SCRIABIN: A NEW THEORY
OF HARMONY AND
STRUCTURE

THESIS

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By

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The thesis speculates upon the source of Scriabin's pitch selection in several of his atonal works, concluding that Scriabin's "principle" stems from his own "mystic chord," its inversion at the major third, and the transposition of these two chords at the tritone. These four chords share the same invariant harmonic basis, Scriabin's characteristic French-sixth sonority. The quartet of chords combine to form two nine-note scales, each containing as a subset the octatonic scale. The thesis demonstrates how Scriabin composed his works in harmonic blocks, utilizing only the notes from these scales.

The thesis traces Scriabin's atonal style back to his tonal period. His fascination with tritone adjacencies and relationships is discussed, and serves to support the theory. Other harmonic and linear theories are discussed. Also, the thesis shows how Scriabin used these scales structurally in his works.
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CHAPTER I

THE MYSTIC CHORD AND THE OCTATONIC SCALE

When Alexander Scriabin died suddenly in 1915, he left no clear indication as to how he derived his harmonic system in the works written after Prometheus, Op. 60, or even what his harmonic system was. He did, in fact, admit to composing "by means of principle. Principle guides creation... When I became convinced that true creativity must always reflect a principle, just as the world of nature is founded on principles, then I began using this more consciously and on a broader scale."\(^1\) Reportedly, Scriabin intended to disclose his system to two of his friends one day, but never did.

Faubion Bowers claims that "Scriabin thought primarily in terms of modes or scales."\(^2\) Many observations have been made regarding what these scales or sets might have been, but no theorist has convincingly determined how Scriabin derived his scales. This thesis will speculate on what some of these scales were, and will present a logic as to how Scriabin could have derived nine-note scales from the "mystic chord," its transposition at the tritone, and the inversions of these two chords. This thesis will also explain Scriabin's use of both the "mystic chord" and the octatonic scale, which on first observation are not compat-
ibile. The thesis will demonstrate how Scriabin composed his works in harmonic blocks, utilizing only the notes from these scales, and will compare these scales with the octatonic scale and other sets. Scriabin's long-time fascination with tritone adjacencies and relationships will be discussed, and will serve to support the theory. Also, the thesis will show how Scriabin used these scales structurally in his works.

When Scriabin talked about his final orchestral work, Prometheus, Op. 60, he stated, "It's the tonality of A," and reduced the entire work to six tones (A, B, C#, D#, F#, G). According to Bowers, "he played various chords and themes out of this, adding, 'There's no difference between melody and harmony. They are one and the same. I have followed the principle strictly in Prometheus. There is not a wasted note.'"

The "six tones" of Prometheus constitute the famous "mystic chord." Prometheus, as well as a short piano piece written at the same time, "Feuillet d'album," Op. 58, are the first compositions in which the "mystic chord" serves as the entire harmonic basis. "Feuillet d'album" will be discussed further in Chapter IV. Theorists at the time, such as A. Eaglefield Hull and Alfred Swan, deduced that this six-note chord was derived from the partials of the natural overtone series, omitting the twelfth partial E (see Example 1), and stacked in unequal fourths, which is the usual configuration (see Example 2). The term "MA" means "mystic
chord on A."

Example 1. The overtone series on A.

\[ I_{11} \]

Example 2. The Mystic Chord on A.

The mystic chord may be transposed to any level and appear with any order of pitches (see Example 3a). "MC" means "mystic chord on C." Interestingly enough, Scriabin's arrangement of the chord often places the harmonic fundamental (in this case, C) as the bass of the chord (see Example 3b).

The mystic chord does not completely fit into the octatonic scale, and so is not considered a subset of that
Example 3. The Mystic Chord on C.

\[ \text{Example 4. The octatonic scale and its pitch specific transpositions as they will be referenced in this thesis.} \]
The scale is often viewed as being composed of two fully-diminished seventh chords. The two seventh chords in Scale X are (C, E-flat, F#, A) and (C#, E, G, B-flat). (See Example 5.) The four tones not found in the scale, the "non-scale tones," form a third fully-diminished seventh chord. In Scale X, the non-scale tones are D, F, A-flat, and B (see Example 6). (All notes can have enharmonic spellings.)

Example 5. Two fully-diminished seventh chords in Scale X.

Example 6. Pitches not found in Scale X (the non-scale tones.)

The one tone from the usual arrangement of MC that does not belong to Octatonic Scale X is the top one, D. In Example 7, filled-in noteheads represent octatonic pitches, and the open note-head locates the non-scale tone.

In the later works, the mystic chord appears just as frequently in other forms: either altered or with "added tones." Hull cites an important variant of the mystic chord
Example 7. MC.

\[ \text{MC} \]

in the Sixth and Seventh Sonatas, with the top pitch flattened.\(^7\) Herbert Wise refers to this sonority as "Mystic Chord B," and the original as "Mystic Chord A."\(^8\) While the original "Mystic Chord A" is not a true subset of the octatonic scale, Hull's variant "Mystic Chord B" is (see Example 8).

Example 8. Variant MC.

\[ \text{Variant MC}^{(8)} \]

Many sonorities may be drawn from the octatonic scale, including Scriabin's characteristic "French-sixth" sonority, which also forms the four-note symmetrical base of the mystic chord, as it is often configured (see Example 9.)
Example 9. The octatonic "French-sixth" sonority as it forms the base of MC.

![Musical notation example 9]

A particular inversion of the original mystic chord appears frequently in the late works. If one considers "C" to be the scale fundamental, and the chord bass, this inversion contains the missing twelfth partial (G), and omits the thirteenth (A). I refer to this chord as "ME inv." as the mystic chord formation is projected down from E, rather than up from C, although both contain the symmetrical "French-sixth sonority without change (see Example 10.)

Example 10. MC and ME inv.

![Musical notation example 10]
This particular inversion seems to be chosen because it contains the same symmetrical four-note "French-sixth" basis and one other common tone. Thus, MC and ME inv. share the same four-note basis (C, F#, B-flat, E), Scriabin's characteristic "French-sixth" sonority, plus the note D. Five common tones with one changing pitch result from pairing a mystic chord with an inversion based a major third higher [T(I,4)]. A more thorough explanation of the symmetrical nature of these two chords will appear in Chapter III.

While the inversion often appears alone, the two chords also appear combined as one single sonority (see Example 11.) Example 12 shows MC and ME inv. combined in one gesture from "Etrangeté," Op. 63, No. 2.

Example 11. MC + ME inv.

\[ \text{MC + ME inv.} \]

Theories concerning the octatonic scale will be discussed later in Chapter II. First, harmonic theories about Scriabin's "French-sixth" sonority and tritone relationships will be discussed.
CHAPTER II

BACKGROUND --

HARMONIC AND LINEAR THEORIES

Hull and Swan were probably influenced in their overtone theory by Scriabin's statement: "How can you express mysticism with major and minor?... I deal in overtones." However, the mystic chord appears frequently in Scriabin's tonal music, that is, in the music written before Prometheus, and often serves a harmonic function, such as a dominant function, or a Neapolitan (Flat-II) function. Scriabin's fascination with tritone relationships can be said to begin with the tonal progression Neapolitan-Dominant-Tonic (Flat-II, V, I). The Flat-II chord is invariably in root position, thus creating a tritone relationship in the bass with the dominant.

In the "Prelude," Op. 48, No. 4 (see Example 13), Baker says that "the mystic chord is formed by the chords of a tritone bass progression from Flat-II to V." The usual configuration of MG appears beside the example. The D-flat missing in the functional V chord appears in the preceding Flat-II chord, in this case separated by a two-measure silence.

An example of a tritone bass progression from an atonal work, "Guirlandes," Op. 73, No. 1, is shown in Example 14.
It is the final cadence of the piece. The tonal cadence of a perfect fifth in the bass (V-I) is replaced by a cadence with a tritone between the two chords. Measures 63 and 64 consist of MA, with D# in the bass. The final chord is Hull's variant mystic chord on A. The completely octatonic variant mystic chord in measure 65 of Example 14 substitutes the octatonic pitch B-flat for the non-octatonic pitch B in the original MA (shown beside the example). In the example, variant MA is missing the D# found in the previous chord. Its bass note is A, creating a tritone bass relationship between the two chords.

