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For the past dozen summers, I have taught a graduate course in analysis. Each year, I begin by trying to make a case for analysis itself. I argue that if an analysis presents a good way to hear or play a piece, it should follow that musicians be enthusiastically involved with analytical work, since the overwhelming majority of us play and/or conduct and/or teach. We should, in fact, see analysis as common ground—perhaps the *only* common ground—shared by the various sub-disciplines that make up music study. I then acknowledge what they all know, that, despite this, very few musicians are involved in any way with analysis, and express my belief that this is due in large part to a misunderstanding of the process of analysis that musicians develop, paradoxically, in the analysis courses they take as students. We purport to teach analysis in our courses, but actually often don't. Instead, we teach the workings and employment of analytical tools. We know we're doing this, and we have good reasons for doing it. But if that's all, or nearly all, we do, the result is that students confuse the acquisition and application of analytical tools for analysis. And they are not at all the same thing.

An analysis, I argue, follows a coherent path through a piece of music. It says, here is a good way to hear, to play, to think about, this piece. An analysis is just that—*an* analysis, not *the* analysis. It's not looking for the truth. It's not trying to prove anything. We're not in the proving business; we're in the persuasion business. It requires a clearly defined argument that must be logically consistent and musically compelling. The chief tool needed to do analysis is a musical sensibility, musical instincts, and you all have those, I tell them, or you wouldn't be here. Other tools, the ones we learn in these classes, can be helpful, but they are not central. The argument, the point of view, is central, and it will call for, and direct the use of, any tools it needs.

A typical class comprises twenty or so students, and is unusual insofar as almost all of them are out working in the field. Many are instrumental-, vocal-, or general-music teachers, doing graduate work in music education in the summers. Others have college jobs,

and are taking as many summer courses toward DMA degrees, typically in performance or conducting, as they can. Still others are officially year-round students, but play in regional orchestras or teach large private studios (or both) during the academic year, so need to take summer courses in order to make headway in their degree programs. Often these students have moved their families to town for the summer, or are themselves living away from spouses and young children. They are nearly all spending their own money on their studies.

Efforts and sacrifices of this sort inculcate a pronounced impatience for coursework that they see as professionally unhelpful or irrelevant. These classes teem with an eagerness to discuss what role, if any, analysis might play in their professional lives, as well as a collective perspective that makes this discussion meaningful, both of which qualities are largely absent in younger students and students who have never been out of school. These distinctions make for particularly rewarding teaching. What they care about is clear to me. Students feel invested in what they are learning, and anxious to apply it to the more central activities of their professional lives. At the end of each summer I have students tell me that the class has stirred them to approach their teaching or playing differently in some sense—a powerful incentive for me to want to reflect back that same level of interest and investment, to do my best for them. I also feel that there is a lot at stake when I make decisions about course structure and music to study.

Over the years, I have treated the course as a kind of analysis laboratory, continuously looking for the approach that works best. I have not taught the course the same way twice, and several times have restructured my approach fundamentally from the year before. In some years, I have worked through a lot of analyses in class myself, hoping that modeling the sort of procedure I would like students to follow would be helpful. In other years, I have kept this modeling to a minimum, and instead tried to prompt students to discover workable procedures on their own. I have had students work alone, in groups, or alternate between the two. I have had them give several shorter presentations of their analyses, or work toward a single longer presentation. I have used the Stein collection,[1] assigning each student a specific set of essays to study,

[1] Deborah Stein, ed. *Engaging Music: Essays in Music Analysis* (New York and Oxford: Oxford University Press, 2005).

depending on his or her choice of piece for a final analysis project.[2] I have at times had the course culminate with a written analysis, and have at other times dispensed with writing altogether in favor of oral presentations (in recent years, videotaped and critiqued by the presenter). I have structured the course by analytical foci—text-music relations, motive, rhythm—or by musical genre. Finally, I have varied the balance between number of pieces studied and depth of study. Some summers, we have worked through a lot of literature at a piece-a-day pace. Other years, we have spent more time with each of a smaller number of pieces, or even with a single work. I will return to this approach to the course in a moment.

Unfortunately, but probably not unexpectedly, I am unable to report that one particular course design stands out as superior. Each of these strategies has both advantages and shortcomings. But there are two course features that I would now be unwilling to give up. The first is group work. Many students, regardless of how self-assured they may be as performers or teachers, are uncertain about whether they have anything at all to *say* about a piece of music. They are reluctant to develop and express their ideas, and groups (and I have acquired a strong preference for groups of three members) insulate against this uncertainty. Further, the smallest of obstacles will derail an individual student's line of inquiry. Groups are much more resilient in managing such difficulties. Even if the ultimate goal is individual analysis—which of course it is—structured group work is, I believe, singularly effective in developing the necessary skills. The second is oral, rather than written, presentation of analyses—provided, that is, that students have come to understand that their analyses must *persuade* their audience of a good way to listen to the music. If this understanding is in place (and it can sometimes take a lot to get it in place!), the immediacy of an audience can provide a helpful guide to the analytical argument that disappears with written analysis. As well, of course, these students are conductors and performers: any analysis they do beyond my course is likely to be presented to an audience.

I mention above the idea of devoting the entire course to the study of a single work. This approach sacrifices any breadth of literature to which students are exposed, of course, as well as the benefit of modeling analytical process for students before they try

[2] I describe this process in some detail in Gordon Sly, Review of *Engaging Music: Essays in Music Analysis*, ed. Deborah Stein (Oxford, 2005), *Journal of Music Theory Pedagogy* 20 (2006): 161-78.

it themselves. Instead, the course becomes a summer-long (in the present case, six-week-long) workshop on a piece, one advantage of which is the opportunity to examine it from several different vantage points. This can be valuable: when analytical findings from various perspectives are overlaid and students see that they are mutually supporting, the result can be an especially vivid picture of a piece. It also allows students to dig deep into a substantial work, quite possibly the first such opportunity they have had; time constraints in our analysis courses often confine our choice of pieces to miniatures, or our study to the musical surface.

