HARMONY AND VOICE-LEADING IN *THE RITE OF SPRING*

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ABSTRACT

While many analysts have considered harmony in *The Rite of Spring* from a variety of angles, a convincing and comprehensive account of its harmonic practices has yet to emerge. This dissertation aims to fill this gap by presenting a full accounting of harmony in *The Rite*. The goal is both to be as comprehensive as possible and also to uncover useful lessons and tools for composers working today. While drawing on previous analytical approaches, the paper's primary analytical method is rooted in recent applications of the geometric modeling of pitch space to harmonic analysis. By showing similar underlying voice-leading patterns and similar ways of moving through pitch space, this approach connects much twentieth century music to the common practice music preceding it. It provides a vocabulary for discussing music that does not follow the syntax of functional tonality, but that is nonetheless intuitively tonal, allowing us to consider the logic of harmonic and voice-leading patterns without being forced either to abandon the concept of tonality entirely, or to invoke tortured extensions of common practice functional progressions. *The Rite* that emerges from this analysis has a large, but contained and describable range of harmonic techniques. It has numerous structural connections and patterns, but no reducible system. And it has logical processes and systems that are warped and disguised by intuitive play. The idea of a "network" or "web" is an especially fruitful image. A given harmony in the work can be seen from several angles at once, and depending on which of its implications are followed, it can be connected to a wide range of other harmonies, creating a complex, interwoven web of associations. Chapter 1 reviews previous approaches to analyzing harmony in *The Rite*, and outlines the paper's analytical method; Chapters 2 and 3 apply the analytical techniques from Chapter 1 in depth, with bar-by-bar analyses of Parts 1 and 2 of *The Rite*,

respectively; Chapter 4 summarizes the main conclusions to be drawn from the analyses in Chapters 2 and 3; and Chapter 5 discusses implications for further analysis and composition.

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INTRODUCTION

I heard *The Rite of Spring* for the first time when I was fourteen, and it is not an exaggeration to say that my life has never been the same since. I had attended a music camp that summer where we sang an odd, captivating piece of music called *Symphony of Psalms*. I was intrigued by this piece, and even more intrigued that whenever people talked about it, another composition by its composer was never far from their lips: *The Rite of Spring*, a work so shocking and revolutionary, I was told, that it had caused a riot at its premiere. Naturally, as soon as I got home, I bought a cassette tape of this work and listened. I was instantly overwhelmed. This music had the raw power and intensity of the hard rock and heavy metal music I loved, but with a vastly expanded range of savagely vivid orchestral colors. It was rhythmically explosive, as unpredictable yet inevitable as forces of nature. And the harmony: boldly dissonant, of course, but also full of twilit shadows and crackling electricity, a range and depth of colors that went far beyond the hazy, luscious landscapes of impressionism, embodying nature in all its terrifying mystery and ferocity. In the weeks following, I started composing music of my own for the first time. I didn't know what Stravinsky was doing, but I knew that I wanted to be able to do it too – to tap into that primal force that found expression in *The Rite*, to find my own way to transform it into sound. Ever since, I have been composing music. And ever since, I have been trying to make sense of the mystery behind *The Rite*'s astonishing power.

I'm not alone. In the century since its premiere, *The Rite of Spring's* influence on musical composition has been profound. Countless composers today, from across the aesthetic spectrum, claim it as an important precedent. It is difficult to think of another work since Beethoven's Ninth that has had as deep and broad an influence on subsequent composers. Many musicians and scholars have grappled with *The Rite*, attempting to figure out how it works from a variety of different perspectives. Significant strides have been made in re-constructing the history of its creation and reception;[1] explaining its rhythmic procedures;[2] and identifying its melodic sources.[3] Yet despite the concerted efforts of many analysts, a comprehensive, convincing explanation of its harmony has remained elusive.[4]

This dissertation aims to fill this gap by presenting a full accounting of the harmonic practices in *The Rite*. While many early analysts heard a haphazard mish-mash of harmonic techniques without underlying principles, many since have sought to uncover elements of unity, cohesion, and systematization. Still more recently, some have questioned these more reductive analyses, calling again for more pluralistic readings of the work. My approach builds on some of these recent criticisms to seek a middle way between the views of Stravinsky as an intuitive jack-of-all-techniques and Stravinsky as a calculating structuralist. *The Rite* that emerges has a large, but contained and describable range of harmonic techniques. It has numerous structural connections and patterns, but no reducible system. And it has logical processes that are warped and disguised by intuitive play. The idea of a "network" or "web" is an especially fruitful image. A given harmony in the work can be seen from several angles at once, and depending on which

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[1] See, for example, Taruskin 1984, Taruskin 1996, Van den Toorn 1987, and Hill 2000.
[2] See, for example, Boulez 1968, Van den Toorn 1987, and Messiaen 1995. McDonald 1987 presents an intriguing argument that many of *The Rite*'s iconic rhythms are derived directly from the intervals of its iconic harmonies.
[3] See Taruskin 1980 and 1996.
[4] These efforts include two full length books that provide quite comprehensive accounts of harmony in *The Rite – The Harmonic Organization of the Rite of Spring* (1978) by Alan Forte, and *Stravinsky and the Rite of Spring: The Beginnings of a Musical Language* (1987) by Pieter C. van den Toorn. It might seem unnecessary to add yet another tome to this list, but both of these works, while providing many valuable insights, also have shortcomings, which will be discussed later in this paper. Both approaches, in different ways, view the work through very narrow methodological lenses, causing much of significance in the work to escape their scrutiny.

of its implications are followed, it can be connected to a wide range of other harmonies, creating a complex, interwoven web of associations.[5]

Underlying my approach is a belief that the harmonic language of *The Rite* is part of an extended tonal practice that evolved organically out of common practice tonality – as opposed to being a radical break from it. Although many harmonies in the work were novel and even shocking at the time of its premiere, they grow out of late nineteenth century practices, and connect forward to twentieth century styles from impressionism to jazz to neo-romanticism to minimalism. At their root, they are made from similar scalar and chordal building blocks as common practice music, and strung together according to similar fundamental voice-leading principles. This is certainly not to deny the genuinely shocking and revolutionary character of *The Rite*'s harmony at the time of its premiere. More than almost any other piece of music one can think of, *The Rite* truly was something unprecedented and unparalleled. Any analysis that attempts to diminish this fact should rightly be treated with some suspicion. But with the benefit of hindsight and the work of composers in the century since, it becomes possible to see *The Rite's* harmonic practices in the context of larger trends. This approach need not defuse any of *The Rite's* power, but can instead unlock it, allowing us to understand more precisely how it continues to have the electrifying effect that it does.

[5] This approach is inspired to some extent by Charles J. Smith's article "The Functional Extravagance of Chromatic Chords" (1986). While his focus is on functionally tonal interpretations of chromatic chords, his thoughts on the importance and value of multiple simultaneous interpretations of a chord are similar to my own.

CHAPTER 1: ANALYTICAL APPROACH

My interest in *The Rite* stems from my creative work as a composer, and my analysis reflects this. I am not so interested in the abstract questions of unity and cohesion that have motivated many previous analyses. Rather, my focus is on the nitty-gritty details of the surface-level harmonic practice. I want to understand how Stravinsky's harmonies are built, what effects they create, and how they relate to one another. In exploring these questions, we will also get some glimpses into deeper structures and unifying features, but my approach will always be anchored to the surface details. In the end, I want to come away not only with a deeper understanding of Stravinsky's harmonic practice, but also with some concrete techniques to apply to my own work as a composer.

Additionally, while my analysis does occasionally reference harmonic practices of Stravinsky's predecessors and contemporaries, it does not in general take an explicitly historical approach. Rather than attempting to place *The Rite* in the context of other works of its time or of Stravinsky's overall output, I largely treat it as a self-contained entity-unto-itself. This approach is not in any way intended to supersede or critique more historically-oriented analyses, which have already yielded many valuable insights into the work.[6] It rather serves a different purpose, aiming to provide insights into the work that will be especially useful to composers working today. For them, the relevant questions are not "where did this piece come from?" and "what did it mean in its time?" but rather "how can I make sense of it today?" and especially "what can I take from it?" Issues of historical context and composer's intent are therefore not particularly

[6] Foremost among these is Richard Taruskin's epic *Stravinsky and the Russian Traditions Volume 1* (1996), whose breadth and depth of detail on Stravinsky's musical education, influences, and development is unparalleled.

relevant to my analysis. Whatever framework best enables us to understand what is going on harmonically – and to appropriate those techniques for our own use – is the framework that will be most useful for my purposes.

My goal is also to be as comprehensive in my analysis as possible, even at the expense of weakening my larger arguments. Some previous analyses of *The Rite*, even when implicitly claiming to be comprehensive, only actually considered certain limited sections of the work that best illustrated their points. While there is certainly a place for generalizing about larger patterns and trends, it can be misleading or tautological if it is not grounded in a thorough and detailed assessment of the entire work. My aim is therefore to consider in detail every single bar of music in *The Rite*. While I will come to some general conclusions and advance some general theories, I will also grapple honestly with the places in the music that undermine them, or that resist explanation altogether. Only by examining the whole work in this manner can we hope to gain an accurate sense of the full range of techniques in play, and of how comprehensive any theoretical framework actually is.

1.1 OVERVIEW OF PREVIOUS ANALYTICAL APPROACHES

Many music theorists have already analyzed and theorized about harmony in *The Rite* from a range of perspectives. Below I briefly consider several of these approaches in order to situate my own analysis in the broader context of *Rite* scholarship.

POLYTONALITY AND POLYCHORDS

For early reviewers and analysts of *The Rite*, its most striking harmonic feature was its dissonance and discord.[7] Many found this aspect of it utterly mystifying, and despaired of finding any method to the madness at all. The related concepts of polytonality and polychords provided one way to make sense of some of the dense, dissonant harmonies that Stravinsky (and other contemporaries) used, relating them to a familiar vocabulary of diatonic scales and triadic chords. While polytonality as an analytic tool has more recently fallen out of favor,[8] in the years immediately following *The Rite* it was a standard analytical tool for making sense of much of the music of the time.[9] Some analysts today continue to draw on it, to one degree or another.[10]

The polytonal approach provides the analyst with a familiar set of labels that can accurately describe the pitches in complex or unfamiliar harmonies. When there is an audible sense of juxtaposition, it also accurately captures something essential about how the harmony

[7] For a good sampling of initial critical reaction, see Kelly 2000, 304-317, and Lesure 1980.
[8] For example, Boulez (1968, 139) had this to say about the idea of polytonality in *The Rite*: "Shall I speak of the polytonality that has been noted so often in *Le Sacre* – to the point at which only it has been seen? That would be anachronistic, so clearly has polytonality been relegated to the museum of useless accessories, of exhausted masks. Fortunately, *Le Sacre* is devoid of those absurdities….*Le Sacre* owes its harmonic physiognomy exactly to that hierarchy which is organized on notes of attraction. We could not be farther from polytonal gratuitousness."
[9] Alfredo Casella's "Tone-Problems of Today," from the April 1924 issue of *The Musical Quarterly*, for example, matter-of-factly lays out the difference between polytonality and atonality, which he saw as the two primary harmonic approaches in music of the time (Casella 1924). His examples of polytonality include several from *The Rite.*
[10] Tymoczko (2002, 84) succinctly summarizes some of the key issues around polytonality as an analytical tool and offers a qualified defense, preferring the less loaded term "polyscalarity." Chua (2007, 71-73) similarly sees it as a useful tool for explaining vertical sonorities in *The Rite*, while emphasizing that it should not be seen to imply any sense of actual functional tonalities. On the contrary, the polytonal juxtapositions effectively *negate* any potential tonal readings: "Thus to analyse the *Rite* in a tonal or polytonal manner is probably necessary in that there are tonal elements within the work, but there is no point listening for their literal meaning, as if the tonal elements are about how the music works, because the 'Augurs' chord works by excluding the very system it alludes to. This means that the tonal system is significant precisely because it is not here" (73).

sounds and functions. It continues to be a useful way to think about some sonorities in *The Rite*, and it will inform some of the analysis to come. However, polytonal explanations run into trouble when they are used to label harmonies that aren't audibly or functionally juxtapositions. In these cases the label does indeed describe the chord, but does nothing to *explain* it.[11] It is akin to labeling chords in a common practice progression solely by their letter name, rather than their Roman numeral function. There is nothing false about the letter name label, but it also doesn't explain anything about how the harmony is actually behaving. It is this shortcoming that led subsequent analysts to look for deeper, more structural explanations of *The Rite's* harmony.

PROLONGATION

One approach to going deeper is to apply insights from the tradition of Schenkerian analysis. In this approach, the moment-to-moment surface harmonies are considered to be artifacts of the background chords and voice-leading patterns that they "prolong." Analysis becomes a process of extrapolating away from the surface features to the deeper structures that they animate. Although Schenker mostly limited his analyses to common practice music, many subsequent analysts have attempted to extend it to post-common practice music as well. The most compelling application of a prolongational approach to Stravinsky's music, including parts of *The Rite*, can be found in Joseph N. Straus' article "Harmony and Voice Leading in the Music of Stravinsky" (2014).[12] Straus' abstract for the article succinctly summarizes his findings: "Much of Stravinsky's music elaborates two structural fifths separated by some interval.

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[11] Boucourechliev puts it nicely: "The criteria of traditional harmonic analysis are only applicable, as it were, *pro memoria*: that is to say, they can easily reveal the constituents of these sound-aggregates and their functions: but to what purpose?" (1987, 71).
[12] See also Travis 1959 for an earlier example of a prolongational approach to analyzing the first bars of *The Rite*.

Typically, one of those fifths is deployed harmonically (with various possible harmonic fillings) and the other is deployed melodically as a perfect fourth (with various possible melodic fillings). The harmony and voice leading of Stravinsky's music thus often prolong a *fundamentally bi-quintal structure*" (Straus 2014, 1). Straus goes on to label these juxtapositions as "Model 1" through "Model 6" with the model number corresponding to the number of half steps between the structural fifths. Different models imply different types of harmonies and different resulting chords and scales. Model 1, for example, with its minor second juxtapositions, tends to result in more clashing, dissonant pitch sets, while models 2 and 4 tend to be more consonant and diatonic. Stravinsky can navigate between the models through simple voice-leading and transpositional procedures (Straus 2014, 2-6).

The main strength of this approach is that it can illuminate harmonic connections that might otherwise be missed. If the same structural fifths are filled in differently (i.e., with a triad versus a scalar subset), they can result in different composite pitch sets; a primarily scale- or pitch set-based analysis might therefore miss connections and similarities that Straus' bi-quintal model makes explicit. Using this framework, Straus can quite elegantly explain and connect some passages in Stravinsky that other approaches can only explain in a much more complicated and roundabout fashion. The model also helps to uncover commonalities between Stravinsky's different stylistic eras, a frequent goal of Stravinsky analysis.

This general insight that different harmonic strands may voice-lead and modulate independently of one another, leading smoothly to juxtapositions of varying harmonic qualities and levels of dissonance, is very useful, and informs elements of my approach in this paper. The claim that these strands are always specifically *bi-quintal* is more problematic, however, as it causes Straus to make some questionable claims about how the music is partitioned and the relative importance of pitches present (or not present) in the music. For instance, he argues that *The Rite's* bassoon melody at R1+3 fills in the melodic fourth D-A, which is juxtaposed with the G♯-C♯ fourth below. The G in the melody is considered a neighbor note, and no mention is made of the low E – a pitch which, to my ear, is at least as prominent as any of the others, as it completes an E minor triad, forms the lowest note of the melody, and acts as a dominant to the tonic A. No reason is given for excluding the E from this upper pitch set, and there is no clear reason in the music itself – other than to make it conform with Straus' bi-quintal scheme. Thus, while I agree that R1+3 consists of the two juxtaposed harmonic units that Straus identifies, I would question his claim of a "quintal" origin for the upper unit.

His manner of partitioning the texture of *Petrushka* at R7 leaves me with similar concerns. From an orchestrational, registral, and motivic perspective, it would seem logical to group the texture into an upper unit consisting of the D-E-F♯-G-A D major scale subset, juxtaposed against the bass B♭. However, because he wants the upper unit to conform to his "melodic fourth" upper structural fifth framework, Straus must forcibly unglue the D from this unit and shunt it down to join the B♭ far below. Then, in order to make the lower unit "quintal" he must posit a phantom F♮ above the B♭ which is not present in the music, and which indeed would clash with the F♯ that *is* present, creating quite a different sound from what Stravinsky wrote. Again, I have no problem with interpreting the passage as a juxtaposition of a D-major scale fragment on top, over a pedal B♭ below, but question the attempt to force both strands to be "quintal" in origin. Thus, while I don't find it particularly helpful to try to reduce the harmonic strands to structural fifths, the more general concept of different harmonic voice-leading strands remains a useful framework for considering the relationships between some passages in *The Rite*.[13]

OCTATONICISM

Another approach to analyzing harmony in *The Rite* has been the "octatonic school" of Stravinsky analysis. This posits the octatonic pitch set (an eight-note scale of alternating half steps and whole steps) as a central organizing principle in *The Rite*, and in Stravinsky's music generally. Berger laid the foundation for this approach in "Problems of Pitch Organization in Stravinsky" (1963), and Taruskin, van den Toorn, and others enthusiastically followed his lead. The existence of the octatonic set in portions of *The Rite* and other Stravinsky works is undeniable, and these octatonicist scholars have done valuable work in explaining the set's historical origins and characteristic deployment. But, as several others have argued, their claims for the octatonic's structural centrality to *The Rite* go a bit too far.[14]

Van den Toorn provides the most thorough octatonic interpretation of *The Rite* in *The Music of Igor Stravinsky* (1983) and *Stravinsky and the Rite of Spring* (1987).[15] In these books, he makes a number of astute observations about the most unequivocally octatonic passages. The most important of these is his identification of two distinct approaches to octatonicism in *The Rite*, and in Stravinsky generally. The first approach, which van den Toorn calls "Model A," is based around minor third related triads (major or minor), and dominant seventh chords, and uses

[13] For further critiques of Schenkerian approaches to Stravinsky and other non-common-practice music, see Whittall 1982, Schulenberg 1985-1986, and Smith 1986.
[14] See, for example, Christensen 1983, Straus 1984, Greer 1989, Kielian-Gilbert 1991, and Tymoczko 2002, 2003, and 2011. For a fascinating critique based on twentieth century Russian approaches to octatonicism and Stravinsky analysis, see Ewell 2012.
[15] See also van den Toorn 1975 for a more succinct introduction to his thoughts on octatonicism in Stravinsky.

the octatonic scale that begins with a half step. A prime example of this approach can be found at R42 where major triads and dominant sevenths, all with minor third-related roots of E♭, F♯, A, or C are layered on top of one another in a glorious cacophony that adds up to a single octatonic set. Notable about this model is the presence of triads and seventh chords that can also have "tonal" implications.

The second approach ("Model B") is centered on melodic (0 2 3 5) "Dorian" tetrachords and uses the octatonic scale that begins with a whole step. A prime example of this is at R134. Here, the blaring melody in the horns consists of the G♯-A♯-B-C♯ (0 2 3 5) tetrachord, with the D-E-F-G (0 2 3 5) tetrachord a tritone away in the accompaniment figure above. These two tritone juxtaposed (0 2 3 5) tetrachords add up to a complete octatonic set. Notable about this model is the potential of the (0 2 3 5) tetrachord to be a member of both octatonic and diatonic sets.

Van den Toorn's analysis of these and the other most blatantly octatonic passages in the work is insightful, especially regarding the nature of these two contrasting models of octatonicism. The problems come when he attempts to expand his theory from these clear examples to *The Rite* as a whole. Both the advantages and the problems with his approach have already been discussed at length by others, and there is no need to rehash it here. The most significant problem from the perspective of this paper is van den Toorn's lack of acknowledgement of scales and juxtapositions that are neither diatonic nor octatonic (such as acoustic, harmonic minor, and harmonic major modes). This leads him to label passages as "octatonic-diatonic interpenetration" that could much more simply be labeled as examples of these other scales, or as other, non-octatonic types of juxtapositions.[16]

[16] See Tymoczko 2002 and 2003 for further discussion and detailed examples.

Taruskin's emphasis, generally in support of van den Toorn's approach, is on the historical development of the octatonic scale in the works of nineteenth century Russian composers, especially Rimsky-Korsakov and his students, including Stravinsky.[17] The wealth of historical and analytical detail Taruskin provides is impressive and it does indeed make a compelling case that Stravinsky came to know the octatonic scale as a result of Rimsky's influence.[18] Like van den Toorn, however, he has a tendency to make some version of octatonicism his default approach to almost anything non-diatonic in Stravinsky's music, even when other explanations could be more illuminating.[19]

Despite the problems of over-reach with the octatonic school of analysis, it does provide some useful techniques for considering the octatonic passages in *The Rite*, and I will draw on it in those circumstances.

PITCH SET ANALYSIS

Pitch set analysis informs both the prolongation and octatonic schools, and reaches its apex in Alan Forte's *The Harmonic Organization of the Rite of Spring* (1978). This book aims to consider every pitch set in the entire work, identify the most prominent and important sets, and trace the relationships between them. Forte's approach helped bring some fresh perspective to the work, clearing the way for analytical approaches independent of the norms and vocabulary of

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[17] Van den Toorn (1987, 116-123) also recounts this history along similar lines, though in less detail. For a very clear and succinct, if less comprehensive history of Stravinskian octatonicism, see Andriessen and Schönberger 1989, 228-235.

[18] See Taruskin 1985, 1987, and 1996 for full details.

[19] As Tymoczko puts it (2002, 70), "…if, like Taruskin and van den Toorn, all you have are the octatonic and diatonic collections, then many sets will seem to be clearly octatonic, if only because they are clearly *not* diatonic."

functional tonality. However, the book's methodological flaws and questionable assumptions have been well-documented.[20]

Despite these shortcomings, the idea of pitch-set analysis in general is often helpful in *The Rite*, and I will employ it freely when it proves useful. Indeed, underlying much of Tymoczko's approach (outlined in section 1.2) is the application of some aspects of pitch-set theory filtered through a tonal lens, an approach that will prove well-suited to analyzing much of *The Rite*. Forte's observations are often "true" as far as they go,[21] but lack the additional perspective and context that comes from Tymoczko's framework. Ultimately, there will sometimes be overlap in the types of observations that Forte and I make, but we are coming at them from very different starting points and speaking in rather different languages from one another. I will aim to make note of the moments when our analyses do sync up, and refer the reader to Forte's book to compare for themselves.

FUNCTIONAL TONALITY

Although *The Rite* has not generally been considered a "tonal" work, in the common practice functional tonality sense of the term, a few analysts have attempted functionally tonal readings of it. Boulez (1968, 74) provocatively claims that "…Stravinsky's language [in *The Rite*], far from being a liberation from the tonal point of view, in fact consists of powerful attractions created around certain poles, the most classic poles there are – that is, the tonic, dominant, and subdominant. Greater or lesser tension is obtained by means of unresolved

[20] See, for example, Taruskin 1979, Moevs 1980, Tepping 1980, and Taruskin 1986.
[21] Taruskin (1986, 318) puts it well: "[Forte's method's] aim is simply to make as many true statements about the music as possible (an endless task, and an aimless one). It does not and cannot distinguish between truths that are relevant and interesting and truths that are not…"

appoggiaturas, passing chords, the super-imposition of several modalities upon a single attractive note, the disposition of different forms of chords on compartmentalized levels….the chromaticism assumes only harmless aspects in relation to the attractive notes, where it can be aimed only at assuring sonorous dysymmetry in slightly used linkages…" However, his subsequent analysis is almost entirely concerned with rhythm, so we don't get to see very many details of how he accounts for this "sonorous dysymmetry" and ropes it into a tonic–dominant–subdominant framework.

Curt Cacioppo (1992) makes the most thorough and compelling case for a functional reading of the work, mainly by identifying harmonic roots and interpreting them in functional relationships to one another. His second paragraph (1992, 129) sums up his findings well: "Stravinsky's tonal practice in the *Rite* draws upon four techniques easily classifiable: (1) the use of standard tonic-dominant-subdominant (or "functional") chord progressions, which includes also the exploration of chord prolongation and chord substitution, especially at the tritone; (2) bifocal statement of material first in the minor and then in the relative major; (3) the fusion or crushing together of principal harmonic functions within a key; (4) and the application of large-scale tonal progression to the relationship between the first and second parts of the work, and the succession of static pitch centers from section to section throughout."

While most of his assertions of harmonic roots are plausible, the main problem with his approach is the scant attention paid to the chords and pitch sets supported by these roots. Functional harmony is more than a series of roots; it is also strongly connected to the types of harmonies and scales employed, the manner of voice-leading between them, and, most importantly, a sense of progression and expectation. While his analysis is abstractly plausible, it thus does not always ring true with the actual sound of the work.[22]

For example, he views the entire Part 1 Introduction as elaborating a basic motion in A from I to V, identifying "functional" roots along the way that can be related to the key of A minor. For the most part, his root identifications are plausible, although I would quibble with some.[23] More importantly, while the basic root motion from A to E is indeed present, I find it very difficult to hear the big E pedal at the end of the Introduction serving a "dominant" function in any meaningful tonal sense; it just doesn't "need" to resolve to A in the way that a dominant ought to. If it did, then the return of the bassoon melody a half-step "too low" in A♭ would sound quite jarring, which it does not. Indeed, unless they have perfect pitch and/or play bassoon, most listeners are likely unaware of this half-step shift, at least on a conscious level. This is ultimately the crux of the matter. Even if Cacioppo's root identifications are accurate (he performs a similar analysis of the "Sacrificial Dance"), they do not create the sense of progression and cadence that is central to a functional understanding of harmony. As we will see, it is instead the colors of the harmonies and scales above these roots, the various connections between them, and the way

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22 Whittall (1982, 41-42) also briefly and insightfully discusses some of the problems in attempting a functionally tonal reading of *The Rite*.

23 For example, he identifies Rehearsal 3 (presumably beginning in the second bar) as a "V/V" harmony built on B – a plausible interpretation for the brief duration of the first quarter note of R3+1, but difficult to hear as a genuine prolonged harmony against all the chromatic slithering of the next six bars. He similarly posits an F root ("VI") for the second part of R6 (presumably beginning in the fourth bar), another case of chromatic slithering that seems implausible to pin to a single root. He also plausibly labels C as the root of R7, but calls it "a modified III, suggesting an excursion to the relative key." This could make sense in a straightforwardly diatonic soundworld, but in the chromatic, modal world of *The Rite*, I find it quite difficult to hear the sonority at R7 as the "relative major" of the opening, even in a highly modified way.

Stravinsky voice-leads between them that are significant to making sense of Stravinksy's harmony.

I do think it is entirely possible that Stravinsky may have been *thinking* in terms of some of the functional relationships that Cacioppo identifies, and they may have helped guide some of his decisions about which pitch levels to use – but that does not mean they actually *behave* like functional harmony. It is perhaps analogous to some late Renaissance composers, who still *thought* in terms of the church modes, even as their music increasingly took on the characteristics of what would become the as yet undefined major-minor system of functional tonality.

On the other hand, there are some instances where a localized functional reading is indeed quite plausible, and others where the residue of functional tonality audibly lingers amidst other harmonic techniques. We will thus freely make use of the principles of functional tonality when they prove useful, but will not attempt to impose them when they do not.

1.2 GEOMETRY OF MUSIC AND THE EXTENDED COMMON PRACTICE

The above approaches to analyzing harmony in *The Rite* all are useful in many ways, but also have shortcomings. None on their own can give us a complete picture of what is going on in the work. Though I will be drawing on many of them at various points in my analysis, my starting point and basic framework comes from Dmitri Tymoczko's insights into extended tonal practice, as outlined in his book *A Geometry of Music* (2011). Tymoczko's central insight, boiled down to its essence, is strikingly simple: harmonic progressions in "tonal" music (very broadly defined) tend to involve moving small distances between similar harmonies. From a geometric perspective, this means moving between harmonies that are near one another in pitch space. This can operate both locally between adjacent chords, and globally between tonal regions in a piece.[24]

In this view, the common practice tonality for which we already have such detailed theoretical models is simply a very specific distillation of these larger principles. In addition to moving small distances between similar harmonies, common practice tonality adds a number of other restrictions: a limited number of chord types (triads and seventh chords); a limited number of scales (major and minor); rules of progression determining which chords can follow one another (tonic—pre-dominant—dominant—tonic); and further constraints on specific voice-leading patterns (resolution of sevenths, prohibition against parallel fifths). Moving back in time before the Baroque period, we find stricter rules on voice-leading (cadential leading tones *always* resolve up; dissonances are *always* prepared and resolve down by step) and permitted harmonies (no root position diminished triads, no unprepared seventh chords), but more relaxed rules on chord progression (no "functional" rules about chord order) and scales (use of other diatonic modes rather than just major and minor). Moving forward through the nineteenth century, we find an expansion of permissible harmonies (extended 9^{th}, 11^{th}, 13^{th} chords), a relaxation of voice-leading rules (parallel fifths, non-resolution of sevenths), and perhaps most importantly, increasing use of the chromatic rather than diatonic set as the underlying scale. If we extend this into the twentieth century, we see in composers like Debussy and early Stravinsky a further expansion of the chords and especially scales in play (all of the diatonic modes, acoustic scale modes, harmonic minor and harmonic major modes, whole tone, octatonic, pentatonic, etc.), and a further relaxation of all voice-leading rules (all sorts of parallel motion permitted, much weaker sense of tendency tones.) Common to all of these styles, however, remains the basic principle of

[24] For a fuller exposition of this idea and its implications, see Chapter 1 of Tymoczko 2011.

motion by short distances between similar harmonic structures. While the nature of these harmonic structures, the rate of change between them, the underlying scales, and their characteristic patterns and rules are highly circumscribed by style and historical period, at the deepest level, they remain fundamentally similar – and fundamentally *different* from the disjunct voice-leading and non-similar harmonic structures that characterize "atonal" music.[25]

The key value of Tymoczko's work is that it provides a vocabulary for discussing music that does not follow the syntax of functional tonality, but that is nonetheless intuitively tonal, to one degree or another. With this framework, it becomes possible to discuss the logic of harmonic and voice-leading patterns without being forced either to abandon the concept of tonality entirely, or to invoke tortured extensions of common practice functional progressions. Rather than viewing functional tonality as the default system, we can instead see it as a very specific distillation of much more general principles. Major and minor scales, triadic harmony, and functional progressions are not norms that must either be extended or rejected, but are instead subsets of a vast universe of "tonal" scalar, harmonic, and voice-leading possibilities. A work like *The Rite* is simply exploring some other regions of this tonal universe, further enriching the late 19th century harmonic vocabulary Stravinsky inherited with other chords, scales, and ways of connecting them.

This approach also allows us to seamlessly incorporate aspects of the other analytical techniques described above. Polytonality and pitch set theory are both useful concepts that are easily integrated into Tymoczko's geometric conception. The octatonic set is one of the many important scales in play, allowing us to draw on some of the insights of the octatonicists, while also absorbing octatonicism into a broader theory of scale relationships. Functional tonality is a

[25] Tymoczko (2011, 224) makes similar points.

specific distillation of Tymoczko's more general principles so it is also easily integrated into our approach. Schenkerian prolongation resists inclusion in this framework because it posits an abstract hierarchical structure that is outside the scope of Tymoczko's pitch-space geometry. Nonetheless, I will occasionally borrow some modified prolongation-like ideas to posit connections between different sections of the work.

Before continuing, a brief note on terminology is in order. Some recent Stravinsky analysts have preferred to use abstract, objective labels, rather than labels borrowed from traditional tonal theory. Chromatic numbers are preferred to traditional interval names (e.g. "6" instead of "tritone"). Numbered pitch sets are preferred to traditional chord names ("(0 3 7)" instead of "minor triad"). Sometimes, Alan Forte's non-intuitive pitch-set labeling systems are invoked. Berger and Van den Toorn prefer the terms "D scale" and "E scale" to describe the white-note scales starting on those pitches, rather than the traditional "Dorian" and "Phrygian" labels – which can lead to confusing phrases like "the D scale on E."[26] In general, I will favor more traditional terminology: traditional interval names, triad names, seventh chord types, the traditional church mode names, etc. When this is not practical because a sonority has no clear connection to a traditional tonal unit, I will also freely make use of pitch set numbers, but I will default to the traditional terms when possible. The resistance to these terms strikes me as an overblown fear that they will taint the analysis with inappropriate tonal residue. In my view, this

[26] See Berger 1963, 17 for the justification of this labeling system. I do appreciate his concern that modal labels are anachronistic, given that modern usage of modes is quite different from the original medieval uses. But at this point there is enough of a cohesive contemporary modal practice which has continued to use the old terms – especially amongst jazz musicians but also many "classical" composers – that those terms have taken on new connotations that are entirely appropriate to Stravinksy's music. Certainly for me as a composer, and I would suspect for many others, "Dorian" and "Phrygian" instantly evoke those mode's characteristic qualities in a way that "D scale" and "E scale" do not.

tonal residue is inescapable and is, indeed, desirable. Stravinsky is *not* a Second Viennese composer, claiming that all associations with the past tonal system must be obliterated. Rather, he is taking elements of that system and repurposing them to new harmonic and expressive ends. Even if triads and seventh chords don't function the way they did for Bach or Brahms, their triad-ness and seventh chord-ness remain salient, evoking many of their old associations even as they are repurposed for new expressive ends.

One possible confusion may arise from my use of the word "dominant." In most cases, I am using it not in any functional sense, but as short-hand for a type of chord that features a major third and minor seventh – so "Dominant 13" describes a chord with a major third, flat seventh and thirteenth above the base; "Dominant ♯11" describes a chord with a major third, flat seventh, and sharp eleventh above the bass. These are in contrast to "Major ♯11" which would indicate a major third and *major* seventh and "Minor ♯11" which would indicate a *minor* third and *minor* seventh. Occasionally, however, I will use "dominant" in its functional tonality sense of a harmony that creates tension and pushes back to the tonic and is typically built on scale degree five. The default meaning will be the "major third, flat seventh" chord type, and I will try to be very explicit when I am instead using the word in its functional sense.

It is also important to note that in my examples and descriptions I will freely enharmonically re-spell pitches. Stravinsky's own spelling is often inconsistent, with differences between the sketchbook, four-hand piano, and orchestral versions, and between different parts in the orchestral score, making it difficult to discern what his "original" spelling was intended to be. Furthermore, one of my central arguments is that the same harmonic object can function in multiple different ways simultaneously; spelling the same pitches differently can often help to illustrate these different interpretations. Finally, although the harmony of *The Rite* does reference tonal practice, it is operating in an essentially fully chromatic pitch universe in which it is entirely reasonable to consider a C♯ and D♭ to be fully equivalent and interchangeable. For all of these reasons, I find it both reasonable and analytically helpful to freely re-spell pitches as necessary.

1.3: TYPES OF HARMONIC OBJECTS USED

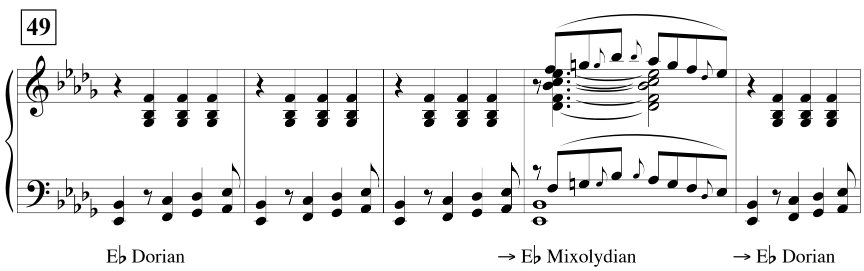
This section provides a summary of the different types of harmonic objects Stravinsky uses in *The Rite*. This will give us the basic building blocks to use in constructing our analysis. Some of the material in this section may seem a bit obvious, but it will be worthwhile to go through it in order to give us a starting point for the more substantive discussion to follow.

SCALES

Traditional diatonic scales figure prominently in *The Rite*, especially in Part I. While occasionally they support directed harmonic progressions, this is rare. When they do, the progressions are typically modal, rather than functionally tonal: Scale degrees do have tendencies and chords do lead to other chords, but not in the inevitable, directed, rule-bound manner of functional tonality.

Often, the scales do not support directed harmonic progressions at all, acting instead as fields of pitches that create a certain color. While they often have a clearly identifiable tonic, sometimes they do not, either implying multiple potential tonics, or a center-less wash of diatonic color. The scales in these cases define a limited and cohesive pitch set, but little sense of melodic or harmonic direction beyond that. As with the impressionists and later the minimalists, it is motion *between* scales, rather than within a scale, that creates a sense of harmonic direction.[27] Rehearsal 49 in "Spring Rounds" is a quintessential example of this, as Figure 1.3.1 shows.[28] While the passage has a clear tonic (E♭), the most dramatic sense of progression comes from the change of mode in bar 4, as it brightens from Dorian to Mixolydian, and then back again in the next bar.

Figure 1.3.1: Harmonic "progression" by modal shifting.



In addition to seven-note diatonic scales, Stravinsky utilizes other types of seven-note scales, including the various modes of the acoustic, harmonic minor, and harmonic major scales. Until recently, these scales were largely neglected by academic theorists, but recent analysts have shown that they were used by Debussy, Ravel, and other Stravinsky contemporaries, as well as by later composers and jazz musicians. Theorists have also shown that, given certain common-sense constraints about how scales work and humans hear, these scales are "naturally occurring" and objectively "ought" to show up in music exhibiting relatively tonal qualities.[29]

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[27] See Tymoczko 2011 chapter 4 for further discussion of voice-leading between scales.
[28] All musical examples are my own reductions, based on the 1989 Dover edition of the full score, which is a republication of the 1965 Moscow State Music Publishing House edition. The reductions are sometimes informed by Stravinsky's own1913 four-hand piano reduction (republished by Dover in 2005), but the full score serves as the final word when there are any discrepancies.
[29] See Tymoczko 1997 for an in-depth discussion of the origins, history, and characteristics of these scales, or Tymoczko 2011 chapter 4 for a more succinct summary.

Stravinsky typically uses them in essentially the same way he uses the diatonic modes: as fields of pitches that create different colors. Figures 1.3.2 through 1.3.4 show the various modes of these different scales. Unlike the diatonic modes, there are unfortunately no universally agreed-upon labels for these modes. As it will be helpful going forward to have a vocabulary for identifying them, I have listed names for each mode in parentheses in the charts below. The names are either common labels from jazz theory or my own labels based on alterations to familiar diatonic modes (e.g. "Mixolydian ♭6"). I call Mode 1 of each the "standard" mode since it is equivalent to the underlying scale type, and when the context is clear I will often simply refer to it by the scale type alone. Going forward, I will continue to refer to these modes by these labels, and will also sometimes list the underlying scale type they belong to in parentheses – for example, "Lydian ♯2 (Harmonic Minor)." The latter is important because the underlying scale type is largely what gives a given mode its distinctive color.