In Example 15, a dominant-functioning MC# is combined with ME# inv. (measure 1). The chord in measure 2 is a drawn-out MC#, spanning the entire measure, but the bass note is a tritone lower than the preceding dominant chord.


So far, both of the examples from tonal works (Examples 13 and 15) contain functional mystic chords that resolve. However, the famous final cadence from "Désir," Op. 57, No. 1 (see Example 16) ends on an unresolved MA inv. The effect is an unresolved dominant chord hovering over the tonic note. "Désir" is considered a transition work immediately preceding the atonal works. Scriabin eventually dispensed with tonal resolutions in the bass.
The theorist, Varvara Dernova, noticed the importance of the "French-sixth," or "altered dominant" sonority in Scriabin's music. (This sonority, mentioned in Chapter I, forms the base of the various mystic chords.) When transposed a tritone, all four pitches are retained. Dernova called this the "tritone link," shown in Example 17.14

Example 17. The "Tritone Link."
Scriabin capitalized on the invariance of the "tritone link" both locally and structurally. Locally, he would often alternate between adjacent chords a tritone apart. In Example 18, from the "Etude," Op. 65, No. 3, Scriabin alternated between incomplete mystic chords a tritone apart. The C# needed to complete MG is found in the adjacent MD-flat (enharmonic C#). Consequently, the G needed to complete MD-flat is found in the adjacent MG. The four invariant tones from MG and MD-flat are G, B, D-flat, F. In passages between alternating mystic chords a tritone apart, Scriabin often leaves out an invariant tone in one chord, realizing it will simply blend in when the passage is played as a whole, much like colored dots blend together in a Pointillistic painting. Dernova termed this "the sum of the dominants." A similar example is the beginning of "Flammes sombres," Op. 73, No. 2.

Now compare Example 18 with Example 13 from the tonal "Prelude," Op. 48, No. 4. Clearly, Scriabin's atonal style evolved from his tonal experiments. The change from tonal to atonal was not an abrupt one. "Scriabin moved from the familiar to the unfamiliar, the consonant to the dissonant, with equal inevitability or naturalness. The seams between Scriabin's classicism and modernism are tightly sewn."\(^\text{16}\)

Scriabin's compositions revolve around two "poles" a tritone apart, called "Dual-Polarity."\(^\text{17}\) In the tonal works, the two invariant "French-sixth" sonorities a tritone apart serve as Dominant chords to two tonics a tritone apart. Thus, the sonority (G, B, D-flat, F) serves a dual function: it can cadence either on the tonic of C or on the tonic of G-flat (see Example 19).

Example 19. Dual Polarity.

\[
\begin{align*}
\text{V} & \text{I} \\
(C) & \text{tritone} \rightarrow (G^b) \\
\end{align*}
\]

According to Roy James Guenther, who translated Der- nova's book from the Russian, "Each of the late works has its own specific 'tritone link' which determines the polarity for that work and which replaces the need for resolution to either traditional tonic."\(^\text{18}\) The "Prelude," Op. 74, No. 3, will serve to demonstrate this concept in Chapter V.
which is also the primary nexus for the transitional period. Set 6-34 is related in Kh to nine other sets (more than any other hexachord) and is also the hexachord most widely used throughout the atonal period... Further, 6-34 is used throughout 1903-14."^{20} Also, "the mystic chord is the basis for continuity in his evolution."^{21}

Pitch class set 8-28 "plays a much more important role in the atonal than in the transitional period," according to Baker.^{22} This set is commonly known as the octatonic scale. Baker believes that Scriabin's reason for utilizing this scale in the atonal works is to allow for structural coherence, since the scale is invariant at T3, T6, and T9.^{23} Baker notes that Scriabin also continued to use whole-tone invariance in the late works as well (T2, T4, T6, T8, and T10).^{24} A reason for this will be discussed in Chapter IV.

A striking linear use of the Octatonic Scale X can be seen in the "Prelude," Op. 74, No. 3 (see Example 21). The scale itself appears melodically in measure 12, and again, transposed at the tritone in measure 24.

George Perle, in his article "Scriabin's Self-Analysis," derives seven-note subsets of the octatonic scale from Scriabin's usage of accidentals. In Example 22 from the "Prelude," Op. 74, No. 3, he labels the recurrent "non-harmonic" element of Octatonic Scale X as a "passing note."^{25}

Perle also claims that "Scriabin provides a source of contrast through a variant form of the derived scale, the
of this thesis.

Recently, several theorists have been utilizing linear methods of analysis, such as Schenkerian analysis and set theory. When analyzing the Sonata No. 10, Op. 70, James M. Baker discusses the mystic chord not as a verticality, but as it "unfolds." For example, the "mystic chord set," 6-34, "underlies the passage" in measures 88-90 (see Example 20). Not every note belongs to the set. MA and MC inv. most underlie the passage. The notes which do not belong to the mystic chords are circled in the example, and may be viewed as conventional "non-harmonic tones" in a chromatic inner voice.


Baker has drawn conclusions about the "mystic chord set" and its importance in Scriabin's works: "The most likely candidate for a primary nexus set for a complex of all of these sets [from atonal works] is 6-34, the mystic chord,


final degree of which is occasionally raised by a semitone, a revision that results in a striking change of harmonic colour by converting a five-note segment of the scale into a whole-tone collection. See Example 23. Perle does not mention that the altered tone in his variant scale is the exact tone which completes the mystic chord! (The six-note mystic chord contains five octatonic tones.)

Jay Reise, in his article "Late Skriabin: Some Principles Behind the Style," believes that Scriabin's late works employ either the octatonic scale or the whole-tone scale. Like Perle, Reise believes that Scriabin "treats foreign tones as 'chromatic'" to these scales, "and almost always
Example 23. Perle's variant scale compared with MG#.


The tones foreign to Octatonic Scale X are circled in Example 24. Arrows point to their "resolutions." Reise claims that the B in measure 5 "weakly resolves by octave displacement," and the resolution of F is delayed until the next measure. Of course, half-step "resolutions" of non-
octatonic tones can almost always be found anyway if one looks hard enough. Scriabin was always admired for his elegant voice leading.

Like Baker, Herbert Wise utilizes set theory in his recent doctoral dissertation *The Relationship of Pitch Sets to Formal Structure in the Last Six Piano Sonatas of Scriabin*. Wise's analysis of a passage from *Sonata No. 9, Op. 68* is shown in Example 25. He points out the melodic use of set 8-28 (the octatonic scale), its complement 4-28 (here outlining other structural thirds in the bass), and vertical use of whole-tone subset 5-33. In the same passage, Allen Forte finds set 6-34, the "mystic chord set," in the second halves of measures 5 and 6.

Wise mentions that "an extraordinary amount of the music analyzed is based on one or more of a group of six supersets including members of SCS 8-27, 7-35, 9-10, 8-28, 9-12, and 10-6, of which members of the last five are symmetrical in structure." For example, he found that Sonata No. 6 is based mainly on the octatonic scale set 8-28. In his analysis of Sonata No. 9, Wise lists three supersets for the entire work: 8-28, 8-27 (0, 1, 2, 4, 5, 7, 8, 10), and 10-6 (not found in Forte's chart). Set 8-27 contains three pitches foreign to the octatonic scale, pitches 2, 5, and 8.

Example 26 shows Wise's analysis of a passage from Sonata No. 9 using superset 9-10 (0, 1, 2, 3, 4, 6, 7, 9, 10), which he calls F*.

Superset 9-10 is the entire octatonic scale plus one extra note. The extra note is interesting, since it allows the "mystic chord set" 6-34 to be a subset of 9-10. Example 27 shows set 9-10 written out in scale form, with members of MC circled.

The significance of this scale will be explained in Chapter III.