This workshop approach can also encompass other of the course features discussed above—group or individual work, written or oral presentation of analytical findings, and so forth—but this work must now be structured within the context of a single analytical process. The instructor must have a good idea at the outset of how ultimately the analysis should look, or at least what essential things it should comprise, and design a series of tasks and assignments that will accomplish that goal. Readings from the analytical literature can also be brought into the process, but they should always be called for, as it were, by what is encountered in the piece.

The balance of this essay will focus on the opening movement of Stravinsky's *Symphony of Psalms*, a work that I have found most effective for this course design. It is sufficiently substantial to support this level of analytical attention, and is a complete movement, so allows for meaningful overarching analytical interpretation. At the same time, it is still of manageable length, running just over three minutes. It employs string, brass, woodwind, percussion (including piano), and vocal forces, so every member of the class can find him/herself in its instrumentation. And it clearly invites several different analytical perspectives. It sets a text, so word-music relations should be considered. It represents the vast "post-tonal" literature, whose principal contributors include Debussy, Bartók, Messiaen, Ravel, and Scriabin, as well as Stravinsky. Much of this music presents us with synthetic tonal languages that bring together traditional and non-traditional tonal materials,[3] characteristics shared by

[3] The post-tonal literature is not tonal in a common-practice sense, of course, but clearly exhibits tonal focus. Arthur Berger coined the term "centric," which has become standard vocabulary in the field. See "Problems of Pitch Organization in Stravinsky," in *Perspectives of New Music* 2/1 (1963): 11, reprinted in *Perspectives on Schoenberg and Stravinsky*, ed. Benjamin Boretz and Edward T. Cone (New York: Norton, 1968).

much of the literature these students regularly play or teach. This movement subtly moves among octatonic, modal, and traditional tonal constituents. It is wonderfully animated music that lures analytical attention to its rhythmic life. And it features a referential sonority, an event that is contextually privileged or marked for consciousness. Attention focused on this sonority's occurrences across the movement— "tracing its history,"[4] if you will—suggests perhaps a narrative analytical approach. As well, focusing on the precise locations of its deployment leads the analyst to consider the proportional division of musical time that its placement imposes on the movement.

In what follows, I will consider the movement from four different perspectives: text, points of formal division, pitch material, and temporal design.[5] My discussion is not meant to chronicle the analytical process that a class would follow. Instead, it tries to provide the kind of textured image of the piece that an instructor would need in order to design around it the kind of course I have described. The course itself could unfold in any number of specific ways, and follow these four—and perhaps other—analytical perspectives in any order.

Text

The three movements of the *Symphony of Psalms* set, respectively: Psalm 38, Verses 13-14; Psalm 39, Verses 2-4; and the whole of Psalm 150. These texts unfold an essential progression in the relationship between humanity and God. The Psalm 38 text invokes prayer, an entreaty to God. God responds to that plea in Psalm 39, whose closing lines acknowledge that response with humanity's testimony of faith. Psalm 150 represents a life "in God," expressed through praise. In the first-movement text, an important structural feature of the Latin is lost in English translations that are commonly consulted. A brief account of the history of this text and of the relationship

[4] Asking students to identify and trace the history of a striking or quirky event in a piece is an analytical idea that I owe to Brian Alegant, who has used it to great success in his classes at Oberlin. One of its advantages is that students without much technical training in music are not excluded.

[5] Many people, including students from several classes and two anonymous reviewers, have offered comments and suggestions that have been most helpful to me. I thank them all heartily.

between English and Latin versions is therefore in order.

The book of Psalms was originally in Hebrew. Several Latin versions were in circulation in the early centuries of this era. Some may have been translations of the *Septuagint*, which was a Greek translation of the original Hebrew. The original texts lacked punctuation, so adding it was a matter of editorial discretion. Wide variation exists here. The version used by Stravinsky is given below; it is from the *Vulgate*, a Latin translation from the Hebrew made by St. Jerome in the late-4th century.

Exaudi orationem meam, Domine
et deprecationem meam.
Auribus percipe lacrimas meas.
Ne sileas.
Quoniam advena ego sum
apud te et peregrinus,
sicut omnes patres mei.
Remitte mihi,
ut refrigerer
priusquam abeam et amplius non ero.

The chief difficulty for an English translator occurs in the third line with the words *auribus* and *lacrimas*, which refer, respectively, to "ears" and "tears," and with the punctuation of that and the following line. My own more or less literal translation of the Latin runs as follows:

Hear my prayer, O Lord and my entreaty.
Perceive with your ears my tears.
Do not be silent.
For I am a newcomer with you and a wanderer,
like all my forefathers.
Turn your (fierce) glance from me,
That I may be refreshed
Before I depart and am no more.

Compare this with the verses as they appear in the *New King James* bible, given below (Psalm 39, Verses 12-13):

Hear my prayer, O Lord
and give ear to my cry;
do not be silent

at my tears:
for I am a stranger with You,
A sojourner,
as all my fathers were.
Remove Your gaze from me,
that I may recover strength,
before I go away and am no more.

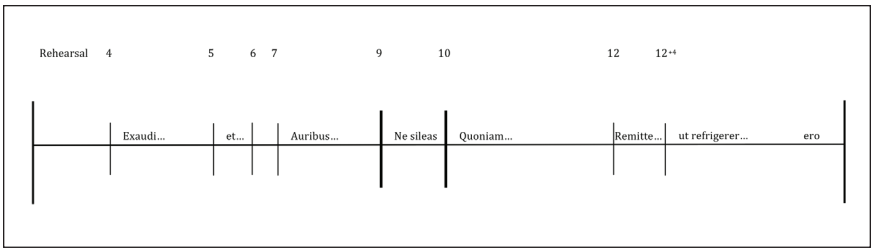
This translation makes changes necessary to deal with the odd suggestion of "hearing tears," and in so doing, incorporates the line *Ne sileas* into the passage that, in the Latin, precedes it. A new line—and a new idea—then starts with *quoniam advena ego sum* ("for I am a stranger"). While the meaning is perhaps not substantially altered, what is lost is the relatively central, discrete position of *Ne sileas*. This plea to the Lord to act ("do not be silent") is the crux of the text. Punctuation sets it off as a self-contained statement. Accordingly, Stravinsky sets it off musically from what precedes and follows it. In fact, as we will see, careful study of the movement's architecture reveals a series of symmetrical durational structures into which Stravinsky sets these words, just as a jeweler sets a gemstone into its mounting.[6]