Figure 1.3.2: Acoustic modes

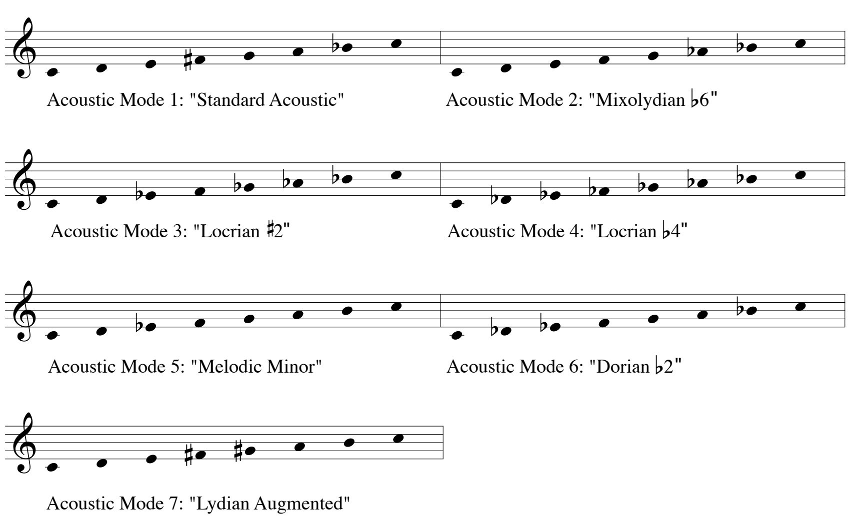


Figure 1.3.3: Harmonic Minor modes

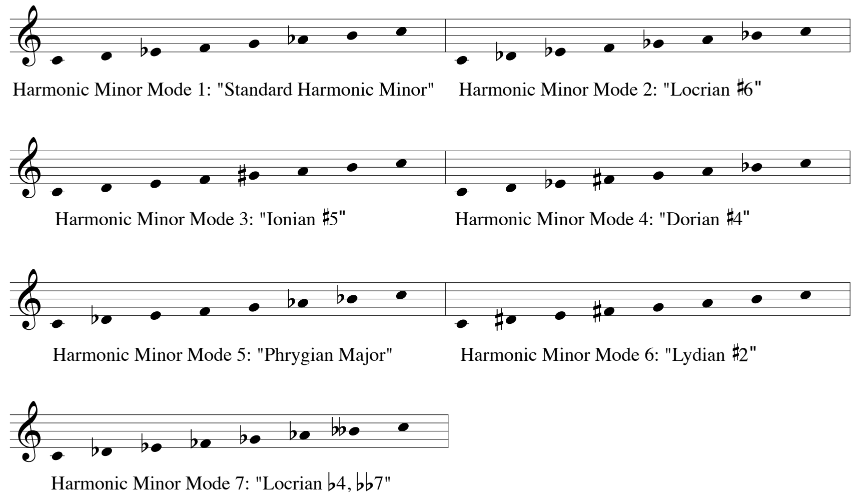
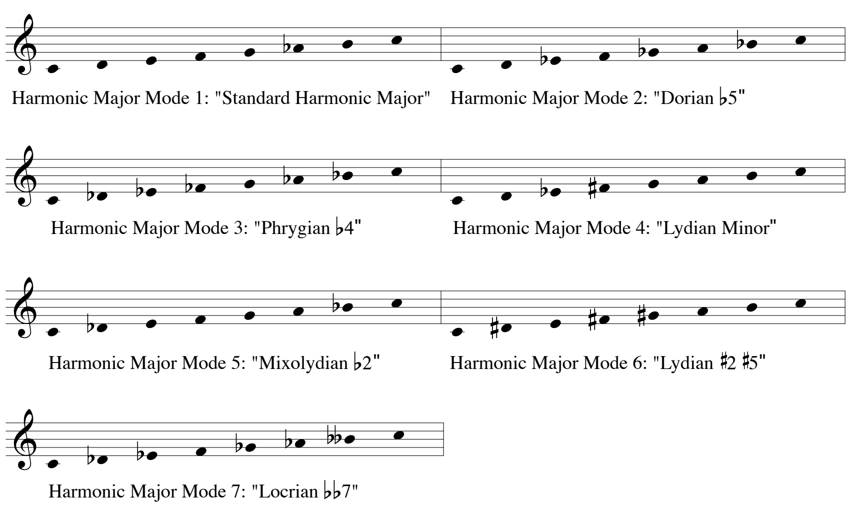


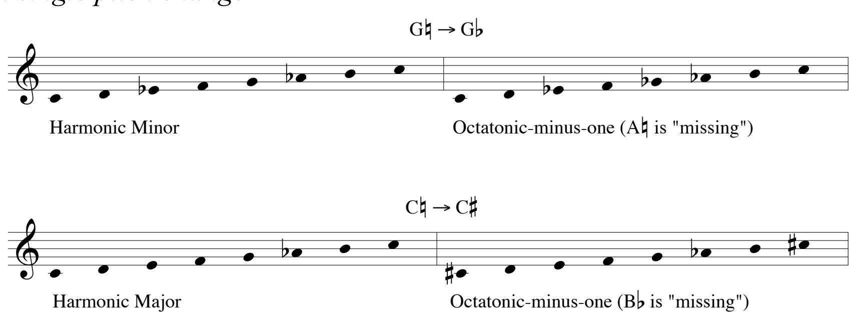
Figure 1.3.4: Harmonic Major modes



There is also the octatonic scale (an eight-note scale that alternates whole steps and half steps, or vice versa), which makes quite a few appearances in the work – though not as many as it has often been credited with, as discussed previously. This scale functions somewhat differently from the seven-note scales due to its symmetrical structure. It only exists in three transpositions and essentially has only two modes: the version that starts with a whole-step and the version that starts with a half-step. The color of any given octatonic set is thus less distinctive than that of the non-symmetrical seven-note scales and there is little room to exploit "modulation" between different pitch levels and modes. Nonetheless, like the seven-note scales, it also provides a limited field of pitches and a basic underlying color.[30]

On a related note, there is one further seven-note scale worth mentioning, the "octatonic-minus-one" (a seven-note scale that is "missing" a pitch that would complete the octatonic set). It is similar to the harmonic minor and major modes, due to the presence of a single augmented second scale step. Figure 1.3.5 shows how octatonic-minus-one modes can be derived from harmonic minor and harmonic major modes with a single pitch alteration. This scale is often considered simply as a subset of the octatonic, but the presence of only seven pitches gives it different characteristics. Since it is now uneven rather than symmetrical, it often behaves more like the seven-note scales discussed above than it does like its "parent" octatonic scale. Attempting to label the modes of this scale in relation to diatonic modes gets messy. As they don't come up all that frequently, I will label them on a case-by-case basis.

Figure 1.3.5: Harmonic minor and harmonic major scales become octatonic-minus-one scales with a single pitch change

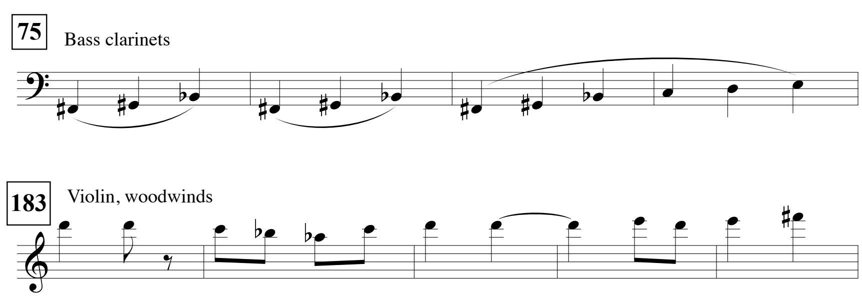


[30] For more on characteristic uses and configurations of the octatonic scale see Berger 1963, Taruskin 1985, 1987, and 1996, and Van den Toorn 1983 and 1987.

Finally, there are quite a few appearances of "double diatonic" scales. These are eight note mostly-diatonic sets, with the eighth pitch coming from the presence of two versions of one of the diatonic scale steps. These scales are often the result of some sort of juxtaposition and may sometimes be interpreted as two different super-imposed diatonic scales, rather than as a single "double diatonic" scale. But they are a common enough feature of the work that it is useful to consider them in their own category.

Four, five, and six-note subsets of the above scales are also common, although typically they are combined with other pitch material to create larger composite pitch sets, as we will see shortly when we look at Stravinsky's melodic settings. There are also limited appearances of the six-note whole tone scale, which is also typically combined with other pitch material (Figure 1.3.6).

Figure 1.3.6: Whole tone scale examples



When any of these scales appear in their pure forms, there is little in Stravinsky's use of them that sets him apart from contemporaries like Debussy or Ravel. What is largely new in *The Rite* (although it was hinted at in *Petrushka*) is Stravinsky's combination of these familiar scales with one another or with other harmonic objects, creating new composite sonorities.

TRIADS and SEVENTH CHORDS

Again following impressionism, triads and seventh chords in *The Rite* are used for their color, and, except in a very few circumstances, do not imply any sense of functional harmony in the traditional common practice sense. Nonetheless, their unique sonic qualities, and the years of tonal practice associated with them, remain relevant and should not be disregarded. For example, the E major triad in the horns at Rehearsal 4 is a significant arrival, the first harmonically stable sonority after the oozing chromatic parallel fourth accompaniment of the opening. It creates a warm glow that colors the activity above it (Figure 1.3.7). At R6+6, beat 2, the surprise arrival on a major triad is a similarly brightening moment, which would not be the same with another sonority (Figure 1.3.8).

Figure 1.3.7: E major triad arrival at R4, after extended series of harmonically ambiguous chromatic fourths.

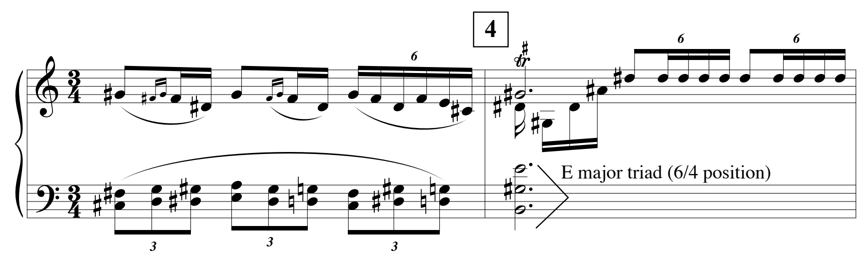
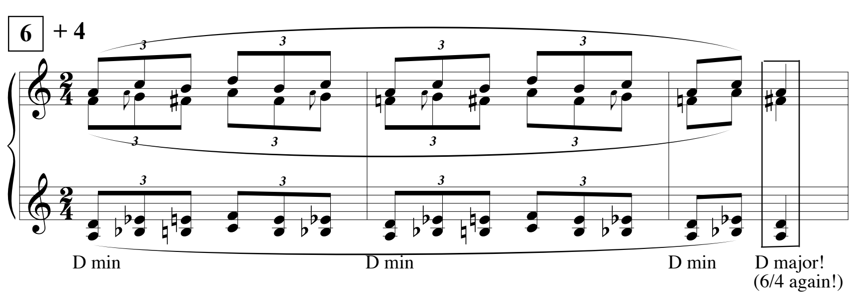


Figure 1.3.8: Major triad brightens the harmony at R6+6 beat 2.



As with scales, triads and seventh chords are frequently combined with other harmonic entities to create more complex sonorities. It can be a difficult question whether or not they retain their "triad-ness" or "dominant seventh-ness" in these situations, and this must be considered on a case-by-case basis. For example, we can easily see that the famous chord at Rehearsal 13 was constructed by putting an E♭7 chord on top of an F♭-major chord; but I doubt that any listener unfamiliar with the score would hear it that way, rather than as a single dissonant conglomeration. A similar situation can be found at Rehearsal 37, where E♭7 is juxtaposed with C major, but it melds into a composite extended dominant chord. On the other hand, in the Introduction to Part 2, while the high oscillating E♭- and C♯-minor triads over the low D minor triad do create a composite sonority, the separate streams of harmonic activity also remain distinct. Both the separate components and the composite juxtaposition are audible and meaningful (Figure 1.3.9). This double-ness has rich implications that we will explore in more detail later.

Figure 1.3.9(a): The "Augurs" chord (R13) looks like a juxtaposition of F♭ Major and E♭7, but sounds like a single chord.

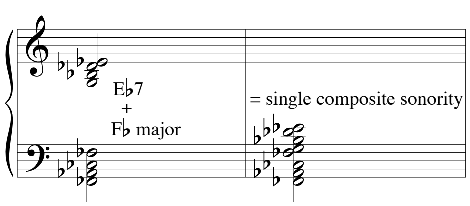


Figure 1.3.9(b): Similar case at R37 (looks like C maj. + E♭7; sounds like "C Dominant ♯9-♭9")

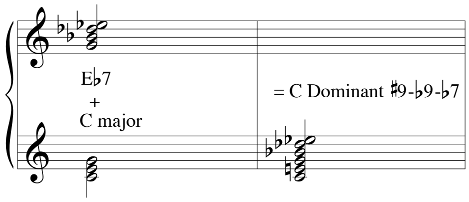
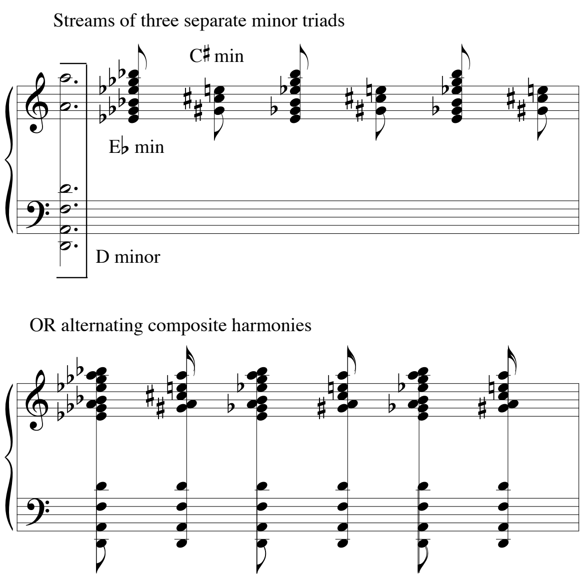


Figure 1.3.9(c): However, at R79, we can hear both distinct strands of high and low minor triads and a resulting composite harmony.



STACKED FIFTHS AND FOURTHS

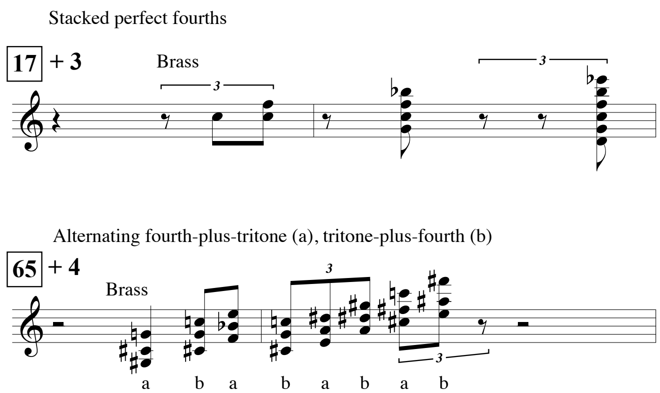
Stacked perfect fifth and perfect fourth sonorities appear frequently, especially in Part I. Like triads and seventh chords, these are often combined with other harmonic material (Figure 1.3.10).

Figure 1.3.10: Example of stacked fifths at R16 (top two lines).

TRITONE PLUS FOURTH

Tritone-plus-fourth and fourth-plus-tritone chords are the evil cousins of the stacked perfect fourth / fifth sonorities; they exhibit a similarly open spacing, but are harsh and dissonant, rather then open and consonant. Compare, for example, the brass in Rehearsal 17+3-4 and Rehearsal 65+4-5 (Figure 1.3.11). These are very similar rising fanfare-like figures that mark the end of a section, but with striking differences in the quality of their harmonies. These tritone-fourth sonorities become increasingly common in Part 2, and again are frequently combined with other sonorities.

Figure 1.3.11: Comparison of stacked perfect fourths and fourth-plus-tritone chords



EXTENDED CHORDS

Ninth, eleventh, and thirteenth chords are also common harmonic elements in *The Rite*, and again after impressionist practice are typically used as colors, rather than with any sort of harmonic function. Some especially clear examples of extended chords are below (Figure 1.3.12). A noteworthy feature of this category is that it frequently intersects with the previous categories. Many extended chords can also be viewed as a juxtaposition of multiple triads, seventh chords, stacked fourths/fifths, and/or fourth-tritone chords. Extended chords also often imply one of the scales mentioned above, containing all or nearly all of the scale's pitches. Thus, extended chords can frequently be interpreted either as cohesive sonorities in their own right, as byproducts of juxtapositions of other sonorities, or as verticalizations of a scale.[31] To illustrate this point, the chords from Figure 1.3.12 are explained below as a variety of different juxtapositions and scales (Figure 1.3.13). All of these interpretations can be useful depending on

[31] See Tymoczko 1997 for an in-depth discussion of these matters. These concepts, though relatively new to "classical" music theory have been used in jazz for decades. Jazz musicians have long associated extended chords with scales as a tool for improvising, and have also used polychordal juxtaposition as a way to create different voicings of extended chords. Mark Levine (1989), for example, clearly outlines the former in chapter 9 and the latter in chapter 14, and his book is just one of many examples of standard jazz pedagogical practice.

the context. Often, multiple interpretations can be applied simultaneously to a single sonority, forming a rich web of connections between it and other sonorities in the piece, depending on which interpretation is followed. This kind of analysis will be an essential tool as we move forward.

Figure 1.3.12: Examples of extended chords

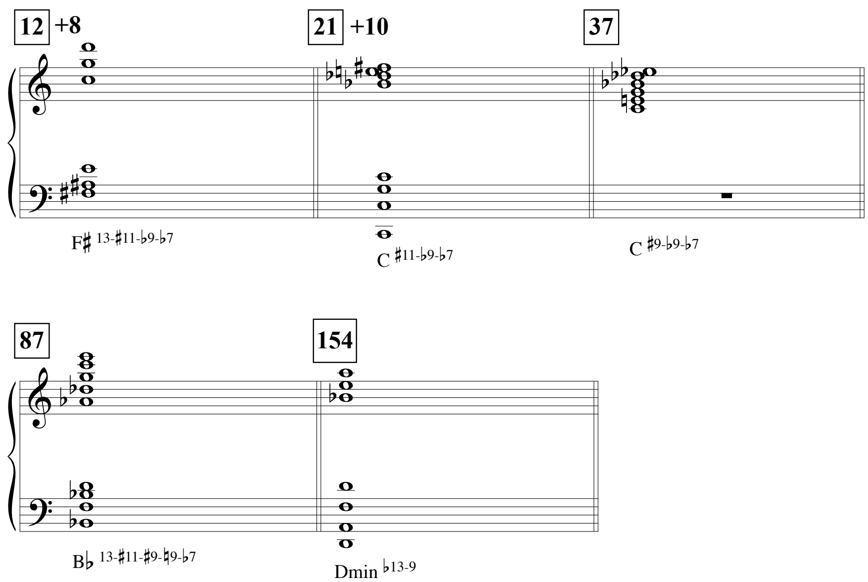
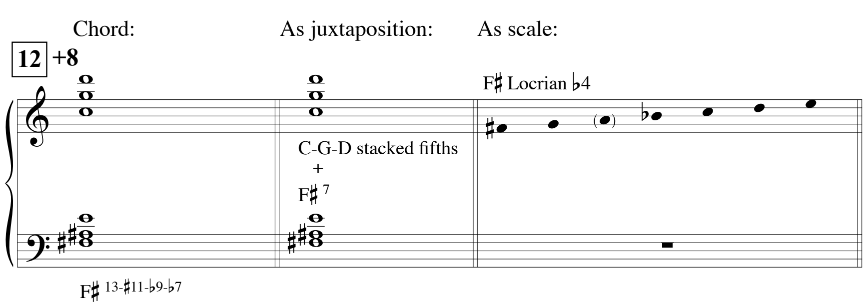
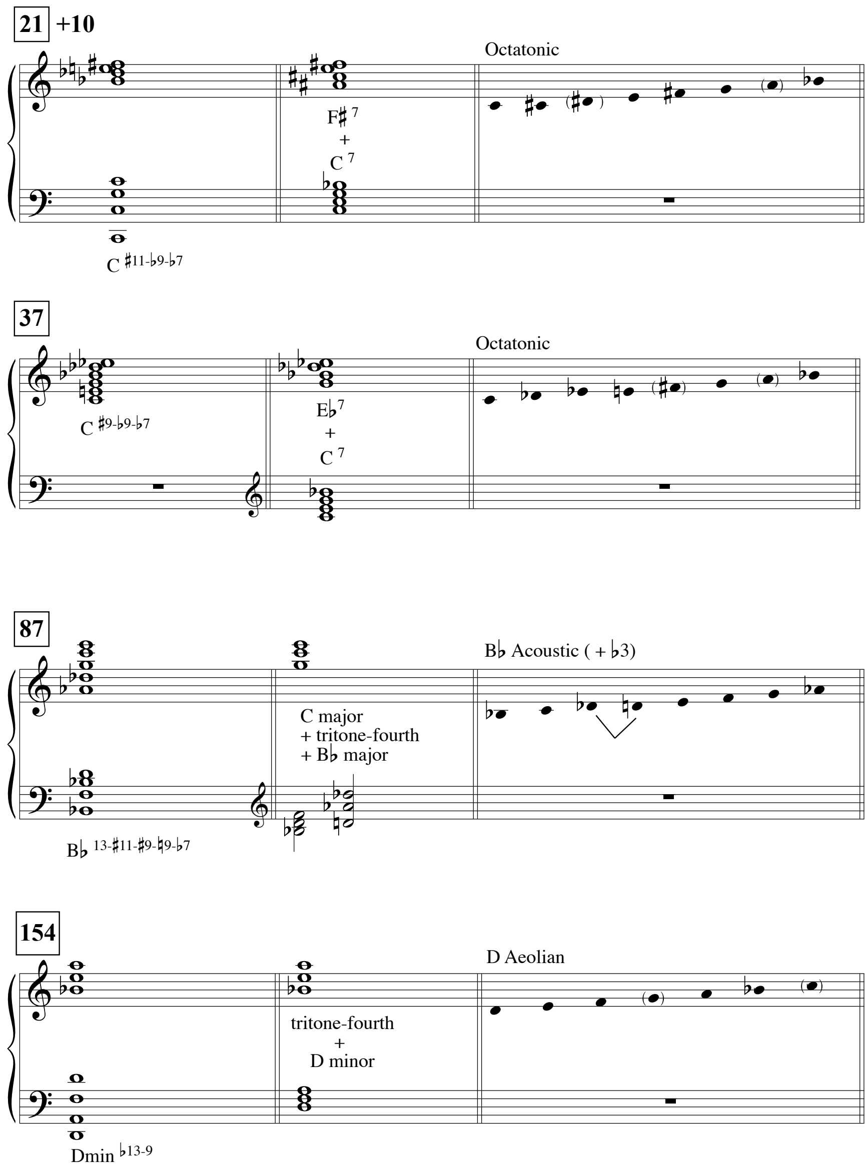


Figure 1.3.13: Multiple interpretations of the sonorities from Figure 1.3.12



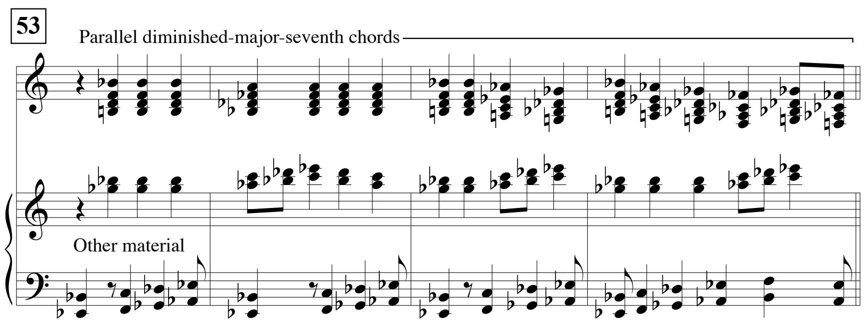
(Figure 1.3.13 continued)



<u>OTHER CHARACTERISTIC SONORITIES</u>

There are a few other characteristic sonorities that don't fit in to the above categories. One is the diminished-triad-plus-major-seventh chord (0 3 6 11) that occurs most strikingly at Rehearsal 53, but in many other places as well (Figure 1.3.14). This doesn't quite fit the "stack of thirds" model of extended chords, which is why I mention it separately here. It does bear some resemblance to the tritone-plus-fourth sonority, which is contained within it, but its sound is distinctive enough that it is worth highlighting as an entity unto itself.[32]

Figure 1.3.14: Diminished-major-seventh chords at R53.



There are also several places where trichords of seconds and thirds figure prominently. R1, for example, features (0 1 5), (0 2 5), (0 3 5), and (0 4 5) sonorities, while (0 1 4) and (0 3 4) figure prominently in “Ritual of Two Rival Tribes” (Figures 1.3.15, 1.3.16).

A final important sonority is the chromatic cluster. Although pure clusters without other pitches present almost never happen, chromatic clusters do make frequent appearances as subsets of other sonorities. The specific chromatic cluster centered around the D above middle C is especially common, containing from three pitches (typically C♯-D-E♭) to five pitches (C-C♯-D-E♭-E♮). Although in most cases the clusters can be explained as the resultant sonority of some sort of juxtaposition, they are a common and audible enough occurrence – especially the specific

[32] Taruskin indeed considers it a variant of the tritone-plus-fourth chord. I won’t object to this too strenuously, but do believe that it underestimates the distinctiveness of this chord’s sound to consider it a mere variant of the tritone-plus-fourth. Taruskin also helpfully points out its derivation from common practice as an appoggiatura to a diminished seventh chord that had a tendency to be dramatically prolonged in some late Romantic music (Taruskin 1996, 944).

one mentioned above – that they warrant consideration as their own entity. We will consider specific examples of it in the in-depth analysis in chapters 2 and 3.

Figure 1.3.15: Trichords at R1

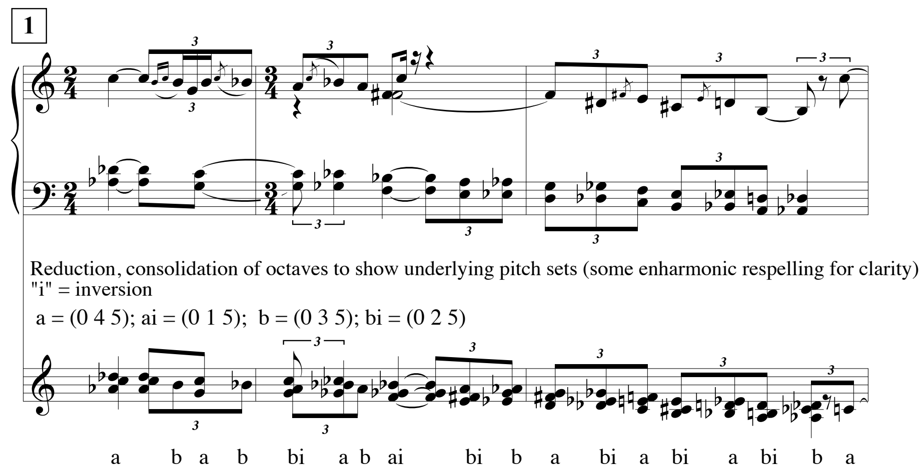
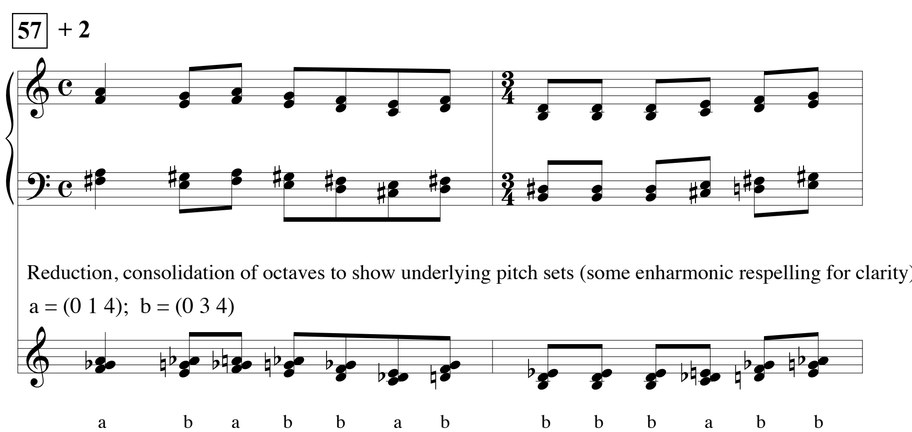


Figure 1.3.16: Trichords in "Ritual of the Two Rival Tribes"



At this point, the reader may well wonder if there are any sonorities left that are *not* used in *The Rite*. If essentially any combination of pitches is permitted, why go through the trouble of categorizing them? The reason is that the different categories of harmonic material are treated differently and create different effects; they *matter*. Unlike in atonal or serial music, all harmonic objects are *not* equal in *The Rite*. They have different colors and different levels of dissonance, and this gives them different meanings and different uses. These uses are informed both by their basic acoustic qualities and by their history in tonal practice.[33] Taken on their own, most are familiar objects, some quite old (triads, seventh chords, diatonic scales), some much newer (non-diatonic scales, extended chords, chromatic clusters), but all employed by Stravinsky's immediate predecessors and contemporaries. As we will see in the rest of the paper, Stravinsky's great harmonic advances in *The Rite* are two-fold: (1) combining and juxtaposing these familiar elements in novel ways and (2) fully exploiting the rich web of potential connections between them.

1.4 CENTRICITY

The concept of a tonal center, though very different than in functional tonality, remains salient in *The Rite*. As described above, even Stravinsky's diatonic scales don't necessarily have a single "tonic," as they do in functional tonality. But there are nonetheless gravitational pulls, sometimes toward a single pitch, but other times toward multiple different central pitches, or toward a central harmony. As Stravinsky himself described his approach, "…our chief concern is not so much what is known as tonality as what one might term the polar attraction of sound, of interval, or even of a complex of tones."[34]

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[33] Stephen Walsh (1988, 48-49) makes a similar point: "…in retaining these shapes [triads and seventh chords] Stravinsky accepted their inherited burden of meaning as part of their symbolism. Had he not done so, he would hardly have adhered to the kind of orchestral layering which not merely retains the chord shapes…but in many cases emphasises them…"
[34] Stravinsky 1947, 37-38.

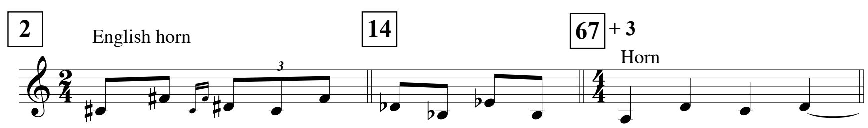
Without the conventions of functional harmony, it becomes surprisingly difficult to decide definitively what the tonal center or "pole" of many passages is. I have been struck, both in the formal analyses I have read and in informal discussions with colleagues, at how frequently I hear a passage of *The Rite* as having a different center than others do.[35] Additionally, different performances, with different balances and emphases can create different impressions of centricity. It is therefore important to acknowledge both that centricity exists in *The Rite*, but also that it can be quite squishy, hard to define, and open to interpretation. Some previous analyses, particularly van den Toorn's octatonic readings, have been intensely pre-occupied with establishing the "priority" of pitches. But the very fact that priority must be analytically proven shows how tenuous it in fact is. One need not go through any complicated theoretical justification to prove what key a classical piece is in – one need only listen. For this reason, I don't find it helpful to get too hung up on definitively determining centricity or "priority" in *The Rite*. When I label scales or chords, I will label them according to what seems most central to me, or according to what will most clearly highlight their connections to other harmonies, but the reader should not be overly concerned if they hear things a bit differently. Part of the point of my analysis is that harmonies can be heard and interpreted in multiple different ways, and this multiplicity gives the work much of its power and richness. This concept of multiplicity is as true of centricity as it is of the harmonic quality of chords and scales.

[35] In particular, I seem to have a much more pronounced tendency to hear the harmonic bass as providing the tonal center of a passage, whereas others often seem to hear the central *melodic* pitch of a passage as the tonal center.

1.5: MELODY IN THE RITE AND ITS HARMONIC IMPLICATIONS: "FIELD HARMONY" VERSUS "KALEIDOSCOPIC OSCILLATION"

The *Rite of Spring* is a deeply melodic work, and its approach to melody has broad implications for its harmonic practice. The most striking quality of *The Rite's* melodies is the narrowness of their scope. Many contain only four or five pitches, with some prominent motives consisting of as few as three. A group of related three-, four-, and five-pitch sets are especially common melodic sources. The (0 2 5) and its inversion (0 3 5) sets make up important motives, such as the English horn melody at R2, the ostinato at R14, and the blaring horn melody in the "Procession of the Oldest and Wisest One" (Figure 1.5.1).

Figure 1.5.1: Examples of (0 2 5) and (0 3 5) motives



A closely related set is the (0 2 7), which is also the same set as a three-note stack of fourths or fifths. These two sets can also combine to form a four-note set, (0 2 5 7), also the same as a four-note stack of fourths/fifths. This can be found, for example, in the oboe and D clarinet melodies at R9, the stacked fifth bass line at R16, and the main melody of the Part 2 Introduction at R81+1 (Figure 1.5.2).

Another closely related four-note pitch set adds a note in the middle of the (0 2 5) set to create the (0 2 3 5) "Dorian tetrachord," as van den Toorn calls it. This is a very common melodic set throughout the work, for example in the bassoon melody at R19, the "Spring

Rounds" melody at R50+2, the horn motive at R75, and the brass melody in the "Ritual Action of the Ancestors" (Figure 1.5.3).[36]

Figure 1.5.2: Examples of (0 2 5 7) motives and melodies.

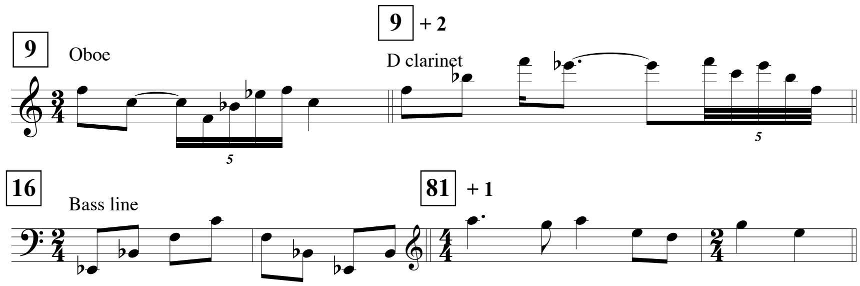


Figure 1.5.3: Examples of (0 2 3 5) melodies.

Two common five note sets can be formed by adding either a minor or major third in the middle of the (0 2 5 7) set, creating an (0 2 3 5 7) minor scale fragment or an (0 2 4 5 7) major scale fragment. The minor one appears, for example, as the English horn melody unfolds at R3+6 and in the clarinet melody at R94, while the major one appears, for example, in the alto flute

[36] Straus 2014 further notes the ubiquity of (0 2 5 7) and (0 2 3 5) sets throughout Stravinsky's entire compositional output.

melody at R6+2, and the horn melody at R25 (and its various repetitions and variants) (Figure 1.5.4). Other melodies add one further pitch to these sets to create six-note nearly complete diatonic sets, for example in the opening bassoon melody, at R49+3, R56, and R93+4 (Figure 1.5.5).

All of the above sets have strong diatonic implications, although as we will see they can in fact be set in a wide variety of different harmonic contexts. Two other common melodic sets in the work are far less diatonically oriented. The first is the four-note whole tone set (0 2 4 6). In addition to the obvious whole tone scales in the bass line at R72, the four-note whole tone set also appears, for example, in the melodies at R72+5 and R111+1, and in the melody that dominates the sections at R174 and R181. It also appears a bit more sneakily as the lower third of parallel third melodies at R50+2 and R64 (Figure 1.5.6). At R72 and R174/R181, out-and-out whole tone scales can be found, but in the other cases, the four whole tones are absorbed into larger diatonic or acoustic sets, as Figure 1.5.7 shows.

Figure 1.5.4: Examples of (0 2 3 5 7) and (0 2 4 5 7) melodies.

Figure 1.5.5: Examples of six-note diatonic subset melodies.

Figure 1.5.6: Examples of four-note melodic whole tone sets.

Figure 1.5.7: Four-note whole tone melodies absorbed into larger diatonic or acoustic sets.

The final important melodic source is sets of anywhere from three to seven consecutive half-steps. Prominent three-half-step melodies include the mysterious trumpet melody at R86, and the trombone melody at R151. Melodies of more half-steps can be found in the D clarinet at R4 (and subsequent variants of this melody) the trumpet melodies at R15+1 and R26+1, and the English horn melody at R129+2 (Figure 1.5.8).

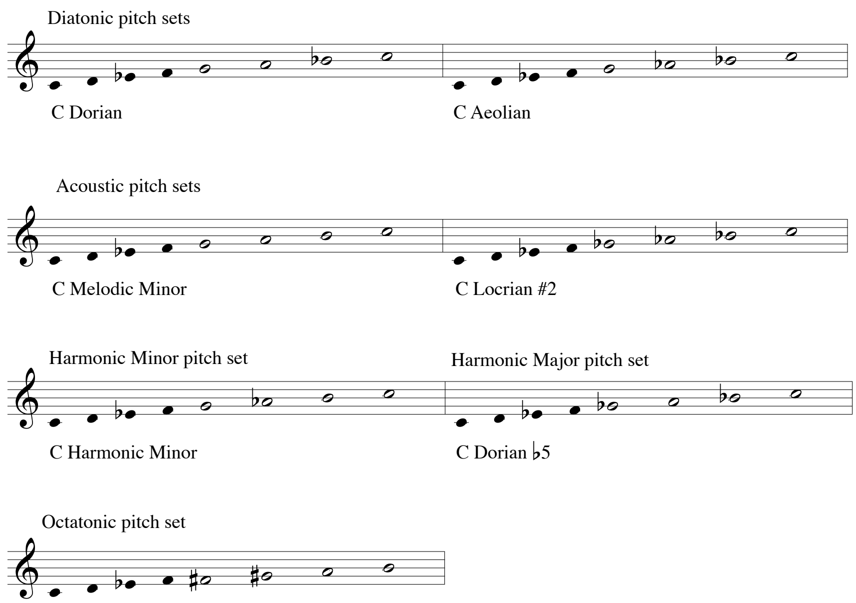
Figure 1.5.8: Half-step based melodies.

To be clear, the above discussion is focused solely on *melodic* pitch sets in *The Rite.* The vertical harmony at a given moment rarely corresponds to one of these sets. This should not be particularly surprising. Because of how acoustics and our ears work, throughout history and across musical traditions, melodic sets and harmonic sets have tended to be treated differently. Melodic sets tend to be conjunct, while harmonic sets tend to be consonant. This is certainly true of common practice music, with melodies that are typically scalar, and harmonies that are primarily triadic. Only beginning with the Second Viennese school did the idea take hold that melodic and harmonic pitch material ought to be equivalent. This approach was not generally taken by previous composers, and is not generally taken by Stravinsky either.

Rather than *forming* the harmony in *The Rite*, these small melodic pitch sets *create the space* for a wide range of different harmonizations around them. Whereas a melody containing seven or eight pitches tends to imply relatively limited harmonic possibilities (especially if they add up to a familiar scale), a three-, four-, or five-note melody can imply a great variety of different settings. It is not the melodies themselves that guide the harmonic possibilities so much as the pitches that are added to them – in a sense, the negative space around them. For example, the (0 2 3 5) "Dorian" tetrachord, so ubiquitous throughout the work, can be harmonized as a part of two diatonic pitch sets, two acoustic pitch sets, one harmonic minor and one harmonic major pitch set, and an octatonic scale, as well as any mode of the above, and, of course, any number of more highly chromatic pitch sets.[37] Each of these settings colors the melody in a different way and creates a different expressive effect. Figure 1.5.9 shows all the different scalar contexts in which this pitch set can appear.

[37] Van den Toorn places great emphasis on the ubiquity of the (0 2 3 5) tetrachord, but only as a potential member of the diatonic and octatonic sets.

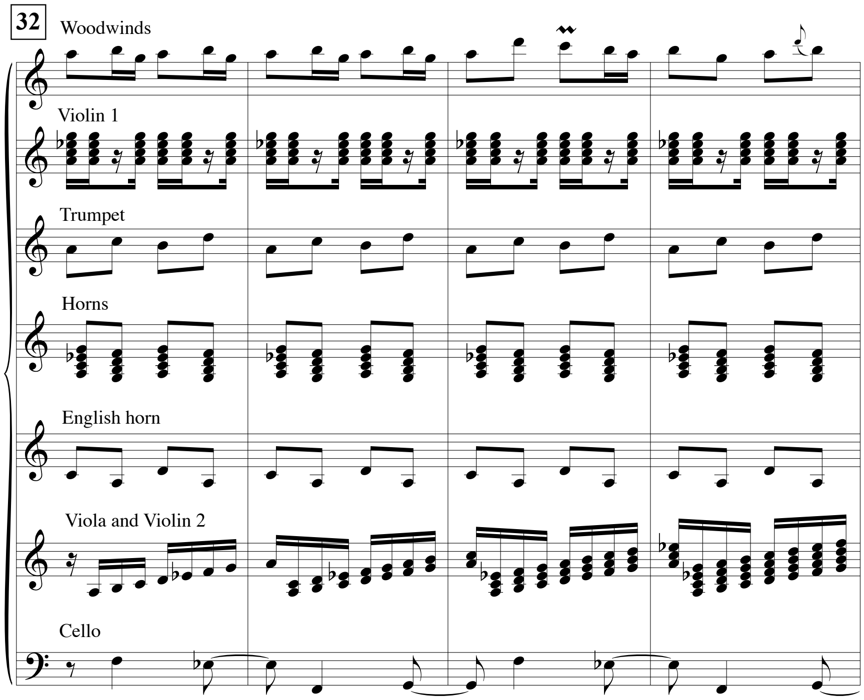
Figure 1.5.9: Possible scalar contexts of (0 2 3 5) tetrachord. (0 2 3 5) tetrachord is in black noteheads, added pitches are in white noteheads.