Example 27. Comparison of set 9-10 and the mystic chord.
Theorists have analyzed Scriabin's music to find the most frequently-used pitch sets. They have observed that the octatonic scale plays an enormously important role in the late works. They have also observed that 6-34, the mystic chord set, appears frequently in Scriabin's atonal music. Some theorists concur that, while the mystic chord plays an important role in the late works, it does not function as a foundation for harmony and structure. Others don't believe that the mystic chord plays an important role at all. The purpose of this chapter is to establish that the mystic chord and the octatonic scale are irrevocably linked, and together serve as the generating force behind Scriabin's pitch selection, although they are not totally compatible. (One pitch from the mystic chord is not octatonic.)

The octatonic scale is widely thought to be Scriabin's sole source of pitches in the atonal works, or at least several of them. Several long passages in his music contain no pitches at all outside this scale. However, the octatonic scale does not account for every pitch. Theorists
believe that Scriabin treated these "non-harmonic" tones in the conventional manner, as passing tones, appoggiaturas, etc. Some pieces use non-scale tones like non-harmonic tones (see Example 22). In others, the patterns are less arguable (see Example 24). Reasons for Scriabin's using the octatonic scale have been made quite clear: its symmetry promotes maximum invariance under transposition and inversion.

Herbert Wise describes how Sergei Protopopov's "duplex chain mode" synthetically generates an octatonic scale. Wise writes: "The essence of Protopopov's Elements [of the Structure of Musical Speech] is the 'single symmetrical system,' consisting of the unstable interval of the tritone, implying dominant harmony, progressing (resolving) to the stable major third, implying tonic harmony." See Example 28.

Example 28. Protopopov's "single symmetrical system."

\[ \text{T M3} \]

"The combining of four single symmetrical systems at successive minor-third relationships forms the 'duplex chain mode.' The complete mode comprises all twelve chromatic pitches. However, as Protopopov indicates, the stable tones form an octatonic, tone-semitone scale." See Example 29.
Example 29. Protopopov's "duplex chain mode."

That Scriabin derived his octatonic scale in this manner has never been proven.

Dernova believed that Scriabin derived his pitches from two six-note whole tone collections a tritone apart. Both pitch collections, of course, contain the same pitches comprising the entire whole-tone scale. She described these collections as Scriabin's "basic chord structure": a ninth chord with raised and lowered fifth, having a dominant quality. However, the whole-tone scale, like the octatonic scale, also does not account for every note of the mystic chord.

I also wish to speculate upon how Scriabin derived his harmonies. My proposed method of derivation accounts for every note in several late works. After careful analysis, I have concluded that Scriabin derived his pitches by harmonic means, using particularly the mystic chord, its transposition at the tritone, and the inversions of these two chords at the major third. All four chords share an important common bond: the same "French-sixth" sonority.

The mystic chord contains a grouping of four pitches in a symmetrical relationship based on tritones. These four
pitches form Scriabin’s characteristic "French-sixth" sonority as the basis for his chord. The spacing consists of a sounding major third in the middle, with the interval of a tritone both above and below the major third (see Example 30).

Example 30. The symmetrical basis of the mystic chord.

The rest of the mystic chord is formed by adding two pitches above the E. These two pitches, together with the E, are arranged in a symmetrical stack of perfect fourths. In Example 31, this second symmetrical component is represented by the separate stem.

Example 31. The two symmetrical components of the mystic chord.
If one "inverts" the mystic chord by keeping the same notes of the "French-sixth" basis, and stacking the perfect fourth component below, this chord will have five of the six notes in common with the original (see Example 32). The two differing pitches (A from MC, and G from ME inv.) both serve as the centers of the second symmetrical component (the stack of perfect fourths). Note that these two differing pitches, or "changing pitches," will always be related by a whole step.

Example 32. MC and ME inv.

I will refer to the chord built on "C" as "MC," and the inversion built on the same basis as "ME inv." as the top "E" becomes the "root" for the inverted projection. Therefore, any inversion listed as a major third up from an original will form this unique common-tone pairing. (MD + MF# inv., MA-flat + MC inv., etc.) In this case, all pitches in these two chords are octatonic (based on Scale X) except for the two D's, the notes farthest away from the
roots in the usual configurations. Note that the non-octatonic pitch can also be thought of as a whole step up from the bass of the chord (or a whole step below, as in the case of any inversion).

As mentioned earlier (Chapter I) these two chords can be found in Scriabin's music separately, or together. Example 33 shows MC beginning the "Poème," Op. 69, No. 1. The chord spacing in the passage, with root C in the bass, closely parallels the usual configuration shown beside it.


Example 34 shows MF# inv. as it appears in the Sonata No. 9, Op. 68.

Examples 35 and 36 show two different versions of ME combined with MG# inv., both from the Sonata No. 9, Op. 68.
Example 34. Sonata No. 9, Op. 68, measure 109, beat 2.

Example 35. Sonata No. 9, Op. 68, measure 32.

The symmetrical four-note basis of the mystic chords also retains the same pitches when transposed a tritone, as discussed by Dernova (see Example 37). Moreover, the symmetrical spacing of intervals is retained as well, with the major third in the middle and the interval of a tritone both

above and below it. Scriabin often used this tritone relationship, or "tritone link," locally and structurally. Example 18, shown in Chapter II, demonstrated alternating mystic chords a tritone apart sharing the same four-note basis.

Example 37. The "tritone link."
In comparing the mystic chord to the octatonic scale, MF# produces all octatonic pitches (based on Scale X) except for the topmost pitch, A-flat (a whole step above the bass). MB-flat inv., sharing the same four-note basis, also produces all octatonic pitches except for the bottom pitch, also A-flat (G#). See Example 38.

Example 38. MF# and MB-flat inv.

All four chords -- MC, ME inv., MF#, and MB-flat inv. -- share the same four-note basis, the "French-sixth" sonority of (C, F#, B-flat, E). The symmetrical four-note basis is transposed a tritone in MF# and MB-flat inv., yet retains its symmetrical structure and its pitches. See Example 39 for the MC/MF# "quartet." The symmetrical four-note basis for the four chords is bracketed. This group of chords can be referred to by either basis, C or F#.

Together, all four chords contain all eight pitches of Octatonic Scale X, plus two extra pitches a tritone apart (see Example 40). Note that these two "non-scale" pitches
Example 39. The four related mystic chords -- the "quartet."

Example 40. The pitches derived from the quartet.

always occur as the "top note" of the usual mystic stack.

The "French-sixth" sonority shared by all four chords is (C, F#, B-flat, E). MC adds A, ME inv. adds G, MF# adds E-flat, and MB-flat inv. adds C#.

The nine-note Scale #1 derived from these four chords is Octatonic Scale X plus one extra note. In this case, the extra note is D from MC (see Example 41). Therefore, the pitch which is added to the octatonic scale is not haphazard, but serves to indicate the primary functioning mystic chord. This particular Scale #1 is therefore based on MC. The A-flat from MF# is not used in this particular scale, but will be used in Scale #2. (Filled-in noteheads represent octatonic pitches.)
Example 41. Scale #1 on MC.

Example 42 shows Scale #1 on MC as it is used in the "Prelude," Op. 67, No. 1, measures 21-22. Notice that the two lowest notes on the downbeat define the generating chords to be used. Furthermore, the first six pitches (except the placement of F#) are in the usual MC configuration (B# = C). The non-octatonic pitch D is circled, but this pitch would not define easily as just a musical "non-harmonic."


Example 43 shows Scale #1 on MC as it is used in the "Prelude," Op. 74, No. 3. Note that C (B#) is the lowest bass note. The non-octatonic pitch D is circled.

Scale #1 on MC therefore encompasses the quartet of related mystic chords MC, ME inv., MF#, and MB-flat inv.

The non-octatonic tone D is always used, and the non-octatonic tone A-flat is not used in this particular scale (see Example 39). All four chords need not be represented in order to qualify as a Scale #1 on MC. Five or more pitches may comprise a scale. For example, since the chords MC and ME inv. both contain the non-octatonic D, only one of these chords might be represented in a Scale #1 on MC. (Both chords share five pitches, including the non-octatonic pitch D.) The chord MC (containing the octatonic pitch A) might not be represented in a Scale #1 on MC, while ME inv. (containing the octatonic pitch G) might be used instead. However, the non-octatonic pitch D (shared by both chords) is always used, and is the determining factor in labelling the scale.