[6] Richard Taruskin argues that an insensitivity, even an indifference, to the meaning of the text he was setting was a "longstanding habit" for Stravinsky. The context for Taruskin's remarks is his controversial discussion of the Cantata—specifically, of Stravinsky's choice of the anti-Semitic text "To-morrow shall be my dancing day" for the work's second Ricercar. While Taruskin makes a strong argument that includes examples that both pre- and post-date the *Symphony of Psalms*, I would nevertheless argue that in this work, at least, Stravinsky attended very carefully to the meaning of the text and its musical setting. See "Stravinsky and us," *Cambridge Companion to Stravinsky*, ed. Jonathan Cross (Cambridge University Press, 2003): 276-84.

Formal Division

Formal design in the opening movement is articulated in usual ways—by boundary events, contrasts in texture, and changes in tonal material. The latter will be taken up presently; here, we will consider boundary events and textural change. The main point of division, as noted, occurs at Rehearsal 9, setting off the words *Ne sileas*. This text is punctuated by framing statements of the Psalm chord: that preceding it is the first occurrence of the chord since the opening bars; that following it is the final sounding of the chord in the piece. A number of second-level points of division can also be noted. At Rehearsal 4, voice is added to the orchestral texture, as the altos introduce the first words of the text. At the same time, the double reeds take over from the horns, pianos, and low strings, producing a shift in orchestral timbre. At Rehearsal 5, the new line of text is announced by the first entry of the full choir. Just four bars later, at Rehearsal 6, a marked change in texture occurs, as the choir drops out and all motion ceases, save for a four-bar passage in the oboes. The music at Rehearsal 7 recalls that of Rehearsal 4, as the altos intone the third line of text, again set to the E-F semitone oscillation. As before, they are accompanied by the double reeds, but now pizzicato cellos and contrabasses add depth to the texture. This carries the music to the sounding of the Psalm chords that set off the fourth line of the text, *Ne sileas*.

A distinctly new melodic idea—and a relatively large section of music, setting the next three lines of text—begins at Rehearsal 10. The large intervals that shape the voice parts here stand in stark contrast to the minimal intervallic motion in the voices to this point. The vocal texture thickens with the addition of the sopranos and tenors in the fourth bar, and the whole continues to intensify, reaching its apex at Rehearsal 12. Although the final word of the seventh line of text (*mei*) overlaps this point of arrival, the musical climax serves to set line eight, a second plea of this Psalm text, *Remitte mihi*. The *New King James* renders this as "remove Your *gaze* from me"; I have it a "fierce glance": what is important is to recognize the desperate cry for release that these words convey. Beginning in the fourth bar of Rehearsal 12 is the closing section of the movement. Melodically, the music here recalls the solo alto theme found at Rehearsals 4 and 7, with the E-F semitone idea now taken up by the tenors. The texture is filled out by the other three vocal parts, though, and the full orchestral timbre characteristic of the second half of the movement remains. Example 1 summarizes this formal organization.



Example 1: Stravinsky, *Symphony of Psalms*, I; Main Formal Divisions

Pitch

An E-minor triad opens the work. Its first two statements frame arpeggiated major-minor 7th chords built on B♭ and G. Taken as a whole, the pitch-class content of these opening four bars defines—and is confined to—the octatonic set built on the chromatic dyad E-F: seven of its eight members are used; C♯ is not. The division, or partitioning, of that octatonic set, though, into the E-minor triad and Mm7th chords, clearly deemphasizes its octatonic character in favor of a more diatonic-tonal character. This raises a number of questions. Is the octatonic collection the *source* of these bars in any meaningful sense, or is it simply an incidental by-product of the three chords that make up the passage? The singularity of the Psalm chord itself, as well as its recurrences through the movement, clearly endow it with referential status of some sort. Does it function as the "tonic" triad? Beyond this, are the Mm7th chords meant to suggest dominant harmonies? If so,what roles are played by their respective tonics, E♭ and C?[7]

[7] A good deal has been written about pitch material in the *Symphony of Psalms*. Much of this scholarship advances the view that the octatonic set serves as pitch source in the work, and indeed, in much of Stravinsky's music. The locus classicus of this idea is Berger's "Problems" (see note 3). It is also fundamental to Pieter van den Toorn's *The Music of Igor Stravinsky* (New Haven: Yale University Press, 1983). However, given, for instance, that a grouping of any major, minor, or diminished triads whose roots lie a minor 3rd or tritone apart will give rise to the octatonic collection, how does the analyst determine whether the collection itself or the superimposed sonorities that generate it are compositionally prior? And what, if any, are the implications of such a determination? In "Stravinsky's Tonal Axis," *Journal of Music Theory* 26.2 (1982), Joseph Straus rejects the idea that the octatonic set is the fundamental source of pitch material in this music, and posits in its

An overview of the music to the first vocal entrance at Rehearsal 4 may begin to answer these questions. In the next three bars, the Mm7th chords continue in the upper three notes of the arpeggios. In the lowest voice, though, B♭ gives way to A in m. 5, which persists into m. 7 and then falls through G and F♯ to E. This descent through the lower tetrachord of the E-minor scale is punctuated by the third statement of the Psalm chord. Rehearsal 1 begins by restating the gesture of mm. 7-8, with the descent through the E-minor tetrachord sounding below arpeggiated Mm7th chords on B♭ and G. In m. 10 we have our first evidence that the Mm7th chord on G does indeed function as V7 of C, as the arpeggiated figures in the oboes and bassoon move through a first-inversion C-major triad and then back to V7 of C. From here they arpeggiate the Mm7th chord on E. Between Rehearsals 1 and 2, then, the oboes and bassoon give us Mm7th chords built above tones in a descending chain of minor thirds: B♭, G, and E. Sounding between the oboe's and bassoon's last chord, the English horn plays first a minor triad, then a Mm7th chord, on G. Meanwhile, the piano begins an ascending gesture that describes the E♭-major scale. This is now set off by the fourth occurrence of the Psalm-chord. For the opening five bars of Rehearsal 2 we find "white-note" music above an E in the bass; this, then, has a strong Phrygian character. The E-Phrygian line continues, first in the horn, then in the solo cello, through Rehearsal 4, but a bar

