op. 69, Nos. 1 and 2. The acoustic/octatonic argument is also a principal feature in Op. 65, Nos. 1 and 3 and Op. 67, No. 2.⁽²⁸⁾ Nevertheless, it is integrated within the broader syntactic scheme that appears fully developed in the Tenth Sonata, the first work of Scriabin's final post-tonal period.

[5.2] The persistent use of the acoustic/octatonic argument suggests more than just the integrity of the proposed analytical model. Acting as an arbiter of cohesion in the composer's early post-tonal period, it reveals a remarkable unity of style, a style that is unique because of the ingenuity with which its primary ingredients are intermingled. Scriabin is not alone in deploying stock-of-the-day pitch material. The Russians and other Eastern Europeans, as well as the French, had been using the octatonic, the whole-tone, and the acoustic scales well before their initial appearance in Scriabin's œuvre. What distinguishes Scriabin from his contemporaries is the method he devises to exploit his primary pitch resource, in particular the $2/\frac{1}{2}$ chromaticism that remains at the core of the acoustic/octatonic argument.

[5.3] The use of chromaticism, either in terms of 2 and its inflection or of other chromatic counterparts, which remains conspicuous in every stage of the composer's stylistic evolution, constitutes a vital technical attribute. This kind of pitch-syntactic consistency raises the possibility that the analytical model that was intended to cope with the pitch issues within the early post-tonal miniatures could also be applicable to the composer's entire post-tonal œuvre.