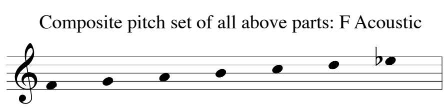


Because of the great variety of ways in which Stravinsky sets his simple melodies, they provide a valuable first window into his harmonic practice. In particular, two distinctive methods of setting emerge. The first, which I call “field harmony,” sets the melody against a single static pitch set. The second, which I call “kaleidoscopic oscillation,” harmonizes each melody note with its own chord, with the pitch set shifting for each note.

“Field harmony” refers to a “field” of pitches that are fixed for a period of time, providing a consistent harmonic wash for melodic and motivic material to float through. A clear example of this is Rehearsal 32, where all of the orchestra’s roiling activity (except for the chromatic fluttertongue whooshes in the woodwinds) is contained within the seven pitches of the F Acoustic scale (Figure 1.5.10).

Figure 1.5.10: R32 reduction and underlying pitch set.



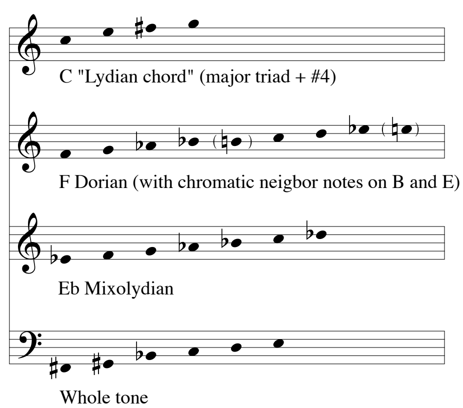


This basic type of field harmony, limited to relatively few (seven or eight) pitches that fit into one of the familiar seven-note modes or octatonic scales, is not unique to *The Rite*, appearing frequently in contemporaneous impressionist works and later in the work of minimalists like Steve Reich. *The Rite*, however, frequently ups the ante by layering multiple harmonic fields on top of one another to create highly dense composite pitch sets. One of the clearest examples of this is in "The Dancing Out of the Earth" (Figure 1.5.11).

Figure 1.5.11: R78 reduction and underlying pitch sets (octave doublings and woodwind run on downbeat are cut for clarity).

(a) The four basic harmonic layers

(b) Pitch sets of each layer



(c) Total composite pitch set

We can sort the field harmony melodic settings into three basic categories: (1) harmony that is equivalent to the melodic pitches, with no additional pitches added; (2) harmony that adds pitches to the melodic pitches in order to complete a familiar seven or eight-note scale; and (3) harmony that creates pitch sets larger than a seven or eight note scale. This last category can be further subdivided into harmonies that simply add chromatic color notes but maintain their sense of "scale-ness;" and others that "complete" the scale in multiple ways at once, implying multiple simultaneous scales. This third category is the most intriguing type, and the most open to the sort of multiple simultaneous interpretations that will form the heart of our analysis.

Figure 1.5.12: Accompaniment adds additional pitches to melody pitch set. Composite pitch set = familiar scale.

The few examples of melodic pitches harmonized with no additional pitches all appear in the middle of Part 1, at R46, R48, and R55, and require little additional comment. Figure 1.5.12 shows examples of melodies harmonized with pitches that complete a familiar scale. It is worth noting that all of these examples except for one – and *all* of the diatonic examples – are found in Part I. We will come back to this point later when considering the work's overall harmonic shape.

Figure 1.5.13 shows melodic harmonizations that are primarily limited to a single scale, but with a few clashing notes outside of it. In these examples, the controlling scale is nonetheless clearly identifiable as the basic unit, with outside "color" pitches added.

Figure 1.5.13: Accompaniment adds additional pitches to melody pitch set. Composite pitch set = familiar scale + "out" notes.

In the above example, there are notable differences in how the non-scale pitches function. At Rehearsal 31, the A♭ and F♯ have the effect of moderately disruptive chromatic neighbors, with the octave displacements creating extra emphasis. At R57+4, on the other hand, the G♯ and F♯ create a more extreme clash, aggressively interrupting the prevailing diatonic pitch material. (Note as well that these first two examples involve exactly the same composite pitch set – more on this later.) At R61, R62+2, R63+11, and R138, the color notes are pedal pitches that cast a haze of soft dissonance onto the scales floating above. All of the above excerpts contrast an underlying scale with pitches that are out of that scale, but show that a range of different effects can be achieved depending on exactly how the color pitches operate.

Finally, there are harmonizations in which multiple different scales are implied at once with no single scale taking priority. In these cases, the concept of "scale" continues to be useful (rather than recourse to a single larger pitch set) because the characteristic qualities of the different scales remain audible. For example, at Rehearsal 25, both an E♭ Acoustic and C Mixolydian scale are implied at the same time, depending on which part of the accompaniment the ear focuses on.[38] Alternatively, the same composite pitch set can be pulled apart into the diatonic fragment of the melody (on the pitches F-G-A-B♭-C) and a chromatic cluster on the pitches C-D♭-D-E♭-E-F – an example of that "ur-cluster" noted previously. Both ways of thinking about the pitch material here – as two overlaid seven-note scales, or as a diatonic fragment on top of a chromatic cluster – are useful. Both interpretations capture something important about the sound of the passage, and both help to relate it to other passages throughout the work (Figure 1.5.14).

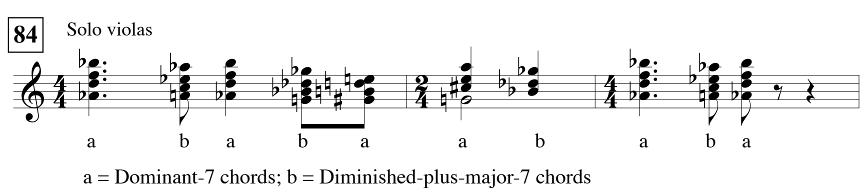
[38] Tymoczko (2011, p. 347) favors E♭ acoustic combined with a white note haze, but I can hear both modes operating, depending on where I let my ear focus.

Figure 1.5.14: Three harmonic interpretations of R25.

Another way of considering this type of pitch set is as a single scale where most of the scale degrees are fixed, but one or more are movable. This concept already exists in functional tonality in the minor key, where scale degrees 1-5 are fixed, but scale degrees 6 and 7 can each exist in two forms. This is similar to the idea of two scales juxtaposed, since a half-step change of a given scale degree will create a different scale. It also sometimes overlaps with the concept of "double diatonic" scales discussed earlier – mostly diatonic scales with one scale step that exists in two different forms simultaneously. It can be a useful approach when the contrast between fixed and movable scale degrees is the most salient harmonic feature of the music.[39] We will look at examples of this in detail in Chapters 2 and 3.

The other mode of melodic harmonization, Kaleidoscopic Oscillation, takes a different approach. Rather than a steady wash of a limited number of pitches, the pitch set is changing constantly, often every beat. However, the rapidly passing chords are typically quite similar to one another. This gives the music a coherent harmonic color, despite the rapidly changing pitch sets. A clear example of this is Rehearsal 84. Even though the chord progression cycles quickly through a large number of different pitches, there are only two different harmonies that alternate (Figure 1.5.15).

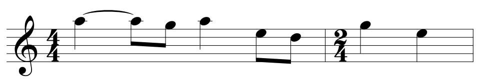
Figure 1.5.15: Harmonies at R84



I use the adjective "kaleidoscopic" because most examples are not as straightforward as this one. Stravinsky often introduces variations and wrinkles into the patterns that subtly shift the colors of the harmonies, like looking at the chords through a kaleidoscope. We can see this most clearly by considering the various settings of the melody first heard in the Part 2 Introduction, shown in Figure 1.5.16.

[39] It is also similar to what Tymoczko (2011, chapter 9) calls the "subset technique," whereby a composer keeps a "subset" of pitches constant, while shifting the other pitches around them in order to change modes.

Figure 1.5.16: Melody at R81+1

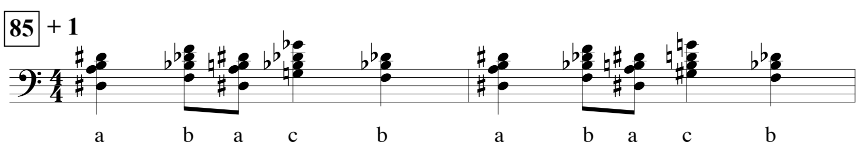


The most straightforward type of oscillation involves shifts back and forth between two chord types, in many cases related by inversion or otherwise similar in structure. We've already looked at several examples of this in other contexts: Figure 1.3.16 featured oscillations exclusively involving inversions of the same pitch set, while Figures 1.3.15 and 1.5.16 showed oscillation between chords that are structurally similar and close together in pitch space. (We will consider the relationships between these chords more thoroughly in Chapter 3).

From this basic idea of alternation, considerably more complex structures can arise. In some cases, Stravinsky adds a few more possibilities into the mix, with three or more different types of chords in circulation (Figure 1.5.17).

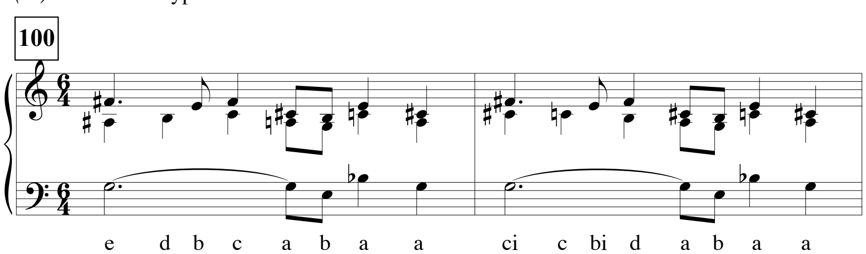
Figure 1.5.17: Kaleidoscopic Oscillation with more chord types.

(a) Three chord types in oscillation



a = (0 2 6) (Dominant-7 subset); b = minor triad; c = diminished-plus-major-7th

(b) Five chord types in oscillation



a = (0 2 6) (Dominant-7 subset); b = minor triad; c = fourth + tritone; d = (0 4 11); e = (0 3 11);
("i" = inversion)

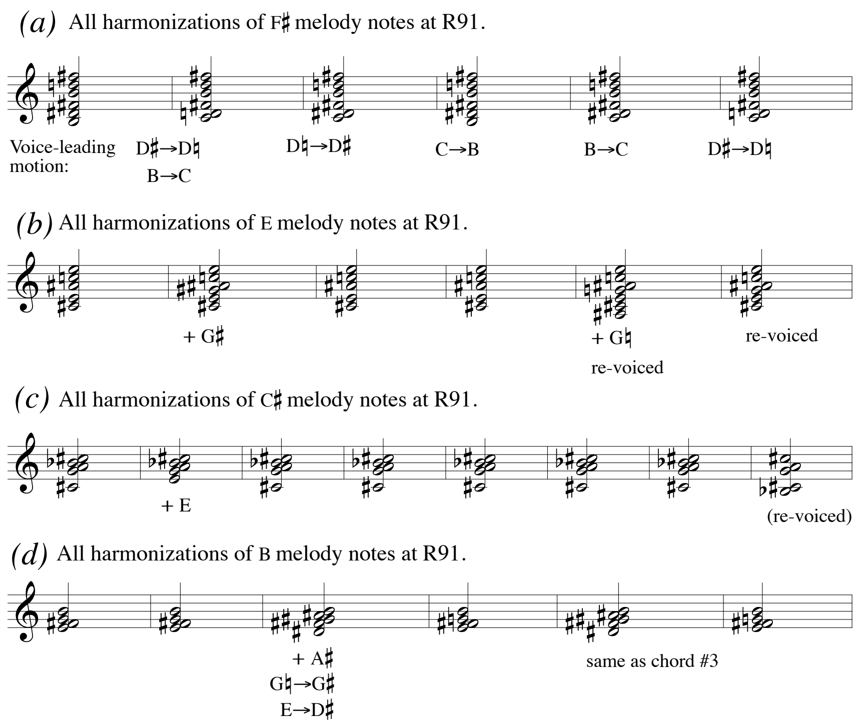
Still more complexity can be introduced by subjecting the alternating chords to processes of variation. Consider the passage from R91 to R92+1. Figure 1.5.18 labels each unique chord type in this passage with its own letter. (For now, I am ignoring the ostinato in the background). Although many of the chords repeat, we still make it all the way to letter "k" by the end of the passage – too many different chords for us to be able to identify any meaningful patterns.

Figure 1.5.18: R91 with a different letter for each different chord type.

However, if we re-conceive the passage as a process of variation on a set of four basic chords, we can make much more sense of it. Figure 1.5.19 shows the chords from R91 to R92+1 arranged by melody note. Each harmonization of the pitch F♯ is listed in sequence, followed by each harmonization of the pitches E, C♯, and B (the only four pitches in the melody). Although there is a wide range of total chords present, all are generated from the four original melody-note chords by some combination of the following: (1) half-step motions in one voice or (very occasionally) two voices; (2) addition or subtraction of one pitch; and/or (3) re-voicing of chords, i.e. changing the register or doubling of notes without altering the pitch class content.

These resulting variant chords are all very closely related to their parent chords, altered only by very small moves through pitch space, additions/subtractions of pitches, or simple re-arrangement of voices.

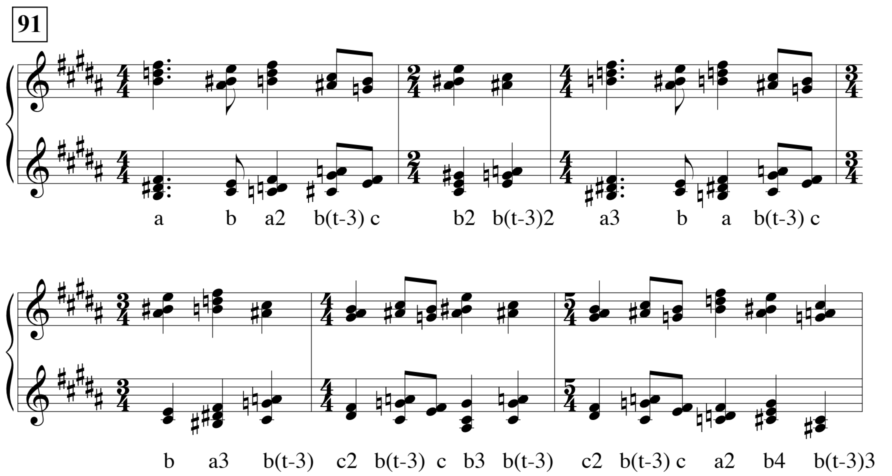
Figure 1.5.19: R91 harmonies by melody note.



When considered in this light, we see that only four basic chord types can give rise to a much more complex harmonic palette through small changes when the chords are "repeated." Further, it turns out that the initial chords harmonizing the melody notes E and C♯ are in fact the same chord type. Although transposed and spaced differently, both can be condensed to the (0 2 3 6) pitch set. So there are in fact only *three* basic chord types that are varied. Figure 1.5.20

draws on 1.5.19 to label the chords as variants of these three basic chords. Instead of the eleven chords we identified in Figure 1.5.18, we now have only three basic chords that are varied.[40]

Figure 1.5.20: R91 re-labeled as variants of three basic chords.



Definitions of chords and their transformations:

a = (0 3 4 7) on B
a2: B → C, D♯ → D♮
a3: B → C

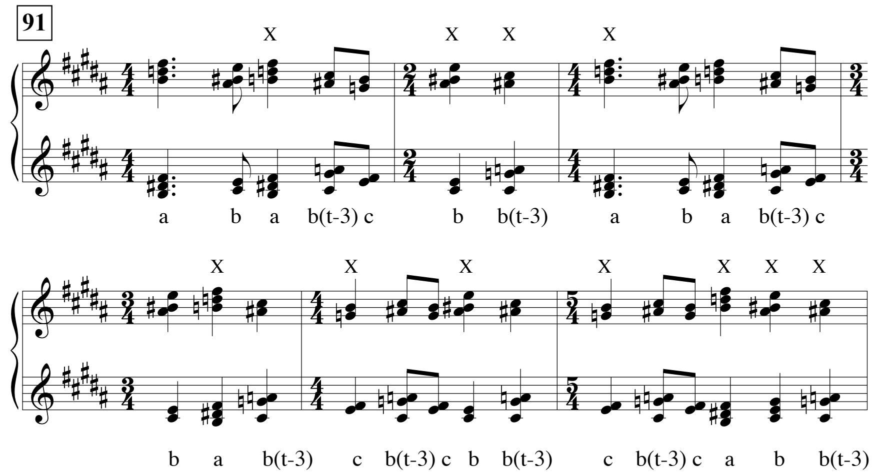
b = (0 2 3 6) on A♯ (C♯ in bass)
b2: + G♯
b3: + G♮; revoice with A♯ in bass
b4: + G♮
b(t-3): transpose down minor third
b(t-3)2: b(t-3) + E
b(t-3)3: revoice with A♯ in bass

c = (0 2 3 7) on E
c2: +A♯, G → G♯, E → D♯

As Figure 1.5.21 indicates, a quite similar harmonic effect could be created by using the same chord every time the same melody note appeared. The basic effect is there, but Stravinsky's procedures create a more kaleidoscopic, restless, three-dimensional quality.

40 Boulez (1968, 77-78) hints at a similar interpretation, noting the variants of the F♯–melody-note chords, but doesn't further develop this idea throughout the passage.

Figure 1.5.21: Simpler, non-varied version of R91. An "X" marks each chord that differs from Stravinsky's version.



Common to both field harmony and kaleidoscopic oscillation is a distinct lack of "progress" in a functional harmonic sense. Both techniques are fundamentally *coloristic* in their approach to harmony. The harmony doesn't propel the music forward, but colors it, and this sequence of colors creates the sense of drama and progression in the music.

<u>1.6 INTERVAL GAMES</u>

One further approach to harmony that is important in a few sections of *The Rite* is what I call the "interval game" technique. Rather than either a field of pitches or a set of oscillating chords, the interval game zeroes in on a specific interval, using it as the harmonic basis for a passage. The clearest example of this comes at Rehearsal 93 in Part 2. The highlighted interval is, first, the major second, which moves in parallel to form the accompaniment from R93 up to R94. At R94 the major seconds continue, but the major seventh is also highlighted, first in the parallel major seventh harmonization of the clarinet melody at R94, and then in the accompanying string figures beginning at R94+5. Finally at R95+2, in addition to the continuing major second and major sevenths in the accompaniment, the melody is harmonized in parallel diatonic sixths. Figure 1.6.1 outlines each of these patterns.

Figure 1.6.1: Interval Games at R93.

While kaleidoscopic oscillation could, to a certain extent, make sense of the composite harmonies, the real harmonic backbone of the passage comes from the qualities of these basic intervals. Interval game techniques make several other appearances throughout the work, making it useful to have in our analytical toolbox.

1.7 THEMES TO TRACK

Now that we have outlined the primary harmonic techniques at play in *The Rite*, we will consider more specifically some of the main thematic ideas that we will be tracking throughout the detailed analyses in chapters 2 and 3. This by no means encompasses *all* of the different ideas in the work, but it highlights some of the most salient and frequently occurring ones.

We have already seen how common the (0 2 3 5) Dorian tetrachord is in the work. More specifically, it is often animated in an arc-like rise and descent pattern. If we think of each successive note in the tetrachord as a step akin to a scale degree, we can label it as 1-2-3-4-3-2. Figure 1.7.1 shows several examples of this throughout the work. As can be seen, the pattern often repeats several times, and sometimes begins going down rather than up (4-3-2-1-2-3-4). Although the contour is thus inverted, it can be best explained as simply starting the pattern in a different spot. Sometimes a fifth pitch above the Dorian tetrachord is added as well to create a 1-2-3-4-5-4-3-2 pattern.

Figure 1.7.1: Examples of 1-2-3-4-3-2 patterning of (0 2 3 5) tetrachord. (Numbers refer to the steps in the melodic (0 2 3 5) tetrachord, not necessarily the underlying key or mode.)

This basic pattern also manifests in other contexts, for example in the stacked fifth bass line at R16. Here, instead of diatonic seconds, the basic intervallic unit is a perfect fifth, but if we think of each fifth as a "step," the pattern is the same – 1-2-3-4-3-2 (Figure 1.7.2). Slightly more abstractly, the pizzicato cello arpeggios at R14 outline the same shape as well – 1-2-3-4-5-4-3-2, with the unit of step now the ascending notes of a triad – E major on the way up and C major on the way down. The bassoons here have the same basic pattern, also in triadic steps, but beginning by going down rather than up, and moving at twice the speed (Figure 1.7.3). A number of other examples are a bit more abstract: the pattern is lurking in the background, but obscured by surface variation, as we will see in more detail in Chapter 2. R46 presents the ultimate culmination of this pattern, as it appears simultaneously in three different versions: a Dorian tetrachord version, a stacked fourth version, and a slightly more abstracted melodic version (Figure 1.7.4), with the fourth and Dorian tetrachord versions moving in exact contrary motion with one another. As we will see in chapter 2, this basic step-wise arc pattern (with "step" broadly defined) occurs throughout Part 1 in a wide range of contexts – but is largely absent from Part 2.

Figure 1.7.2: 1-2-3-4-3-2 pattern at R16. Here a "step" is defined as a perfect fifth.

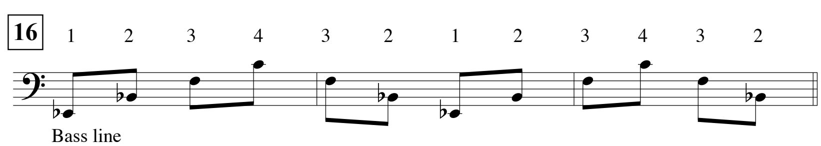


Figure 1.7.3: Arpeggio 1-2-3-4-5-4-3-2 pattern at R14. Here a "step" is defined as each note in an arpeggio.

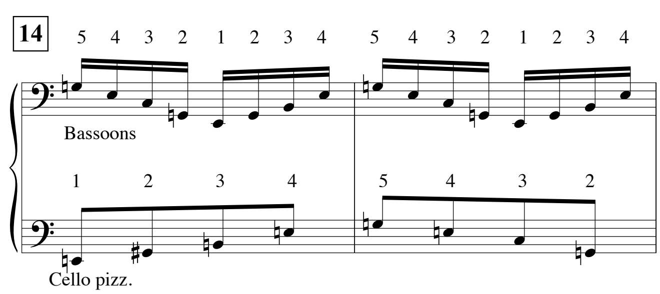


Figure 1.7.4: Three different types of overlaid 1-2-3-4-3-2-based patterns at R46. Top voice has an imprecise diatonic melodic version (steps correspond to melodic pitches from bottom to top). Middle voice has a stacked fourth version (steps equal perfect fourths). Bottom voice has a Dorian tetrachord version. All three versions coexist within an overall B♭ Mixolydian pitch set.

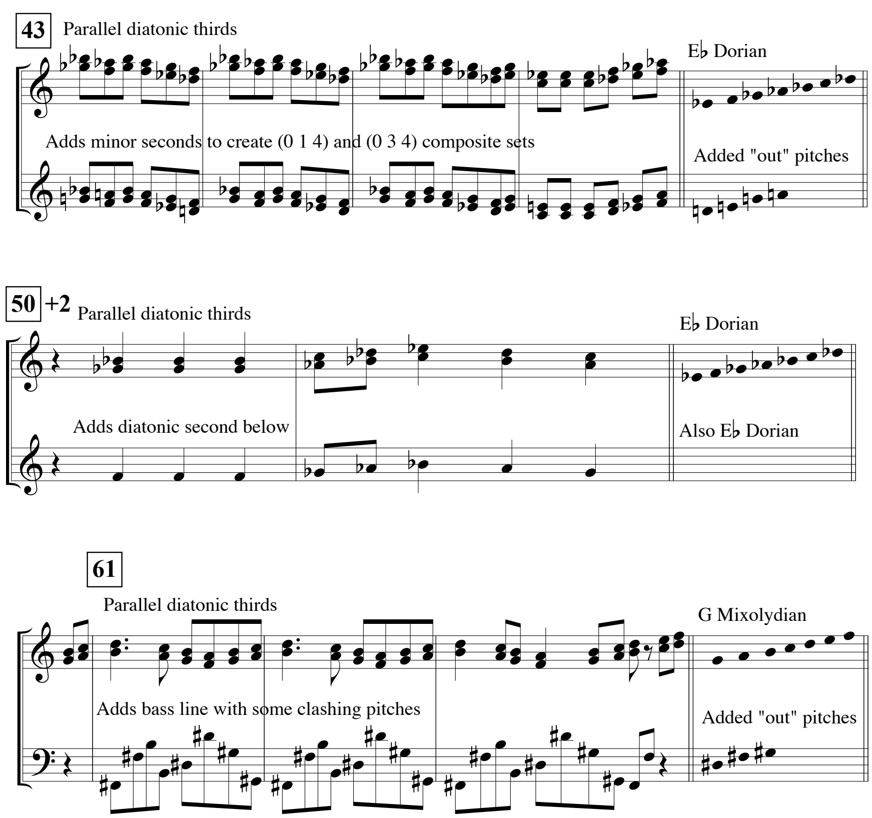
Stacked fifths specifically and (0 2 5 7) sets more generally are another very common feature throughout the piece. The specific set of stacked fifths on E♭ – E♭-B♭-F-C – is especially central to Part 1. There is also a very general pattern of these (0 2 5 7) sets tending to rise over the course of the entire piece. This is explicit in the central movements of Part 1, and more partial and inexact throughout the rest of the work, as we will see in more detail in the next chapters.

It is difficult in general to pick out long-range harmonic goals and patterns in *The Rite*, but one pattern that *can* be identified is a pronounced sinking half-step tendency on a number of different levels from relatively local to more global. We will track these half-step descents throughout chapters 2 and 3, and summarize them more thoroughly in chapter 4.

Half-steps are also a central vertical harmonic feature in *The Rite*, with superimpositions of minor second-related material appearing frequently. Indeed, this is one of the most important elements of *The Rite's* basic sound. We will track these minor second juxtapositions throughout chapters 2 and 3, and consider their meaning and effect in more detail in chapter 4. Additionally, as we saw in section 1.3, half-steps often manifest in chromatic clusters, especially the specific one centered on D4 – another feature we will track through chapters 2 and 3.

A specific distillation of the Kaleidoscopic Oscillation technique that is especially frequent in *The Rite* is what I call the "Parallel Thirds + X" scheme, where a steady stream of parallel thirds (either diatonic or chromatic) is juxtaposed with other "X" material of various sorts. Figure 1.7.5 shows a few illustrative examples of different approaches to this technique, which will be discussed in more detail as it comes up in chapters 2 and 3.

Figure 1.7.5: Examples of "Parallel Thirds + X" scheme.



(Figure 1.7.5 continued)

A final important concept that we will be tracking throughout the work is what I call "ur-chords" – distinctive, characteristic harmonic units that act as the central harmony of a section of music. They often begin a section, are often repeated at length, and often become the seed for further harmonic developments within the section. Examples include the iconic "Augurs of Spring" chord at R13; the "Ritual of Abduction" chord at R37; the "Spring Rounds" chord at R49; the opening harmony of Part 2 at R79; the "Ritual Action of the Ancestors" chord at R129; the opening harmonies of the "Sacrificial Dance" at R142; and the "Sacrifical Dance" "B section" chord at R149. An important part of the analysis to come will be considering different ways to interpret these fundamental harmonies and the relationships between them.

1.8 WARPED SYSTEMS

One of the most notable features of Stravinsky's compositional technique in *The Rite* is the ubiquity of systems and processes that are warped or distorted in some manner. There is a wide range of approaches to this. Sometimes, a system or process is nearly exact, but with just a few deviations. Other times, multiple simultaneous systems interact with and distort one another. In many cases, there are some elements of systematization intermixed with non-systematic elements, sometimes in highly complex ways. Comparing R49 and R90 shows an especially rich example of this. There are some qualities of repetition and parallelism here. For example, both passages have very similar opening sonorities: the first two beats of R90 create the "Spring

Rounds" opening sonority, though with the F and G♭ in sequence rather than sounding simultaneously (Figure 1.8.1). The melodic motion to G♮ at the end of R90 also parallels the harmonic move from E♭ Dorian to E♭ Mixolydian from R49+2 to +3 (Figure 1.8.2). There is also parallelism on the level of the phrase, with the first four bars of R49 and R90 behaving in strikingly similar ways. Both have three repetitive, static, quarter note-heavy measures, followed by a contrasting fourth bar with a much more expressive melody in eighth notes (Figure 1.8.3).

There is also an element of contraction between these two sections, with the G♭-G♮ motion occurring over the course of each measure at R90, instead of over the course of a whole phrase at R49, as can also be seen in Figure 1.8.3. Finally, there are also some elements of inversion. The bass motion at R90 begins from the same place but inverts the contour of the bass motion at R49 (Figure 1.8.4).

Figure 1.8.1: Comparison of first two beats of R49 and R90.

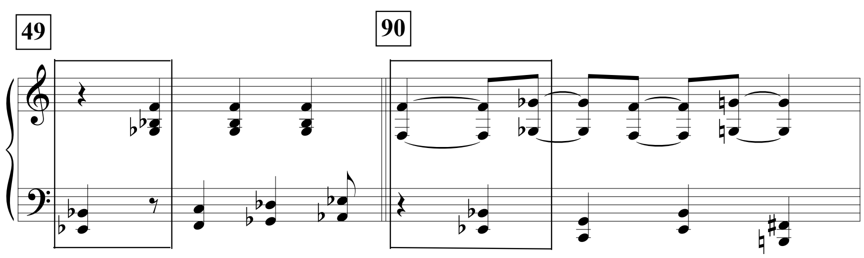


Figure 1.8.2: G♭ to G♮ motion at R49+2 and R90.

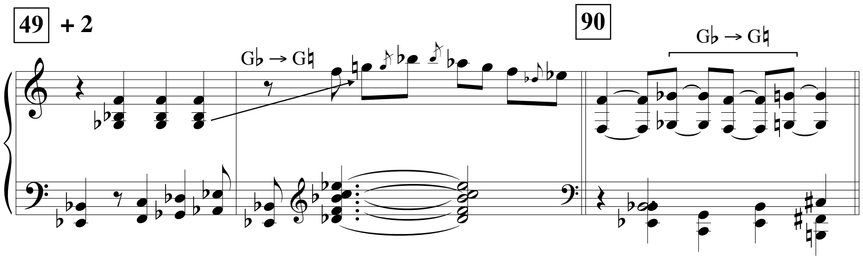


Figure 1.8.3: Comparison of phrase structure at R49 and R90.

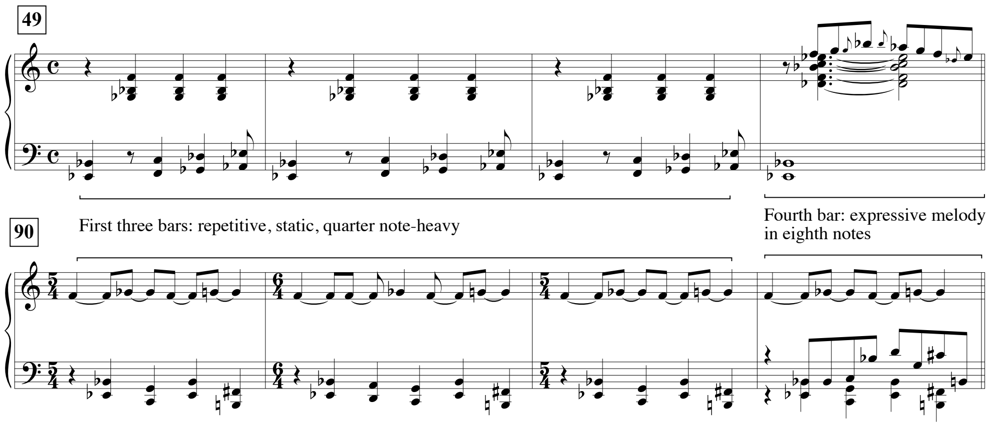
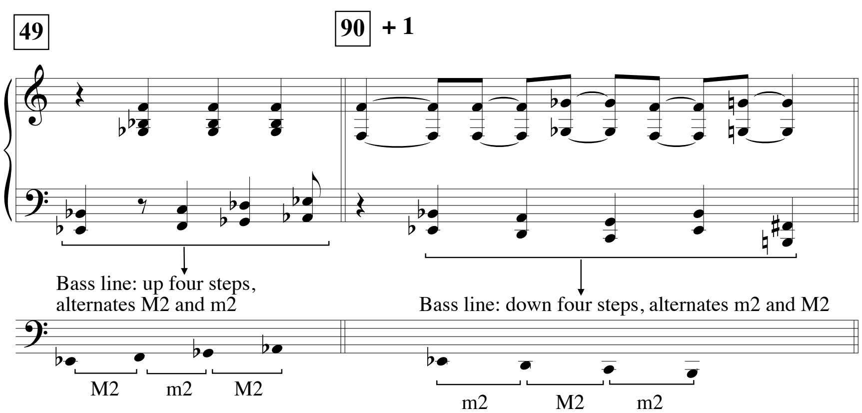


Figure 1.8.4: Bass line motion at R49 and R90+1.



At R49, the bass line moves up alternating major and minor seconds, E♭–F–G♭–A♭, while at R90+1 it moves *down* alternating minor and major seconds, E♭–D–C–B. There is also an inversional relationship between the on-the-beat and syncopated parts, which are exactly switched between the two phrases, as can be seen in Figure 1.8.3. At R49, the bass line begins on beat one and then proceeds in syncopated off-beats, while the treble part begins on beat two and articulates on-the-beat quarter notes. At R90, the situation is reversed: the *treble* part begins on beat one and proceeds to move on the syncopated off-beats, while the *bass* line begins on beat two and moves in on-the-beat quarters.

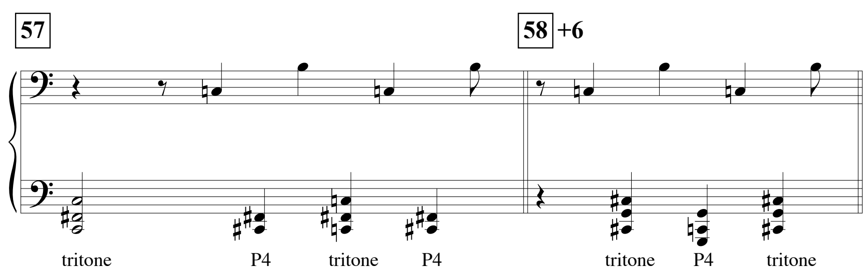
None of these relationships are exact, however, and all apply only to some aspects of the musical texture, but not others, creating an exceedingly complex set of relationships. While there are thus multiple overlapping elements of systematicity, they are all partial and inexact in their deployment. Stravinsky is clearly interested in systems and processes, and finds them a useful way to generate and organize material. But he also clearly has no ideological or aesthetic commitment to them, freely interrupting, distorting, and otherwise messing with them. Indeed, if anything, he almost seems to have an ideological commitment to *not* fully realizing them, always finding a way to mess up his systems before they can come to completion. Over the next two chapters, we will continue to track the myriad ways in which Stravinsky both deploys and undermines systems in *The Rite*.

1.9 OBSESSIVE VARIATION

Related to warped systems is Stravinsky's obsessive use of often slight, but nearly constant variation throughout *The Rite*. There are many instances where this constant variation helps to create a sense of forward momentum, restlessness, and three-dimensionality, as we saw in the examples of Kaleidoscopic Oscillation in section 1.5, and will see in many more places over the course of chapters 2 and 3. In other places, the variations are so subtle that they are barely noticeable and sometimes, given the musical texture, even essentially inaudible.

Figure 1.9.1 shows an example of this, comparing R57 and R58+6. Both feature a repeated melodic C-B major seventh, with tritones and fourths/fifths against it. But there is a small shift at R58+6, with a G in place of the F♯ in the second voice from the bottom. Instead of a tritone against the C and a perfect fourth against the C♯, we now get a tritone against the C♯ and perfect fifth against the C. To make it feel more parallel, however, Stravinsky starts on a C♯ in the bass rather than a C♮, and then adds an extra low G below the following C♮ to create a perfect fourth rather than perfect fifth. This makes the sequence of bass intervals – tritone, perfect fourth, tritone – the same in both instances, even though one of the pitches has shifted by a half-step, from F♯ to G. The end result is very similar, with motion between C and C♯ in one voice creating tritones and perfect fourths with the other voice – but also ever so slightly different. Given the primarily percussive effect of the passage, why even bother with such a subtle, essentially inaudible harmonic shift? It is hard to say, and seems to reflect an obsessive need to vary material even when the variation is, for all practical purposes, inaudible.

Figure 1.9.1: Comparison of R57 and R58+6. F♯ moves to G, but now the bass note starts on C♯, creating the same sequence of bass intervals.



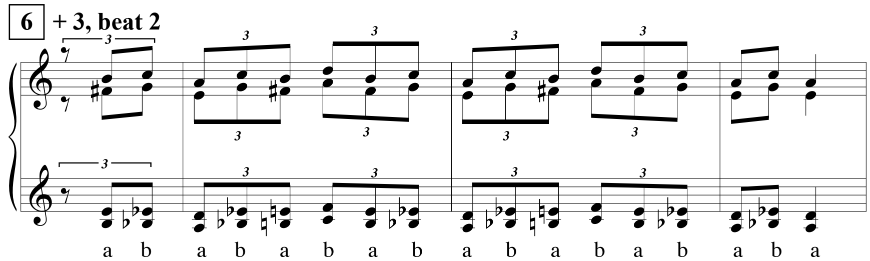
1.10 ORDER AND DISORDER

A final important point to make before diving in to the bar-by-bar analysis is the rich and complex relationship between order and disorder in *The Rite*. For many early listeners and analysts, disorder was certainly their reigning impression of the work. Musical objects seemed to be thrown together and juxtaposed willy-nilly with the only criteria that the bolder and more outlandish the juxtaposition the better. Structurally, one cacophony followed another with none of the tension and release or return of musical themes that normally gave a piece of music structural coherence. And yet, compared to other sonic assaults of the era (Antheil's *Ballet Mécanique* comes to mind), *The Rite* proved to have staying power. It became a core part of the repertoire and a fundamental influence on subsequent composers, even as similarly provocative contemporaneous works faded away. Many therefore concluded that there must be some method to the madness, some hidden structure, cohesion, and unity lurking behind the chaos on the surface.

Analysts in recent decades have indeed managed to uncover structures and order in the piece – sometimes at the cost, however, of ignoring or papering over the chaos. This analysis will show that *The Rite* in fact ranges in its approach to order, from highly structured to highly chaotic, and everything in between. We find numerous examples of passages that are *almost* the result of pure processes, but with tweaks and deviations – "warped systems," as described earlier. A good example of this can be found at R6+4. Figure 1.10.1(a) shows a sort of platonic re-imagining of this passage – a systematic scheme of two sets of parallel fourths that create an exact alternation of only stacked fourth (0 5 7) chords and minor seventh chords. Below (1.10.1(b)), we can see the actual version Stravinsky wrote, with an "X" marking the deviations from the "platonic" scheme. The only changes come in the alto voice (English horn in the orchestra score), which moves its E's on the downbeats up one half-step to F, and it's final note up to F♯.

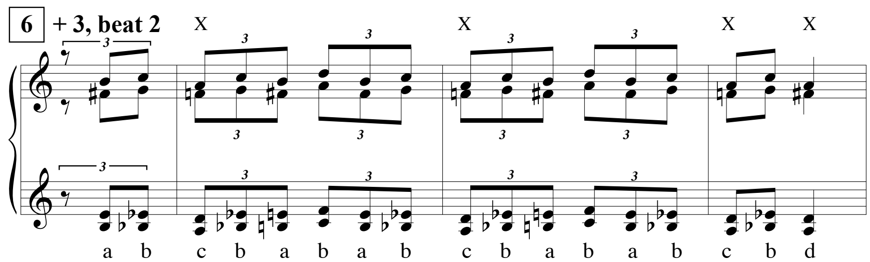
Figure 1.10.1: "Platonic" scheme for R6+4-9, and Stravinsky's actual realization. Grace notes are removed for clarity.