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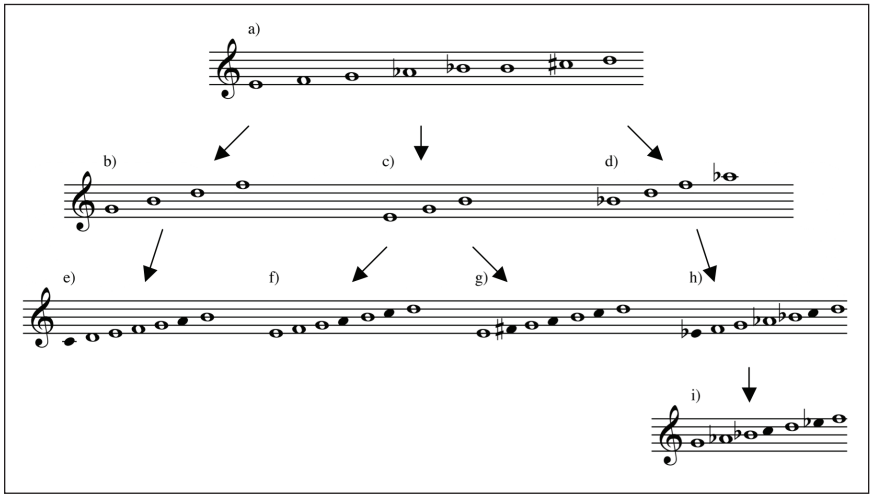
place the "tonal axis," which is a conflation of triads that produces either a major- or a minor-7th chord, and whose role in a piece must satisfy a number of defining features. The axis of the opening movement of the *Symphony of Psalms*, according to Straus, is the 7th chord e-g-b-d. Interestingly, Straus's tonal axis shares important characteristics with Robert Bailey's "double-tonic complex," developed to account for the tonal language and structure of Tristan, and expounded most clearly in his Prelude and Transfiguration from Tristan and Isolde (New York: W. W. Norton: 1985), and by his student, Christopher Lewis, in *Tonal Coherence in Mahler's Ninth Symphony* (Ann Arbor: UMI Research Press: 1984). Dmitri Tymoczko has most recently taken up the question of octatonicism in Stravinsky's music, and determined that its role has been overstated. While he does not deny the composer's use of the scale, he feels that it shares the stage with other of Stravinsky's techniques, such as triadic or polyscalar superimposition and modal use of non-diatonic minor scales. See Tymoczko "Stravinsky and the Octatonic: A Reconsideration," *Music Theory Spectrum* 24/1 (2002): 68-102, and van den Toorn and Tymoczko "Colloquy: 'Stravinsky and the Octatonic'," *Music Theory Spectrum* 25/1 (2003): 167-202.

before Rehearsal 3 the pianos and second horn, later joined by the strings, reintroduce the E-octatonic set. In these final bars leading into the vocal entrance at Rehearsal 4, then, the diatonic and the octatonic are set in different strata of the orchestra.



Example 2: Stravinsky, *Symphony of Psalms*, I; Pitch Materials

At this point it would be wise to step back from the music for a moment to try to organize these observations. Example 2 sets the various pitch-class collections into a kind of flow-chart that interprets their possible derivations and interrelationships. This asserts that the octatonic set is the source of the pitch material, and gives that set in open noteheads in the example (a). Also in open noteheads are those members of all other collections Stravinsky uses to this point in the piece that reside within the source octatonic scale. Pitch-classes foreign to the source set are given in black noteheads. As we read down the example we see first the partitioning of the octatonic set into the work's opening gestures, the E-minor triad (c) and the two V7 chords (b and d). The E-minor triad implies both the E-Phrygian and E-minor collections (f and g), and the V7 chords imply their respective tonic collections, C and E♭ (e and h). These are the collections we identified through Rehearsal 4. One final scale, the G-Phrygian, is shown in example 2 (i). It is isolated to indicate that it has not appeared in the music so far, but included because it completes this group of pitch-class collections inasmuch as it stands in the same relation to the E♭-major set as does the E-Phrygian to the C-major set. Both pairs are different rotations

of the same collection. We also see, by observing the content of each set represented in open noteheads, the invariant segments that flow out of the octatonic set to effect transition from one collection to another. For example, the tetrachord D-E-F-G belongs to both the octatonic and the diatonic collection that yields C major and E Phrygian; it therefore functions as a "pivot" between the two sets, and allows Stravinsky to move seamlessly between octatonic and diatonic tonal worlds.

Shifts in pitch collection tend to reinforce the formal divisions noted above. The section of music from Rehearsal 4 through Rehearsal 9 is cast as a three-part *aba* design, with a brief interpolation in the oboes and flutes at Rehearsal 6, before the return of the *a* music. The pitch material in the orchestra is octatonic throughout, described most prominently in the persistent arpeggiations of the bassoons and English horn. The opening line of text is sung by the altos alone, to the pitches E and F. Confining the vocal part to this "hinge dyad" between the octatonic and Phrygian collections at once places the voices in tonal agreement with their accompaniment, and continues the stratification between octatonic and diatonic sets that had been introduced by the orchestra in the preceding bars.

At Rehearsal 5 the sopranos, tenors, and basses join the altos to complete the choral texture, outlining the V7/C harmony. Meanwhile, the altos themselves move up to the chromatic dyad G-A♭. The total pitch content of these bars completes and is confined to the octatonic set, but Stravinsky continues the stratification, as the orchestra's full octatonic collection sounds against the dominant-7th diatonic subset in the choir. The alto voice, with its G-A♭ oscillation, once again straddles the line between the contrasting sets: as a continuation of the E-F dyad that began the larger section, its progression E-F-G-A♭ allies itself with the octatonic, since it belongs to no diatonic collection; at the same time, the A♭ is comfortable within the diatonic harmonic function projected by the choir, as the 9th above V7/C.