Example 44 shows Scale #1 on ME. Octatonic Scale Y is a subset of Scale #1 on ME (see Example 4). Note that the added pitch (F#) is a whole step above the generating mystic chord basis, E.
Incidentally, Scale #1 comprises set 9-10, mentioned by Wise as a superset (see Chapter II).

Before explaining Scale #2, it is necessary to discuss the scale tones Scriabin most often uses and the tones he tends to leave out when necessary. Of course, Scriabin does not always use all nine pitches of his scales. For example, he often needs to allow for thinner textures. Also, Scale #2 always leaves out at least one octatonic pitch.

Referring to Example 39, which shows the MC/MF# quartet, the symmetrical four-note basis (C, F#, B-flat, E) common to all four chords serves as the structural foundation for not only the chords themselves, but for the entire harmonic system. Therefore, it follows that the pitches in this structural basis, constituting the "French-sixth" sonority, are the most frequently used in the music itself. Scriabin's affinity toward this sonority is evident even in his earliest "Chopinesque" works.

Scriabin also almost always includes the non-octatonic pitches (a whole step above the generating pitches) found at the top of the mystic stacks. For special passages in the music, or at the climax (as in Sonata No. 9 -- see Chapter
V), Scriabin will revert to an all-octatonic scale, leaving out the non-octatonic pitch, thus creating a starker sound.

The pitches that Scriabin seems to leave out the most, when the situation arises, are the "changing pitches." In the MC/MF# quartet (see Example 39), these pitches are A and G (from MC and ME inv. respectively) and E-flat and C# (from MF# and MB-flat inv. respectively). They serve as the centers of the second symmetrical component (of stacked perfect fourths). MC and ME inv. share five pitches, while A is found only in MC, and G is found only in ME inv. (The "changing pitches" are a whole step apart.) Consequently, MF# and MB-flat inv. share five pitches, while E-flat is found only in MF#, and C# is found only in MB-flat inv.

It is interesting to note that these "changing pitches" are the only non-whole-tone elements in the mystic chords. Save for the "changing pitches," the MC/MF# quartet contains the entire whole-tone scale based on C (C, D, E, F#, A-flat, B-flat). Scriabin, thus, was able to capitalize on two different scales -- the whole-tone scale and the octatonic scale. The whole-tone scale explains his transpositions of material at $T^2, T^4, T^6, T^8,$ and $T^{10}$, while the octatonic scale explains his transpositions of material at $T^3, T^6,$ and $T^9$.

Example 45 from Sonata No. 9, Op. 68, immediately points out the importance of the "French-sixth" structural basis (C#, F, G, B) which serves as the downbeat of the
measure. The measure is based on Scale #1 on MC#. The only pitch left out (besides the non-octatonic A from MG) is the "changing pitch" A-flat from MF inv.


Scale #2 is also a nine-note scale, but it contains two non-octatonic pitches instead of one. Consequently, one octatonic pitch is not used. This unused octatonic pitch varies from scale to scale. Example 46 shows Scale #2 on MC and MF#, which generate the two added pitches D and A-flat a whole-step above each basis.

Example 46. Scale #2 on MC and MF#.

The octatonic pitch not used in the scale shown in Example 46 is the "changing pitch" C#, derived from MB-flat inv. of the MC/MF# quartet. Another possible scale, shown in Example 47, leaves out "changing pitch" E-flat from MF#,
and includes the C#.

In both cases, the omitted scale pitch is a half-step away from an added non-scale pitch, and interrupts a five-note chromatic segment, perhaps imitating the normal interruption of a usual octatonic formation.

Example 47. Scale #2 on MC and MF# (possible variant).

Scale #2 on MC and MF# encompasses all four related mystic chords (see Example 39). For labelling purposes, however, only MC and MF# are used to represent the scale. The non-octatonic pitches D and A-flat are the determining factors in labelling the scale, and are always used. MC and ME inv. both contain the pitch D, and MF# and MB-flat inv. contain the pitch A-flat. As in Scale #1, all four chords need not be represented. For example, ME inv. and MB-flat inv. might be used exclusively. Since both chords contain the important non-octatonic pitches D and A-flat, the scale is labelled Scale #2 on MC and MF#. (Five pitches or more qualify as a scale.)

Example 48 shows a passage from the "Poème," Op. 69, No. 1, comprised of Scale #2 on MC and MF#. Two octatonic "changing pitches" are left out of the passage -- G and D-flat. Notice that the generating pitches C and F# are the
lowest pitches in the bass. The non-octatonic pitches D and G# are circled. This passage will be discussed in more detail in Chapter IV.


The mystic chord in Scriabin's late works is actually a combination of four mystic chords, each sharing the same "French-sixth" sonority. Thus, Scriabin's system is purely harmonic, stemming from four harmonies combined. (This system will be demonstrated in the following chapters.)

The "added tones" often found with the original mystic chord (which perplexed Hull) are in fact tones from the other three related mystic chords. The variant "Mystic Chord B" is completely octatonic (see Example 49). In the variant "Mystic Chord B," briefly discussed in Chapter I, the original non-octatonic D is replaced with the octatonic D-flat/C#, borrowed from MB-flat inv.

A change in scale represents a formal change in harmony. Scales elicited from MC# and MD-flat and their related
mystic chords are considered the same enharmonic scales. Enharmonic usages of accidentals are often inconsistent.

Example 49. Derivation of the variant "Mystic Chord B."

Example 50 demonstrates the derivation of Scale #2 on MD-flat and MG (Example 51). The same scale would be created were the mystic chord on C# instead of D-flat. Octatonic Scale Y is a subset of Scale #2 on MD-flat and MG (see Example 4). The octatonic pitch left out of this particular scale is "changing pitch" D, derived from MB inv.

Example 50. The derivation of Scale #2 on MD-flat and MG.
Example 51. Scale #2 on MD-flat and MG.
As mentioned earlier, Scriabin based Prometheus and "Feuillet d'album," Op. 58, entirely on the original mystic chord. In "Feuillet d'album," (see Example 52) non-harmonic tones occur at the ends of phrases, linking one phrase to the next.

The circled non-harmonic tones in measure 4 occur at the end of the first phrase, and the beginning of the second phrase. Phrase 1 is based on MF#, and phrase 2 is based on MA-flat.

After these two works, Scriabin solidified his harmonic method, or "principle," eliminating the extra "linking tones," and expanding his selection of pitches to nine. Bowers writes that in 1910, "newspapers carried an announcement that the Mysterium will soon be finished, and as Prometheus was built from six tones like the Pleiades, the Mysterium will be hitched to a constellation of nine." The Mysterium, which Scriabin envisioned as a multimedia event fusing all of the arts, was never completed. The works from Prometheus onwards can be seen as means of perfecting his "system," laying the groundwork for the Mysterium.

Evidence as to how Scriabin arrived at his new system has already been shown in examples from his tonal works (Chapter II). His new system came as the result of harmonic experiments with the mystic chord, then serving a functional purpose, its inversion, tritone movement in the bass, and the "tritone link." In the "Poème," Op. 32, No. 1 (see Example 15), the mystic chord and its paired inversion combined together elicit seven tones. Scriabin utilized the "French-sixth" sonority as a "tritone link," or substitution, and placed great structural importance on "dual dominants" a tritone apart (see Example 19). Scriabin's experi-
ments with tritone relationships, or substitutions, in the bass, began in the progression Flat-II, V, I (see Example 13), and culminated in alternating mystic chords in the atonal works (see Example 18).

Scale #1

Demonstrations of Scale #1 as applied to the atonal works will begin with subsets of that scale. (Five or more pitches may comprise a scale.) Scale #1 always contains one pitch foreign to the octatonic scale. Scriabin often utilizes all nine notes of Scale #1, but first showing subsets of five pitches or more will demonstrate the logic behind using Scale #1 as a "superscale" encompassing several varieties of harmonic options.

From now on, labels in musical passages refer to scales, not individual chords. Thus, in Example 53, "ME" stands for "Scale #1 on ME." The mystic chord ME is a subset of the nine-note scale, and may or may not be used in its entirety. Individual mystic chords are not labeled in the music, but appear quite frequently.