(a) "Platonic" version: pure parallel fourths, alternation between two chord types.



a = (0 5 7); b = minor seventh chord

(b) Stravinsky's "altered" realization. "X" marks changes from above version.



a = (0 5 7); b = minor seventh chord; c = minor triad; d = major triad

Moving further away from highly ordered patterns, we find passages like R53, which has a cohesive harmonic framework as a starting point, but also has independent, clashing harmonic streams that go their own way. As Figure 1.10.2 shows, the first bar of R53 adds up to a complete harmonic minor scale harmony. Starting in the next bar, the different harmonic strands become distinct entities and move independently, creating highly dissonant pitch sets. However, we do return to the same harmonic minor chord at R53+2 beats 1 and 2, R53+3 beat 1, and R53+6, giving it the sense of a "tonic" harmony that provides some degree of harmonic anchor to this section, even in the midst of high levels of dissonance.

Figure 1.10.2: "Tonic" harmonic minor chords at R53 (in boxes):

These sorts of passages can vary greatly in the balance between harmonic cohesion and independence between the streams. All of the harmonic strands in R70, for example, can be interpreted as rooted on a D-G♯ tritone, but this does little to mitigate the extreme sense of dissonance and clashing in this section (Figure 1.10.3). (There is a much more detailed explanation of this passage later on in chapter 2.)

Figure 1.10.3 D-G# tritone as underlying sonority of each Harmonic Group at R70. Examples of it are bracketed or boxed.

In passages like those found at R174 and R181, near the end of the piece, the different harmonic streams are now completely independent, with no background harmonic framework at all tying things together, creating highly dissonant and chaotic-sounding music. Finally, a passage like the very end of the piece (R201+1 to the end) is pure gesture and effect, with essentially no meaningful harmonic structure at all.

The key point is that *The Rite* comfortably and coherently incorporates this entire range of approaches to order/disorder into its musical language. Passages like R174 don't jump out at the listener as being somehow out-of-place, even though they are far more difficult to explain theoretically than passages like R6+3. Rather than order being an assumed property of art, it is treated in *The Rite* as another artistic variable that can exist on a spectrum and used to create different aesthetic and dramatic effects.

CHAPTER 2: ANALYSIS OF PART 1

Chapter 1 presented the basic building blocks of Stravinsky's harmonic vocabulary in *The Rite*, showed some of the characteristic ways in which he puts them together, and presented some important patterns and procedures to be on the lookout for. Now we will look at how these techniques play out. Moving through the entire work, one section at a time, we'll consider how these different procedures operate throughout the piece, and start to glimpse some of the larger trends and patterns.

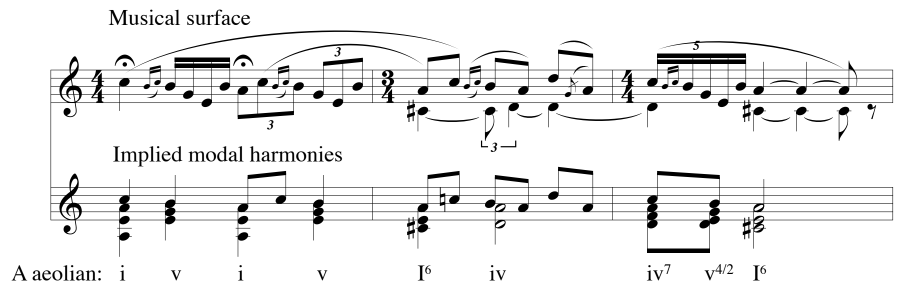
2.1 INTRODUCTION TO PART I

From the start, the Introduction to Part 1 presents clear examples of both field harmony and kaleidoscopic oscillation. The bassoon melody in the first three bars includes the pitches A-B-C-D-E-G, a six-note A minor subset. The horn C♯ has the feel of a Picardy third. Indeed, it is not a stretch to interpret this opening as modally inflected functional harmony (Figure 2.1.1).[41]

This is quite a striking way to begin a work that ultimately has little connection to functional harmony. While this functional interpretation is plausible, we can also view it as an example of field harmony with one "out" note – the C♯. This interpretation helps to make sense of the clash between the horn C♯ and bassoon C♮ on the "and" of beat one in the second bar; we are essentially in A minor, with the horn actively clashing.

[41] Boulez (1968, 80) also gives a tonal interpretation of this melody, emphasizing the dominant (E) and subdominant (D) frame, and the pauses on tonic and subdominant. Van den Toorn (2003, 169) strongly *denies* any diatonic implications for this melody: "A seventh pitch-class is missing, and, as far as scales are concerned, the articulation is contradictory as well as incomplete. Although the melody is a subset of the diatonic set, insufficient evidence exists for a judgment call along more determinate lines."

Figure 2.1.1: Functional interpretation of opening bassoon melody.



Or we can think of it as a scale with five fixed pitches – A-B-D-E-G – and one moveable one – C♮/C♯. This squares more with the functional reading above, with scale degree three existing in two versions, a minor one and a major one.

Finally, another way to see that C♯ is as the first subliminal stirring of the D-centered chromatic cluster that will keep rearing its head throughout the work. If we consider the entire composite pitch set (A-B-C-C♯-D-E-G), it is generally diatonic, but there is a chromatic cluster around the pitches C-C♯-D. Certainly it is not audible as a discrete harmonic unit here, but given the resonance it achieves later in the work, it is worth noting this initial appearance. To summarize, even in this simple opening, the seeds are planted for several different types of harmonic structures and ways of hearing.

The downbeat of Rehearsal 1 immediately signals that whatever functional tonality may have been implied by the opening bars is not to be. We keep the C♯-C clash (now spelled with a D♭), but add an A♭, creating a sonority foreign to any sort of A minor reading, and leading into the chromatically slinking parallel fourths that undergird the next 16 measures.[42]

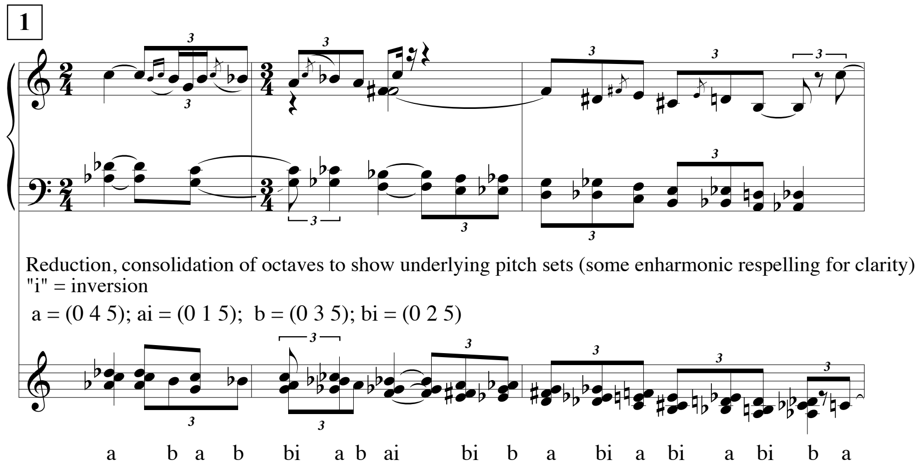
[42] Hill (2000, 60) makes a similar observation on the shift from diatonic to chromatic. Travis (1959) on the other hand sees the entire passage as a "prolongation" of the A♭–D♭–C "tonic" sonority at R1.

One straightforward explanation for the harmony from Rehearsal 1 up to Rehearsal 4 is bitonality, broadly defined. On the one hand, we have the melodies passing between bassoon and English horn, which mostly shift between two diatonic subsets – the A minor one already mentioned and a five-note C♯ minor subset (C♯-D♯-E-F♯-G♯). (The only exception comes at R1, where the bassoon melody drifts down chromatically.) On the other hand, there is the slithering chromatic parallel fourth accompaniment in the clarinets and then bassoons, which exists in a separate, fully chromatic harmonic stream. In this bitonal view, the juxtaposition of these two streams gives the passage its essential harmonic quality, with little concern for the resultant vertical sonorities.

This explanation does account for all of the pitches present, and effectively captures the sense of two audibly separate planes of activity. But it fails to explain the composite vertical harmonies in any meaningful way, treating them as arbitrary byproducts rather than relevant entities themselves. Approaching the passage from the perspective of kaleidoscopic oscillation, on the other hand, reveals patterns and structure in these vertical sonorities as well. When we examine the vertical sonorities at Rehearsal 1, we find a preponderance of two basic pitch sets: (0 4 5) and its inversion (0, 1, 5); and (0, 3, 5) and *its* inversion (0, 2, 5). These pitch sets are very close together in pitch space, linked by a series of one half-step motions. Stravinsky is playing the kaleidoscopic oscillation game, moving between closely related, but slightly shifting harmonies (Figure 2.1.2).[43]

[43] Another way of looking at it is that Stravinsky is playing a game of "fill in the fourth," exploring all four ways of adding a third pitch in the middle of a perfect fourth. This approach will have compelling resonances with some later passages in the work.

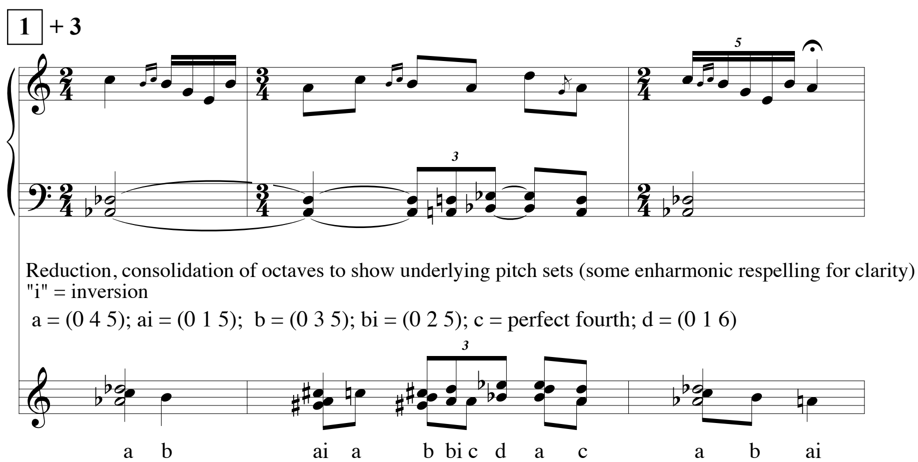
Figure 2.1.2: Kaleidoscopic Oscillation at R1.



An analogy to the asymmetry of diatonic pitch space can be made here. If we have a C major melody in parallel thirds, when it moves from C-E to D-F, the chromatic interval changes from a major third to a minor third. But from a diatonic perspective, it is two versions of the same interval. In diatonic pitch space, these two versions of the third are functionally equivalent in every way, even though they have slightly different absolute sizes in chromatic pitch space. If we analogize this to R1, we can consider the (0 1 5) and (0 2 5) pitch sets (and their inversions) in a similar manner. Our basic harmonic unit here is a second-plus-a-third, but it comes in two different colorations: minor-second-plus-major-third (0 1 5) and major-second-plus-minor-third (0 2 5). Rather than a single point in pitch space representing the harmony here, we have a small, fuzzy region, a cloud of pitch space possibilities that create very similar, but slightly differently colored chords. Stravinsky's procedure here thus speaks to an issue that confronted all early non-tonal composers: how to handle the relationships between transposition, variation, and identity in a non-diatonic pitch universe.

In the three bars from R1+3 to R1+5, a shortened version of the bassoon melody repeats, mostly over the A♭-D♭ fourth, but with some chromatic sliding in the second bar. While the pitch sets continue to be mostly those mentioned above, we do briefly get two new harmonies: a perfect fourth, which in effect adds a third pitch *on* the perfect fourth, rather than inside it; and an (0 1 6) pitch set, which adds a half step *outside* the perfect fourth, rather than within it (Figure 2.1.3).

Figure 2.1.3: Kaleidoscopic Oscillation from R1+3 to R1+5.



At Rehearsal 2, we land on a single stable harmonic unit for three bars (more on this later), before the oscillation picks up again at R3+1, continuing up to R4. As before, (0 1 5), (0 2 5), (0 3 5), and (0 4 5) pitch sets are frequent, but now stacked fourths, the (0 1 6) pitch set, and major and minor triads are added in to the mix as well. There are also a few more-complex four-note chords at R3+1 due to the overlap of the bassoon and English horn melodies. The effect of this is to create a hazier, more complex harmonic landscape just for a moment, before it clears into the familiar oscillating three-pitch texture at the end of R3+2.

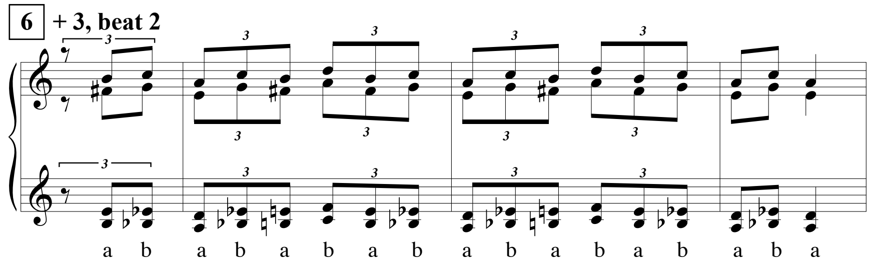
This process of beginning with a very simple and limited set of oscillating chords that evolve into more complex sets of chords is characteristic of the kaleidoscopic oscillation sections throughout the piece. Stravinsky gives our ears a pattern that is initially relatively easy to grasp, using it as a starting point to lead us into more complex terrain.

One further passage in the Introduction can best be explained with kaleidoscopic oscillation: R6+4-9. The material here clearly derives from R1 and R3, but it is treated a bit differently. It has the same slinky chromatic parallel fourths, though now they are strictly contained within a single minor third interval, rather than wending their way down and down, as if they got stuck on the single measure of R3+2. The two upper parts are also mostly in parallel perfect fourths, and are similarly static. As at R1, the resulting harmony is limited to a small number of chords, in this case four – major and minor triads (which are inversionally related), stacked fourths, and minor seventh chords.

There are even simpler basic harmonic patterns lurking below the surface. This passage is a good example of a "warped system," close to purely systematic, but slightly altered. Figure 2.1.4(a) shows a sort of platonic re-imagining of the passage – a systematic scheme of two sets of parallel fourths that create an exact alternation of only stacked fourth (0 5 7) chords and minor seventh chords. Below (2.1.4(b)), we can see the actual version Stravinsky wrote, with an "X" marking the deviations from the "platonic" scheme. The only changes come in the "alto" voice (English horn in the orchestra score), which moves its E's on the downbeats up one half-step to F, and it's final note up to F♯.

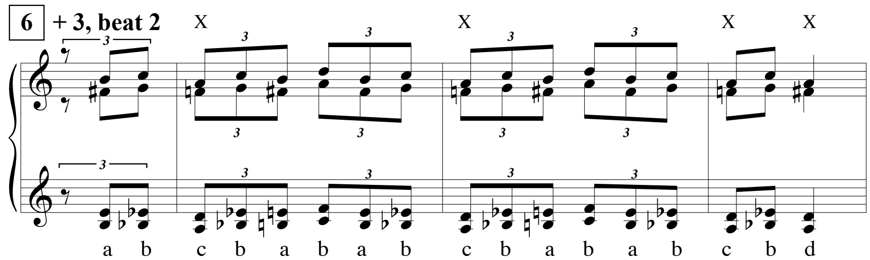
Figure 2.1.4: "Platonic" scheme for R6+4-9, and Stravinsky's actual realization. Grace notes are removed for clarity.

(a) "Platonic" version: pure parallel fourths, alternation between two chord types.



a = (0 5 7); b = minor seventh chord

(b) Stravinsky's "altered" realization. "X" marks changes from above version.



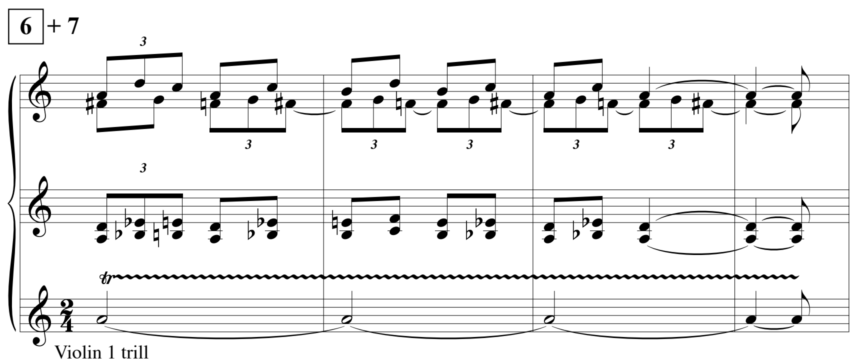
a = (0 5 7); b = minor seventh chord; c = minor triad; d = major triad

It's a subtle difference, so why not just have it be purely systematic, as in 2.1.4(a)? The D-major chord on beat 2 of R6+6 is the key. This chord creates a sudden brightening of the sound, especially since it is joined by a trill in the first violin – the first time we've heard a bowed string instrument in the whole piece. This would not have the same brightening effect if it were the fourth-y A-D-E-A chord created by the "platonic" scheme above. Once this D-major chord is in place, it is further emphasized by contrasting it with the D-*minor* triads that land in the equivalent spots earlier – again, this contrast would be lessened if there had been A-D-E-A chords instead of D minor chords.

Continuing on at R6+7, the process warps further. The English horn moves into a more repetitive holding pattern alternating F♮ and F♯, the other parts slow to duples against the

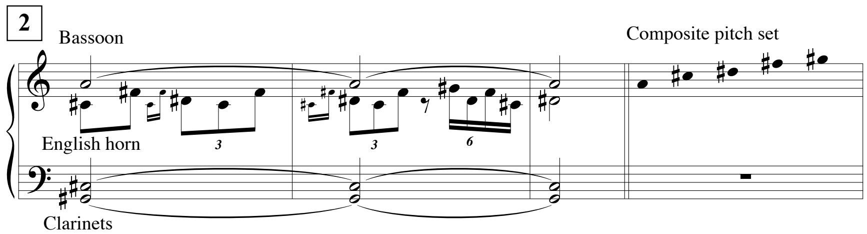
English horn triplets, with a brief change in direction on the first beat of R6+7, and there is the violin A-B trill against it all (Figure 2.1.5). The key point is that Stravinsky is creating something that is close enough to a predictable process that our brain latches onto it, but then he warps it, keeping us on our toes and moving forward. In a similar manner to R1, the pattern here also starts out more regular and simple, becoming more warped and complex as it progresses. Furthermore, the resulting sonorities of these warped processes are not mere byproducts, but meaningful entities themselves (e.g., the D major chord above).

Figure 2.1.5: Further warping at R6+7.



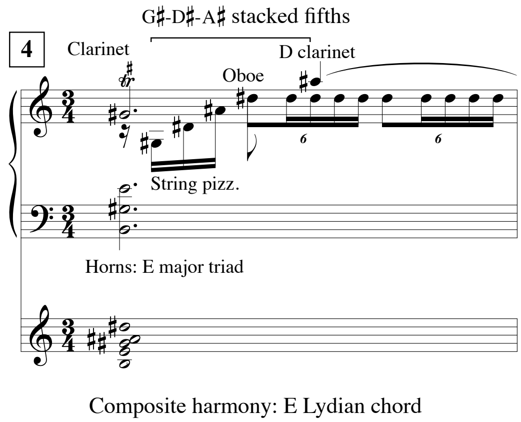
The rest of the Introduction is dominated by field harmony. I largely follow Tymoczko 2002 in his readings of the Introduction's field harmonies, but will note any deviations. Beginning at R2, the clarinets and bassoons come to rest on G♯-A-C♯, one of the (0 1 5) pitch sets from the previous section of kaleidoscopic oscillation. The English horn then has a melody over this in the (0 2 5 7) stacked fourth-y pitch set of C♯-D♯-F♯-G♯ (with melodic emphasis on the fourth intervals). The total pitch set of this melody over the sustained trichord is C♯-D♯-F♯-G♯-A, a C♯ minor-ish subset, though with important mode-defining pitches missing (Figure 2.1.6). This same pitch set will crop up again soon, in a different context.

Figure 2.1.6: Harmony at R2



At R4, after many measures of chromatically slithering fourths, we have our first strong harmonic arrival. The composite pitch set is what a jazz musician would call an E Lydian chord (E major7 + ♯4, or E-G♯-A♯-B-D♯). It is voiced in such a way that it naturally breaks apart into two strands: a second-inversion E major triad in the horns, and a G♯-D♯-A♯ stack of fifths in the pizzicato strings, oboe, and D clarinet. The trilling clarinet on G♯ and A♯ acts as a sort of glue connecting these strands together. These two strands – the E major triad and the stacked fifths – play significant roles later in the piece, and so does the composite E Lydian harmony. We need not decide whether this sonority should be considered a juxtaposition of these strands or a single cohesive harmonic entity. It is both, and both ways of considering it resonate with later harmonic events. (See Figure 2.1.7).

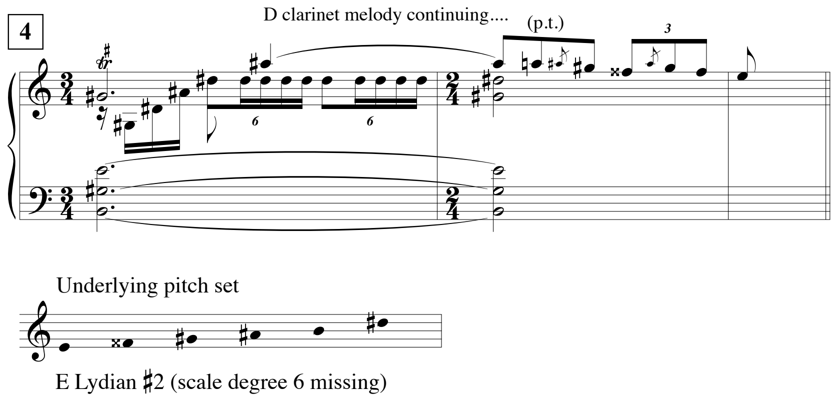
Figure 2.1.7: Harmony at R4.



If we continue on, the D clarinet melody adds one more note to our composite pitch set: an F-double-sharp, giving us a total pitch set of E-F𝄪-G♯-A♯-B-D♯. I consider the A♮ to be a passing tone here for several reasons: 1) it is de-emphasized metrically, both as the second note of a triplet, and because it lacks a neighboring grace note; 2) it is the only melodic pitch that appears only once, aside from the final, strong-beat E; and 3) because in this and subsequent reiterations of the melody, it is the only pitch that consistently clashes with the background harmony. Although scale degree 6 is missing, we almost have one of our seven-note scales present: the E Lydian ♯2 mode of G♯ harmonic minor.[44] This pitch set has powerful resonances with things to come, and we will return to it in a bit. (See Figure 2.1.8.)

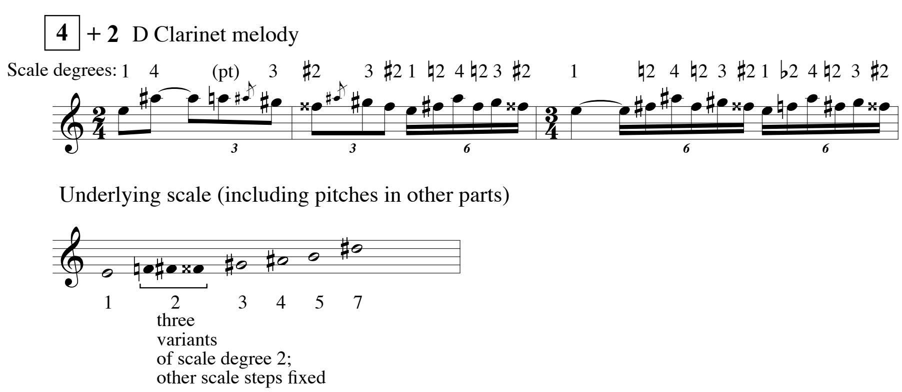
[44] Tymoczko (2002, 78) similarly labels it as "G♯ Harmonic Minor," without specifying a more specific mode or "tonic." Chua (2007, 88-89) also has a similar take, but labels it as an "altered Kalindra scale" – a type of Russian folk scale – and identifies E♭ rather than E♮ as the "tonic."

Figure 2.1.8: Harmony at R4 including D clarinet melody.



Continuing on, as we follow the D-clarinet melody up to Rehearsal 5, we get a few more chromatic notes that fill the space between E and G♯ with each of the three possible notes in between them (F, F♯, and F𝄪). Against these shifting versions of F, the E, G♯ and A♯ remain constant in the melody, implying a stable scale with a moveable scale degree 2. In other words, we have fixed pitches of E-G♯-A♯-B-D♯, with a movable scale degree 2 that can be either F♮, F♯, or F𝄪 (Figure 2.1.9).

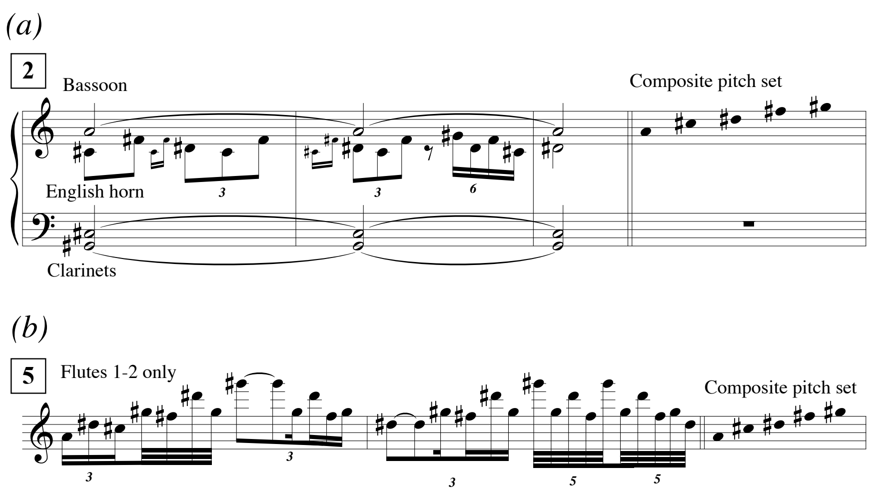
Figure 2.1.9: D Clarinet melody with three types of scale degree 2: F 𝄪 = #2; F# = ♮2; F♮ = ♭2 (some enharmonic re-spellings to reflect this scalar interpretation).



As we will see, these scalar variants have surprisingly deep resonance with later events. If we factor in the passing A♮ as well, we end up filling in all of the chromatic pitches between E and A♯, which we will see also has deep resonance with later events in the work.

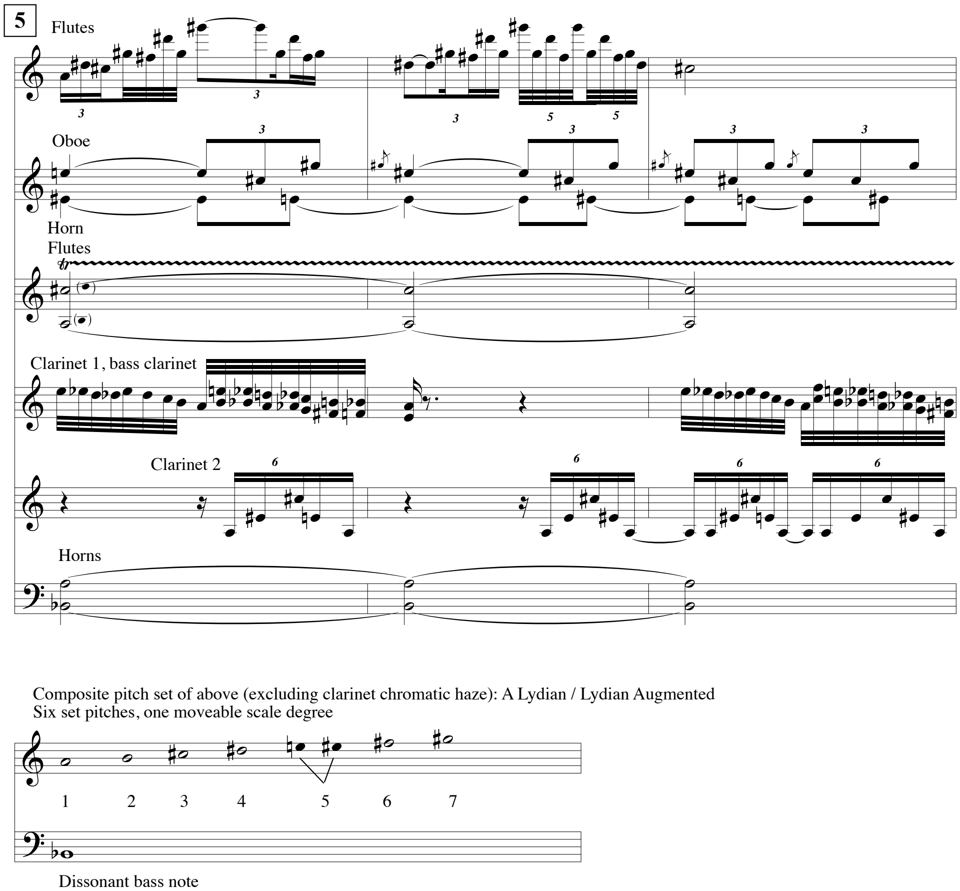
Rehearsal 5 provides another example of the moveable scale degree technique. The flute filigree inhabits a familiar pitch set – the same one as Rehearsal 2, A-C♯-D♯-F♯-G♯. It even emphasizes the same stacked fourth-y C♯-D♯-F♯-G♯ subset (Figure 2.1.10).

Figure 2.1.10: Comparison of pitch set at R2, flutes at R5.



When this line combines with the other flutes, oboe, clarinets, and horn 1, it creates a scalar pitch set with one moveable scale degree: A Lydian / A Lydian Augmented (Acoustic), or the pitches A-B-C♯-D♯-**E/E♯**-F♯-G♯. The moveable scale degree interpretation is further supported by the motivic alternation between E and F in oboe, clarinets, and horn 1. The complicating factor here is horn 4, which adds a low B♭ underneath, casting a gentle haze of dissonance into the above proceedings (Figure 2.1.11). The chromatic waves in the clarinets add some additional haze, and also refer back to the chromatic parallel fourth motives at R1 and R3.

Figure 2.1.11: Pitch set at R5.



Continuing on, Rehearsal 6 plays with motion between and overlaying of closely related scales. The English horn has a simple three-pitch (0 2 5) set on F-G-B♭. The alto flute noodles around in B Locrian ♯2 (B-C♯-D-E-F-G-A). The other flutes and bassoon sustain B, D, and C♯ against this, which are also contained within the B Locrian ♯2 scale. And finally the bass clarinet burbles underneath on the pitches of an E half-diminished 9th chord (E-G-A♯-D-F♯).

There is certainly a significant degree of polytonality at play here, with the alto flute, English horn, and bass clarinet melodies all occupying distinctive bands of pitch material. However, if we look at the common elements between the different strands, and the background sustained pitches, we can also find some unifying harmonic logic. Given that the bass clarinet ultimately provides the harmonic bass, it seems reasonable to consider E to be the root of the harmony.[45] Building up the scale from E, the following scale steps exist in only one form: E-G-B-C♯-D. These are the stable scale degrees, with scale degrees 2 (F/F♯) and 4 (A/A♯) movable.[46] Now we can consider all four scales that are possible given the different combinations of the movable scale degrees: E Dorian ♯4 (E-F♯-G-A♯-B-C♯-D), E Dorian (E-F♯-G-A-B-C♯-D), E Dorian ♯4 ♭2 (E-F-G-A♯-B-C♯-D), and E Dorian ♭2 (E-F-G-A-B-C♯-D). If we consider these scales to each have a distinct color, we can think of this passage as shifting shades of color, as different versions of this E-rooted scale move in and out of focus (Figure 2.1.12).

Figure 2.1.12: Shifting scales at R6.

[45] Before it enters, the harmony is more centered on B, since this is the center of gravity for the alto flute melody and it is also the lowest sustained pitch, in the bassoon. For clarity, I will continue the analysis with E as the "tonic," while fully acknowledging a degree of ambiguity.
[46] Note that I am interpreting the B♭ in the English Horn as an A# for the sake of constructing scales.

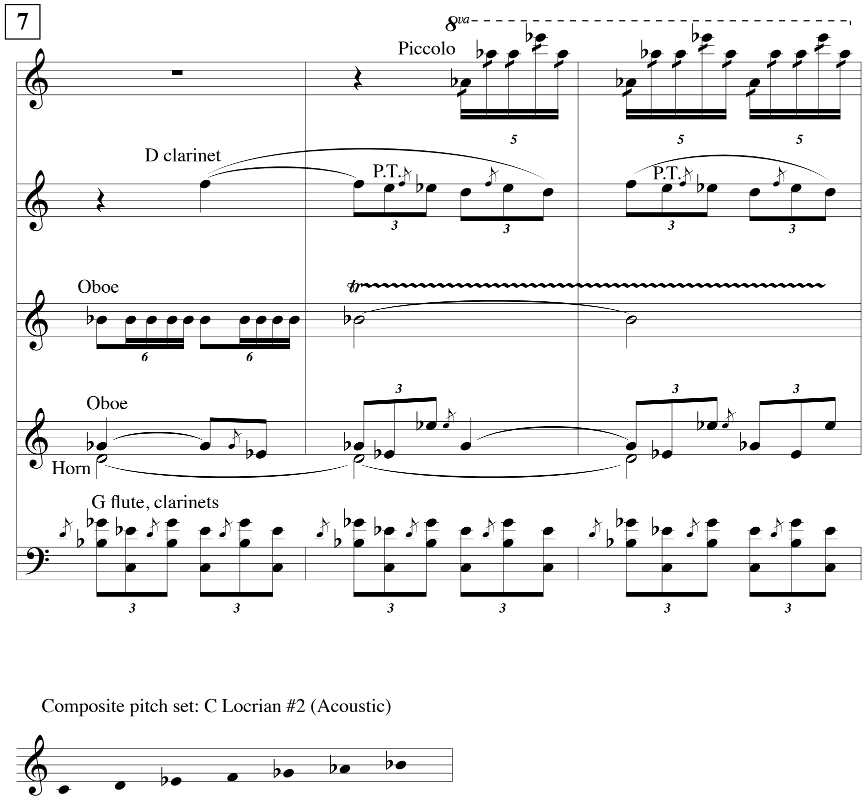
This shifting scales interpretation of the passage helps provide an explanation for how and why the passage sounds harmonically coherent. We do indeed hear the independent layers of activity, but we also hear a composite sonority that makes sense. When we think about the passage as a kaleidoscopic shimmering between different scales, each with a slightly different harmonic color, it all comes into focus.[47]

Continuing on, we already considered the Kaleidoscopic Oscillation at R6+4 (Figure 2.1.4). The flute flourish at R6+10 could be logically parsed as an A major triad followed by an A♭ major triad, followed by a C-F-G-B♭ stacked fourth sonority. The first five pitches have resonance with the flute passage at R5, comprising the same pitches in the same register (plus an E), and the stacked fourths can be connected to the many other stacked fourth motives in the Introduction. That said, I am hesitant to ascribe too much meaning to it, since it goes by in a blur. Sometimes a connecting flourish is just a connecting flourish.

Moving on to Rehearsal 7, the controlling scale here is quite clearly C Locrian ♯2 (Acoustic).[48] If we again hear the E♮ in the D clarinet as a chromatic passing tone (as we did with the equivalent A♮ at Rehearsal 4) then the pitches present are exactly those of this scale and no others (Figure 2.1.13). Note also the flute part with its fluttering G♯-D♯ fifth: this relates back to the similar figure in the flutes at R5, as well as to the pizzicato stack of fifths at R4.

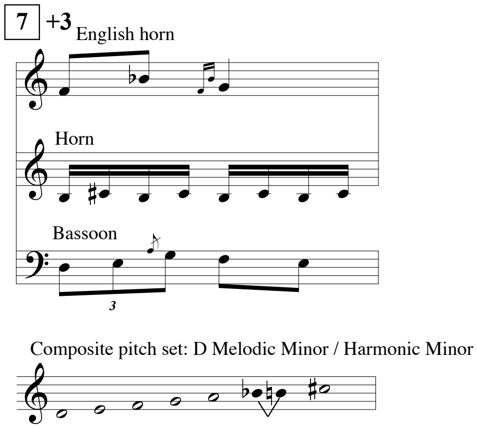
[47] Tymoczko (2002, 76-78) similarly presents a scalar interpretation of this passage, but breaks the scales apart differently, emphasizing the simultaneous occurrence of different registrally distinct scales, rather than the "movable scale degree" interpretation advanced above. My approach implies a greater degree of harmonic cohesion to the passage, while his implies greater harmonic distinctiveness between the different registers. Both interpretations are plausible and in different ways capture the sense of both harmonic cohesion and ambiguity in the passage.
[48] Tymoczko (2002, 75) identifies the same pitch set, but labels it as E♭ melodic minor, since his focus is on discussing melodic minor scale pitch sets generally, rather than specific modes.

Figure 2.1.13: C Locrian ♯2 at R7.



The contrasting bits at R7+3 and R7+5-6 come directly from R6, minus the burbling bass clarinet. However, the orchestration and registration change the harmonic affect, even as the pitch content remains almost the same. As at R6, the three motives inhabit their own distinctive pitch areas. But since the bass clarinet part is gone, and the previous alto flute melody is now an octave lower in the bassoon, D becomes the harmonic bass, rather than E. The bassoon plus the horn create a very strong sense of D melodic minor, as their composite pitches add up exactly to that scale (bassoon plays D-E-F-G-A, horn B-C♯), while the English horn throws a B♭ into the mix, giving it a harmonic minor coloring (see Figure 2.1.14). The contrast between these passages is a good illustration of how much of an impact registration and timbre can have on how we perceive even very similar pitch sets.

Figure 2.1.14: Pitch set at R7+3.

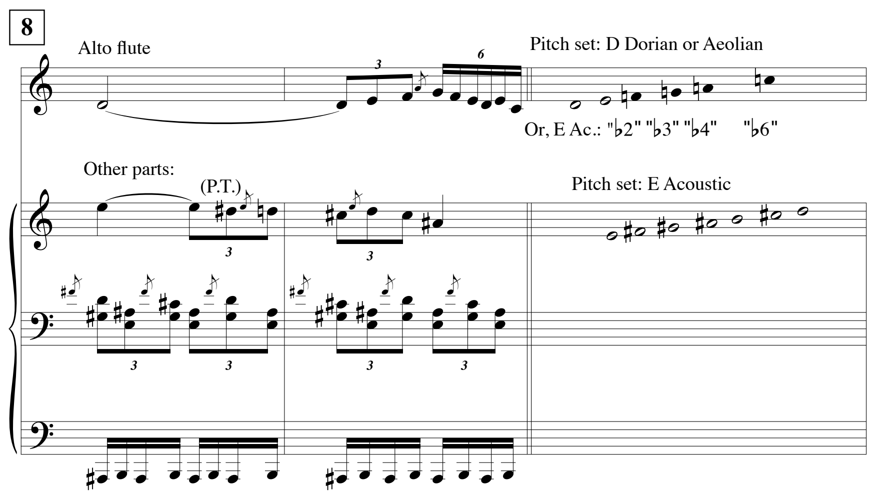


Rehearsal 8 takes much of the material from R7 and modally transposes it, essentially into an E acoustic mode.[49] As at R6, there is some ambiguity here about what constitutes the "root." It could be B or B♭ as well as E. To my ear, E sounds like the root, with the B♭ as a neighbor to the bottom B, giving it a "6/4" quality, similar to the effect of the bass B at R4. As at R6, I will carry on with an E-centric analysis, while again acknowledging the bass ambiguity.[50] This E Acoustic mode is clearly present in most of the voices, although the alto flute part is an outlier, as it picks up a variant of its noodling melody from R6, first in a D minor subset (Aeolian or Dorian) and then in a D Mixolydian one. A bitonal interpretation is quite plausible here, as the alto flute does sound like it's off in a different harmonic world of its own. However, the basic E acoustic sound is strong enough that the effect is of the alto flute playing *outside of* the underlying tonality, rather than of a balanced juxtaposition of different modes. And the D-ness of the alto flute part only really comes into focus retrospectively at Rehearsal 9 when the texture

[49] Van den Toorn (1983, 125) calls this passage "wholly octatonic," but disregards the grace note F♯'s, which, to my ear, tip the scales to E Acoustic.
[50] Tymoczko (2002, 75-76) favors B♭ as the "root," but otherwise analyzes the passage similarly.