The interpolation to which we referred earlier occupies the four bars between Rehearsal 6 and 7. This is a curious passage, quite unlike anything that comes before or after. It begins with a distinctly Phrygian flavor, but tails away in its last bar with a fully chromatic gesture. Oddly enough, the only member of the total chromatic that does not sound here is C♯, the same pitch-class that was omitted from the octatonic set projected in the opening four bars of the movement. We will leave this passage for the moment, but revisit it below.

Rehearsal 7 marks the return to the music of Rehearsal 4. A fuller texture in the orchestra is the only modification here, as pizzicato ostinati in the strings fortify the arpeggiations of the double reeds. The vocal part returns to altos alone with their E-F oscillation.

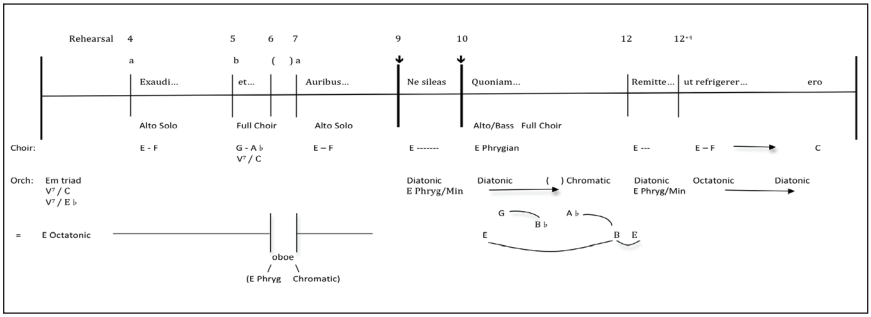
The setting of the line *Ne sileas* at Rehearsal 9 is purely diatonic, either E Phrygian or E natural minor (neither F♮ or F♯, which would point to one or the other, occurs), with pedal Es in the strings and octave Es in the sopranos and tenors, all supporting E Phrygian/minor figuration in the rest of the orchestra.

Like Rehearsals 4 through 9, the music from Rehearsal 10 through the end of the movement is organized into three sections, the central one, beginning at Rehearsal 12, signaling the climax of the movement. In the first section, the E-Phrygian character of the preceding music continues in both orchestra and voices. This is short-lived, though, as elements of the E-minor and octatonic sets begin to be overlaid. The whole of this passage is characterized by an increasing chromatic texture. For the first time in the piece (save for the brief interpolation at Rehearsal 6) we find fully chromatic segments, such as the G-F♯-F♮-E in the bass trombone in the third and fourth bars after Rehearsal 10. This bass trombone line is part of the underlying bass voice that supports the opening section. At the broadest level, E moves to B, its dominant, in the bar before Rehearsal 12, and the bass progression back to E helps announce the climax. But the motion from the initial E across to B is shaped by parallel major-6th descents. The first of these is from the G in the third bar of Rehearsal 10 to the B♭ in the bar before Rehearsal 11. The second one, enharmonically spelled, begins on the A♭ in the second bar of Rehearsal 11 and leads to B♮. These parallel descents are divided by the opening bar of Rehearsal 11, which stands outside the growing chromaticism of the section and returns for a moment to E Phrygian. These major 6^{ths} can be understood as octave-displaced minor 3^{rds}, of course, a defining interval of the octatonic set, which brings to mind the motion in minor 3^{rds}, noted above, that occurs between Rehearsals 1 and 2.

The climactic passage at Rehearsal 12 is a more intense version of the setting of *Ne sileas* at Rehearsal 9: the music is, once again, purely E Phrygian or minor, with pedal Es in the bass, repeated Es in the sopranos, tenors, and basses, and arpeggiations in the full orchestra.

The closing section of the movement begins with idiosyncratically Stravinskian abruptness in the fourth bar of Rehearsal 12. This

section reverses the increasing chromaticism of Rehearsals 10 through 12, as the octatonicism gradually gives way to a diatonic conclusion. At Rehearsal 13 the octatonic string ostinato E-G-F-A♭ gives way to half notes on D and E, and the strong Phrygian character in the choir shifts its tonal focus toward C major. Finally, four bars from the end a bass descent in G Phrygian supports the approach to the G-major triad that concludes the movement. This harmony functions locally as dominant of the C that begins the second movement. It is in keeping with Stravinsky's conception of the first movement as a prelude that it should be tonally "open" in this way. Example 3 fleshes out the overview given in Example 1 by adding details of the movement's tonal organization.



Example 3: Stravinsky, *Symphony of Psalms*, I; Formal Divisions and Tonal Design

Proportion

I begin here with an anecdote. As a young student, I had the good fortune to attend a wonderful performance of the work given by the Boston Symphony Orchestra, the ensemble for whom it was composed,[8] and the Tanglewood Festival Chorus. Of the images of that performance that remain with me, the most vivid is the sense I had that the division of time in the opening movement had been very carefully calculated. The sudden changes of texture that punctuate the musical flow throughout the movement certainly contributed to this impression. But the effect of closely measured punctuation was introduced in the exciting opening moments. In all the literature, few openings are as distinctive and memorable as this one. This quality is owed largely to the initial E-minor

[8] The *Symphony of Psalms* was composed in 1930, and commissioned by Serge Koussevitzky to celebrate the 50th anniversary of the Boston Symphony Orchestra.