The Ninth Sonata contains many different combinations of related mystic chords. In Example 53, ME is combined with MG# inv. (the paired inversion). All seven notes from the two chords are used. Five tones are invariant between the two chords, with two changing pitches, C# from ME, and B from MG# inv. Circled notes are non-octatonic.

In the passage, F# is the only pitch that does not belong to Octatonic Scale Y (see Example 4). F# is the non-scale tone, but the pitch is justified by the ME chord. In Example 54, Scale #1 on ME is shown. Pitches used from the scale are squared, the octatonic pitches are filled in, and the non-octatonic note is shown as an open note-head. The four-note basis for the mystic chords is bracketed.

Example 54. Scale #1 on ME.

The chordal analysis procedure accounts for all the notes in the excerpt, while the octatonic scale does not. This passage was analyzed by Wise as belonging to super-set
9-10, which is the octatonic scale plus one extra note, but he offered no justification or theoretical basis for the extra note.

A harmonically interesting example occurs in measure 97 of the Sonata (see Example 55). The measure combines MB-flat inv. with ME inv. Both are related mystic chords sharing the four-note basis (G-flat, C, E, B-flat). Since the A-flat is the only tone that does not belong to Octatonic Scale X, the passage is based on Scale #1 on MG-flat. (For an explanation of the labelling procedure, see Chapter III.) The D from ME inv. is also a non-scale tone, and is therefore not used.

Example 55. Sonata No. 9, Op. 68, measure 97.

In Example 56, Scale #1 on MG-flat is shown with the pitches used in measure 97 squared. Again, the chordal analysis procedure accounts for every note in the passage. Also note that Scriabin uses the G-flat as the lowest bass note in the excerpt.
Example 56. Scale #1 on MG-flat.

The first measure of the Sonata (see Example 57) combines pitches from three related mystic chords -- MG, MC#, and MF inv. All three chords contain the same four-note basis (G, C#, F, B), and all four notes of this basis are used prominently as the lowest notes of the dyads.

Example 57. Sonata No. 9, Op. 68, measure 1.

Since A is the only non-scale tone in the measure (to Octatonic Scale Y), the measure is based on the MG quartet. This is further evidenced by the note "G" as the basis for the opening interval. Scale #1 for this measure is demonstrated in Example 58.

The following measure 2 is a sequence of measure 1, transposed a tritone. It is therefore based on MC# and its related mystic chords (see Example 59). Observe, again,
that the bass notes are the "French-sixth" sonority, pitches (C#, G, B, F) in that order. Also, as mentioned earlier, this four-note basis serves as the downbeat of the measure.

Example 58. Scale #1 on MG.


In measure 2, the E-flat is the non-octatonic tone instead of the A from the previous measure. The Scale #1 on MC# is shown in Example 60 as utilized in this measure.

Example 60. Scale #1 on MC#.
Both scales used in these two measures employ the same four-note basis (G, C#, F, B). The entire passage, measures 1-4, alternate between scales, or related mystic chord systems, a tritone apart. Compare these four measures, shown in Example 61, with Example 18 from the "Etude," Op. 65, No. 3, consisting of alternating mystic chords a tritone apart. The same mystic chords are used in both passages, alternating the same way, eliciting the same non-octatonic tones A and E-flat. However, the passage from the Sonata contains "added" octatonic tones foreign to the two original mystic chords. Thus, a theorist such as Hull, looking for original mystic chords, would have been unable to account for the B-flat and A-flat in the first measure, since B-flat and A-flat do not appear in the original MG. A theorist such as Baker would simply say that the mystic chords "underlie" the passage. A theorist looking for octatonic scales would simply dismiss the A in the first measure as a passing tone (accented). However, the system speculated upon in this thesis accounts for every note.

Yet another combination of related chords appears in measures 6 and 7 of the Sonata. Example 62 exhibits part of a passage having non-octatonic tones in prominent places which do not resolve by half-step. The first half of measure 6 is based on MB-flat and ME.

Example 62. Sonata No. 9, Op. 68, measure 6 (first half).

![Musical example]

Since the tone foreign to Octatonic Scale Y is C, the example is based on the MB-flat quartet (the G-flat from ME is not used). The non-octatonic tone C does not resolve, and is positioned as the bass note. Thus, this non-octatonic pitch is prominently placed and harmonically important, and does not resolve like a non-harmonic tone. Example 63 shows Scale #1 on MB-flat with the pitches used in Example 62 squared.

The second half of measure six consists of an original mystic chord on G with no "added tones" (see Example 64). The non-octatonic tone A is also placed prominently in the
bass and does not resolve.

Example 63. Scale #1 on MB-flat.

Example 64. Sonata No. 9, Op. 68, measure 6 (second half).

Wise, in his analysis of the passage, pointed out that the bass tones for the entire passage outline a diminished seventh chord (E-flat, C, A, F#), which constitutes the complement of set 8-28, the octatonic scale. Example 65 shows the entire passage, with each verticality comprised of a different scale. The bass notes, therefore, are the non-octatonic tones for each scale, found a whole-step away from the generating pitches, or at the tops of the generating mystic stacks. For example, the non-octatonic tone of Scale #1 on MD-flat is E-flat, which is also the bass note
of measure five, beat three.

Example 65. Sonata No. 9, Op. 68, measure 5 (beat 3) through 7 (beat 2).

Scriabin utilizes all nine tones of Scale #1 in the "Prelude," Op. 67, No. 1. Therefore, every octatonic pitch is used as well as the non-octatonic pitch A-flat (for Octatonic Scale X). See Example 66. Consequently, all four related mystic chords are used. The non-octatonic tone is A-flat and the D from MC is not used. Notice that the two lowest notes on the downbeat define the generating chords to be used.

Scale #1 on MF# is shown in Example 67, with every note utilized in the passage. The non-octatonic A-flat is prominently placed in the passage on the downbeats.

Example 67. Scale #1 on MF#.

Scriabin begins the "Prelude," Op. 74, No. 3, with the same nine-note Scale #1 on MF# (see Example 68). The G# is the non-octatonic pitch. Notice the use of F# as the bass of the sonority.

The next two measures consist of the nine-note Scale #1 on MC a tritone away (see Examples 69 and 41). The non-octatonic pitch for these two measures is D, also a tritone away.


Measures 5 and 6 return to the Scale #1 on MF#. The first six measures of this Prelude, therefore, contain another example of alternating mystic chord systems a tritone apart.
The nine-note Scale #2 contains two tones outside the octatonic scale. They are always a tritone apart. Consequently, one octatonic tone is left out. (For an explanation of the derivation of Scale #2, see Chapter III.)

In the "Poème," Op. 69, No. 2, two non-octatonic tones a tritone apart occur within the same gesture, often simultaneously. The passage from measures 11-14, marked "Più vivo," is based on MG and MF inv. (see Example 70). These two mystic chords contain two different non-octatonic tones. MG contains the B-double-flat, and the MF inv. contains the E-flat. Both mystic chords are related, containing the same four-note basis (G, D-flat, F, C-flat). Since the non-octatonic tones are B-double-flat and E-flat, the passage is comprised of pitches from Scale #2 on MD-flat and MG. (See the explanation for the labelling procedure in Chapter III.)

Note that this example is yet another different demonstration of alternating verticalities a tritone apart, and that the "French-sixth" basis comprises the bass verticalities.

The Scale #2 on MD-flat and MG is shown in Example 71. Pitches used in the passage are squared.

Although the previously discussed passage from the "Etude," Op. 65, No. 3 (see Example 72) could be analyzed as alternating mystic chords, and thus alternating Scale #1 systems a tritone apart, Scale #2 seems to fit the passage very well. With both verticalities combined, the pitch count

Example 71. Scale #2 on MG and MD-flat.


totals eight. Furthermore, both mystic chords on G and D-flat are incomplete. The one pitch missing in each is part of the four-note basis common to both chords (G, D-flat, F, B) and thus can be found in the other chord. (Dernova
called this "the sum of the dominants."\textsuperscript{42} Due to the speed of performance, the tones will aurally blend in anyway.

Scale #2 on MG and MD-flat comprising the passage in Example 72 is shown in Example 73. The non-octatonic tones A and E-flat alternate rapidly.