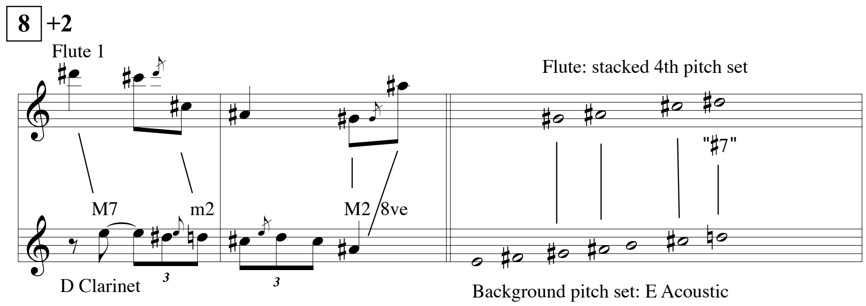
clears out. At Rehearsal 8 itself, then, the effect is more of strange "blue notes" murmuring in the background; the F G, A, and C in the alto flute are like lowered 2, 3, 4, and 6 scale degrees, clashing with the raised versions of these scale degrees in E acoustic – a hint of E Phrygian color against the prevailing E Acoustic sound (Figure 2.1.15).

Figure 2.1.15: Relationship of alto flute to prevailing harmony at R8. The alto flute line can be heard to be in D Dorian/Aeolian, or it can also be considered a "flatted" inflection of the E Acoustic scale that dominates the rest of the harmony.



The first flute part at R8 also clashes a bit with the E acoustic tonality in an intriguing way. Initially, this line seems to function as a dissonant shadow at the major seventh of the D clarinet melody – a similar effect to the parallel major seventh harmonization that happens much later, at Rehearsal 94 in Part 2. However, as this part unfolds, it turns out to be another (0 2 5 7) stacked fourth pitch set, similar to other ones we've heard, especially in the flute – G♯-A♯-C♯-D♯. The only pitch here that clashes with E acoustic is the D♯, which shades things in an E Lydian direction. So this flute part then has the effect, all at once, of dissonantly harmonizing the D clarinet melody; introducing another stacked fourth pitch set, tying it to the other similar sets in the Introduction; and slightly brightening the harmony from E Acoustic to a hint of E Lydian (Figure 2.1.16). In the end, then, the E Acoustic sonority remains primary from R8 up to R9, but it is simultaneously darkened by “flatted” inflections in the alto flute, and brightened by the “raised 7” in flute 1.

Figure 2.1.16: R8+2, Flute 1 and D Clarinet. The flute creates a dissonant shadow of the clarinet melody, forms its own stacked fourth pitch set, and slightly brightens the underlying E Acoustic tonality with a D# “#7.”



Rehearsal 9 has a strongly bitonal effect. The D-Mixolydian alto flute line meanders below the F-B♭-C-E♭ stacked fourth pitch set in the other parts, creating a highly dissonant composite pitch set – D-E♭-E-F-F♯-G-A-B♭-C. And yet this passage doesn’t *feel* particularly dissonant, because the bitonal juxtaposition also adds up to a coherent underlying harmony. The alto flute line highlights the pitches of the D major triad; every beat starts with a D, except for beat 3 of R9, which sits on an F♯ trill for most of the beat, and A is always the highest note reached. If we combine this D major triad with the stacked fourths above it, we end up with a coherent chord: in jazz parlance, a Dominant ♭13-♯9-♭9 chord. If we stack these pitches into a scale, we get the Phrygian ♭4 mode of harmonic major (Figure 2.1.17). If we jump way ahead and take a look at the opening harmony of Part II, we find the same pitch set (minus the C), but voiced as juxtaposed half-step-related minor triads, rather than as an extended dominant chord

(Figure 2.1.18). As we will see later, this harmony and mode become central to much of Part 2. Of course, there are also E♮'s and G's in the alto flute line that fall outside of the above harmony, muddying the waters and enhancing the element of bitonal juxtaposition, which co-exists with the composite harmony described above.

Figure 2.1.17: Harmonic reduction of R9.

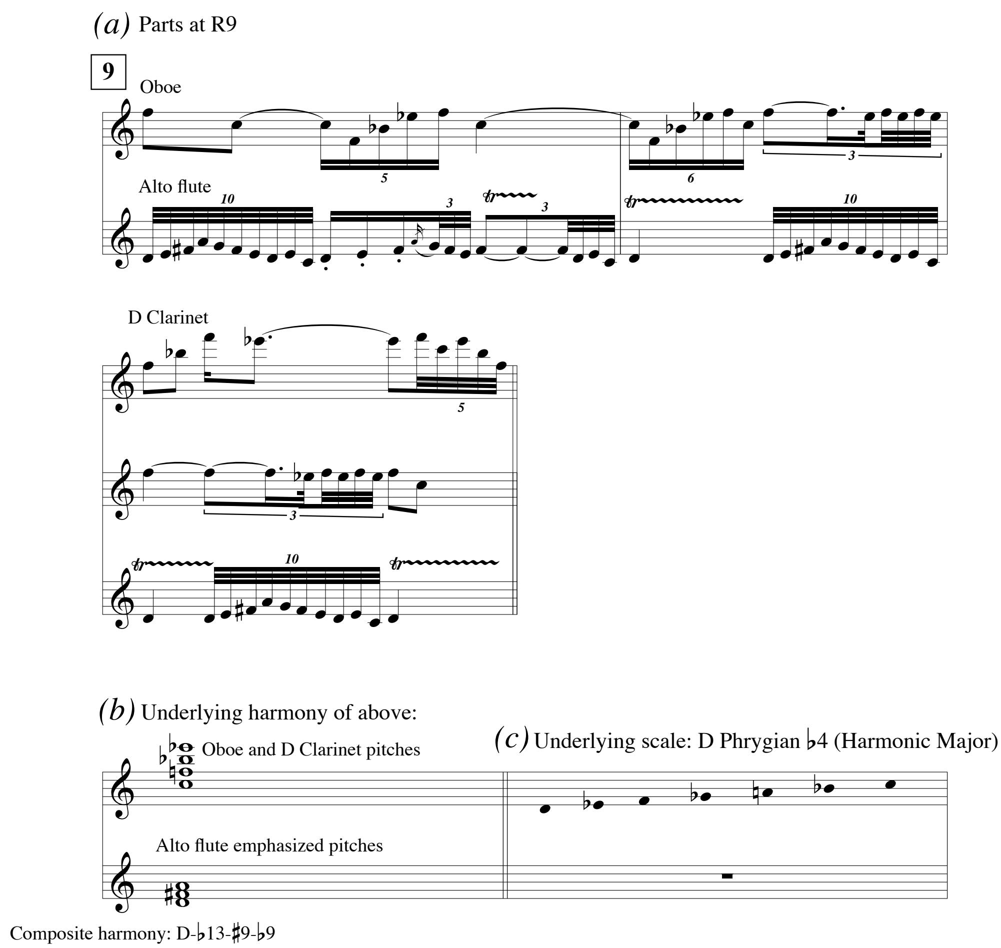
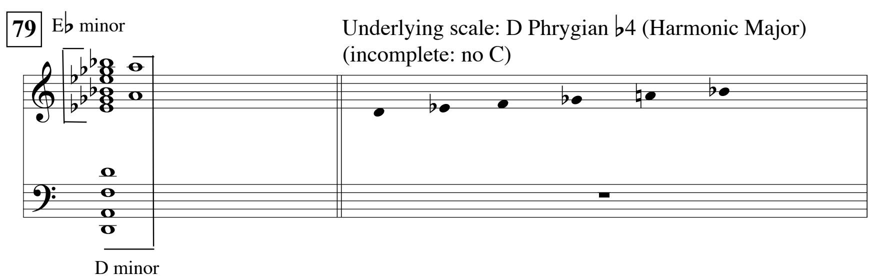


Figure 2.1.18: Opening sonority of Part 2 built on the same D Phrygian ♭4 scale, but partitioned into half-step related minor triads.



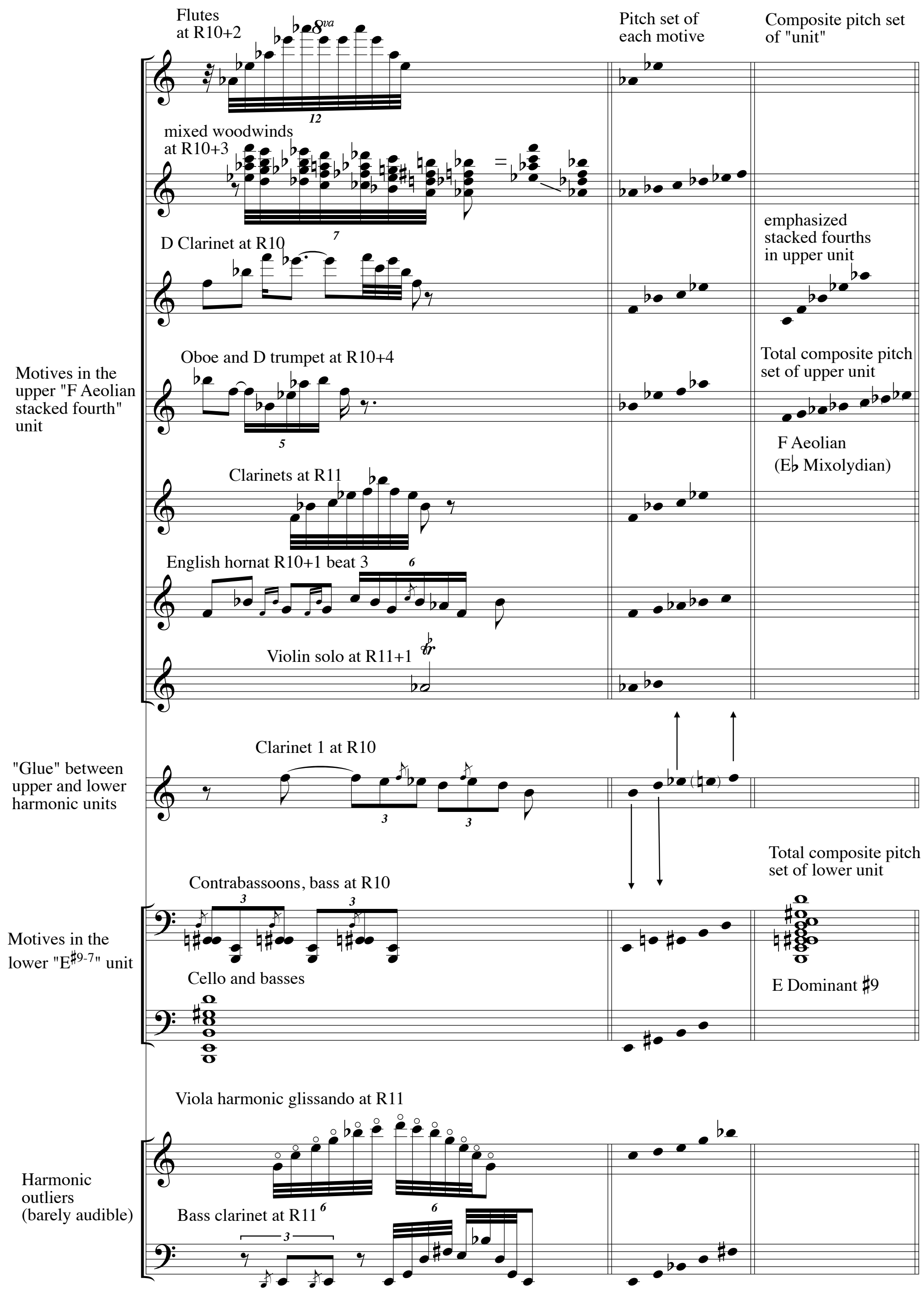
Finally we reach Rehearsal 10, the culmination of the Introduction, bringing together all of the different motivic ideas heard up to this point (except for the opening bassoon melody). It's a very dense texture, but the harmony is more coherent than might be expected. Let's first look at the different harmonic strands in play, and then we'll try to make sense of the composite whole.

On the bottom, in the cellos, basses, bassoons, and later horns (at R11), we have an E Dominant ♯9 chord, voiced, as on so many previous E harmony occasions, with the fifth (B) in the bass. Above this, we find several different parts that can be harmonically grouped together, as all are emphasizing stacked fourth sonorities emanating from the F-B♭-C-E♭ sonority introduced in the previous section. The D clarinet continues its pattern on these pitches from before. The English horn picks up the motive it had at R3 and R6, which emphasizes the F-B♭ fourth, and also adds a G to the mix. The flutes pick up their A♭-E♭ (I enharmonically re-spell for clarity) flitting from R7, which extends the fourths out one more fourth to A♭. Then in the bar before R11, oboe and D trumpet enter with the oboe melody from R9, transposed up a fourth. It emphasizes the B♭-F fourth as well, and its total pitches – B♭-E♭-F-A♭ – are also contained within this upper register pitch set. Finally, if we factor in the chromatic fluttertonguing in the woodwinds, and consider the starting and ending chords to be harmonically salient, we move from an E♭-A♭-C-F chord to A♭-D♭-F-B♭, which has the net effect of adding a D♭ into the mix. If we now consider the composite pitch set of all of these fourth-y upper register parts, they add up to a single diatonic scale – F Aeolian / B♭ Dorian (depending on how you hear the tonic). This is the complete pitch background of these parts, with particular emphasis on the C-F-B♭-E♭-A♭ stacked fourths.[51]

There are, of course, several other parts going on as well that muddy the waters a bit. The solo violin adds a G♯-A♯ trill which fits in with the above stacked fourths material. The first clarinet is playing the slinky chromatic figure from R4 connecting F and B, which can be seen as a sort of glue between the stacked fourths on top and the E Dominant below. The bass clarinet plays its E half-diminished 9 licks from rehearsal 6, which can be considered part of the bottom "E Dominant" unit; the E, G and D already fit with the E dominant ♯9 harmony, and the F♯ and A♯ can be considered further overtone extensions of this harmony to the 9th and ♯11th. Finally, the violas play a C Dominant 9 harmonic glissando, which is undeniably a harmonic outlier in the above scheme. Perhaps it foreshadows some of the C-E♭ juxtapositions to come later in Part I. In reality, I have never been able to hear it in any recording or live performance, and it is not in Stravinsky's four-hand piano reduction. Even though present in the score, it is difficult to make the case that it actually contributes to the harmony heard in a real performance in any meaningful way. Despite the complications of these other parts, the basic units of fourth-y F Aeolian over E Dominant ♯9 remain audible, with some additional haze created by these other harmonic outliers (Figure 2.1.19).

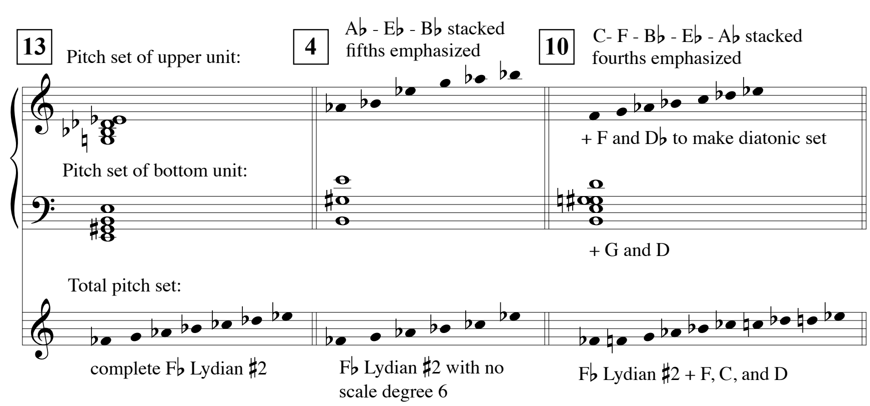
[51] Van den Toorn's analysis (1983, 125-126) is somewhat similar, as he identifies the upper diatonic component (which he considers to be F Dorian) in combination with an octatonically conceived E dominant-seventh on the bottom.

Figure 2.1.19: Harmonic blocks at R10-R12.



This juxtaposition of an E chord on the bottom and stacked fourths on top should be familiar: it is quite reminiscent of R4, where we had an E major triad in the bass (also with B on the bottom, as at R10), and G♯-D♯-A♯ fifths above. R10 can therefore be thought of as an intensification of this sonority. Instead of E major in the bottom, we now add a seventh and a sharp ninth (minor third). And on top, the fourths are extended out in both directions until they add up to a complete diatonic scale. The total pitch set is quite dense – E-F-G-A♭-B♭-B-C-D♭-D♮-E♭, for ten pitches in all – but it makes sense because our ears have been primed to hear it as an extension of the simpler E Lydian ♯2 harmony at R4. Looking ahead for a moment to the famous chord at Rehearsal 13, we can see that this is in fact almost the same chord as R4 – it is all seven pitches of E Lydian ♯2 sounding together (R4 had all but one of these pitches present).[52] If we now consider R4, R10, and R13 in sequence, it's not difficult to hear them as different manifestations of the same underlying harmonic idea. But what a difference orchestration and registration make, from the glowing spaciousness of R4 to the registrally expansive, dense, and complex R10, to the compact, homogenous crunch of R13 (Figure 2.1.20).

Figure 2.1.20: Comparison of composite pitch sets and partitioning at R13, R4, and R10



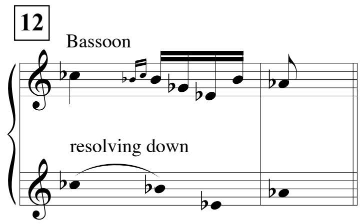
[52] Tymoczko (2002, 78) also connects R4 to R13 in a similar manner.

The important point is that even Stravinsky's most dissonant, dense, and chaotic-seeming superimpositions are often also controlled and related to other harmonies in the work in interesting ways.

Continuing on, at Rehearsal 12, the opening bassoon solo comes back a half step lower than it was at the opening. This is an early example of a pattern we will see recurring throughout the piece: a "sinking half-step" tendency, with events recurring a half-step lower on various levels, from the local to the global. Another possible explanation for the semitone drop is voice-leading. Especially due to the prominence of the D trumpet line, the section before R12 ends with a B♭ reverberating as the primary melodic note. The bassoon melody C♭ then has the effect of an upper neighbor resolving to that same B♭ (Figure 2.1.21). Furthermore, the bassoon melody as written ends up emphasizing the pitches B♭, A♭ and E♭, which are consistent with the stacked fourth pitches in the previous section. If the bassoon instead emphasized B, A, and E, as it does at the beginning of the piece, they would actually seem "too high" coming out of the preceding harmony. I would not be surprised if Stravinsky initially tried writing the bassoon melody at the same pitch level as the opening, but it just didn't sound right, so he tried it a half-step lower. [53]

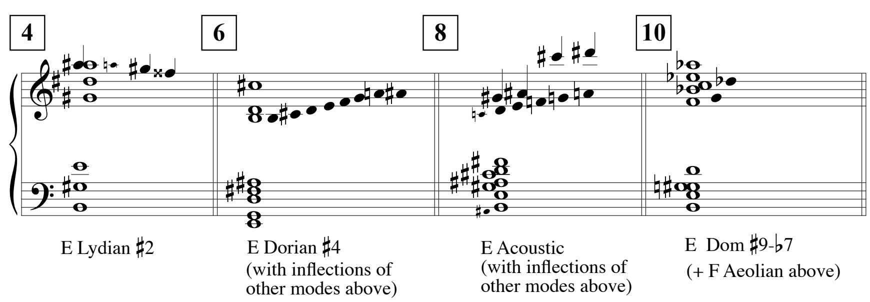
[53] Another consideration is Hill's observation that the bassoon melody now outlines an E♭ minor triad (rather than the E minor of the opening), setting up the E♭ tonality of the next dance (Hill 2000, 63).

Figure 2.1.21: Bassoon solo at R12. C♭ as upper neighbor resolving down to B♭.



Arguably the most important harmonic thread through the Introduction and into "The Augurs of Spring" is the development of the E Lydian ♯2 sonority. This is the sonority we get at the first strong harmonic arrival at Rehearsal 4, and it is, in expanded form, also the sonority that ends the whole Introduction, as we saw above. A bit more speculatively, a version of it may also be heard at Rehearsal 6 and Rehearsal 8. At R6, we have another harmonic minor mode built on E (Dorian ♯4) as one of the main scales in play (E-F♯-G-A♯-B-C♯-D), a sonority quite similar to that of R4. At R8, the E Acoustic harmony is also very close to R4, with only two half step shifts (F♯→G, D→D♯) needed to voice-lead between them (Figure 2.1.22).

Figure 2.1.22: E-rooted harmonies in the Introduction



With these E pillars in place, we can hear the other harmonies as contrasting secondary pitch areas leading between them, bringing a coherence and focus to the flow of harmony in the

Introduction. It is of course noteworthy and characteristic that these E areas are quite different from one another, both in terms of the exact pitches present and also the texture. In a sense, Stravinksy is applying the kaleidoscopic oscillation idea on a larger scale, to relationships between different sections of field harmony, rather than individual chords. The effect is powerful: on the surface, the music seems ever-evolving and changing, and yet we can feel a coherence and familiarity due to the similarity of the underlying harmonic structures.

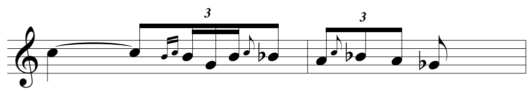
Zooming out, we can summarize the basic harmonic shape of the "Introduction" as follows: beginning in A minor-ish, Rehearsal 1 through 4 presents some of the main thematic material over downwardly meandering chromatic parallel fourths, creating a kaleidoscopic oscillation pattern of primarily (0 1 5), (0 2 5), (0 3 5), and (0 4 5) sets. Beginning at Rehearsal 4, a variety of E-based harmonies alternate with contrasting harmonic areas, culminating in the big build-up over a complex E-rooted harmony from R10-R12. [54] At R12, the opening returns a half-step lower, in A♭, leading into a transition to the next dance.

There is also a quality of "kaleidoscopicity" to the development of motivic material in the Introduction. Stravinsky is constantly re-interpreting the pitch content of his motives to make them fit against the background harmony in a great variety of ways. Consider first one of the section's characteristic motives, the slinky tritone-spanning melody that we first hear at Rehearsal 1 in the bassoon (Figure 2.1.23), and which appears at several different pitch levels over the course of the Introduction: beginning on C (R1, bassoon), F♯ (R1+1, D clarinet), A (R3+1, bassoon), B♭ (R4 D clarinet), F (R7 D clarinet), E (R8 D clarinet), and F again (R10 A

[54] Cacioppo (1992, 129-132) has a somewhat similar analysis, though he attempts to place it in a functionally tonal context.

clarinet). In addition to appearing at several different pitch levels, the relationship of the motive's pitches to the underlying harmony is also different on each iteration.

Figure 2.1.23: "Slinky tritone" motive: bassoon at R1.

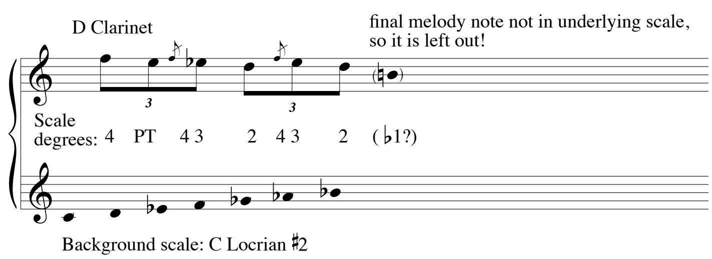


At both R1 and R3+1, the melody is set over chromatically moving parallel fourths, but its relationship to them changes. At R1, the fourths come in to form an (0 4 5) set with it, while at R3+1 they form an (0 3 5), and the two harmonizations, though both playing the "fill in the fourth" game described earlier, do it in different ways. R1 mostly alternates the "a" (0 4 5) and "b" (0 3 5) sets, while R3+1 is all "b"s (Figure 2.1.24). Additionally, at R3+1 the English horn joins in with another melody that adds further complexity to the harmony.

At R4, the melody appears in the D clarinet. Here, the first note is scale degree 4 of the underlying E Lydian ♯2 tonality, descending down to the tonic E, all using scale pitches except for the chromatic passing A♮. At R7, the melody starts on scale degree 4 again, this time of the underlying C Locrian ♯2 (Acoustic) mode. Again, the second pitch is a chromatic passing tone to scale degree 3, followed by scale degree 2. In this case, however, the motive is truncated, never reaching scale degree 1. Why is this? If Stravinsky had maintained the interval content of the motive as it appears in every other instance, its final note would be a B♮ – a pitch which does not appear in the underlying C Locrian ♯2 mode, and which is left out of this version (Figure 2.1.25).

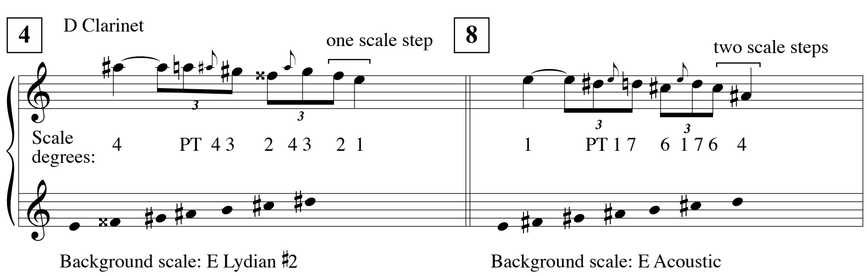
Figure 2.1.24: Comparison of "slinky tritone" motive settings at R1 and R3+1.

Figure 2.1.25: Missing final note in slinky tritone motive at R7



At R8, the motive begins a half-step lower, starting on E. As in our previous examples, the second pitch functions as a chromatic passing tone, and the other notes are all scale degrees. In this case, the motive starts on scale degree 1, descending to scale degree 7, 6, and then 4. In a sense, it is the mirror image of the same motive at R4, descending from scale degree 1-4 instead of 4-1, from E-A♯ instead of A♯-E. There is, however, a subtle difference in how the scale degrees function. At R4, aside from the chromatic passing tone, the motive descends by single scale degrees – 4-3-2-1. At R8, on the other hand, it skips scale degree 5 – descending 1-7-6-4 – even though it has exactly the same intervallic content. This is due to the different structures of the underlying scales. The harmonic minor mode has one augmented second scale step, which the motive exploits at R4 between scale degrees 2 and 1. But the Acoustic mode has only major and minor seconds; thus at R8, that final interval is functionally a minor third, not an augmented second, and therefore it skips one scale step. It's a subtle distinction, but shows once more how Stravinsky re-interprets the scalar content of a motive in order to make it function in a variety of different contexts (Figure 2.1.26).

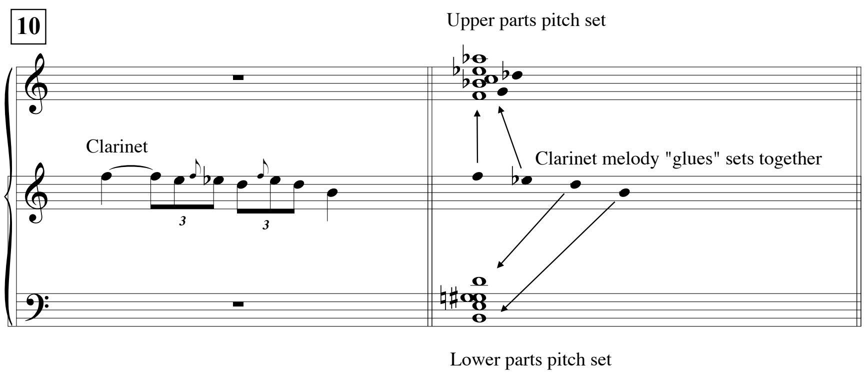
Figure 2.1.26: Comparison of slinky tritone motive settings at R4 and R8. Same final chromatic interval, but different number of scale steps.



In the motive's final appearance, at R10, it appears in its most harmonically complex context yet. It is the same pitch level as it was at R7, beginning on F, but with an E harmonic underpinning that is more similar to its statements at R4 (where it began on A♯) and R8 (where it began on E). Here the motive, rather than having a clear relationship to an underlying scale, acts as a sort of glue between the E Dominant ♯9 bass harmony and the stacked 4th upper harmony:

the F and E♭ belong to the stacked 4th universe, while the D and B belong to the E Dominant ♯9 universe (Figure 2.1.27).

Figure 2.1.27: Slinky tritone motive as harmonic glue at R10.



In summary, we can sort the appearances of this motive in several different ways, and each way intersects with others in a rich interweaving of associations. It appears twice against chromatic fourths, but each time at a different pitch level, and each time creating different (but similar) harmonies against the fourths. It appears twice at the pitch level F, but once in a scalar context built on C Locrian ♯2 (Acoustic), and once as the glue in a dense harmonic complex built on E. And it appears three times over an E-based harmony, but each time the harmony, pitch level, and scalar relationship to the harmony are different. Figure 2.1.28 charts the various correspondences between these different settings.

We clearly hear this motive as a discrete entity every time it appears, and yet each time it is set and colored differently on multiple levels. There is a parallel with common practice here. It is analogous to a tonal composer setting the same melody in different keys, so that the same pitches take on different scale degrees. Figure 2.1.29 shows an example from the Bach chorales.

Stravinsky's innovation is in applying this basic principle far more broadly, with a vastly expanded palette of scales and harmonies.

Figure 2.1.28: Chart of settings of "slinky tritone" motive.

Starting Pitch

Harmonic Setting	**E**	**F**	**A**	**B♭**	**C**
Parallel 4ths			R3+1		R1
C Locrian ♯2		R7 (melody incomplete)			
E harmony	R8 (E Acoustic)	R10 (4ths stack + E Dom. ♯9)		R4 (E Lydian ♯2)	

Figure 2.1.29: Bach setting the same melody first in B Minor, then in D major. The scale degrees of the melody are written above it in both cases.

(a) "Herzlich thut mit verlangen" (B.A. 39 #18) - setting in B Minor

(b) "Herzlich thut mit verlangen" (B.A. 4, #186) - setting in D major

Stacked fourths/fifths are another salient motive in the Introduction – and throughout Part 1 – and we can gain some valuable insights by following their journey as well. They appear in two different basic guises in the Introduction: as chromatically oozing parallel fourths; and in melodies that both feature fourths/fifths prominently and are also built from stacked fourth/fifth pitch sets.

The chromatically oozing parallel fourths first appear at R1, and dominate the accompaniment up to R4. They make another, more constrained appearance as the lower two parts at R6+3. They also appear more subtly in two other places, as 32nd notes instead of eighth notes: in the chromatic clarinet runs at R5, and in the fluttertongued woodwind rushes that begin at R10+3 (where they appear as two sets of parallel fourths a major third apart).

In all of these instances, the color of the perfect fourth is emphasized by its parallel motion, but the larger pitch sets are not fourth-y at all – they are fully chromatic. The fourth-based melodies, in contrast, create highly fourth-y pitch sets to go along with their fourth-y melodic content. The first appearance of this type of melody occurs at R2 in the English horn. This melody emphasizes the interval of the perfect fourth, and its pitches also add up to an (0 2 5 7) set – a four-note stack of fourths/fifths consolidated into a single octave. As this melody continues after R3, the emphasis on fourths diminishes and the pitch set fills in the rest of an (0 2 3 5 7) minor scale fragment, but its fourth-y origin is unmistakable.

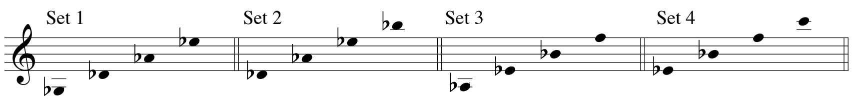
At R4, the pizzicato strings arpeggiate a three-note stack of fifths – an early foreshadowing of the prominent stacked fifth bass line to come at R16. Then at R5, the flutes flit around in the same exact C♯-D♯-F♯-G♯ (0 2 5 7) set as the R2 English horn melody. At R6, the English horn has a similar melody emphasizing the perfect fourth interval as part of a three-note (0 2 5) set – not itself a stacked fourth set, but highly similar to and reminiscent of the (0 2 5 7) four-note stacked fourth set. Although R7 is not generally very fourth-y, the piccolo flutters on a G♯–D♯ fifth, reminiscent of the flute part at R5. Then at R8, as we saw earlier, the flute countermelody creates another (0 2 5 7) set on G♯-A♯-C♯-D♯.

At R9, stacked fourth melodies take center stage. In the oboe melody, all but one melodic interval is a fourth or a fifth, and the pitch set is another (0 2 5 7) on B♭–C–E♭–F. The D clarinet melody two bars later inhabits the same pitch set and has a similarly strong emphasis on melodic fourths. The clarinet and flute flourishes that begin at R9+3 are also in this same pitch set. At R10, Stravinsky adds in the R6 English horn melody, the flute G♯–D♯ flittings from R7, and the oboe melody from R10 transposed up a fourth to the E♭–F–A♭–B♭ pitch set (as well as all of the other non-fourth-y motives from the Introduction).

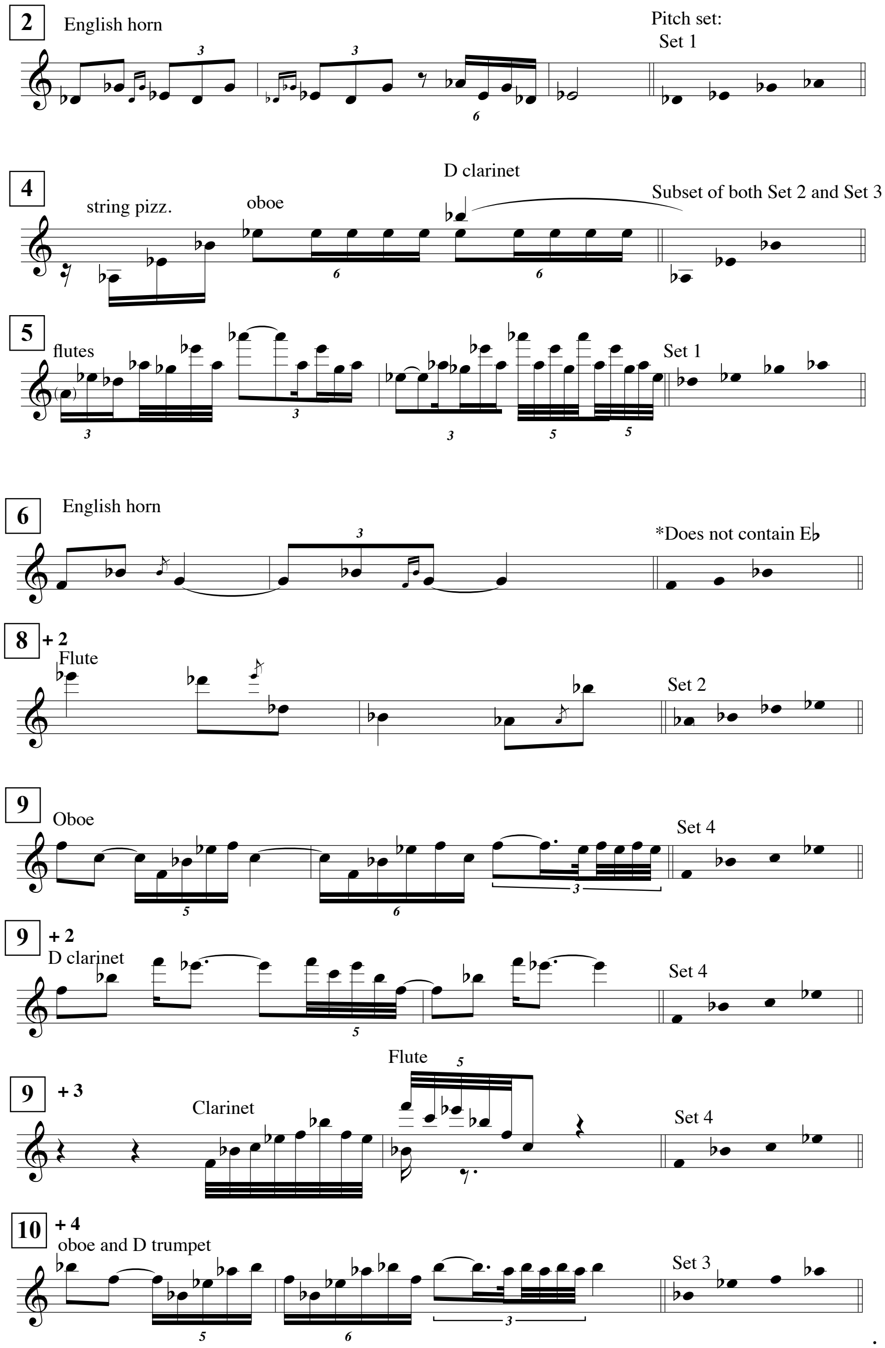
Considered as a whole, scarcely a measure passes in the Introduction that doesn't include at least one fourth-based pattern, whether the chromatic parallel fourths, a fourth-based melody, or both. Although these fourth-based melodies appear at a variety of pitch levels, significantly they are all limited to the four (0 2 5 7) pitch sets that include the pitch E♭, with the sole exception of the R6 English horn melody. Figure 2.1.30 shows this, with enharmonic spellings to clarify. Especially notable from this perspective is the transposition of the oboe/trumpet melody at R10+4, which brings in the only E♭–inclusive (0 2 5 7) set that had not yet been used in the Introduction. (It almost appeared at R4, but as a three-note set without the F.) This is particularly striking given the importance of E♭ as a tonal center throughout Part 1. Furthermore, if the (0 2 5 7) sets are considered as stacked fifths, there is also a general pattern of mostly moving up the fifths stack throughout the Introduction, with the beginning tending toward lower (0 2 5 7) sets and the end toward higher sets. Figure 2.1.30 labels the sets accordingly with "Set 1" the lowest and "Set 4" the highest.

Figure 2.1.30: The fourth/fifth-based motives in the Introduction are limited to the four (0 2 5 7) pitch sets that include E♭ (with the exception of English horn at R6). The (0 2 5 7) sets are here expressed as stacked fifths and labeled from lowest (Set 1) to highest (Set 4).

All four (0 2 5 7) sets containing E♭:



Fourth-based motives in the Part 1 Introduction:



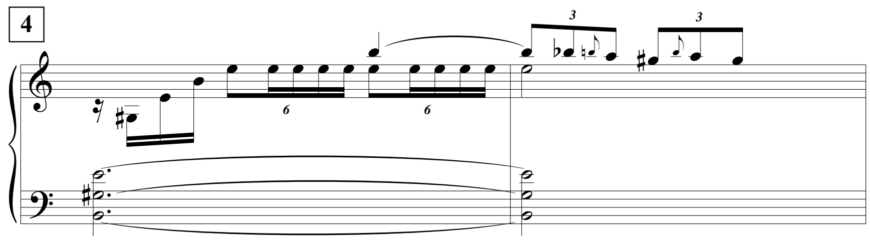
One final pattern to point out in the Introduction is the sinking half-step. We already saw an example of this in the re-statement of the bassoon melody at R12, a half-step lower than the opening. It's an intriguing question what the psychological effect of this is. There is enough separation between statements of this melody that the casual listener (unless blessed/cursed with perfect pitch or being a bassoonist) is unlikely to consciously note the discrepancy – certainly I was not aware of it before looking at the score for the first time. Yet it seems likely that it creates some sort of effect of darkening or deepening. This is characteristic of the half-step descents in other parts of the work as well. They generally are not juxtaposed next to each other to create an obvious aural effect, but instead are separated by other material or act at more structural levels, making them function more subtly and subconsciously.

A different version of the descending half-step idea is present in the chromatically descending fourths at the beginning. These are quite literally descending by half step much of the time, but they also trace larger and more subtle voice-leading patterns of descent. From R1 to R1+2, they descend exactly an octave from their starting A♭-D♭, and hover there until R3. On the small scale, it's a big descent, though it is effectively static in terms of the larger-scale voice-leading. They end R3 a half-step lower on G-C, then start the next bar another half-step lower on F♯-B. From R3+1 to R4, the half-step motion slides up and down, but also gradually works its way down and down. If we consider the highest notes attained in each surge, we move from F♯-B in R3+1 and +2 to E♯-A♯ in R3+3, to E-A in the next three bars, and finally the A descends to G♯ at R4, for a series of larger-scale half-step descents (Figure 2.1.31). The cumulative effect of all of this is to make the harmonic arrival at R4 feel like one we have *descended* to from the opening bassoon melody.