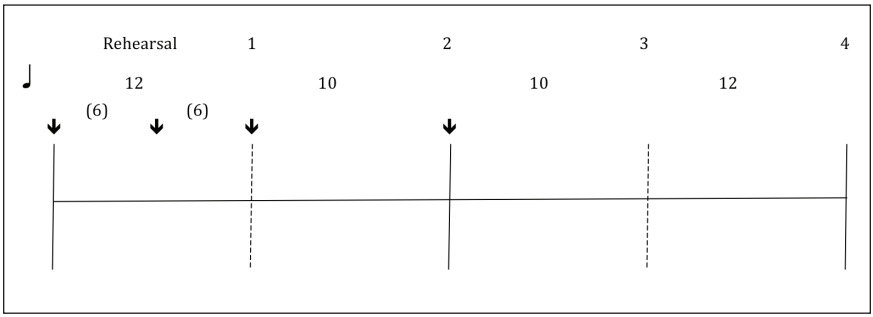
triad, the "Psalm chord," whose unique sonority derives from its articulation, timbre, and registral deployment. The Psalm chord that opens the work sounds three times more in close succession, and each time it is framed differently—that is, each has a different duration of silence immediately preceding it: the first of the three is preceded by a quarter rest, the second by no rest, and the third by an eighth rest.[9] Maestro Ozawa clearly attached significance to this feature, and gestured emphatically so as to differentiate the three statements of the chord in this respect. Does Stravinsky's placement of the Psalm chords articulate a perceptible pattern in the division of musical time?

Time signatures change frequently in the movement, but they are all based on the quarter note, and no tempo changes occur. The quarter note, then, is a temporal constant that one might use to calculate the division of time. Six quarters separate the opening two statements of the Psalm chord, and six more come between the second and the third. Ten quarters then elapse before the fourth iteration of the Psalm chord. Rehearsal 2 clearly marks the first main point of articulation, with the entry of the sustained bass tones in the left hand of the piano and strings and the descending line in the horn. As we noted, the five bars following Rehearsal 2 present "white-note" arpeggiations above the bass E-F-E, suggesting a Phrygian character. This is disrupted a bar before Rehearsal 3 with the change of bass tone from E to G, and the addition of non-Phrygian members A♭ and B♭ in the pianos. The B♭ is actually introduced on the second half of the previous bar, but it is the new bass tone on the following downbeat that draws our attention, and, with the A♭ and B♭, signals the change in sound from Phrygian to octatonic. The next formal boundary, of course, is the vocal entrance at Rehearsal 4.

The passage between Rehearsal 2 and the shift from Phrygian to octatonic is ten quarters in duration; from this point through Rehearsal 4 is twelve quarters. The division of time through to the first vocal entrance, then, produces a durational palindrome, as illustrated in Example 4. The arrows again locate Psalm chord statements, and the numbers above the time-line indicate elapsed quarters. Note that the main division within this opening passage, signaled by the final Psalm chord and the new musical texture

[9] The Psalm chord that opens the piece comes out of silence, of course, but it is worth noting that Stravinsky begins the work with a notated quarter rest, setting this first sound on the second beat of the opening $\frac{2}{4}$ bar.

at Rehearsal 2, occurs exactly in the middle, articulating the palindrome. The less pronounced divisions are marked by Psalm chord statements in the first half, and a shift in collection (Phrygian to octatonic) in the second. Also note that while the Psalm chords help define the durational scheme, they are not themselves included in it. The quarter-note duration that each of the four occupies stands outside the main temporal unfolding of the piece.

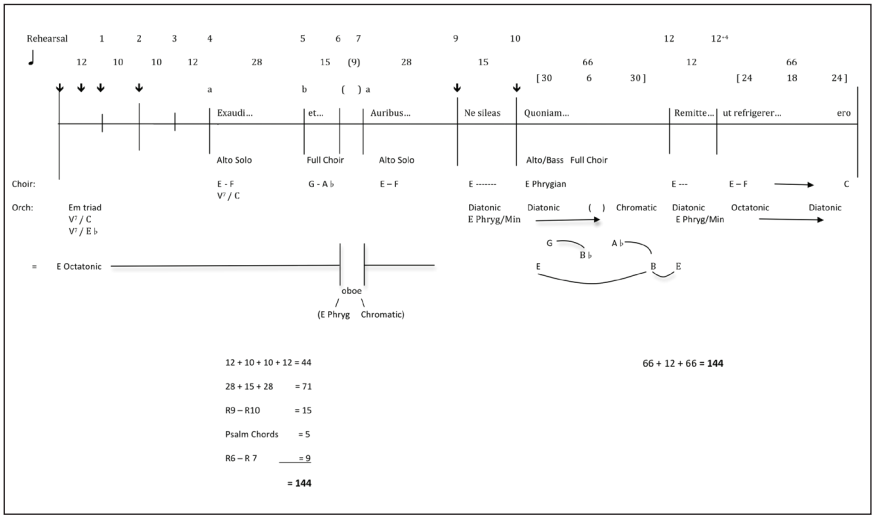


Example 4: Stravinsky, *Symphony of Psalms*, I; Temporal Proportion through Rehearsal 4

Continuing our investigation into Stravinsky's durational architecture beyond the opening twenty-four bars reveals a number of striking calculations. The music between Rehearsals 4 and 9—if we ignore the nine-beat interpolation of Rehearsal 6, which we shall do for the moment—is once again cast as a durational palindrome, with sections of twenty-eight quarters framing a middle section of fifteen quarters. Given the *aba* design, the durational symmetry is less remarkable than it would be were the design otherwise. It is worth noting, though, that the lines of text set by the two *a* passages have different numbers of syllables. That Stravinsky fit both lines into the same number of beats, then, is surely not incidental.

The music from Rehearsal 10 through the end also unfolds as a large durational palindrome, with the climactic passage at Rehearsal 12 occupying twelve quarters centered between passages of sixty-six quarters on either side. Beyond this, each of the passages of sixty-six quarter duration divides symmetrically in this way, creating nested palindromes within the larger one that shapes the second half of the movement. The Phrygian bar at Rehearsal 11 occupies six quarters, centered precisely between passages of thirty quarters on either side. And the diatonic displacement of the foregoing octatonic at Rehearsal 13 initiates a passage of eighteen quarters

that divides the closing sixty-six-quarter section into twenty-four plus eighteen plus twenty-four quarters. Example 5 summarizes this durational scheme and incorporates it into the overview of formal and tonal designs shown in Example 3.