Example 73. Scale #2 on MG and MD-flat.

\begin{music}
\begin{譜}
	\begin{譜}
	\begin{譜}
	\begin{譜}
	\begin{譜}

Compare Examples 71 and 73. Notice that the MG and MD-flat groupings have generated two different scales, determined by Scriabin's selection of pitches for each scale.

The "Poème," Op. 69, No. 1, contains a passage combining MF# and MC (see Example 48). The A from MC is added only in the cadenza. The non-octatonic tones are G# and D. The first and third beats consist of MF#, however without the pitch F#. The emphasis here is on alternating verticalities a tritone apart. Example 74 shows the generating chords for the passage.

Scale #2 on MF# and MC comprising this passage is shown in Example 75.
Example 74. MF# and MC.

Example 75. Scale #2 on MF# and MC.

Measures 1-4 of the "Poème," Op. 69, No. 1 (see Example 76) are comprised of MC, MF#, and MB-flat inv. The entire four measures belong under Scale #2, even though the non-harmonic tones D and A-flat are comparatively spread out. Measure 1 has already been mentioned as comprising MC. Measure 3 is MF#, with no E-flat. The E-flat appears in measure 4, which consists of an incomplete MC. Measures 3 and 4 are also probably pedalled together, blending the pitches. Furthermore, all four measures comprise a total of nine pitches, and the passage constitutes a phrase, with a major change in harmony occurring at the beginning of measure 5. Scriabin seems to be alternating mystic chords a tritone apart, but this time leaving out the tritone relationship in
the bass.


The Scale #2 on MC and MF# from this passage is shown in Example 77. All nine pitches are used.

Example 77. Scale #2 on MC and MF#.
CHAPTER V

STRUCTURAL DEMONSTRATIONS OF THE
THEORY IN COMPLETE WORKS

This thesis speculates that each of Scriabin's nine-note scales are derived from a quartet of related usages of the mystic chord. Thus, in his music, each change of scale represents a formal change in harmony.

This chapter will demonstrate the harmonic changes, or changes of scale, within some of the atonal works. Sonata No. 9 will later be analyzed to demonstrate how changes in scale correspond to the structure of the entire work. In the Sonata, changing from Scale #1 to Scale #2 will be discussed, as well as changes in octatonic scales.

Designation of the three Octatonic Scales (X, Y, Z) is shown within the grand staff. Each designation carries through until the next listing (transposition). Circled notes are non-octatonic scale tones. Dark vertical bars divide the harmonic changes as designated by the mystic chord generators. All notes between these bars are accounted for in the designated mystic chord groupings. Scale labelling procedures are discussed in Chapter III.

Five atonal pieces use Scale #1 exclusively. These pieces are Op. 63, No. 2; Op. 65, No. 2; Op. 67, No. 1; Op. 74, No. 3; and Op. 74, No. 5. They are all short works.
No atonal sonata uses one scale exclusively.

The "Prelude," Op. 74, No. 3 (see Appendix A) is in binary form. Except for the addition of a two-measure codetta at the end, the second half (beginning at measure 13) is an exact transposition at the tritone of the first half.

Not only does the piece use Scale #1 exclusively, but it also uses only the scales containing Octatonic Scale X as a subset. These scales are generated by MC, ME-flat, MF#, and MA (see Example 78).

Example 78. Octatonic Scale X compared with the scales used in "Prelude," Op. 74, No. 3.
If the non-octatonic tone is D, the Scale #1 on MC is being used. If the non-octatonic tone is F, the Scale #1 on ME-flat is being used. If the non-octatonic tone is G#, the Scale #1 on MF# is being used. If the non-octatonic tone is B, the Scale #1 on MA is being used. (The non-octatonic tone is always a major second above the bass of the generating mystic chord.)

The first two measures begin with pitches from Scale #1 on MF#. It has been mentioned earlier that all nine pitches from this scale are used. The only pitch not belonging to Octatonic Scale X is the G#, justified by MF#. These first two measures represent a harmonic block. The next two measures (3 and 4) represent another harmonic block comprising the pitches from Scale #1 on MC, containing the non-octatonic pitch D. Note that Scriabin uses the bases for these two generating harmonies in a repeated double-pedal in the lowest voice. Measures 5 and 6 return to Scale #1 on MF# (a tritone away). Measure 7 contains pitches from Scale #1 on MD# (E-flat) because the non-octatonic pitch is E# (F). Actually, measure 6 can be considered as a "pivot" between the two scale usages as it is completely contained in both.

Measures 8-14 use Scale #1 on MC. Included in these measures is the beginning of the second half transposed a tritone (measure 13). Thus, the scale beginning the second half (MC) is centered a tritone away from the scale beginning the first half. Measures 15-16, comprising Scale #1 on
MF#, correspond to measures 3 and 4, comprising Scale #1 on MC (a tritone away). Measures 17 and 18 are comprised of Scale #1 on MC, measure 19 is comprised of Scale #1 on MA, and measures 20 through 26 are comprised of Scale #1 on MF#. Thus, the piece ends on the same scale as it began -- Scale #1 on MF#.

The two harmonic centers, then, are the pitches contained in the scales MF# and MC, representing the two tritone "poles" as discussed by Dernova.43 The piece begins and ends on Scale #1 on MF#, and the Scale #1 on MC is used in the center of the piece to end the first half and begin the second.

The harmonic changes in the piece are diagrammed in Example 79.


Section A (T^0_0)  B (T^6_6)
Measure 1 3 5 7 8 13 15 17 19 20
Scale #1 MF# MC MF# MEb MC MC MF# MC MA MF#

Pole MF# Pole MC
Pole MF#

Substituting the tritone for the usual dominant, this piece makes a strong binary argument in terms of tonal levels.

Three pieces include both Scale #1 and Scale #2. These pieces are the "Etude," Op. 65, No. 3, the Sonata No. 9, Op. 68, and the "Poème," Op. 69, No. 1. All three pieces have
already been briefly discussed harmonically, and the Sonata will be discussed structurally later.

The "Poème," Op. 69, No. 1 (see Appendix B) is in binary form. However, the second half (beginning at measure 17) is not completely transposed a tritone, as only part of it is (the second half of measure 24 through the first three eighth notes of measure 32). In fact, the second half begins exactly like the first half.

The "Poème," as discussed earlier, begins with pitches from Scale #2 on MC and MF#. These first four measures (the first phrase) are considered the first harmonic block. The next phrase, measures 5-8, is a transposition at $T^4$ of the first phrase. These four measures, plus measure 9, are comprised of pitches from Scale #2 on ME and MB-flat, and thus represent a change in octatonic pitches as well. Scale #2 on ME and MB-flat contains seven pitches from Octatonic Scale Y as a subset, while Scale #2 on MC and MF# contains seven pitches from Octatonic Scale X as a subset. (Octatonic Scale Y is shown in Example 4.)

Measure 10 contains pitches from Scale #1 on MB, including pitches from Octatonic Scale Z as a subset. So, the "Poème" has already included all three Octatonic Scales, thus creating maximum harmonic variety. Measures 11 and 12 repeat measures 9 and 10. Measure 11 contains only one non-octatonic tone (F#), and is thus considered composed of Scale #1 on ME.
Measures 13 through 20 are comprised of pitches from Scale #2 on MF# and MC. The tritonal relationship of sonorities in measures 15 and 16 have been discussed earlier. The first section ends with F# as the bass note (measure 16) representing the "tritone pole" with the C in the bass at the beginning.

The second section begins exactly like the first section, with the transposition at the tritone occurring in the second half of measure 24. Due to an added tenth note (G) in measure 23, the second phrase this time is split into two different scales -- Scale #1 on ME (measures 21-22), and Scale #2 on MB-flat and ME (measures 23-25). Measures 26 and 28 are comprised of pitches from Scale #1 on MF. The second half of measure 32, beginning with the E-flat in the bass, is comprised of pitches from Scale #1 on ME-flat. Measure 33 to the end contain pitches from Scale #1 on MC. Measures 33 and 34 are an interesting octatonic version of the opening theme, with E-flat in the bass.