Figure 2.1.31: Chromatic descent at the beginning of the Introduction.

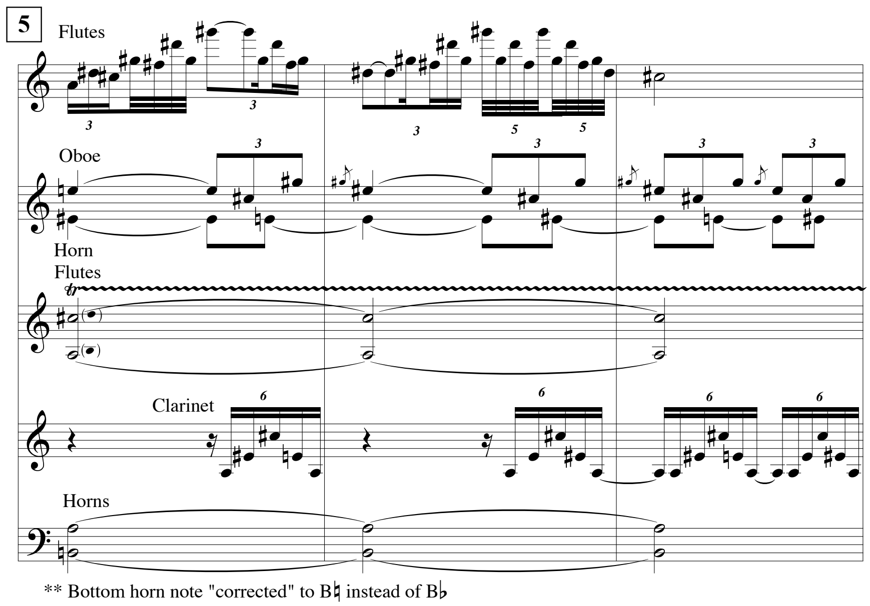
Finally, there is a quality of "descending half-step-ness" to many of the harmonic juxtapositions as well, with one of the subsets of the harmony occurring a half-step "too low." Consider this counter-factual example: at Rehearsal 4, what if the oboe and D clarinet were a half-step higher, to bring them in line with the E major sonority underneath? (Figure 2.1.32). I have also raised the upper notes of the string pizz's a half step to put them solidly in E major, and cut the G♯-A♯ clarinet trill. We wind up with a perfectly acceptable and in a certain sense not all that different sonority. Now consider Stavinsky's actual version. The lowered pitches give it a huskier, more mysterious quality, taking it out of the realm of generic tonality into something richer and stranger.

Figure 2.1.32: "Corrected" version of R4.



Continuing on at Rehearsal 5, something similar is going on, with the bass note this time a half-step "too low." If there were a B♮ in the bass instead of B♭, we would have a beautiful Debussyan B Dominant 13 harmony, which would flow nicely from the preceding E harmony. But that half-step shift makes an enormous difference, as we can see by comparing the below counterfactual B♮ bass note example to Stravinsky's version (Figure 2.1.33). Similarly, what if at Rehearsal 9 the bottom voice, the alto flute, moved up a half-step? Again, it works "better" harmonically, now becoming a pan-diatonic wash of E♭ Mixolydian, and sounds a bit like something an impressionist composer might write to evoke a pastoral landscape (Figure 2.1.34). Finally, at R10, the upper unit continues in E♭ Mixolydian, while the bottom unit moves up from D to E, making it now a half step "too *high.*" If the bottom unit were a half step lower, on E♭, we would again have a more "normal" E♭ dominant sonority (Figure 2.1.35). Like the half-step transpositions discussed above, the ear doesn't hear Stravinsky's versions as being "off" unless contrasted directly with my hypothetical "corrected" versions. The half-step juxtapositions become a color in their own right, a darker, murkier version of my counterfactual "originals.

Figure 2.1.33: R5 with bass note on B♮ instead of B♭ creates lush, impressionistic B extended dominant harmony.



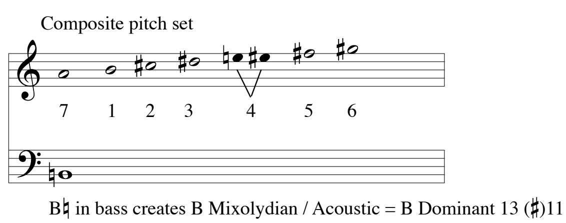
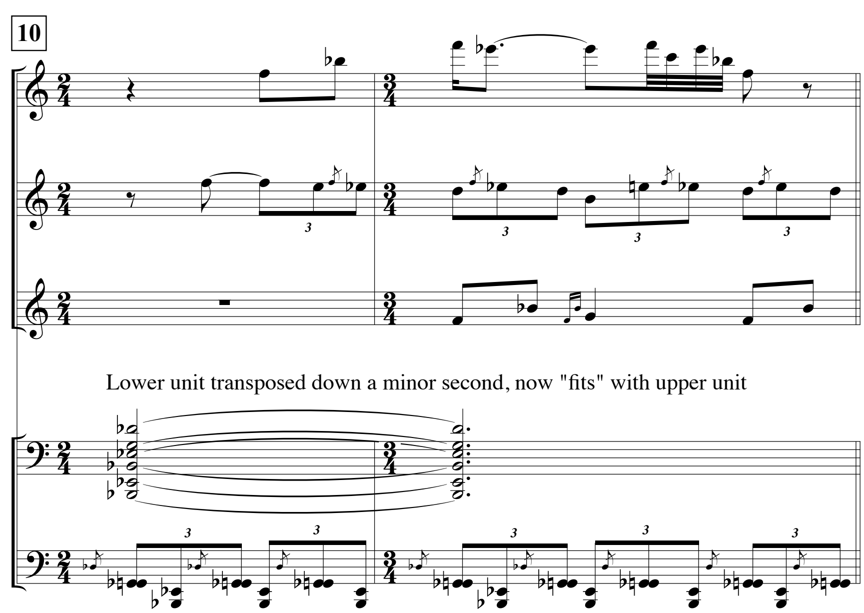


Figure 2.1.34: R9, with alto flute transposed up a minor second, creates a more "normal" diatonic wash of E♭ Mixolydian.

Figure 2.1.35: R10 with lower unit transposed down a minor second.



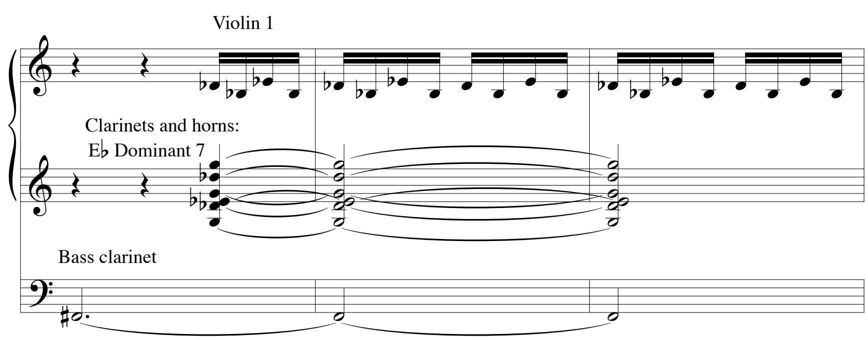
In conclusion, the Part I Introduction presents a number of techniques that will continue to shape our analysis going forward. These include: (1) oscillation between closely related harmonies by combining parallel intervals with a variable added interval (as at R1 and R3+1); (2) warped or disrupted processes, as at R6+4; (3) interpreting a harmony as both a juxtaposition of different harmonic strands (i.e. the E major triad and G♯-D♯-A♯ stacked fifths at R4) and as a complete, coherent harmony in its own right (E Lydian ♯2 scale at R4); (4) the development of harmonic ideas through changes in density, spacing, and subset emphasis (comparison of R4, R10, R13); (5) the technique of re-interpreting the intervallic meaning of motivic ideas in different harmonic contexts; (6) the prevalence of stacked fourth/fifth (0 2 5 7) melodic sets, especially those including E♭; and (7) the prevalence of half-step descents, both vertically and horizontally.

2.2 THE AUGURS OF SPRING

"The Augurs of Spring" expands on the Introduction's E Lydian ♯2 sonority from R4 in a number of ways**.** In addition to the juxtaposition of E♭ and E♮ units implied by this sonority, further juxtapositions with C-based harmonic units come to the fore in this dance as well. Various relevant composite pitch sets also result from (or lead to?) these juxtapositions. As in the Introduction, we will consider both the implications of the composite pitch sets and of the different ways of pulling them apart into juxtapositions.

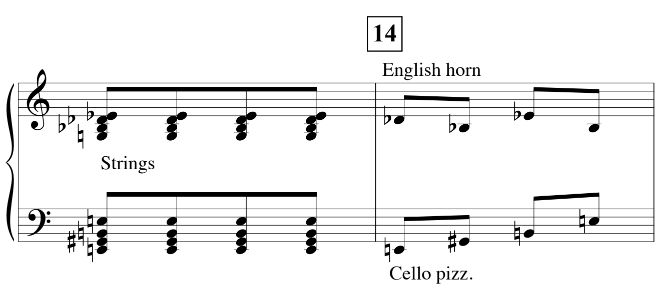
Beginning at Rehearsal 13 we have the famous "ur-chord" of the entire *Rite*, often interpreted as a juxtaposition of E major and E♭ Dominant 7. (We'll consider the transition/introduction into R13 a bit later.) As we have already seen, this chord also adds up to an E Lydian ♯2 scale, and has been foreshadowed in the Introduction at R4 and R10-12. I argued previously that listeners would likely hear this chord as a single composite sonority, rather than as an audible juxtaposition of E major and E♭ dominant 7. While I generally think this is true, I will hedge that claim just a bit now. Three bars before R13, an E♭ dominant 7 chord sounds, planting the seed for considering this sonority as a discrete entity (Figure 2.2.1).

Figure 2.2.1: E♭ Dominant 7 setting of ostinato 3 before R13.



Then at R14, the top and bottom parts of the chord are audibly pulled apart, with the English horn continuing three of the four notes in the E♭ dominant 7 harmony, and the E major harmony clearly spelled out separately in the cello (Figure 2.2.2). While the primary effect of the chord at R13 remains as a single harmonic entity, an element of juxtaposition is also made audible by the way it is set-up and exited.

Figure 2.2.2: Single conglomeration breaks up into separate E♭ and E♮ components at R14.



Looking again at R14, we find the first hint of a "C" element in the mix as well, as the pizzicato cello outlines first an E major and then C major triad. One plausible reading is that Stravinsky is polytonally juxtaposing E major and then C major with the E♭ unit above in the English horn (Figure 2.2.3). The bassoons, however, muddy the waters, as they arpeggiate C major and then E *minor* triads for the entire four bars, at twice the rate of the cello arpeggios. They thus coincide with the cello harmonies in four different ways: C major against E major; E minor against E major; C major against C major; and E minor against C major (Figure 2.3.4).[55] And all of this is also juxtaposed against the E♭ unit in the English horn. This is a lot for the ear to process in a short amount of time and I doubt that the listener can pick out all of these harmonic strains as separate entities. An alternate way to consider this passage is as another example of a scale with one movable degree. The only new pitch introduced from the preceding E Lydian ♯2 scale harmony is a C. We can therefore see the scale in R14 as essentially the same scale but with one movable scale degree 5 of B or C, or, respelled to clarify scale steps, F♭-G-A♭-B♭- **C♭/C♮**-D♭-E♭. This creates an oscillation between a mode of harmonic minor (with the C♭) and harmonic major (with the C♮). An intriguing detail lends support to this interpretation: at R14, B and C never sound simultaneously (as G and G♯ do), but instead there is an oscillation between the two in both the bassoon and cello parts, as well as in the composite of both (Figure 2.2.5). This further supports the idea of a single moveable scale degree rather than a polytonal juxtaposition. Of course, there's no reason it can't be both. The triads outlined by the cello and bassoons are clearly audible; yet the sense of an underlying controlling composite harmony is audible as well, and the moveable scale degree interpretation helps to explain this.

[55] Boucourechliev (1987, 83) posits a similar polytonal interpretation.

Figure 2.2.3: E♭ juxtaposed with E♮ and C at R14.

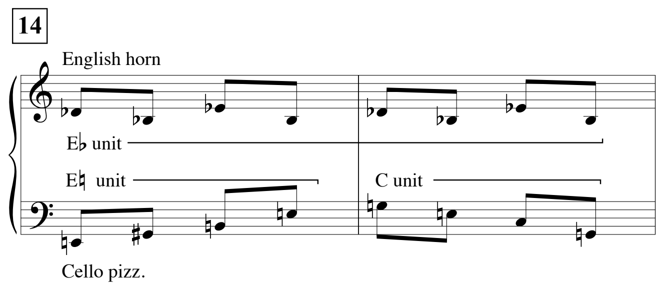


Figure 2.2.4: Bassoon and cello at R14 create four combinations of triads.

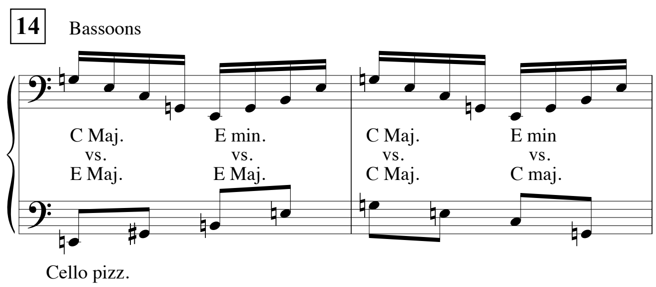
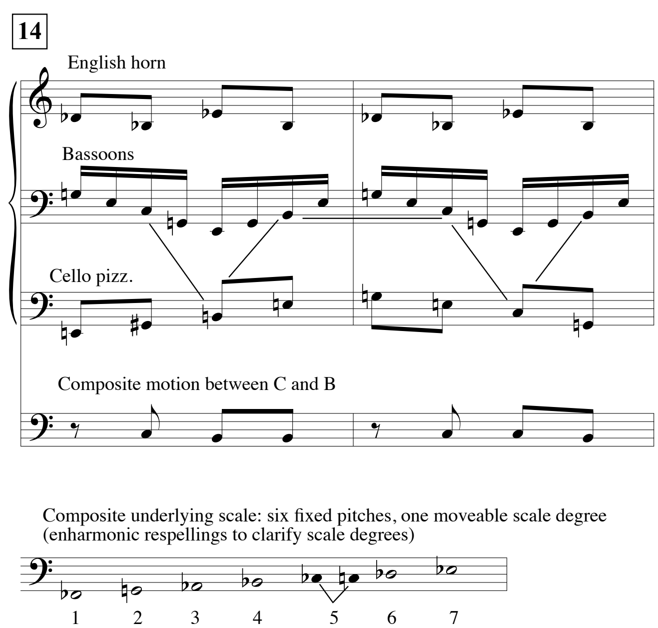
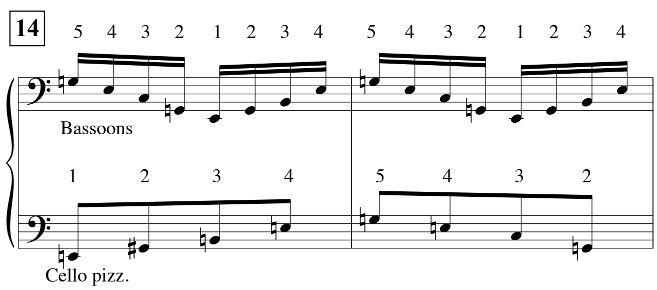


Figure 2.2.5: Composite C-B oscillation between bassoon and cello creates underlying scale with one moveable pitch.



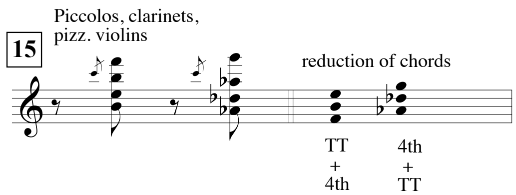
The cello and bassoon parts at R14 also present the first of many instances of the "1-2-3-4-5-4-3-2" pattern that was discussed in chapter 1. This is an arc-like pattern of ascending and descending "steps," with the size of the step varying depending on the context. Here, a step is the distance from one note in an arpeggio to the next above it. In the cellos, it begins with an ascent and then descent along the steps first of E major and then C major arpeggios. In the bassoon, it first descends and then ascends along E minor and then C major (Figure 2.2.6). There are many other instances of this pattern throughout "Augurs," which we will summarize at the end of the section.

Figure 2.2.6: Arpeggio version of 1-2-3-4-5-4-3-2 pattern at R14. Each successive note in the arpeggio is considered a "step."



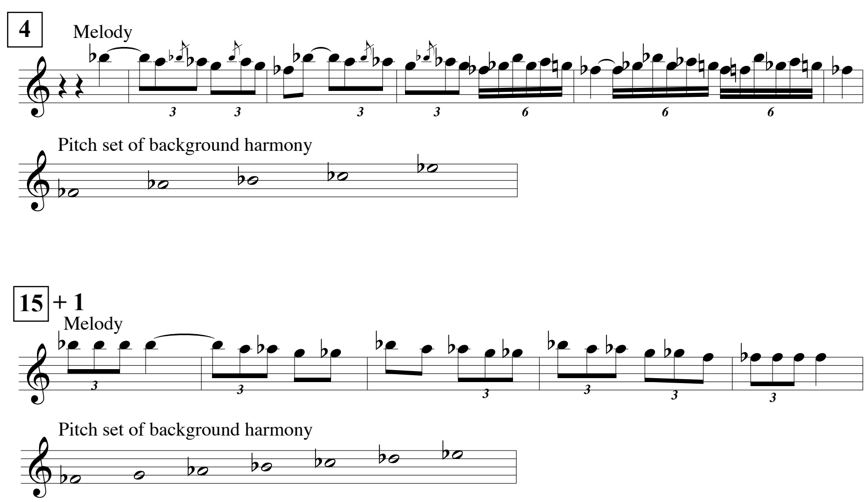
Moving on to Rehearsal 15, I interpret the F and G in the piccolos as a brief foreshadowing of the melody to come at R19. They are harmonized with chords that reduce to a tritone-plus-fourth (counting up from the bottom) and then its inversion, a fourth-plus-tritone chord – sonorities not frequently encountered yet, but that take on increased significance later on in the work, especially in Part 2 (Figure 2.2.7).

Figure 2.2.7: Hits at R15.



The chromatic melodies from R15+1-5 parallel the D clarinet melody back at R4: both start on a high B♭, and eventually fill in all the chromatic space between that note and the E a tritone below it – and both do this over essentially the same harmony (Figure 2.2.8). This is another indication of the extent to which R4 sets up what happens later on in "Augurs."

Figure 2.2.8: R15+1 melodic setting foreshadowed at R4 (R4 enharmonically re-spelled to match spelling at R15+1).



From Rehearsal 16-18, a different version of the E♭-C juxtaposition comes to the fore: stacked fifths rooted on E♭, juxtaposed with a C major triad. This is an undeniably audible juxtaposition, with E♭-based fifths in both the ostinato bass line and brass fanfares set against C major triad arpeggiation in the violas. There is a bit more going on here, however.

First, if we consider only the E♭ material, it's a little more complicated than first meets the ear. The combination of the English horn ostinato and the bass line indicates some sort an E♭ scale with a ♭7 scale degree – whether Acoustic, Mixolydian, or Dorian is impossible to know without more pitches. However, from the start of R16, the bassoon is trilling C to D♮, creating an ever-so-slight clash between D♭ and D♮. When the brass come in at R16+3, it clarifies the rest of the scalar pitch set, but also further reinforces the D♮ (blaring in the piccolo trumpet), creating an ambiguity between E♭ Lydian and Acoustic – E♭-F-G-A-B♭-C-**D♭/D♮**.[56] The woodwind melody that comes in at R16+4 is limited to the pitches G-A-B♭-C, so fits into either scalar conception. When we also factor in the C major viola arpeggios, we find our mid-register cluster rearing its head as well, as the pitches C-D♭-D-E♭-E all sound. Due to the orchestration, it is a mild bite, but it is there, casting a gentle haze in the middle of the fifths emanating out in both directions (Figure 2.2.9). We had a hint of this same idea back at R12+3, when we heard the ostinato for the first time, juxtaposed with a C-D trill in the clarinet, creating a C-D♭-D-E♭ cluster (Figure 2.2.10), and we will see much more if it as we continue.

[56] Tymoczko (2003, 187) has a somewhat different interpretation, grouping the upper part of he fifths stack with the C major material, rather than the E♭ material, to create C Mixolydian in the upper register, and E♭ Dorian below. This is certainly a plausible interpretation as well. To me, the brass stacked fifths sound as a single unit rooted on E♭, which connects to the bass line E♭ stacked fifths below. This causes the whole vertical sonority to be fundamentally rooted on E♭, with the C major material as a colorful outlier. But if one's ear is drawn more to the C major trills and arpeggios and less to the pizzicato bass line, Tymoczko's interpretation is entirely reasonable. Different performances of course could also emphasize these parts to different extents, thereby tipping the balance in one direction or the other.

Figure 2.2.9: E♭ and C harmonic units at R16

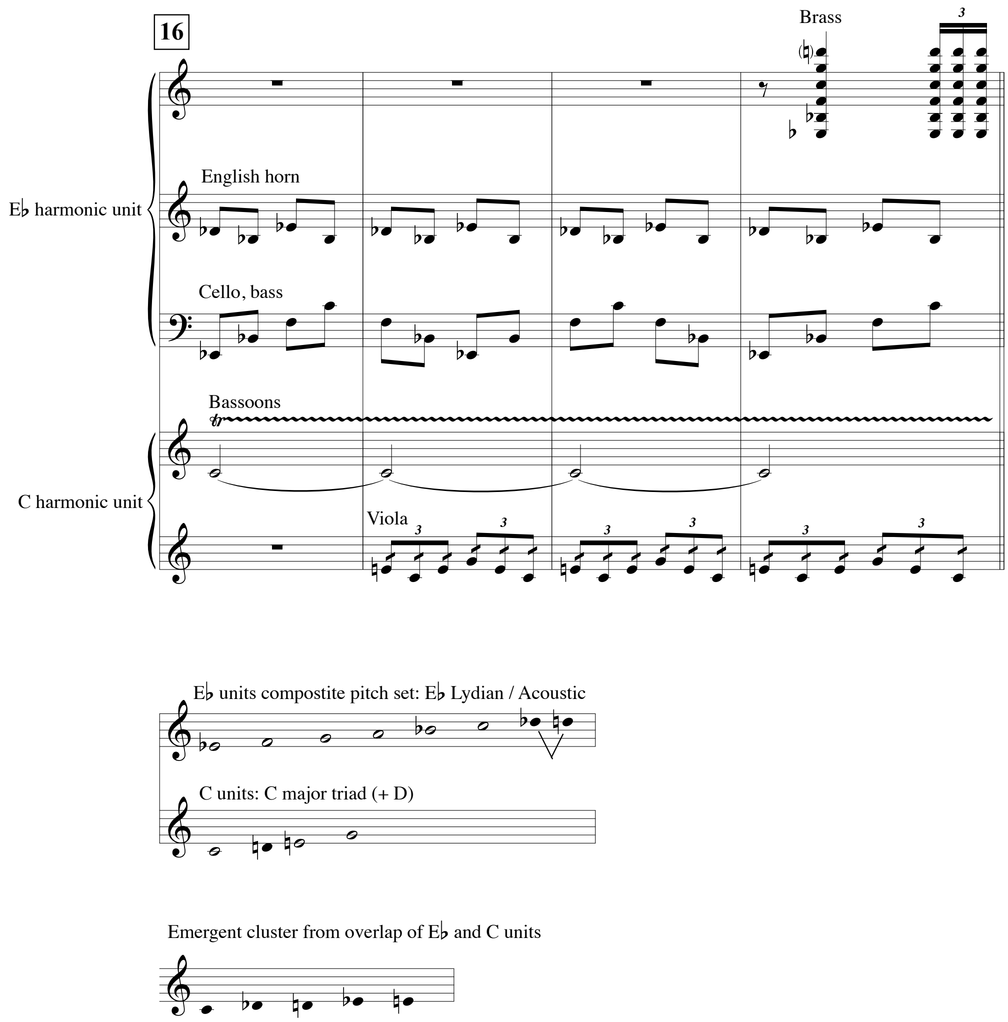
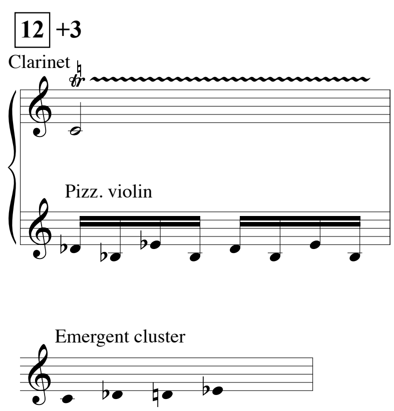


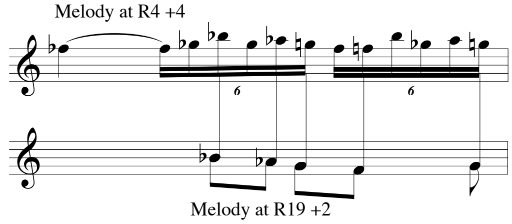
Figure 2.2.10: Cluster at R12+3.



At Rehearsal 18, we come back to the iconic "ur-chord" discussed previously. The melody at R19 transposes the R16+4 melody down a major second, adding an F♮ to our pitch set. To my ear, this melody sounds like it is in E♭, even though it never lands on E♭; I hear the G as a scale degree 3. Two bars before Rehearsal 22, the E♭ fermata in the horns reinforces this E♭ interpretation. As such, this melody can be seen to reinforce a bitonal interpretation of this chord, emphasizing the E♭-ness of the upper part of the harmony.

Just as we traced the B♭-E tritone-spanning melody at R15 back to the D clarinet melody at R4, we can similarly trace the R19 melody back to the end of that D clarinet melody, in the bar before R5. Here, after touching on F♯ in the previous bar, the D clarinet touches on F♮ as well and practically outlines the R19 melody in the last two beats of the measure (Figure 2.2.11). And this D clarinet melody is happening against essentially the same background pitch set as at R19 (R19 simply adds G♮ and D♭). It is more or less certain from the sketches that Stravinsky composed the Introduction *after* completing the "The Augurs of Spring," so it seems entirely plausible that the rhapsodic chromatic wandering of this D clarinet melody is in fact a carefully planted precursor to many of the events that happen later in "Augurs."

Figure 2.2.11: Relationship of last bar of D clarinet melody at R4 +4 to bassoon melody at R19. Clarinet melody enharmonically re-spelled to clarify comparison.



The last two measures before Rehearsal 22 have a clear dramatic function, bringing the music to a sudden halt so that it can blast off again at R22, but it is difficult to harmonically relate them to the rest of the movement. The offbeat pizz. is an extended dominant chord, $C^{\sharp 11\text{-}\flat 9}$ (or C7 and F♯7 juxtaposed) and perhaps is an early foreshadowing of the harmonic world of "Ritual of Abduction" (though if so, it is a very subtle one). The function of the next bar is dramatic and rhythmic. As percussive a piece as *The Rite* would seem to be, this is in fact the first time in the work that any percussion has been used. After hearing the strings deployed, quite effectively, as ersatz-drums for the past several minutes, it creates a striking and dramatic effect to suddenly be bombarded by the real thing. The actual pitches in the bar – D-F♯-G-F – don't seem to be particularly related to other pitch material, but pitch is clearly beside the point here.

Rehearsal 22 picks up the thread from R16, with continued exploration of similar C-E♭ juxtapositions. At R22+1 and R23, the clarinet C major arpeggiations stand in stark contrast to the E♭-centered ostinato, even more so than the viola arpeggios did at R16.

Rehearsal 24 sets up an intriguingly ambiguous harmonic frame for the melody at Rehearsal 25, and there are several different ways of considering it, as we saw in Chapter 1. To recap, if we ignore the first violin part, we end up with a white note hazy diatonic cluster in the trilling bassoons, solo violins, and col legno strings, C-D-E-F-G-A. The melody includes notes from this pitch set (F,G, A, and C) plus B♭, which pushes the total pitch set into C Mixolydian. On the other hand, if we ignore this white note haze, and consider the first violin to be the primary harmonic content, we end up with an E♭ Acoustic pitch set (the violin adds a D♭ and E♭ to the melody's pitch set, giving us E♭-F-G-A-B♭-C-D♭). The pitches of the melody are a subset of *both* of these scales, and Stravinsky, in effect, harmonizes it with both scales simultaneously, as Figure 2.2.12 shows.

One more way of seeing it is that the trilling bassoons and strings add up to create our old friend, the chromatic cluster C-D♭-D-E♭-E, which is juxtaposed with the melody's diatonic subset above: F-G-A-B♭-C (Figure 2.2.12).

Figure 2.2.12: Three harmonic interpretations of R25.

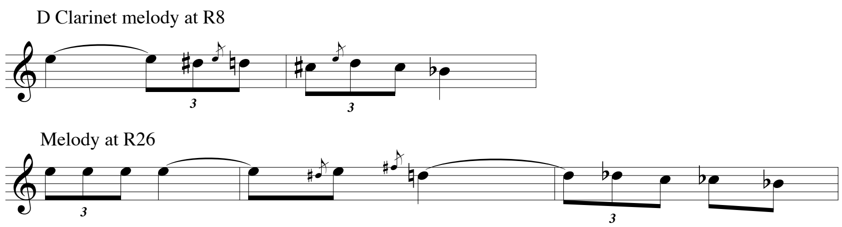
The net effect of the harmony is indeed a mixture of all of these. Depending on which parts are more emphasized in a particular performance, or on where our ears focus, we may hear the violin sixteenth notes as harmonically primary, creating an E♭ Acoustic harmony, colored by the white-note haze of the other parts. Or, if our ear is drawn to the trilling bassoons, we may hear a C Mixolydian primary harmony, with colorful "out" notes in the violin ostinato. Finally, if our ear focuses on the composite effect of all of the non-melodic parts, we may perceive it as a white-noise chromatic cluster that the diatonic melody floats over. Even though the actual pitch set is completely static for measures at a time, there is a richness of association to it that allows our ear and attention to re-hear and re-interpret the same sounds in multiple ways – in a sense, creating our own psychological kaleidoscopic oscillation out of a static pitch set.

R25 is also quite similar harmonically to R17. Both feature very similar melodies with nearly equivalent contours and pitch sets, set against harmony that juxtaposes E♭ and C elements, creating the C-D♭-D-E♭-E mid-register cluster. R25, however, is compressed into the space of just over an octave, as opposed to the nearly five-octave expanse at R17, and the texture at R25 is also greatly homogenized. Comparing the two passages is a good illustration of the power of registration and texture to alter the effect of the same basic harmony (Figure 2.2.13).

Figure 2.2.13: Comparison of R17 and R25 (texture of R17 somewhat simplified for clarity). Similar pitch content in each staff, but much wider registral space at R17.

At Rehearsal 26, we have another chromatic tritone-spanning melody, similar to the melody at R15, but now descending from E-B♭, rather than from B♭-E. This is reminiscent of R8 in the Introduction when the D-clarinet transposes its melody from R4 down a tritone so that it descends from B♭-E rather than from E-B♭ (Figure 2.2.14). The F♯ grace note in this melody is a striking detail that I don't have a good explanation for. Perhaps it is a reference again to R8 and the F♯ grace notes in the bassoon there, though this seems like a bit of stretch. It is foreign to the pitch set that we have been in, and sounds that way. Like the tritone-fourth chords at R15, it sounds intentionally disruptive and harmonically outside of the surrounding context.

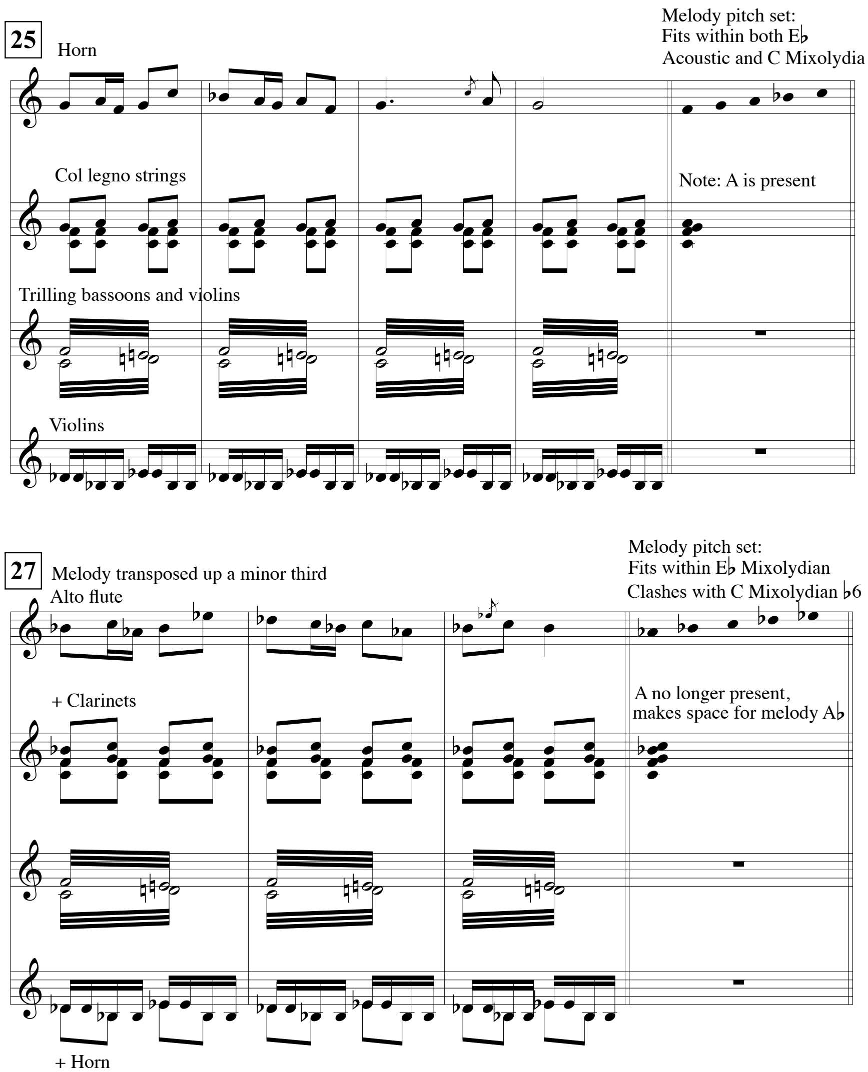
Figure 2.2.14: Comparison of R8 D clarinet melody and R26 melody.



Two bars before Rehearsal 27, there is a very subtle but significant harmonic shift. The violin 2 oscillation between G and A shifts to parallel fourths, F-B♭ to G-C (with clarinets added as well). At first, the only effect on the harmony is to remove the A♮, without changing the basic underlying scale(s). But it paves the way for a different transposition of the melody at R27, now up a minor third from R25. This transposition has two significant harmonic effects: (1) it shifts the underlying pitch set by one half step, moving the (now absent) A down to A♭, darkening the modes to C Mixolyidan ♭6 / E♭ Mixolydian, and (2) it puts the melody squarely in the E♭ scale camp, as its top two notes (D♭ and E♭) now belong to that scale exclusively, and not to the C scale.[57] Recall that the same melody back at R25 could fit within *both* of the potential underlying scales, favoring neither one. Additionally, the horn enters on the eighth-note ostinato, giving further emphasis to the E♭ pitch set. (See Figure 2.2.15).

[57] Hill (2000, 65) makes a similar point, emphasizing how this melodic transposition sets the stage for the return of the stacked fifths at R28.

Figure 2.2.15: Change in accompaniment and melodic transposition at R27.



This tipping of the scales in the E♭ direction helps to set up what happens at Rehearsal 28: a nearly pure diatonic field harmony of E♭ Dorian – the closest thing to unadulterated diatonicism we've had in the piece so far (except, perhaps, for the opening bassoon melody). The section indeed *sounds* very E♭ Dorian, but it's just a little bit more complicated. At R28, while almost all parts are unequivocally in E♭ Dorian, the third clarinet sustains a G♮, which gives just a hint of brighter Mixolydian-ness to the harmony. It's very subtle, and it's hard to say how audible it is in context.[58] The G♮ doesn't sound like it clashes particularly, but more like it adds just a little bit of brightness and warmth to the harmonic color. Then at R29+2, no new pitches are introduced, but the blaring hits in horns and oboe/English horn emphasize the G♮-G♭ clash, as part of a crunchy E♭ Dominant 13-♭9 chord. Now instead of providing a warm glow underneath, the G♮'s are actively dissonant with the prevailing harmony (Figure 2.2.16).

This comparison of the function of the G♮ first at R28 and then at R29+2 shows just how complex and versatile the idea of dissonance is in *The Rite*. As we've seen in a number of other instances, the same exact pitch set – in this case, even the same exact registration – can have a very different effect depending on orchestration, articulation, and volume.

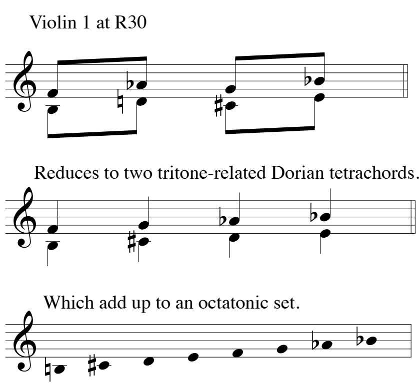
[58] Another detail that is even less audible is the D♮ in the trilling bassoons which, perhaps, brightens the color just a little bit more, though it's pretty hard to tell it's there at all.

Figure 2.2.16: Comparison of the effect of the G♮ at R28 and R29+2. (Texture somewhat simplified for the sake of clarity).

Continuing on, Rehearsal 30 looks like an overlaying of an octatonic pitch set above the stacked fifth bass line and ostinato from before (with some decorative chromatic pitches) creating a bitonal juxtaposition of octatonic over E♭-rooted diatonic stacked fifths. This interpretation accounts for the audible sense of juxtaposition between the continuing diatonic ostinatos and the harmonically new octatonic material above. But a close examination reveals surprising structure and patterning in the composite vertical sonorities as well.[59]

The two static harmonic streams carrying over from the previous section are the E♭-B♭-F-C stacked fifths bass line, and the D♭-B♭-E♭-B♭ ostinato. Against this, the first violins present a quintessential example of van den Toorn's "Model B" octatonic partitioning: the top part outlines one Dorian tetrachord, and the bottom part outlines another Dorian tetrachord a tritone away (Figure 2.2.17).

Figure 2.2.17: Tritone related Dorian tetrachords create octatonic set at R30.

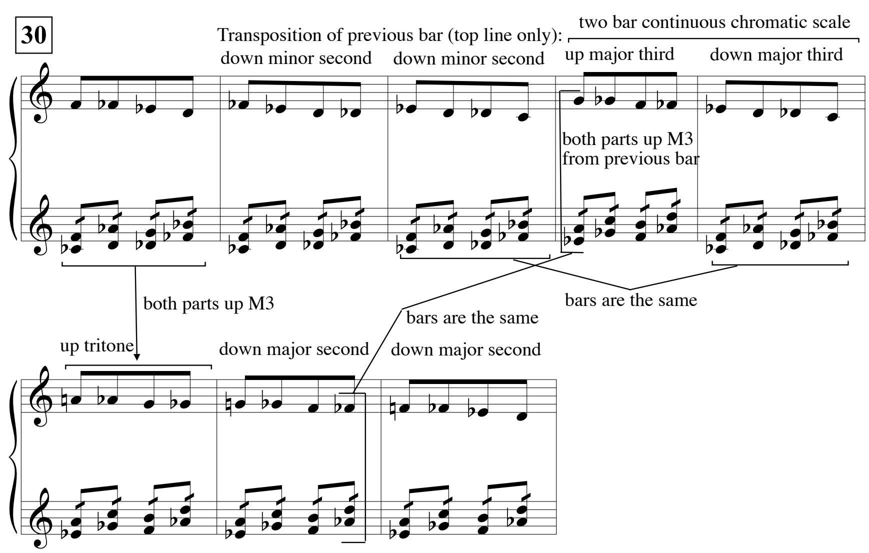


The second violins play the same pitches, but in a triplet figure that outlines diminished triads. At R30+3, this shifts up a major third and into a different octatonic set. Things don't get any more blatantly octatonic than this, and this section undeniably has a very ocatonic sound.