Example 5: Stravinsky, *Symphony of Psalms*, I; Overview of Formal Divisions, Tonal Design and Durational Architecture

In addition to this series of palindromes, two other large proportional relationships emerge. The principal division within the first part of the movement, up through the first of the final two soundings of the Psalm chord that frame *Ne sileas*, occurs at Rehearsal 4. Here we have both the first choral entrance and the point of division between the two palindromes. Preceding this point are the forty-four quarter notes that comprise the opening palindrome, plus the four quarters occupied by the four Psalm chords, for a total of forty-eight. Following it are the seventy-one quarters of the second palindrome (ignoring again, for a moment longer, the nine-beat interpolation at Rehearsal 6), plus the one quarter of the Psalm chord that announces *Ne sileas*, for a total of seventy-two quarters. The ratio of forty-four to seventy-two is exactly 2:3.[10]

[10] Jonathan Kramer's well-known analysis of the *Symphonies of Wind Instruments* reveals the consistent use of the durational ratio 3:2 in the work's first half. See "Moment Form in Twentieth-Century Music," *Musical Quarterly* 64 (1978): 177-94, and *The Time of Music: New Meanings, New Temporalities, New Listening Strategies* (New York: Schirmer: 1988).

A second, and overarching, proportional relationship is shown in the few calculations given at the bottom of Example 5. The large palindromes that frame and thereby highlight the setting of the line *Ne sileas*, and the fact that the Psalm chord punctuating these words marks the final sounding of that singular event, focus attention on this moment. From Rehearsal 10 through the end of the movement we have sixty-six plus twelve plus sixty-six quarters, for a total of one hundred forty-four. The opening of the movement, as just noted, has the forty-four quarters of the first palindrome and the seventy-one quarters of the second. *Ne sileas* at Rehearsal 9 has fifteen quarters. Now, as we noted earlier, the durational palindrome through to Rehearsal 4 did not include the quarters occupied by the Psalm chords. This was appropriate, since those Psalm chords articulated the balanced divisions. But in calculating durational proportion, as we did in determining the 2:3 ratio of the movement's first half, those values must be taken into account. There are five of them up to the *Ne sileas* passage. In total, forty-four plus seventy-one plus fifteen plus five equals one hundred thirty-five. If we then include the nine-quarter duration of the curious little interpolation at Rehearsal 6 (finally!), we have a total of one hundred forty-four. The sixth and final sounding of the Psalm chord, then, which punctuates the crux of the movement's text, *Do not be Silent!*, divides the structure exactly in half, with precisely one hundred forty-four quarters on either side.[11]

[11] Martha Hyde has shown that the temporal architecture of the opening movement of the *Symphony in C*, completed in 1940, ten years after the *Symphony of Psalms*, shares important features with those I have presented here. See "Stravinsky's neoclassicism," *Cambridge Companion to Stravinsky*, ed. Jonathan Cross (Cambridge University Press, 2003): 115-22. She shows the overarching palindrome of the movement—in her words, "a balanced arch with strict temporal proportions." She also points out the return of the principal theme "in the middle of the development section (bar 181) exactly halfway through the movement . . ." (emphasis mine). A number of other scholars, as well, have taken up Stravinsky's division of musical time and proportional organization. Edward Cone also discusses proportional relationships in the first movement of the *Symphony in C* in "The Uses of Convention: Stravinsky and His Models," *Stravinsky: A New Appraisal of His Work*, ed. Paul Henry Lang (New York: Norton, 1963): 21-33. In his "Stravinsky: The Progress of a Method," *Perspectives of New Music* 1/1 (1962): 18-26, reprinted in Perspectives on Schoenberg and Stravinsky, ed. Benjamin Boretz and Edward T. Cone (New York: Norton, 1968), Cone describes the temporal interruption characteristic of Stravinsky's music as a three-phase process he terms "stratification,

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This focus of the course is analytical process, informed by the idea that analysis ought to be understood as an argument aimed at persuading the listener of a good way to hear or play a piece. It is vital that this goal of analysis be made clear at the outset. It entices students initially because it eschews a dependence on tools and techniques in favor of musical instincts and sensitivity. And it both defines a desired outcome and provides an abiding standard against which students can measure their evolving lines of analytical inquiry. It is equally important to return to this idea at the end of the process, since it represents a meaningful assessment tool that—and consider how often you can say this—students are not only able, but anxious, to apply to their own work. Does the foregoing analysis, then, whose crux is a set of interdependent proportional relationships, represent a good way to hear the piece? Is it sufficiently compelling to justify the effort? Should we envision the music this way? I would argue that we should.

The precision and symmetry that the durational architecture embodies is certainly in keeping with the objective, overtly anti-romantic conception of the work, the austerity and timeless qualities that define the piece in so many ways: an ancient text, in Latin, set by vocal writing that invokes chant; the use of double-reed instruments, which have an ancient provenance and an ascetic timbre, and the concomitant absence of clarinets, which have a more recent history and produce a warmer sound; the fortified brass and percussion, which, similarly, evoke a distant past. Stravinsky's stated preference for children's rather than woman's voices, of course, reflects the historical practice of the Christian church, but also contributes to the austere quality, since they lack the romantic warmth of mature women's voices. As well, the multi-level tripartite design, realized in the form of the palindrome, with its inherent autonomy, reflects the importance of the number three in Christian symbolism and imagery.

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interlock, and synthesis." The "relational patterning" of Stravinsky's formal designs is taken up by Marianne Kielian-Gilbert in "The Rhythms of Form: Correspondence and Analogy in Stravinsky's Designs," *Music Theory Spectrum 9* (1987): 42-66, a study that owes much to the work of Jonathan Kramer. Kramer's contribution to our understanding of musical time and proportion in 20th-century music is vital. His *The Time of Music* devotes a full chapter to "duration and proportion," focusing here prominently on Stravinsky's music.