The harmonic usage of scales in the piece is diagrammed in Example 80. Octatonic scales are also included.

No piece is comprised of Scale #2 exclusively. However, the "Poème," Op. 69, No. 2 (see Appendix C) comes close. Scale #2 on MD-flat and MG is used extensively in both sections of the piece. The second half, beginning at Tempo I, measure 18, is an exact transposition at the tritone of the first half, except for the Coda, beginning at

<table>
<thead>
<tr>
<th>Section I</th>
<th>Measure</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Scale</td>
<td>MC+MF#</td>
<td>ME+Mb</td>
<td>MB</td>
<td>ME</td>
<td>MB</td>
<td>MF#+MC</td>
</tr>
<tr>
<td></td>
<td>#2</td>
<td>#2</td>
<td>#1</td>
<td>#1</td>
<td>#1</td>
<td>#2</td>
</tr>
<tr>
<td>Octatonic</td>
<td>X</td>
<td>Y</td>
<td>Z</td>
<td>Y</td>
<td>Z</td>
<td>X</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Section II</th>
<th>Measure</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Scale</td>
<td>MC+MF#</td>
<td>ME+Mb</td>
<td>MF</td>
<td>Mb</td>
<td>MF</td>
<td>MC+MF#</td>
</tr>
<tr>
<td></td>
<td>#2</td>
<td>#2</td>
<td>#1</td>
<td>#1</td>
<td>#1</td>
<td>#2</td>
</tr>
<tr>
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<td>Y</td>
<td>Z</td>
<td>Y</td>
<td>Z</td>
<td>X</td>
</tr>
</tbody>
</table>

Tempo, I, measure 36. The Coda returns to the beginning tonal level and material. Thus, both tritone poles are structurally represented: the pole in Section I and the Coda, and the pole at $T^6$ in Section II.

The first four measures contain all eight pitches from Octatonic Scale Y, making a nine-note scale for the first section impossible (due to the two non-octatonic pitches E-flat and B-double-flat used from measure 5 onwards). One way to analyze the piece is to view measures 1-4 as being comprised of simply Octatonic Scale Y, with no non-harmonic tones. Measure 5 and the first half of measure 6 are composed of Scale #2 on MD-flat and MG. Octatonic Scale Y resumes in the second half of measure 6, and Scale #2 on MD-flat and MG resumes from measure 11 to the end of the first section (measure 18, first four beats).

In measure 42, the gesture marked "forte" is comprised
of pitches from Octatonic Scale Z. The last measure is an incomplete mystic chord on D-flat, thus comprising pitches from Scale #1 on MD-flat.

A diagram of the scales used in this piece is shown in Example 81.


<table>
<thead>
<tr>
<th>Section</th>
<th>I (T°)</th>
<th>(2nd half)</th>
<th>Measure</th>
<th>Scale</th>
<th>Octatonic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I</td>
<td>5</td>
<td>6</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mystic</td>
<td>MD + MG</td>
<td>-</td>
<td>MD + MG</td>
<td></td>
</tr>
<tr>
<td>Octatonic</td>
<td>Y</td>
<td>#2</td>
<td>-</td>
<td>#2</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(Tempo I)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section</td>
</tr>
<tr>
<td>Measure 18</td>
</tr>
<tr>
<td>Scale -</td>
</tr>
<tr>
<td>(Mystic) -</td>
</tr>
<tr>
<td>Octatonic Y</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pitches</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Coda (T°)</th>
<th>(Tempo I)</th>
<th>(2nd half)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measure 36</td>
<td>42 43</td>
<td></td>
</tr>
<tr>
<td>Scale -</td>
<td>- MD</td>
<td></td>
</tr>
<tr>
<td>(Mystic) -</td>
<td>#1</td>
<td></td>
</tr>
<tr>
<td>Octatonic Y</td>
<td>Z Y</td>
<td></td>
</tr>
</tbody>
</table>

| Pitches |

Sonata No. 9, Op. 68 (see Appendix D), entitled "Black Mass," is composed of both Scale #1 and Scale #2. These two scales account for every measure of the sonata.

Interestingly enough, Scale #2, with its two non-octatonic tones, is reserved for the most complex part of the piece -- Mid-Development through the first four measures of the Recapitulation. Scale #2 first appears in measure 109
of the Development. At this point, the appearances of back-to-back themes and short motives begins, growing more and more frenzied, building to the cascading chromatic passage at the beginning of the Recapitulation (measures 155-158). After this point, Scale #2 does not appear again. In fact, the Recapitulation grows more octatonic and contains two long passages of purely octatonic pitches, creating a stark-er sound.

So, the types of scales, and usage of non-harmonic tones, is directly related to the programmatic nature of the Sonata. At first, evil is in its formative stages (one non-octatonic tone -- Scale #1). The Development represents the battle of wills, as themes collide at an alarming rate (two non-octatonic tones -- Scale #2). Finally, evil prevails in the Recapitulation, containing very few non-octatonic tones, and more of an octatonic dissonant edge.

The usage of octatonic scales is directly related to the structure of the piece. The main tonality of the sonata is in the scales containing Octatonic Scale Y as a subset. These scales are MG, MC#, MB-flat, and ME.

The primary tonality (the equivalent of the tonic in a tonal sonata) lies in the scales MG and MC#. The Exposition begins with these two alternating scales in Theme Aa. The tonality then gravitates toward the scales MB-flat and ME for Themes B and C, concluding the Exposition. (This secondary tonality MB-flat and ME, is the equivalent of the
Dominant area of a tonal sonata. The Development begins with Theme Aa alternating between MB-flat and ME, and concludes with a return to the primary tonality MG in the Recapitulation. The sonata ends as it began, with alternating scales of MG and MC#.

Example 82 shows the general presentation of the primary tonality, and the scales MB-flat and ME represent the secondary tonality. All four scales contain Octatonic Scale Y as a subset.

Example 82. Primary and secondary tonal areas of Sonata No. 9, Op. 68.

Exposition

<table>
<thead>
<tr>
<th>Theme</th>
<th></th>
<th></th>
<th></th>
<th>a</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measure</td>
<td>1</td>
<td>24</td>
<td>35</td>
<td>60</td>
</tr>
<tr>
<td>Tonal</td>
<td>MG/MC#</td>
<td>MBb/ME</td>
<td>ME/MBb</td>
<td>MBb/ME</td>
</tr>
<tr>
<td>Centers</td>
<td>primary</td>
<td>secondary</td>
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<td></td>
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</tbody>
</table>

Development

Recapitulation

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Measure</td>
<td>155 179 210</td>
</tr>
<tr>
<td>Tonal</td>
<td>MG MG MG/MC#</td>
</tr>
<tr>
<td>Centers</td>
<td>primary</td>
</tr>
</tbody>
</table>

The main structure of the piece is outlined in Example 83. The diagram is limited to the major occurrences of main themes. Minor deviations of octatonic usage will not be noted in order to present a clearer picture. Theme A has three subsections in all -- a, b, and c. Subtheme a begins in measure 1, subtheme b begins in measure 5 (and is actually a sequential variation of subtheme a), and subtheme
c begins in measure 8. Only occurrences of subtheme a are noted in the diagram since it better represents the formal return of A material. However, subtheme c is noted when it is motivically combined with other themes. The occurrences of Scale #2 are circled, and octatonic subsets are listed with each theme.

Example 83. Structural and harmonic diagram of Sonata No. 9, Op. 68.