[59] Interestingly, the Sketchbook strongly implies that Stravinsky's original plan was to have the section from R28 to R30 lead directly into "Spring Rounds" (which helps to explain the foreshadowing in the trumpets at R28+4). R30 to R37 seems to have been "tacked on" later in order to enable the harmonic move to "Ritual of Abduction" instead.

The only additional material is the chromatic inner part in the violas and top cellos. Although the violas decorate it with neighbor tones, it is essentially a series of four-note descending chromatic scale fragments. It would be easy to discount it as chromatic passing tones that connect notes in the underlying octatonic set. Indeed, literally every note in the chromatic scale is either in a given octatonic set or one half-step away from two other pitches that are. This explanation, however, fails to account both for how this pattern shifts, independently of the other parts, and also for the surprising consistency in the vertical sonorities that it creates with the other parts. Figure 2.2.18 shows the chromatic line's shifting patterns of transposition from bar to bar, and its resulting relationship to the violin 1 part.

Figure 2.2.18: Development of chromatic line at R30, and its relationship to Violin 1 part.



As we can see, this inner chromatic line turns out to be far more complex than it first appeared. Multiple different processes are overlaid and interacting at the same time, creating a kaleidoscopically shifting relationship between this line and the other parts that feels logical, yet is in fact quite unpredictable.

Figure 2.2.19: Composite chords at R30. (Triplets, sixteenths, and woodwind hits are left out for clarity). Except for bar two, constant alternations of subsets of the two whole tone scales.

What makes this passage even more surprising, though, is the pattern that emerges in the composite vertical sonorities. One would not intuitively expect there to be a whole lot of consistency to the harmonies that result from overlaying patterns of different lengths built out of completely different types of harmonic material – stacked perfect fifths, a static three-note (0 3 5) ostinato, octatonic parallel tritones, and descending chromatic scale fragments. And yet, with the sole exception of bar 2, the harmonies alternate each eighth-note between three- or four-note subsets of the two whole tone scales. The sforzando hits in the woodwinds are in fact just picking out these composite chords, the pitches of which are all already present in the other parts, in the rhythm of the accents at R13. Figure 2.2.19 shows these composite chords, and 2.2.20 shows how the woodwind hits incorporate them.

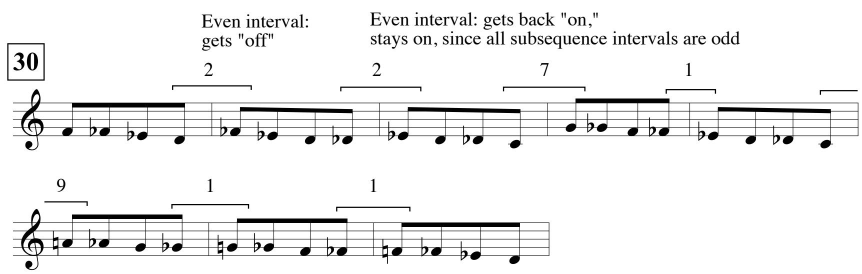
Figure 2.2.20: Woodwind hits simply double, exactly, the composite harmonies created by the other parts, in the rhythm of the accents from R13.

This is quite an extraordinary result. What are the chances that overlaying separate lines with such different harmonic content would add up to such a coherent succession of vertical sonorities? The reason it works as it does is that Stravinsky is essentially playing a game of "odd and even intervals." The similarity between the different overlaid strains is that all of them move exclusively in intervals with an odd number of half-steps. This is true of the stacked fifths in the bass (seven half-steps); the oscillating minor thirds and perfect fourths in the ostinato (three and five half-steps); the minor seconds in the chromatic line (one half-step) and the minor thirds and minor seconds in the first violin (three and one). One fundamental difference between odd and even intervals is that even intervals will always be in the same whole-tone scale as one another, while odd intervals will always be in different whole tone scales from one another. So as long as the first vertical chord is made up of all even intervals – which it is – then this whole-tone scale alternation will automatically happen as long as the intervallic motion in each part continues to be odd – which it does (Figure 2.2.21).

Figure 2.2.21: Even and odd intervals at R30. Initial vertical intervals are even; successive horizontal intervals are odd. This causes the alternating whole tone subset harmonic pattern. (Numbers refer to the number of half-steps between pitches)

Well, almost. From bar 1 into bar 2, the chromatic line leaps a major second, an even interval, causing it to get off from the pattern for one bar. It leaps another major second into bar 3 to get back on. From here, even when it gets transposed, it always leaps an odd interval (a perfect fifth from bar 3 to 4, a major sixth from bar 5 to 6, and minor seconds the rest of the time), so the pattern is maintained (Figure 2.2.22). What should we make of this one "off" bar? Why doesn't Stravinsky do what he did in the last three bars and ascend by half step, instead of whole step, across the bar line? It is hard to say. It might simply be an error. Or, as is so typical in this work, Stravinsky's process may be *intentionally* inexact, as if he is asserting his right to be inconsistent and intuitive, thumbing his nose at our attempts to define his processes too rigorously.

Figure 2.2.22: Intervals across the bar-line in descending chromatic part. The pattern gets "off" from the alternating whole tone chords in bar two because of the even interval across the bar line. Another even interval into bar three cancels it out and it gets back "on." It remains on for the rest of the passage because all across-the-barline intervals are odd.



At Rehearsal 31, we are back in a diatonic field harmony, the C diatonic pitch set, though the "tonic" is difficult to determine. The melody implies A and the ostinato figures imply D, but the chromatic neighbors in the horn and contra-bassoon imply G. Ultimately, it is the color of the diatonic wash (punctuated by chromatic neighbors around G) that is salient here rather than a specific pitch center.

At Rehearsal 32, the pitch set shifts by one half-step, with E moving to E♭. We are undoubtedly in the F acoustic pitch set now,[60] but again it is hard to say what the "tonic" is.

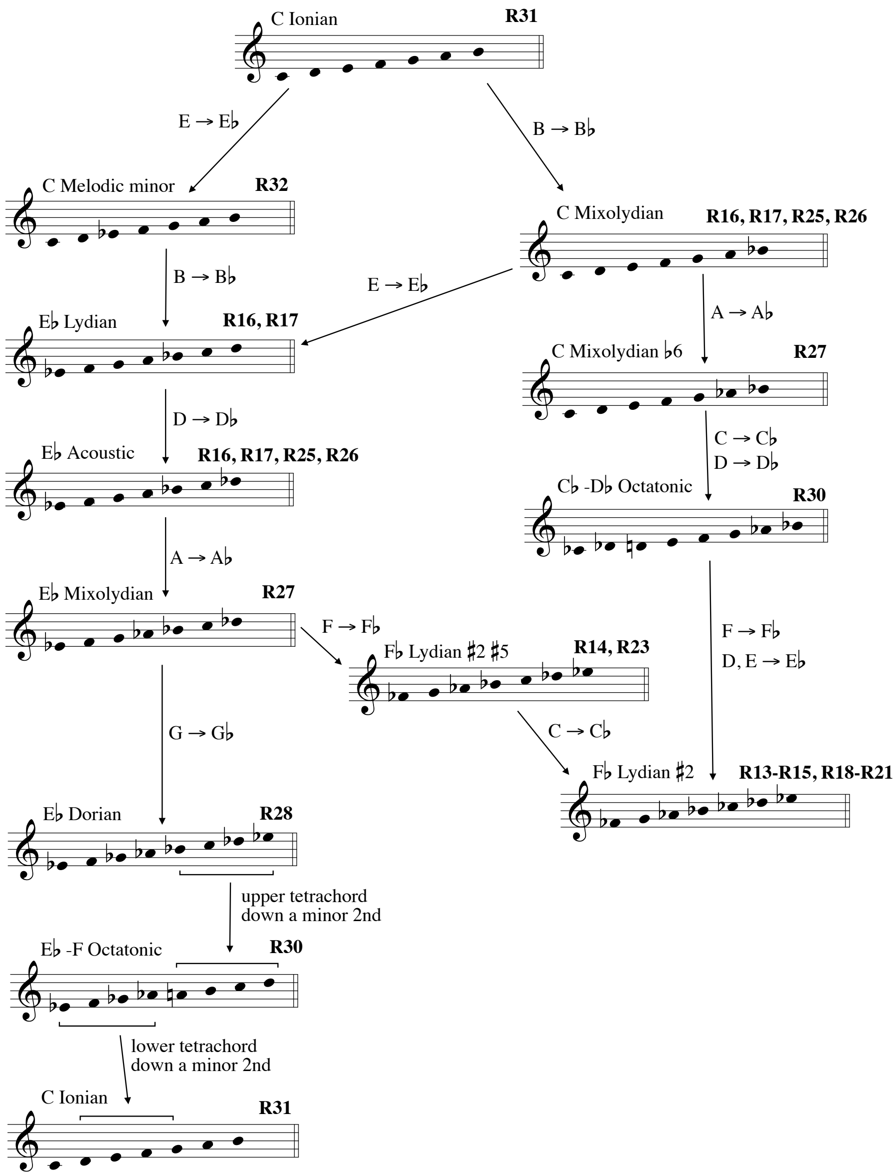
[60] Van den Toorn calls this passage "octatonic diatonic interaction," while Hill refers to the "whole-tone diversions at the end of 'Augurs'" (Hill 2000, 66). While the acoustic scale does contain both octatonic and whole-tone subsets, Stravinsky is very clearly treating the pitch set

Many of the parts indicate A, while the bass line once again implies G.[61] Regardless, as we saw in chapter 3, all of the roiling activity of the orchestra is contained within this F acoustic scale, a static harmony until the arrival at Rehearsal 37 and the "Ritual of Abduction."

As we did in the Introduction, we will now consider how several of our larger themes play out through "Augurs**."** First, we will look at the larger scale voice-leading and harmonic progression. While the Introduction was built around harmonic pillars on E, "Augurs" slips down to E♭ as its central pitch – another large scale half-step descent. This is presented quite explicitly at R16, where the bass note drops a half-step from E (or F♭) to E♭. There is definitely some sense of "♭2 to 1" here – and in retrospect, we may even be able to hear those E pillars in the Introduction as a big ♭2, especially since they were so often juxtaposed with E♭–based material above. In this reading, most of the Introduction and R13-R16 act as one big appoggiatura into the resolution on E♭ at R16. Continuing on in this vein, R18 returns to the E♮ ♭2 chord, while the section at R22 prolongs a secondary tonal area combining E♭ and C material, which resolves to pure E♭ again at R28. R30 is a harmonic transition leading us into the C diatonic harmony at R31, and then the F acoustic harmony at R32. The harmony at R32 could also be considered a big functional dominant pedal in C melodic minor: the bass line continually converges on G, and the whole thing ultimately resolves to the C extended harmony ($C^{\sharp 9-\flat 9-\flat 7}$) at R37. Considered in this way, the basic harmonic move of this entire section is from E♭ (with lots of ♭2 inflection) to C.

here as a single (acoustic) scale, rather than as some sort of juxtaposition, as Tymoczko has demonstrated (Tymoczko 2003, 192-195).
[61] Tymoczko (2002, 73-75) has the same pitch set analysis, and considers A to be the "tonic" since it is the central pitch of the main melody.

Figure 2.2.23: Voice-leading routes of increasing "flatness" between sets in "Augurs of Spring." Rehearsal numbers where the sets appear indicated to the upper right of the bar.



We can also look at the harmony as a fairly systematic exploration of closely related diatonic, acoustic, harmonic minor, harmonic major, and octatonic pitch sets – sometimes in sequence, and sometimes juxtaposed on top of one another. Figure 2.2.23 charts this out, showing the minimal voice-leading routes between each of these sets in "Augurs." The "least flat" set from the dance, C Ionian, is at the top, with "arrows of flatness" showing the voice-leading paths to the other sets. The sections in the music that correspond to each set are indicated above each scale.[62] The decision to frame the voice-leading paths in terms of flatness is an arbitrary convenience. The fact that C Ionian is on top is not an indication of its centrality, as its return at the bottom of the figure hopefully makes clear; the voice-leading connections instead form a web with no center or hierarchy.

Turning now to melody, we already considered how Stravinsky's melodic transpositions can cause shifts in the underlying mode (for example, at R27). It is also interesting to note that, with very few exceptions, he does not alter the *intervals* in his melodies in order to accommodate mode changes. For example, at R27, the basic modal shift is an A♮ moving to an A♭. To achieve this, Stravinsky could have kept the R25 melody on a G starting pitch and simply changed the A's in the melody to A♭'s (Figure 2.2.24).

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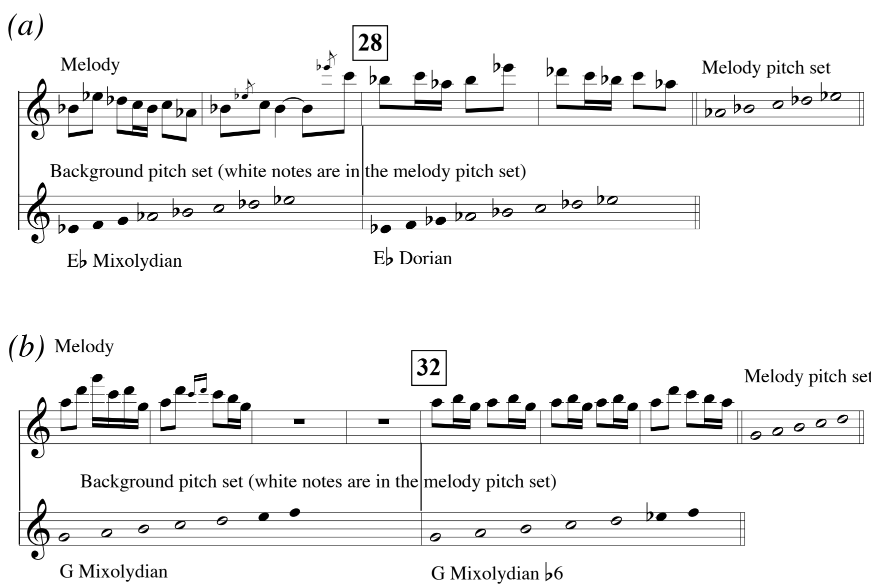
[62] For clarity, only the predominant pitch sets are indicated. Outliers of these sets are not always acknowledged here, for example the tritone-plus-fourth-chord interjections at R15, the F's from the bassoon melody at R19, the F♯ grace notes at R26+1, the G♮'s at R28, the continuing E♭ stacked fifths bass line at R30, and the A♭-F♯ chromatic neighbor notes at R31. It is not my intent to minimize the importance of these other pitches, which are discussed elsewhere, but simply to clarify the relationships between the primary pitch sets in the section. Also, I am considering the F♭-G-B♭-C-D♭-E♭ set that appears at R14 and R22-R23 to be a subset of F Lydian ♯2 ♯5 (a mode of harmonic major), although it could also be part of an octatonic set. (If we add A♭, it becomes harmonic major, if we add A♮ and G♭, it becomes octatonic.) This same set definitely *does* take on clear octatonic implications in the next dance, "Ritual of Abduction."

Figure 2.2.24: Counterfactual R27 melody as a modal shift of R25 melody, instead of transposition. This creates an equivalent harmonic shift (A → A♭), but changes the intervallic content of the melody. (Compare to real version in Figure 2.2.14).

The basic contour and identity of the melody would remain intact, as would all the scalar intervals; the only change would be in the chromatic quality of the seconds from G to A/A♭ and A/A♭ to B♭. This sort of melodic transformation is, of course, extremely common in functionally tonal music, for example when a motive is translated from major to minor. The *scalar* intervals of the motive remain constant while the *chromatic* intervals change to fit the change in mode. For Stravinsky, however, the precise chromatic intervals of his motives seem to be fundamental and unalterable. He can get away with this because the melodies are so simple and narrow in range. If he wants to change any of the melody's pitches, he therefore has to shift the pitch-level of the entire melody.

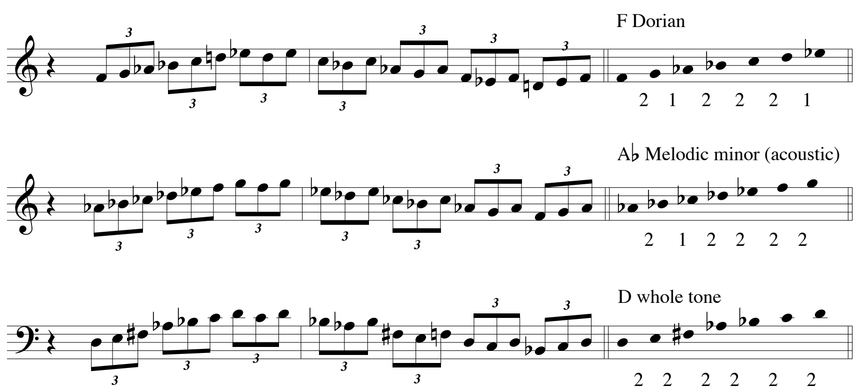
In some cases, Stravinsky also manages to achieve modal shifts without altering his melodies at all. For example, there are modal shifts at R28 and R32, but in both cases the melodies' pitch content is unaltered. This works because the melodies' pitches are present in both modes, with the pitch shifts happening in the *other*, non-melodic voices (Figure 2.2.25).

Figure 2.2.25: Modal shifts without changing melodic pitch content. Pitches in the underlying harmony shift to change mode at R28 and R32, but the melody pitches stay constant. For clarity, "color" pitches outside of the harmonically primary mode are not included.



This intervallic immutability sets *The Rite* apart from traditional tonal practice, and even from some like-minded contemporaries. A clear example of this difference can be seen in the main melody of movement 2 of Debussy's *Nocturnes*.[63] Like Stravinsky, Debussy is working with an expanded scalar vocabulary that includes modes of the diatonic, acoustic, and whole tone scales, among others. If we look at the first several statements of the melody, we see that Debussy, unlike Stravinsky, changes the chromatic intervallic content of the melody to adapt it to different modal settings, as Figure 2.2.26 shows.

Figure 2.2.26: The first three statements of the main theme in movement 2 of Debussy's Nocturnes. Each time, the intervallic content of the melody changes to create modal shifts. The numbers below the pitch sets indicate the number of half-steps between each scale step.



This is in stark contrast to Stravinsky's intervalically constant melodies. It would appear to lend support to more pitch-set-based interpretations of *The Rite*. How can music be considered "scalar" if its basic motivic material is stubbornly fixed intervallically, unwilling to yield to the uneven steps of a scale? The key again is the narrow scope of his melodies. They are indeed unwilling to change their intervals to accommodate shifts in mode, but because of their limited number of pitches, Stravinsky can still shift to other modes either by (1) keeping the melodies

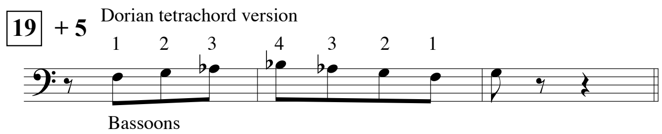
[63] This difference does *not* apply to Debussy's work as a whole, which often makes similar use of small fixed melodic cells with pitches changing around them. See, for example, Tymoczko 2011, 312, for an example of this technique in Debussy.

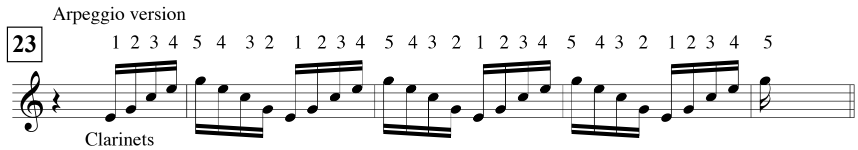
constant against changes in the pitches around them or by (2) transposing the entire melody to shift the pitch content of the underlying mode. Debussy's *Nocturnes* melody, in contrast, includes all the pitches in the scale, so if he wants to change the type of mode, he has no choice but to alter its intervals.

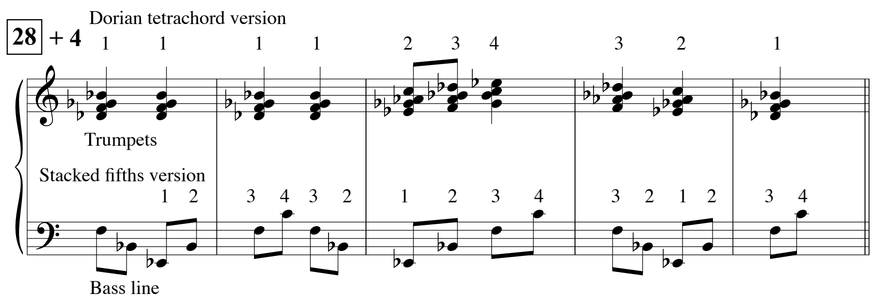
We noted the first appearance of the 1-2-3-4-5-4-3-2 pattern in an arpeggio version at R14 (see Figure 2.2.6). This pattern reappears in a number of different guises throughout "Augurs." At R16, the stacked fifths version appears in the bass line, followed shortly thereafter by the Dorian tetrachord version at R16+4, with both parts continuing up to R18. The Dorian tetrachord version happens again in the bassoon melody that dominates R19 up to R22. The arpeggio version is back in clarinet part at R23, followed by a return of first the stacked fifth and then the Dorian tetrachord version at R28. Figure 2.2.27 summarizes each of these appearances.

Figure 2.2.27: 1-2-3-4-(5-4)-3-2 patters throughout "Augurs."

(Figure 2.2.27 continued)







Next, we will consider the further development of the stacked fourths/fifths from the Introduction. Recall that the Introduction featured many fourth-based melodies that exploited the four (0 2 5 7) sets that include the pitch E♭. "Augurs" picks this up with the E♭-B♭-F-C stacked fifth bass line at R16 – the same pitch set as the oboe and D clarinet melodies at R9, but now emphasizing fifths rather than fourths and on the *bottom* of the texture rather than the top. At R16+3 brass and woodwind fanfares extend the stack up two more fifths to G and D, enough fifths to make a nearly complete diatonic scale of E♭ Ionian/Lydian – the melodic A♮ at R16+4 pushes it into Lydian. This is followed by the stacked fourths version of the same pitch set at R17+3 (Figure 2.2.28).

This extension of the fifths stack up to G and D was already planted in the transition into "Augurs." At R12+5, the clarinet figure begins with downward descending fourths C-G-D in a pattern that adds up to a five-note stacked fifths set, B♭-F-C-G-D, effectively extending the "highest" stack of fifths in the Introduction up by two more fifths (Figure 2.2.29). Then in the next bar, the string chord highlights the C-G-D fifths stack on top in the same register that it appears at R16+3 (Figure 2.2.30).

Figure 2.2.28: Stacked fifths at R16+3 extend the Introduction's E♭-B♭-F-C fifths stack up to complete an E♭ Lydian diatonic set. At R17+3, the same set is extended down using stacked fourths. (Only the parts that form these stacks are shown).

Figure 2.2.29: Clarinet run at R12+5 extends Introduction's "highest" stacked fifth set up two more fifths.

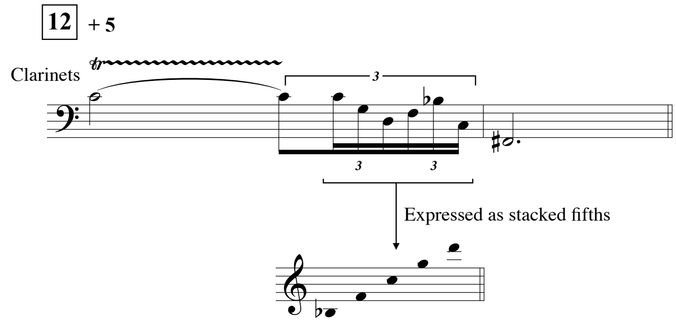
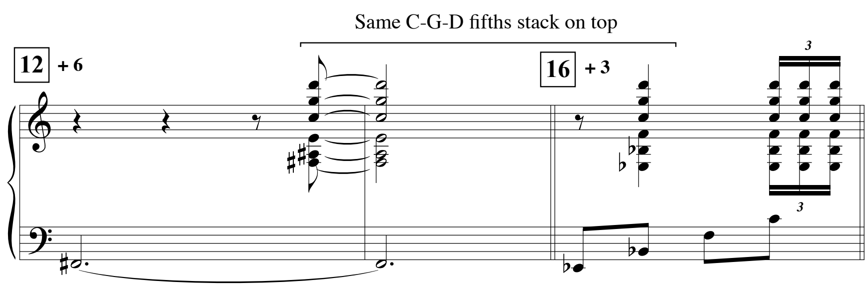


Figure 2.2.30: Comparison of R12+6 and R16+3: same C-G-D stacked fifths in same register on top.



At R18, the stacked fourths/fifths disappear for a while, but are back at R25+4 in the flute's consequent melody, now in the F–G–B♭–C (0 2 5 7) set – the same set as the English horn melody at R6, and a subset of the E♭ Lydian stacked fifths at R16+3 (Figure 2.2.31).

Figure 2.2.31: Stacked fifths at R25+4 are same set as R6 English horn melody and subset of E♭ Lydian fifths stack from R16+3.

At R26+6, as we saw earlier, there is a modal shift, accomplished in part by adding in this same F–G–B♭–C (0 2 5 7) set as parallel fourths in the clarinets and second violin (Figure 2.2.32). Then at R28, the E♭–B♭–C–F bass line returns, and the same set is also highlighted in parallel fifths in the second violin. Then at R28+2, fourths are in the melody again as well, this time in an A♭–B♭–D♭–E♭ (0 2 5 7) pitch set that we also saw in the Introduction (Figure 2.2.33)

Figure 2.2.32: F-G-B♭-C (0 2 5 7) set in parallel fourths at R26+6

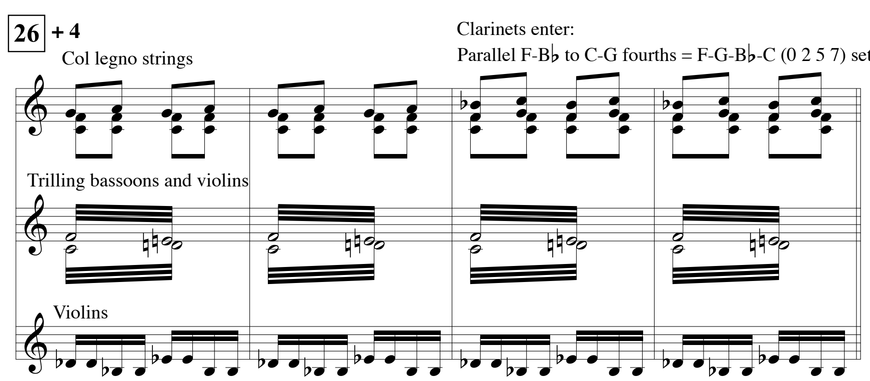
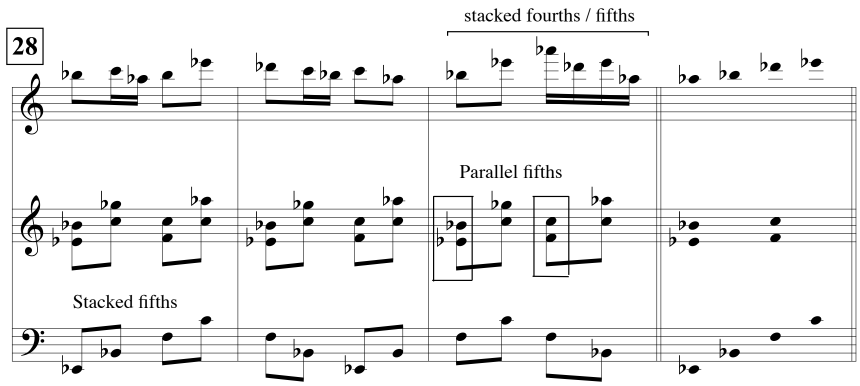


Figure 2.2.33: Fourth- and fifth-based (0 2 5 7) sets at R28 (only the parts that highlight this set are shown).



At R30, the bass line stacked fifths continue under the octatonic material above them. Finally, at R31+4, the stacked fourths are in the melody again, but now in a G–A–C–D (0 2 5 7) set, equal to the “top” set of fifths from the E♭ Lydian stack back at R16. To summarize, in “The Augurs of Spring,” stacked fourth and fifth-based motives continue to be prominent. Initially they are strongly anchored around E♭, as they were in the Introduction, but by the end of the movement they have migrated into a C diatonic universe, along with the rest of the pitch material. In a particularly striking move, the diatonic fifths C-G-D-A that appear at R31+4 and help to firmly establish the new C context originally appeared at R16 within an *E♭* context, as the upper pitches of the E♭ Lydian fifths stack.

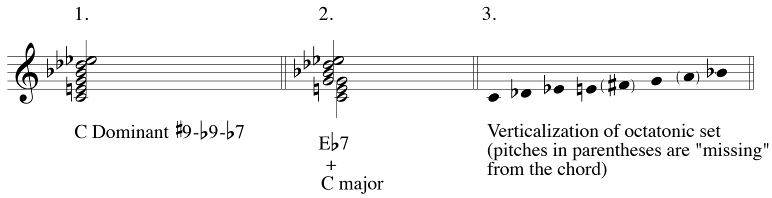
Finally, we already saw the “descending half-step” idea in the large-scale sinking from E to E♭ from the Introduction into “Augurs.” The other significant descending half-step in this dance comes in the evolution of the D♭-B♭-E♭-B♭ ostinato. Unlike the R25 melody or the “slinky tritone” melody from the Introduction, both of which appear at a variety of different pitch levels, this ostinato seems to be fixed not only intervallically, but also at a single pitch level. It continually reappears in the same exact location at R12+3 and +7, R14, R15 up to R18, and R22 up to R31. All told, it is present at this exact pitch level for 96 out of 150 total bars from R12 to R31, as close to being constantly present as anything gets in *The Rite*.

But something striking happens at R31: the ostinato shifts down a half-step to C-A-D-A, and remains at that pitch level continuously until the end of the section. This is, perhaps surprisingly, not especially noticeable when it happens, because the voice-leading is smooth and natural. But it is striking nonetheless, especially if we compare it to the very similar treatment of the opening bassoon melody, with its half-step drop at the end of the Introduction. In both cases, an iconic motive that seemed fixed in pitch sneakily drops a half-step near the end of a section. And in both cases, that shift paves the way harmonically for the transition into the next section. If we consider "Augurs" as a sort of struggle for supremacy between E-, E♭-, and C-based material, R31 is a significant turning point, with the C material for the first time taking complete control of the harmonic field – so much so that, for the first time, the dance's iconic ostinato is even pulled into this C diatonic universe.

2.3 RITUAL OF ABDUCTION

"Ritual of Abduction" zeroes in on one of the harmonic zones from "Augurs" and extrapolates it out into a whole section. The "ur-harmony" here is the chord at Rehearsal 37, which can be variously interpreted as a C Dominant ♯9-♭9 chord; a juxtaposition of C major (or C dominant 7) and E♭ dominant 7; or as a verticalization of (most of) an octatonic scale. Figure 2.3.1 outlines these possible interpretations.

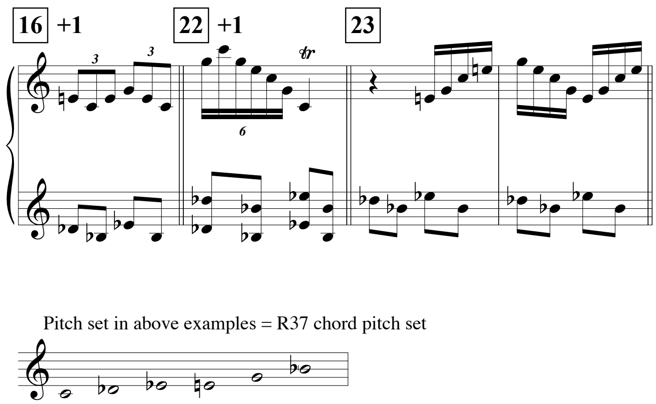
Figure 2.3.1: Three interpretations of the chord at R37.



The seed for this harmony appears at several points in “Augurs.” The first appearance is at Rehearsal 14. In the second bar, the D♭-B♭-E♭-B♭ English horn ostinato, combined with the cello pizz’s creates exactly this sonority – it’s even in the same spacing as at R37, an octave lower (Figure 2.3.2). Of course, it is also a dramatically different texture and occurs only in passing, so its impact is far less striking. We get similar hints of this sonority any time the ostinato happens at the same time as the C major arpeggio material, as it does at R16+1, R22+1, and R23 (Figure 2.3.3).

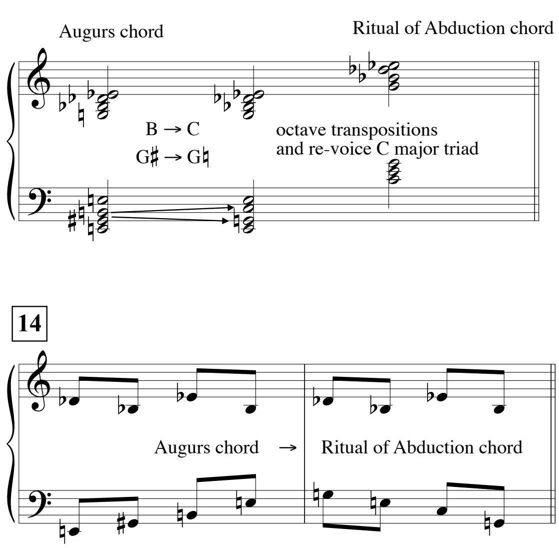
Figure 2.3.2: Precursor of “Ritual of Abduction” ur-chord at R14.

Figure 2.3.3: Other precursors of "Ritual of Abduction" chord



A key insight into the R37 "Ritual" chord's relationship to the R13 "Augurs" chord can be found at R14, where these two chords are juxtaposed right next to one another. This shows clearly that they are only two half-steps apart from one another in pitch space: starting with the "Augurs" chord, all we have to do is move the B up to C and the A♭ down to G and we get the "Ritual" chord (Figure 2.3.4).

Figure 2.3.4: Voice-leading relationship between "Augurs" and "Ritual of Abduction" ur-chords, and its manifestation at R14.



Many analysts have recognized that these chords similarly juxtapose E♭ dominant with another major triad, but their simple adjacency in pitch space has not been remarked upon, as far as I am aware. While we don't hear this voice-leading happen directly at R37, we *do* hear it directly from R14 to R14+1, and again from R14+2 to +3. This not only presents a very subtle foreshadowing of the R37 harmony, but also creates an intriguing bridge between the worlds of field harmony and chordal voice-leading.

This harmony doesn't last in a "pure" state for very long at R37. At R37+2, low F# timpani hits come in, encouraging an octatonic interpretation, both because it nearly completes the octatonic set, and because it emphasizes its characteristic minor third / tritone partitioning.[64] Then at R37+3 the woodwinds and D trumpet squeal away on a frantic melody in D Mixolydian. A bitonal interpretation certainly makes a good deal of sense here, with the D Mixolydian melody audibly clashing with the harmony below it (Figure 2.3.5).[65]

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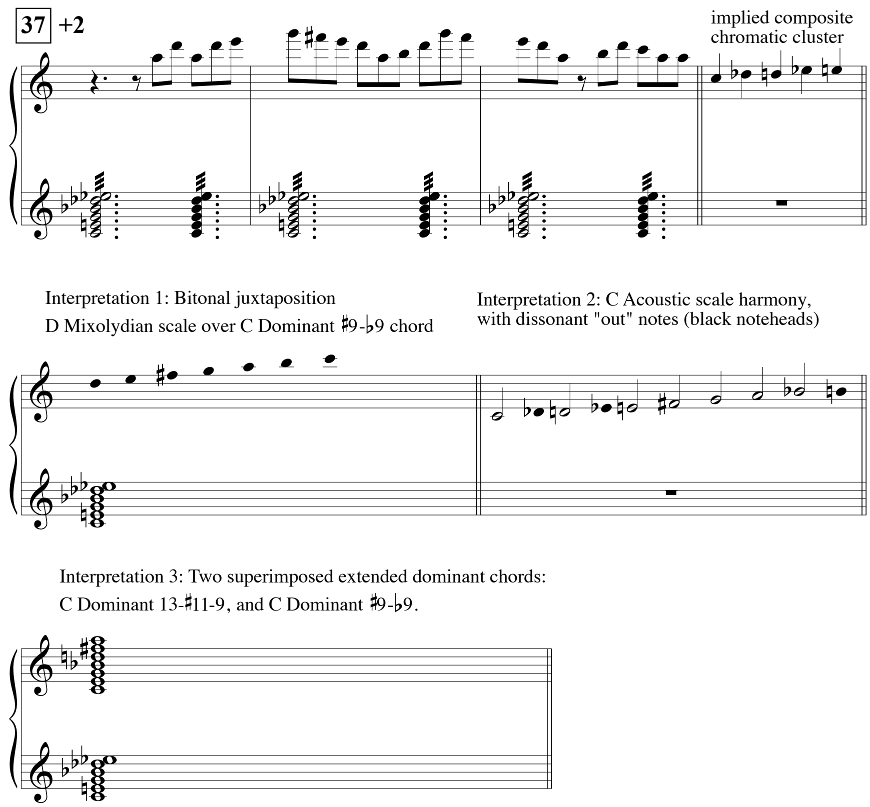
[64] Van den Toorn (1987, 181) makes a similar point.

[65] This is close to van den Toorn's interpretation of the passage, though he considers it fundamentally octatonic with "interference or diatonic interpenetration" coming from the D material in the melody (1983, 129).

Figure 2.3.5: Various interpretations of the composite harmony at R37+2.

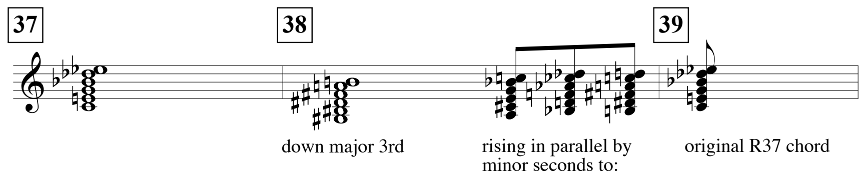


The combination of these two harmonic fields also creates yet another version of our favorite chromatic cluster, this time an octave higher than usual. Another possibility is to consider the D♭ and E♭ to be the dissonant “out” notes, with the melody forming a consonant C Acoustic scale when combined with the C dominant 7 chord below. (The B♮ in the second and third bars of the melody is an outlier in this scheme). A somewhat similar interpretation is to hear it as two superimposed extended dominant chords: the crunchy C Dominant ♯9-♭9, with the D♭ and E♭, and the brighter C Dominant 13-♯11-9 created by the melody notes. Indeed, the resulting sound has elements both of this crunch *and* of this brightness.

The C Dominant ♯9-♭9 chord at R37 acts as a sort of seed chord in “Ritual,” spawning much of the harmonic activity that follows. At R38, this chord is transposed down a major 3rd to

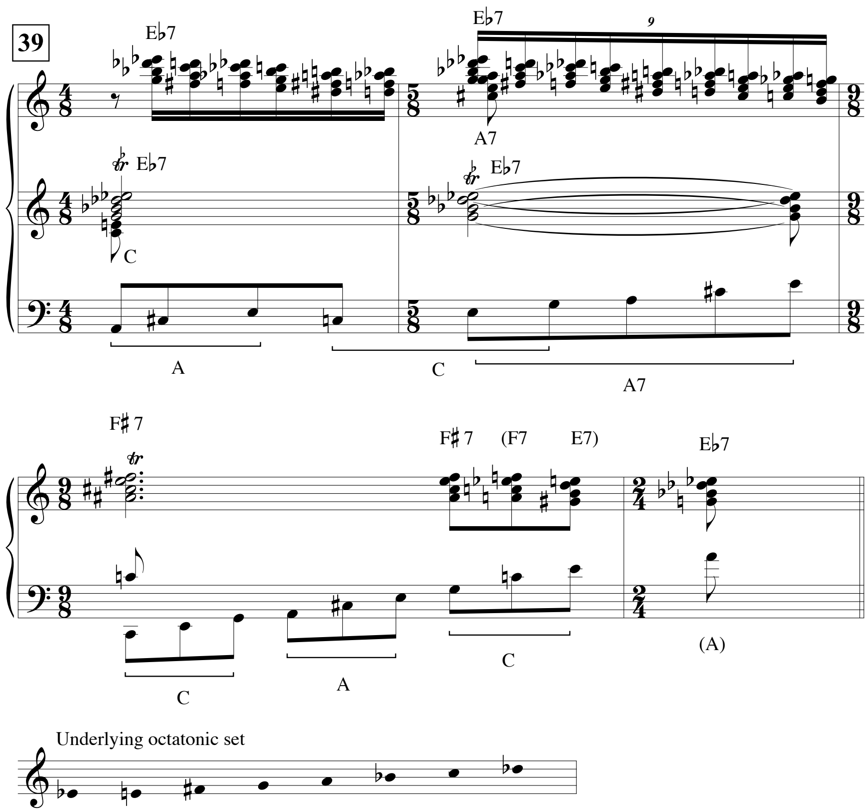
G♯, and two bars later, horns and trumpets move it up in parallel by half-steps, taking us back to the original pitch level at R39 (Figure 2.3.6).