Musicians will certainly disagree about what sorts of structures ought to attract our attention when listening to a piece of music. If our analytical and pedagogical efforts tend to be apportioned in response to those opinions, then most of us, it would seem, are dubious about the significance—perhaps the accessibility—of durational proportion. In the context of tonal music, where most of us spend most of our time, there are good reasons for this. The energy that derives from tonal harmony and melody ebbs and flows, changing the nature of musical time and our perception of it. As a result, the "substance" of a given passage issues far more from its content than from its duration. Many of us appeal to just this idea when teaching the difference between rounded binary and ternary forms. Both are represented by the thematic schema ABA. But whether we understand a given work's formal design as A || BA (rounded binary) or A || B || A (ternary) depends on the nature of the B section. Does it simply stand on the dominant, or move to the dominant via sequence? Does its chief melodic role seem to be simply "other than A"? Or does it present new thematic content? Contrasting character? It's own key? In short, does it have the musical heft to rival the surrounding A passages as a self-contained section? Does it "weigh" enough? Duration usually carries little influence in this decision. Pieces in which each of the three "thematic" sections is eight measures in length—a durational scheme that would obviously point toward a ternary conception—yet are heard as rounded binary forms are very common. That is, the skewed durational proportions (8 || 8 + 8) caused by regarding the digression and the return as a single part do not upset our sense of an essentially balanced two-part design. Clearly, many qualities contribute more substantively to our impression of musical weight in tonal music than does duration.

But what of post-tonal music, in particular a style like Stravinsky's, that is frequently strikingly discontinuous, static, and highly recursive? Such music, according to B. M. Williams, "is closer to the truly static arts of sculpture and architecture than music which is dynamic, whose parts are constantly on the move in a kaleidoscope of change.[12] Jonathan Kramer similarly concludes that "the proportions in Stravinsky's music operate in a way quite

[12] B. M. Williams, "Time and the Structure of Stravinsky's Symphony in C," *Musical Quarterly* 59 (1973): 357-58. Cited in *The Time of Music.*

different from those in tonal music."[13] Edward Cone sums up this difference concisely:

> Classical balance, even when apparently rigid, controlled contrasting events moving at various speeds, so that the listener's experience usually belied the exact parallel of timespans and defeated most attempts to measure one against the other. Stravinsky's sections—rhythmically persistent, harmonically static, melodically circular—not only invite the hearer to make the comparisons leading to just such measurement, but also reward him for doing so.[14]

The proportional architecture is one among many aspects of the work's design that provides an analytical approach that can form an important part of a listener's experience of the piece. Certainly the weight of evidence—the number and complexity of the symmetrical structures, the fact of an identical number of quarter-note values on either side of the final statement of the work's referential sonority, the absence of any tempo variation whatever—suggests that Stravinsky has done everything in his power, as Cone would have it, to reward the effort.

[13] *The Time of Music*: 286.

[14] Cone, "The Uses of Convention," p. 29. Cited in *The Time of Music*.

Bibliography

Bailey, Robert. *Prelude and Transfiguration from Tristan and Isolde.* (New York: W. W. Norton, 1985).

Berger, Arther. "Problems of Pitch Organization in Stravinsky." *Perspectives of New Music* 2/1 (1963): 11–42. Reprinted in *Perspectives on Schoenberg and Stravinsky*. Edited by Benjamin Boretz and Edward T. Cone (New York: Norton, 1968).

Cone, Edward T. "Stravinsky: The Progress of a Method." *Perspectives of New Music* 1/1 (1962): 18-26. Reprinted in *Perspectives on Schoenberg and Stravinsky*. Edited by Benjamin Boretz and Edward T. Cone (New York: Norton, 1968).

———. "The Uses of Convention: Stravinsky and His Models." *Stravinsky: A New Appraisal of His Work*. Edited by Paul Henry Lang (New York: Norton, 1963): 21-33.

Hyde, Martha M. "Stravinsky's neoclassicism." *Cambridge Companion to Stravinsky*. Edited by Jonathan Cross (Cambridge University Press, 2003): 98-136.

Kielian-Gilbert, Marianne. "The Rhythms of Form: Correspondence and Analogy in Stravinsky's Designs." *Music Theory Spectrum* 9 (1987): 42-66.

Kramer, Jonathan. "Moment Form in Twentieth-Century Music." *Musical Quarterly* 64 (1978): 177-94.

———. "Discontinuity and Proportion in the Music of Stravinsky." *Confronting Stravinsky: Man, Musician, and Modernist*. Edited by Jann Pasler. (Berkeley: University of California Press, 1986): 174-94.

———. *The Time of Music: New Meanings, New Temporalities, New Listening Strategies*. (New York: Schirmer, 1988).

Lewis, Christopher. *Tonal Coherence in Mahler's Ninth Symphony.* (Ann Arbor: UMI Research Press, 1984).

Sly, Gordon. Review-Article on *Engaging Music: Essays in Music Analysis*. edited by Deborah Stein (Oxford, 2005). *Journal of Music Theory Pedagogy* 20 (2006): 161-78.

Stein, Deborah, ed. *Engaging Music: Essays in Music Analysis*. (New York and Oxford: Oxford University Press, 2004).

Straus, Joseph. "Stravinsky's Tonal Axis." *Journal of Music Theory* 26.2 (1982): 261-90.

———. Review of *The Music of Igor Stravinsky*, by Pieter van den Toorn. *Journal of Music Theory* 28 (1984): 129-34.

Taruskin, Richard. "Stravinsky and us." *Cambridge Companion to Stravinsky*, edited by Jonathan Cross. (Cambridge University Press, 2003): 260-84.

Tymoczko, Dmitri. "Stravinsky and the Octatonic: A Reconsideration." *Music Theory Spectrum* 24/1 (2002): 68-102.

van den Toorn, Pieter. *The Music of Igor Stravinsky*. (New Haven: Yale University Press, 1983).

——— and Dmitri Tymoczko. "Colloquy: 'Stravinsky and the Octatonic'." *Music Theory Spectrum* 25/1 (2003): 167-202.

Williams, B. M. "Time and the Structure of Stravinsky's Symphony in C." *Musical Quarterly* 59 (1973): 357-58.