**Exposition**

<table>
<thead>
<tr>
<th>Measure</th>
<th>1</th>
<th>11</th>
<th>24</th>
<th>35</th>
<th>43</th>
<th>51</th>
<th>60</th>
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</thead>
<tbody>
<tr>
<td>Theme</td>
<td>Aa</td>
<td>a</td>
<td>B</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>B</td>
</tr>
<tr>
<td>Scale (Mystic)</td>
<td>#1</td>
<td>#1</td>
<td>#1</td>
<td>#1</td>
<td>#1</td>
<td>#1</td>
<td>#1</td>
</tr>
<tr>
<td>Octatonic Pitches</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Z</td>
<td>Y</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>Tonality</td>
<td>MG/MC#</td>
<td>Mb/#1/ME</td>
<td>ME/Mb/#1</td>
<td>Mb/#1/ME</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pitches</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tonality</td>
<td>MG/MC#</td>
<td>MBb/ME</td>
<td>ME/MBb</td>
<td>Mb/ME</td>
<td></td>
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**Development**

<table>
<thead>
<tr>
<th>Measure</th>
<th>69</th>
<th>77</th>
<th>87</th>
<th>95</th>
<th>115</th>
<th>137</th>
<th>143</th>
<th>147</th>
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<tbody>
<tr>
<td>Theme</td>
<td>a</td>
<td>a</td>
<td>C</td>
<td>C/c</td>
<td>C/c</td>
<td>C</td>
<td>a/c</td>
<td>a/c</td>
</tr>
<tr>
<td>Scale (Mystic)</td>
<td>#1</td>
<td>#1</td>
<td>#1</td>
<td>#1</td>
<td>#1/#2</td>
<td>#1</td>
<td>#2</td>
<td>#2</td>
</tr>
<tr>
<td>Octatonic Pitches</td>
<td>Y</td>
<td>Z</td>
<td>X</td>
<td>X</td>
<td>Z/X</td>
<td>Y</td>
<td>Z/Y</td>
<td>X/Z</td>
</tr>
<tr>
<td>Tonality</td>
<td>MBb/ME</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Recapitulation**

<table>
<thead>
<tr>
<th>Measure</th>
<th>155</th>
<th>159</th>
<th>163</th>
<th>167</th>
<th>171</th>
<th>179</th>
<th>193</th>
<th>210</th>
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</thead>
<tbody>
<tr>
<td>Theme</td>
<td>a</td>
<td>a/c</td>
<td>a</td>
<td>a</td>
<td>a</td>
<td>C/B/a</td>
<td>C</td>
<td>a</td>
</tr>
<tr>
<td>Scale (Mystic)</td>
<td>#1/2</td>
<td>#1</td>
<td>#1</td>
<td>#1</td>
<td>#1</td>
<td>Oct/#1</td>
<td>Oct/#1</td>
<td>#1</td>
</tr>
<tr>
<td>Octatonic Pitches</td>
<td>Y/X/Z</td>
<td>Y</td>
<td>Z</td>
<td>X</td>
<td>Y</td>
<td>Y</td>
<td>Z</td>
<td>Y</td>
</tr>
<tr>
<td>Tonality</td>
<td>MG</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>MC#/MG</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>MG/MC#</td>
<td></td>
</tr>
</tbody>
</table>
Each theme in the Exposition -- A, B, and C -- is comprised of scales containing Octatonic Scale Y as a subset. Theme C, in measure 43, is transposed at $T^4$ to Scale #1 on MD, containing pitches from Octatonic Scale Z. However, harmonies with pitches from Octatonic Scale Y recur in measure 51. Thus, measures 43-50 are considered a temporary deviation from the predominant harmony.

In the Development, each theme occurs with harmonies containing at different times all three octatonic subsets. In the Recapitulation, octatonic subset Y returns as the predominant harmony, with a few deviations. The most noteworthy deviation is the statement of Theme C in measure 193, completely comprised of Octatonic Scale Z.
CONCLUSION

This thesis has sought to speculate upon the source of Scriabin's pitch selection, or "principle." In conclusion, Scriabin's pitch selection in his atonal works stems from his own "mystic chord," its inversion at the major third, and the transposition of these two chords at the tritone. These four chords share the same invariant harmonic basis, Scriabin's characteristic French-sixth sonority. The quartet of chords combine to form two nine-note scales. Scale #1 is the octatonic scale plus one extra note, found at the top of the generating mystic chord. Scale #2 consists of seven tones from the octatonic scale plus two extra tones a tritone apart, found at the extremities of all four related mystic chords.

This thesis has traced Scriabin's atonal style back to his tonal period, where the mystic chord and its inversion can already be found, functioning harmonically. The four-note "French-sixth" basis of the mystic chord had been a favorite sonority of Scriabin's even in his earliest works. The invariant transposition of this sonority at the tritone, the "tritone link," led to tritone bass movement, alternating sonorities a tritone apart, and tritone-based tonal structures ("dual polarity").

The transition works, Prometheus, Op. 60, and "Feuillet
"Feuillet d'album," are based entirely on the mystic chord. This thesis has shown that each phrase of "Feuillet d'album" is composed completely of the mystic chord and its transpositions, with linking tones between phrases. Scriabin stated about Prometheus, "There's no difference between melody and harmony. They are one and the same." Thus, each phrase of "Feuillet d'album" is a harmonic block. The melody and harmony are taken from the same set of pitches -- in this case, the six-note mystic chord.

Scriabin later expanded his selection of pitches to nine, utilizing Scale #1 and Scale #2, which are derived from the mystic chord and its three related chords. This thesis has shown entire works in which Scale #1 and/or Scale #2 account for every pitch. The pieces are composed in harmonic blocks, corresponding to transpositions of the scales. Also, the usages of the scales and the octatonic subsets are shown to be directly related to the overall structures of the works.

Wise's superset 9-10, which he does not relate with the mystic chord, directly corresponds to Scale #1. Baker discusses the importance of the mystic chord set and the octatonic set in the atonal works, but discounts the connection between the two: five out of the six tones of the mystic chord are octatonic. Other theories have been mentioned which do not account for every pitch. Purely harmonic theories, based on the mystic chord and the "tritone link," fail
to satisfactorily explain "extra" octatonic pitches. Purely linear theories label non-octatonic tones as "non-harmonic tones" that resolve traditionally. However, this thesis has pointed out a few passages in which the "non-harmonic tones" do not resolve, or resolve tentatively (by octave displacement, for example).

Many examples can be found of mystic chords appearing in the music voiced closely parallel to the usual configuration. The symmetrical "French-sixth" basis is always present, often playing a harmonically important role. The music often seems to literally grow out of these sonorities. Linear theories fail to grasp the essence of Scriabin's music, the main element of his music that the listener leaves the concert hall remembering: his sensuous and exotic harmonies. Even his elegant melodies take a back seat, perhaps because these melodies are taken directly from the harmony, and are a part of it. The succession of phrases and motives directly corresponds to the changing of harmony (or the transposition of scales). Scriabin's harmonies remain fresh today, even in a musical world which has heard practically every possible combination of pitches. However, his appealing, carefully planned harmonies serve to enhance and illuminate his solid formal structures (largely traditional), giving the listener an all-around satisfying musical experience.
ENDNOTES


4. Ibid.


30. Reise, *op. cit.*, 228.
33. Wise, *op. cit.*, iii.
34. Wise, *op. cit.*, 292.
35. Wise, *op. cit.*, 293.
42. Guenther, *op. cit.*, 113.
APPENDIX A
Allegro drammatico

Incipit

\[ \text{mf}^* \]

4

\[ \text{f com' un cri} \quad \text{p subito} \quad \text{cresc.} \]

8

\[ \text{mc} \]

\[ \text{dim.} \quad \text{p} \quad \text{cresc.} \]

Op. 74, No. 3
APPENDIX B
Op. 69, No. 2

Allegretto.

avec une subite douceur

Più vivo.
Sonata No. 9 ("Black Mass"), Op. 68

Aq

Moderato quasi andante

\[ \text{Mysterieu} \]

\[ \text{cement murmure} \]
molto accel.
sombre mystérieux

d'une douceur de plus en plus caressante et empoisonnée
Più vivo

Presto
BIBLIOGRAPHY


Swan, Alfred J. *Scriabin*. London: John Lane: The Bodley Head, Ltd., 1923

To Whom It May Concern:

I am requesting permission to use music that you publish in a dissertation. I am a student at the University of North Texas in Denton. The dissertation will be titled "A Theory of Scriabin's Harmony," and speculates on scale derivation in Scriabin's late works.

Specific works to be used in their entirety are: "Feuillet d'album," Op. 58, Preludes Ops. 67, No. 1, 69, Nos. 1 and 2, 74, No. 3, and Sonata No. 9, Op. 68.

Thank you very much.

Sincerely,

Michael McVay

Michael McVay