Figure 2.3.6: Transposition of R37 chord at R38.



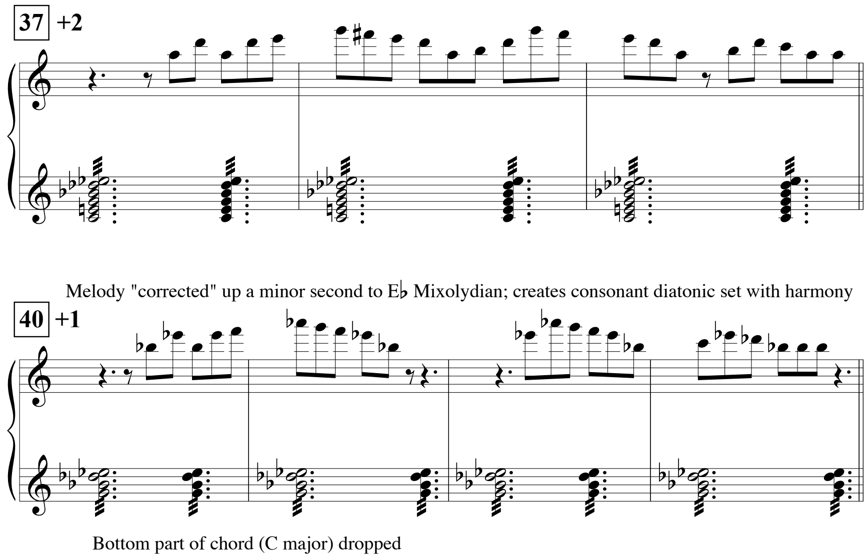
From here, the chord breaks up into its component parts of major triad and first inversion dominant seventh, and these distinct harmonic units start taking on independent lives of their own. This is similar to what happens to the E Lydian ♯2 chord from "Augurs," which appears as a single conglomeration at R13, but later separates out into its component units, as we saw in Figure 2.2.2. At R39, the clarinets hang onto just the E♭7 part of the chord, while the trombones outline alternating A major and C major triads under it. The C major triads create the ur-chord from R37, while the A major triad creates a new, but very similar sonority: the only difference in the composite pitches of the two chords is that the C shifts to an A. At the same time, the oboes descend chromatically from E♭7 to A7. At R39+2, the E♭7 shifts up a minor third to F♯7, and below this we also get C major and A major triads. There's a pretty clear "octatonic minor third game" going on here: as long as Stravinksy keeps on juxtaposing and shifting between dominant 7ths and/or major triads that are a minor third (or tritone, aka two minor thirds) away from one another, (1) they remain in the same underlying octatonic scale (a classic example of van den Toorn's "Model A"), and (2) the composite harmonies are quite similar. We wind up with a single field harmony *and* kaleidoscopic oscillation at the same time: the chords are constantly shifting between similar harmonies, but they're also all contained within a single octatonic set (Figure 2.3.7).

Figure 2.3.7: Chords generated by "minor third game" at R39. All parts are built on minor third transpositions of triads or dominant sevenths on A, C, E♭, and F♯. Composite chords are therefore all part of same octatonic set.



At R40, we return to a simplified variant of the R37 harmonic material: the top E♭7 part is there, but the bottom C major triad is gone, and all that's left of the D Mixolydian material is the stark A-D descending fifth in the horn. When the D Mixolydian melody comes back in the next bar, it has been "corrected" up to E♭, creating a purely diatonic E♭ Mixolydian pitch set with the E♭7 harmony below it. In retrospect, we can hear the melody at R37 as another example of a harmonic unit appearing a half-step "too low" (Figure 2.3.8).

Figure 2.3.8: Comparison of melody and harmony at R37+2 and R40+1 (horn part omitted at R40+1).



At R40+6, we come back to the G♯ version of the ur-chord. R41 to R43 is an expanded and intensified version of R39's octatonic minor third game. At R41, the dominant sevenths in the violins move by minor third between each beat, and the brass outline major triads a minor third apart, all contained in the same octatonic pitch set. While it *is* highly octatonic, it's also a little bit more complicated. In the strings, for example, while the C-D♭ octatonic mode is clearly in control, the chromatic parallel dominant sevenths also touch on the other two octatonic modes. While the violins move in parallel dominant sevenths, the cello and viola move independently in parallel major triads. They remain part of the same octatonic set as the violins, but unlike in the pick-up to R39, they do not move in parallel, emphasizing the independence of the dominant seventh and major triad streams. The brass further emphasize this independence at R41+1. The lowest brass line at R40 outlines major triads in the underlying octatonic set, as at R39.

However, it is harmonized above in parallel major triads, resulting in pitches that at times clash with the underlying C-D♭ octatonic set and the octatonic sets of the strings above (Figure 2.3.9).

Figure 2.3.9: Harmony at R41 in relation to octatonic sets. Numbers above notes or chords refer to the octatonic set that they belong to. Set 1 is clearly in control: all brass bass notes and all strong beats in the strings belong to set 1. But the strings also pass through sets 2 and 3, and the parallel brass triads above the bass at times clash both with the underlying set 1 and with the other passing sets in the strings.

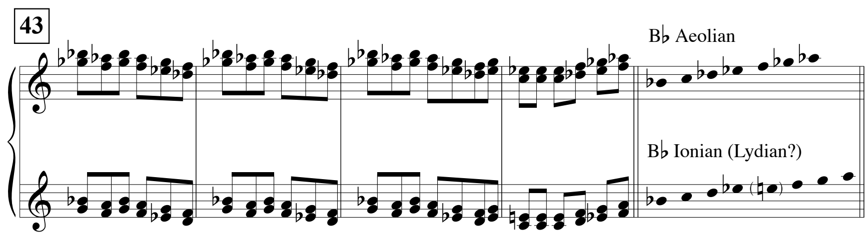
Stravinsky here makes the idea of separate streams of triads and seventh chords primary, even when it clashes with the underlying framework of the octatonic pitch set. It may seem like a small, quickly passing detail, but it is a good illustration of how Stravinsky employs multiple simultaneous interpretations of his harmonic material. In general, the octatonic set is paramount, animated by streams of major triads and dominant seventh chords. Yet these chord streams also can and do (at R41+1) become paramount in their own right, even to the extent of clashing with the controlling octatonic scheme.

The passage culminates in R42, were the octatonic minor third game is played in nearly every combination possible at once. Over an underlying E♭7 pedal in the clarinets and horns, Dominant 7ths on E♭, F♯, and A are layered on top of one another repeatedly in sequence, so that we can clearly hear both the addition of each one, as well as the composite of all three. Underneath, pizz's rise up from the depths outlining major triads on A, C, E♭, and F♯, first one at a time, then two on top of each other, then three simultaneously, back to two and back to one. Finally, the oboes, and eventually most of the strings, are playing triads moving by minor third on each *eighth* note. The passage is striking for its sense both of independently moving harmonic strands, and also of a coherent underlying harmony. This is the magic of the octatonic scale: it can be partitioned into clearly discrete sub-harmonies that will nonetheless always sound cohesive when put together.

Stepping back for a moment, it is instructive to compare the harmonic worlds of "Ritual of Abduction" up to R43 with "Augurs of Spring," which have similar underlying ideas that manifest in very different sounds. Both have ur-chords built from juxtaposing a major triad and a first-inversion E♭7 chord. In "Augurs," however, this sonority is treated as the verticalization of a scale, and is generally expanded out in the direction of field harmonies of single or juxtaposed diatonic/acoustic pitch sets. In "Ritual," on the other hand, Stravinsky seizes on two characteristics of the movement's ur-chord and expands these into the dance's defining features: (1) its partitioning into major triads and dominant sevenths; and (2) its potential octatonicism. By focusing on different implications and latent possibilities, Stravinsky is able to take quite similar pitch-sets and logically expand them in dramatically different directions.

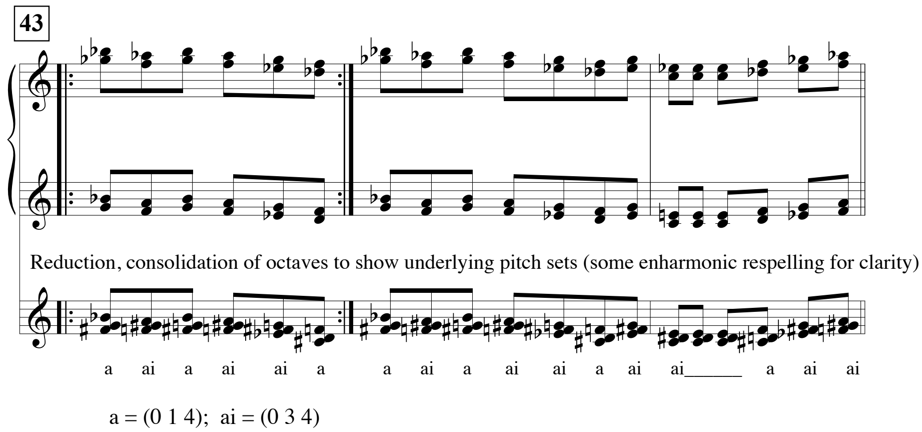
Continuing on in "Ritual," the texture shifts abruptly at R43, with pairs of parallel thirds over a pedal tritone in the bass instruments. The woodwinds and brass present these patterns straightforwardly, while the strings complicate the texture by leaping haphazardly between pitches in different lines. One interpretation of the streams of thirds in this passage is bitonality, and there is indeed some sense of bitonal clash going on between them (Figure 2.3.10).

Figure 2.3.10: Bitonal interpretation of R43. Two streams of parallel diatonic thirds in different keys.



To my ear, however, the top set of thirds sound like they define the tonality, with a dissonant added note from the lower set. Measure four reinforces this interpretation: if it were strictly bitonal B♭ Aeolian/Ionian, the lower stream would have an E♭ here in the top voice, since this would be consistent with its key. The E♮ that is in fact there instead breaks this bitonal scheme, but *maintains* the pattern of adding a dissonant note to the B♭ Aeolian thirds above. Considered in this light, it turns out to be a very clear example of kaleidoscopic oscillation between inversionally related harmonies of (0 1 4) and (0 3 4), as outlined in Figure 2.3.11.

Figure 2.3.11: Kaleidoscopic Oscillation interpretation of R43.



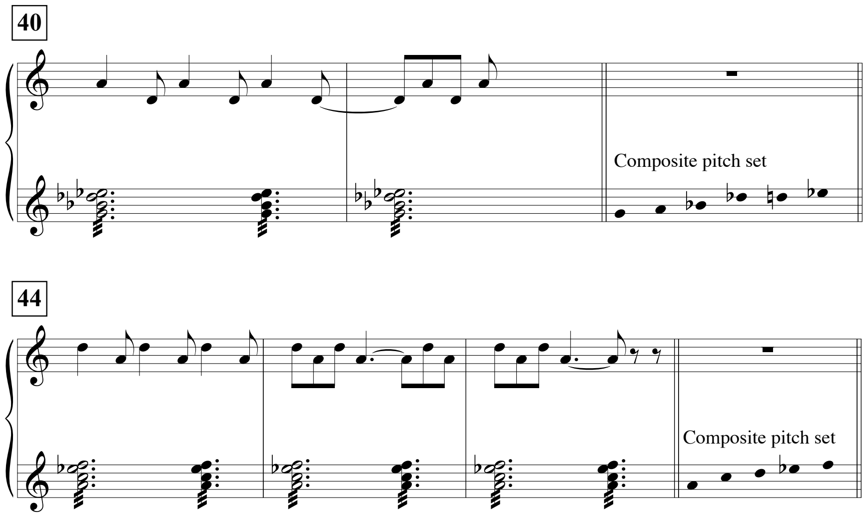
Another way of looking at it is as an “interval game” of diatonic thirds + dissonant minor seconds. The top two parts of the harmony move in parallel diatonic thirds, and the bottom two parts double one of these pitches, while adding a third harmony note a minor second away to create one of the above two pitch sets. If the diatonic third is major, the third voice adds a minor second above the lower note to create the (0 1 4) pitch set; if the diatonic third is minor, the third voice adds a minor second above the top note to create the (0 3 4) pitch set. This is entirely systematic, continuing at R43+6 when the whole thing drops a minor second – another example, incidentally, of a structural half-step drop, though this one is more local and audible than others we have considered. Because of how it is voiced, in two streams of thirds separated by an octave, the diatonic third-ness is clearly audible, as well as the oscillation between the two different dissonant pitch sets. In this way, it is similar to R1 in the Introduction, where the chromatic parallel fourths are audible as a unit, but also form a logical composite harmony with the other voice, oscillating between similar harmonies. In both cases, there is one unit moving in parallel intervals (chromatic fourths at R1, diatonic thirds at R43), with a third voice adding an additional oscillating second.

Finally, what makes this passage (and the many similar passages in "Ritual of the Two Rival Tribes") especially distinctive is the specific pattern of two different sets of thirds an octave apart, which is not captured by the reduction to (0 1 4) and (0 3 4) sets. This spacing increases the sense of tonality with wrong notes: we *almost* have two sets of the same parallel diatonic thirds an octave apart. But in the lower octave, one of the pitches is always "right" and one is always "wrong," off by a minor second, throwing some dirt into the parallel diatonic thirds texture above.

In more general terms, if we consider the entire four-voice texture, there is a quite beautiful sort of atonal invertible counterpoint happening. The four-voice vertical sonorities in play are m3 + m6 + M3 (bottom to top), and its inversion, M3 + m6 + m3. In the first form, the common tone is between soprano and tenor (m6 + M3 = P8); in the second, it is between bass and alto. Tenor and alto are related by chromatic transposition (m6 or eight half-steps), as are soprano and alto (m3 + m6 + M3 = m10 or fifteen half-steps). Stravinsky harmonizes the upper, diatonic pair, with the type of third (minor or major) inherent to the diatonic set. It follows that the lower pair always has the interval *not* in the upper pair – so when the upper pair has a major third, the bottom pair has a minor third and vice versa. This creates a sort of atonal invertible counterpoint between the two pairs of thirds.

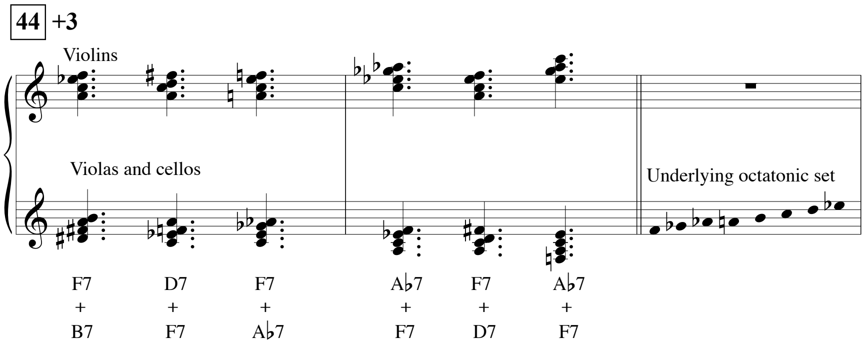
At R44, we have another variant of the D-based horn call at R40, this time with D descending to A, rather than A to D, and now against F7 instead of E♭7. This maintains the clash of D against E♭, but now it is absorbed into a much gentler F Dominant 13 harmony (Figure 2.3.12). It is also a transposition of most of the R37 sonority, up a major second: the C major part of that sonority becomes the D-A horn call, while the E♭7 part becomes the F7 in the strings. But as is so typical, nothing is straightforward: part of the original chord is now animated to parallel the melody at R40; and a key pitch is left out, which significantly lessens the bite of the harmony at R44.

Figure 2.3.12: Comparison of R40 and R44. Same A-D pitch set in horn; accompaniment shifts up a whole step at R44, creating a significantly less dissonant composite pitch set, while maintaining the characteristic E♭ against D dissonance.



At R44+3-4 we have another octatonic minor third game, as F Dominant 7 is juxtaposed with B7, D7, and A♭7. This creates the same chord types we had back at R41, but now in the alternate octatonic set of R38 and R40+6 (Figure 2.3.13).

Figure 2.3.13: Minor third game at R44+3.



R45 is an unusual and uncharacteristic passage. First, it features patterns that are literally sequential, which is rare in this piece; and second, the patterns move completely independently of one another without adding up to composite harmonies with discernible logic. Most of the orchestra moves in parallel (0 7 11) chords, descending by minor third, with one tritone leap in the middle that could also be interpreted as a restart of the pattern a minor third lower. This motion by minor third perhaps alludes to the minor third games at R41 and R42, but the harmonies here create a fully chromatic composite pitch set rather than the unified color of the octatonic. There is also, perhaps, a resonance here with R1. The harmony that entered below the bassoon melody at R1 created the exact same pitch set – D♭-A♭-C – as at R45. As R1 progressed it frequently touched on the same (0 4 5) pitch set that we find at R45, and the bassoon/D clarinet melody also outlined the same descending minor thirds as the top voice at R45 (Figure 2.3.14). Meanwhile, bass voices and some brass move through an ascending sequence of perfect fifths (Figure 2.3.15).[66] The bass note makes a series of composite harmonies with the other parts, but without any underlying pattern. The two streams ultimately converge on F at R46.

[66] In the piano version, this ascending fifths pattern is very clear, while in the orchestral version it is disguised by the way it is divided between instruments.

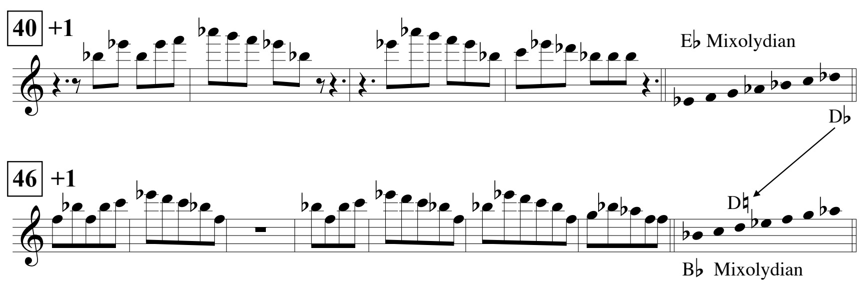
Figure 2.3.14: Comparison of R1, top parts at R45. Same descending minor thirds outlined in top voice, and both excerpts emphasize (0 4 5) pitch sets.

Figure 2.3.15: Harmonic layers at R45. Each layer is logically sequential, but there is no pattern to the resulting composite harmonies.

On paper, this lack of pattern in the composite harmonies is a marked contrast with other sections we have considered, which can indeed be broken into separate streams of harmonic activity, but also add up to composite harmonies with their own logic. However, the aural effect of the passage is not noticeably different from the rest of the piece; it doesn't stick out as being somehow out of place, or come across as any more or less chaotic than numerous other passages. It thus points out both the deepest paradoxes and deepest lessons of *The Rite*. The work employs a wide range of approaches to harmony, from highly ordered to highly disordered, with countless shades in between. What holds it all together is not the sort of deep structural coherence or consistency that a Schenker or a Schoenberg would seek, but rather a vast network of interconnected techniques and approaches employed in an intuitive, playful manner.

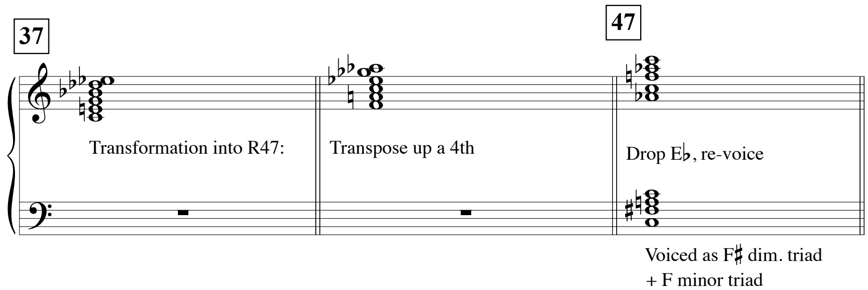
At R46 we find the melody from R37+2 and R40+1 again. It has been transposed down a fourth from R40+1, creating a closely related pitch set: the D♭ of R40+1 moves to D♮, but all other pitches remain the same (Figure 2.3.16). As at R40+1, it is harmonized purely diatonically.

Figure 2.3.16: Relationship of melodies at R40 and R46. R46 is transposed down a fourth, which causes the underlying pitch set to shift by a single half-step, D♭ → D♮.



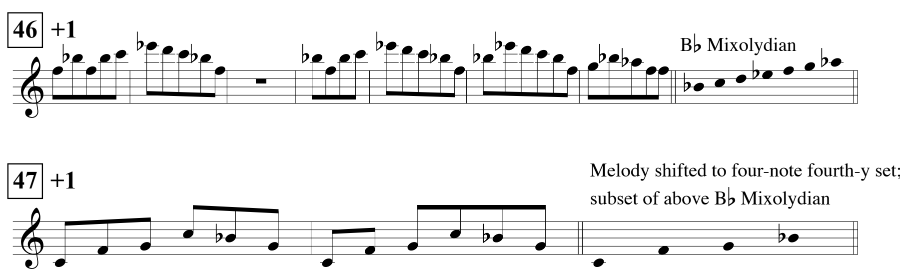
The chord at R47 seems like a strikingly dissonant, new sonority. However, it is actually very close to the dance's ur-chord. It is the same pitch set type minus one note; if it had an E♭ present, then it would be the same pitch set type (Figure 2.3.17). The spacing makes it sound quite different though. Rather than a juxtaposition of minor-third related dominant seventh chords, it combines a diminished triad and minor triad related by half-step. At R47+7, it adds an E♮ to the pitch set, which defines it definitively as a different type of chord, and also negates a potential octatonic reading. We can still consider it very close to the dance's ur-chord pitch set, since it is just one half-step motion away from it. R47+12 brings this home even more when the E-E♭ tremolo effectively causes the harmony to oscillate between these two chord types.

Figure 2.3.17: Relationship between chords at R37 and R47. R47 chord is R37 chord transposed up a fourth and re-voiced (with one pitch dropped).



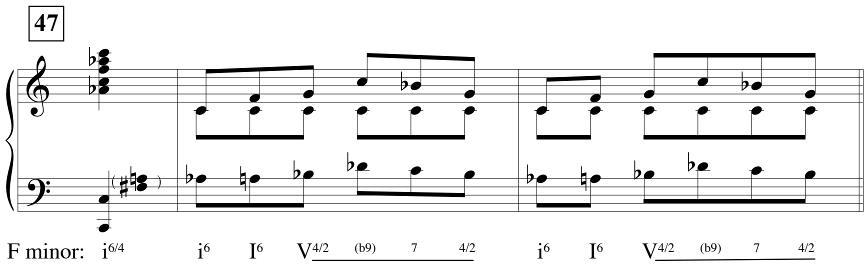
These dissonant chords alternate with material derived from the R46 melody. Here it is transposed down another fourth so it starts on C, and while the basic contour of the melody is maintained, it shifts into a stacked-fourth (0 2 5 7) pitch set on F–G–B♭–C (Figure 2.3.18), which is a subset of the same B♭ Mixolydian scale as at R46.

Figure 2.3.18: R46 melody shifted into stacked fourths set at R47.



It is also harmonized in one of the more explicitly functionally tonal passages in the piece, strongly implying F minor. Indeed, if we merely excise the G♭ and A♮ from the dissonant hits, the whole passage is straightforwardly F Minor over a dominant pedal (Figure 2.3.19).

Figure 2.3.19: Functional interpretation of R47. G♭ and A♮ are discounted from the "hits."



Picking up now on one of our themes, there are several appearances of the 1-2-3-4-3-2 pattern in this dance as well. The arpeggio version shows up at R42 in the four simultaneous versions of E♭7 arpeggiations in the clarinets, beginning with an 8-note version in E♭ clarinet, then a bar later a 7-note version in B♭ clarinet 1, 6-note version in B♭ clarinet 2, and finally a 5-note version in B♭ clarinet 3 (Figure 2.3.20). A scalar version then appears at R43 (Figure 2.3.21), and the arpeggio version appears again in the violins at R44 (Figure 2.3.22). Finally, three different simultaneous versions of it appear at R46: a Dorian tetrachord version, a stacked fourth version, and a slightly more abstracted melodic version (Figure 2.3.23). The stacked fourth version is the same pitch set as the stacked fifths at R16. If it were arranged in fifths like R16, it would start on the *highest* note of the pattern and begin with a *descent*; but because fifths have been inverted to fourths, the C that was the highest note at R16 is now the lowest note, and it follows the same contour of ascent followed by descent as the R16 version. This very clear juxtaposition of the scalar and stacked fourth/fifth versions of the 1-2-3-4-3-2 pattern in note-against-note contrary motion counterpoint retrospectively clarifies what was happening in the section from R16. There, these patterns also appeared, but the relationship between them was never presented so clearly and starkly.

Figure 2.3.20: Arpeggiation patterns in the clarinets at R42, with arpeggio "steps" numbered.

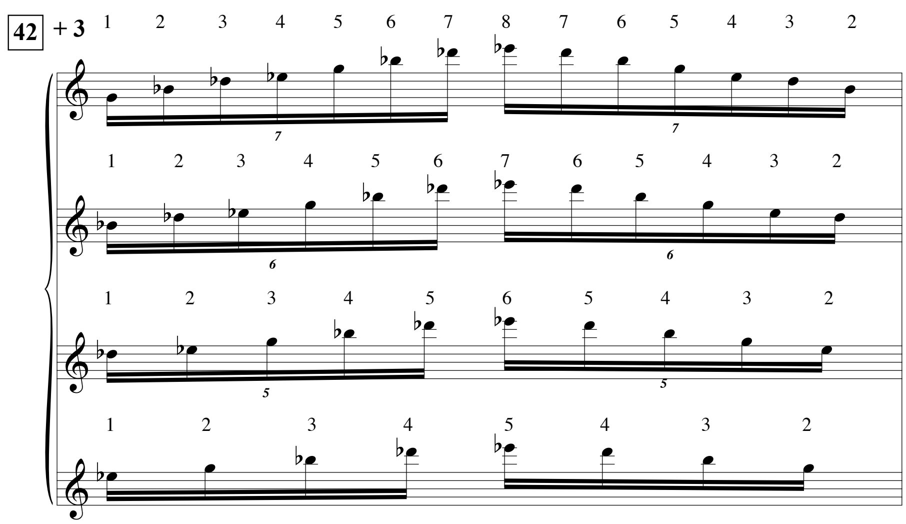


Figure 2.3.21: Scalar 1-2-3-4-5-4-3-2 pattern at R43.

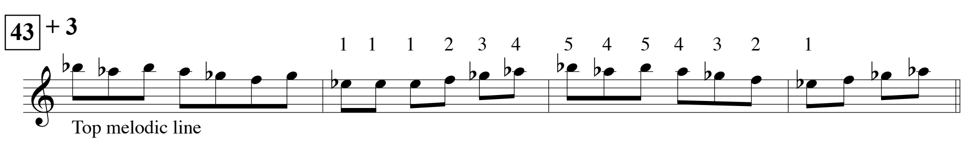


Figure 2.3.22: Arpeggio 1-2-3-4-3-2 pattern at R44.

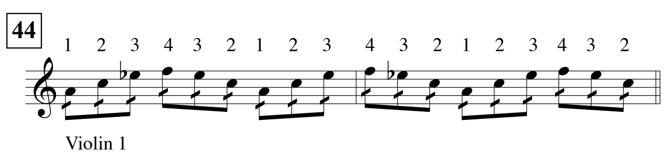
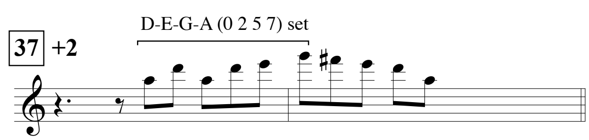


Figure 2.3.23: Three different types of overlaid 1-2-3-4-3-2-based patterns at R46. Top voice has an imprecise diatonic melodic version ("steps" correspond to melodic pitches from bottom to top). Middle voice has a stacked fourth version, bottom voice has a Dorian tetrachord version. All three versions coexist within an overall B♭ Mixolydian pitch set.

Fourths/fifths play an important role in this dance as well, not only motivically, but also on a more structural level. Motivically, the D-E-G-A (0 2 5 7) set forms the first four pitches and backbone of the melody at R37+2, and, in other transpositions, the similar melodies that follow at R40+1, R46, and R47 (Figure 2.3.24).

Figure 2.3.24: D-E-G-A (0 2 5 7) set in the melody at R37+2.



The horn melodies at R40 and R44 also emphasize D-A, first as a descending fifth (A to D), and then as a descending fourth (D to A). As we saw earlier, a long string of ascending bass line fifths are also one of the harmonic elements at R45, A-E-B-F♯-C♯-G♯-E♭-B♭-F. Then at R46, in addition to the fourths and B♭–C–E♭–F (0 2 5 7) pitch set highlighted in the melody, as we saw above (Figure 2.3.23) one of the accompaniment figures is a stack of fourths in the same set, C-F-B♭-E♭. Finally at R47, as we saw in Figure 2.3.19, the melody is translated into a purely (0 2 5 7) set on F-G-B♭-C, highlighting the C-F and G-C fourths to close out the movement.

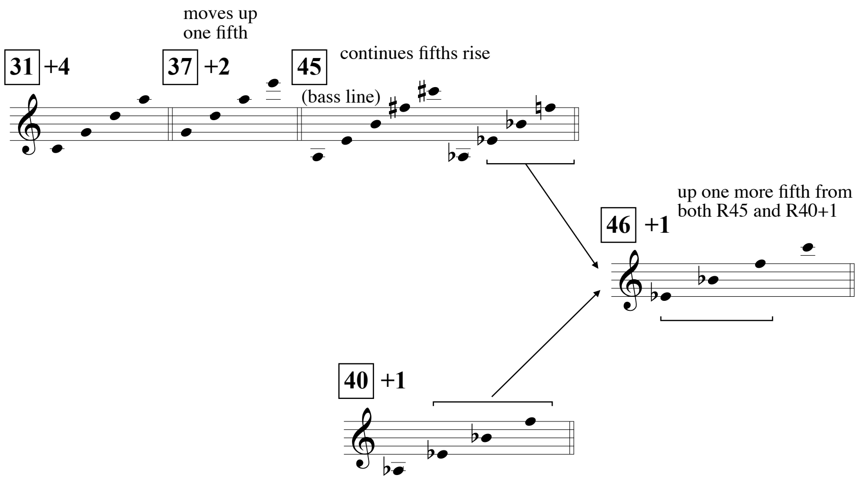
Fourths/fifths also operate more structurally. After the first statement of the R37+2 melody, subsequent statements follow an ascending fifths sequence. If we conceive of the (0 2 5 7) pitch sets as stacks of fifths, then we are moving progressively higher along our stack: A♭–E♭–B♭–F at R40+1; up a fifth to E♭–B♭–F–C at R46+1; and up another fifth to B♭–F–C–G at R47+1. If we jump ahead to the return of this material in the next movement at R54+1, it is up yet another fifth, on F–C–G–D (Figure 2.3.25).[67]

Figure 2.3.25: Appearances of main melody at R40+1, R46+1, R47+1, and R54+1 move progressively up a stack of fifths. Underlying (0 2 5 7) pitch sets are expressed as stacked fifths to clarify this pattern.

[67] Van den Toorn (1987, 183-186) also has some discussion of cycles of fourths/fifths in the Introduction, "Augurs of Spring," and "Ritual of Abduction."

The attentive reader may note that I conveniently skipped over the pitch set of the *first* statement of the melody at R37+2, as well as the ascending bass line fifths at R45, which don't seem to quite fit with the above ascending fifths story for the movement. If we look at the bigger picture though, they do in fact fit, in a quite clever way. Recall that the final section of "Augurs" featured the C-G-D-A set in the melody (R31+4), which itself was the "highest" stack of fifths yet reached up to that point. The R37+2 melody is in a sense moving up one more fifth from *that* set to G-D-A-E. The repetition of this melody at R40+1 restarts the sequence, jumping way back down to A♭–E♭–B♭–F. But the ascending fifth bass line at R45 actually *continues on* from the R37+2 set, starting with its last two fifths and continuing up, A-E-B-F♯-C♯-G♯-E♭-B♭-F. When it lands on F at R46 it has in a sense "caught up" with the R40+1 version of the melody, incorporating its set as its last four fifths. This makes the R46+1 E♭-B♭-F-C set doubly inevitable: it is both another fifth up from the previous statement of the melody at R40+1; *and* it is one more fifth up from the immediately preceding ascending fifth bass line which itself was continuing a much longer ascending fifths pattern from the Introduction-"Augurs" into the R37+2 melody. Figure 2.3.26 shows how this works. It is especially noteworthy that the set thus arrived at is none other than the B♭-C-E♭-F (0 2 5 7) set that has been so central to the work thus far. In Chapter 4, we will consider the journey of these stacked fifth patterns through the entirety of Part 1.

Figure 2.3.26: R46+1 arrived at by two different sets of ascending fifths.



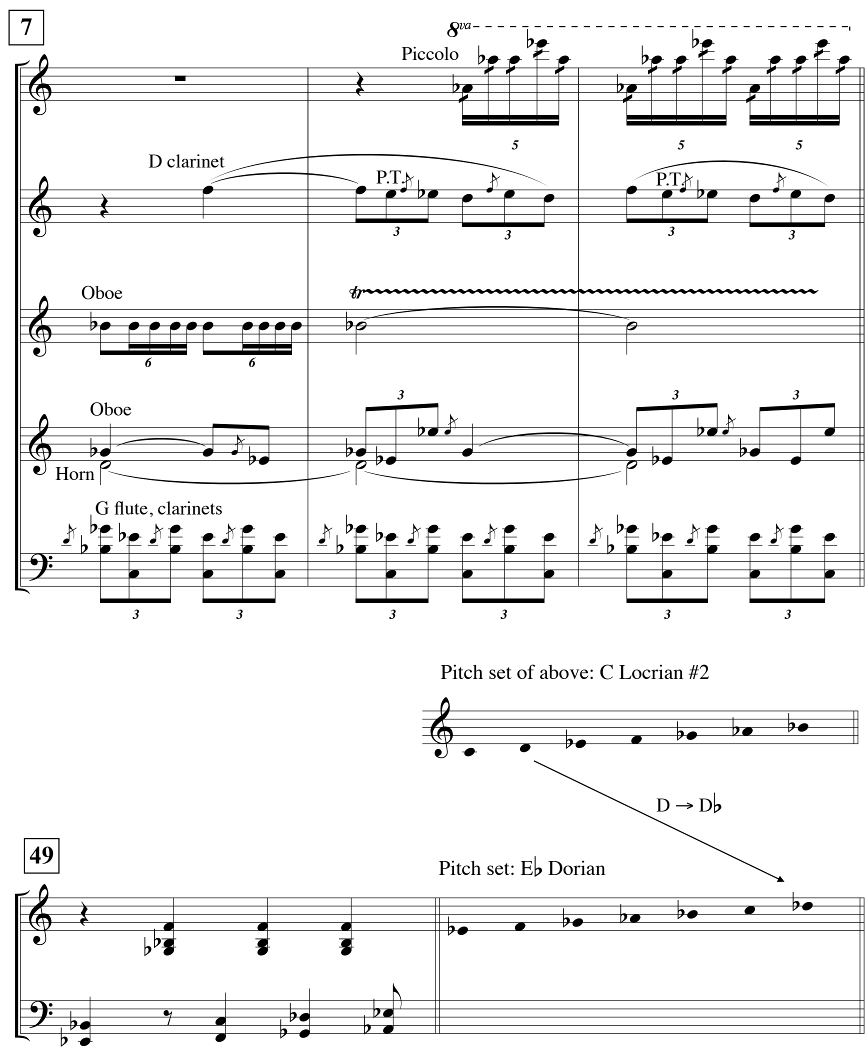
2.4 SPRING ROUNDS

At R48, as we saw in chapter 1, we have a mostly pentatonic melody (F-A♭-B♭-C-E♭ with one D♭ in the fourth bar) with no additional pitches added to harmonize it. This leads into one of the most diatonic-tonal sections of the work at R49. Mostly in E♭ Dorian, it brightens every few bars into E♭ Mixolydian, as Figure 1.3.1 showed.[68] The harmony here also has some resonances with earlier passages in the work. First, there is the literal foreshadowing of the R50+2 melody and harmony in the trumpets at R28+4, which requires little additional comment. Second, there is a strong harmonic parallel to R7, which has the same G♭–B♭–F set forming the top part of the

[68] Incidentally, this passage is a prime example of how Forte and I occasionally offer very similar explanations using entirely different languages. In describing the shift from R49 to R49+3 Forte states, "The main harmony [at R49] is 7-35, which in this ordering would probably be interpreted by most readers as a Dorian mode…at R49+3, 7-35 is transposed (with *t* = 7) to accompany the consequent melodic phrase, based on 6-33. This transposition produces maximum invariance, the invariant subset being 6-32" (Forte 1978, 52). In other words, at R49+3, the mode shifts from E♭ Dorian to E♭ Mixolydian, with only one pitch changing (G♭ to G♮).

harmony, over E♭ and B♭ below – although at R7 there is an additional C underneath everything and also a quiet D (Figure 2.4.1).

Figure 2.4.1: Comparison of R7 and R49 pitch sets.



The melodies throughout this section are once again following a 1-2-3-4-3-2 framework. This pattern is presented literally in the melody at R50+2 and the piccolo /E♭ clarinet countermelody in contrary motion at R51; and a bit less precisely in the melody at R49+3, which follows the basic arch-like contour, but with some skips.

At R50+2, over the continuing bass line ostinato, we get parallel diatonic seventh chords in E♭ Dorian, as was explicitly foreshadowed in the trumpets at R28+4. Because of its unusual and distinctive voicing, it can also be considered as another variant on the "diatonic thirds plus a second" game from R43, though now in a purely diatonic context. At R43, the top two parts of the harmony moved in parallel diatonic thirds, with the third harmony note adding a minor second to create either an (0 1 4) or (0 3 4) set (see Figure 2.3.11). At R50+2, we similarly find parallel diatonic thirds, but now with a *diatonic* second added below as a third pitch. The version of the game here is much simpler: "add a diatonic second below the parallel diatonic thirds." But it can be seen as another example of the more general "add a second to the diatonic third" game from R43. Indeed, the diatonic thirds at R50+2 even come from the same E♭ Dorian scale as at R43, and begin with the same G♭-B♭ third, but then expand up, rather than down. In both places, there is also a fourth voice that doubles one of the diatonic thirds an octave lower. R50+2 is again more straightforward in this regard: the fourth voice always doubles the top third. At R43, on the other hand, the fourth voice jumps around between doubling the top and bottom pitch of the third. Figure 2.4.2 shows both passages with the "added second" separated out into its own staff to show how this works.

If R50+2 were considered in isolation, this might seem to be an overly complicated analysis. Aren't parallel diatonic seventh chords sometimes just parallel diatonic seventh chords? Several factors lend credence to this "diatonic third plus second" interpretation, however. First, these are only three-note chords, with the fifth of the chord missing. This is a highly distinctive voicing, and is noticeably different from the foreshadowing of these chords at R28+4, where the fifth of the chords *was* present (Figure 2.4.3). The R50+2 voicing thus highlights both the parallel diatonic thirds on top, and their clash with the second just below them, without the fifth of the chord there to soften this clash.

Figure 2.4.2: Diatonic thirds at R43 and R50+2. In both cases, parallel E♭ Dorian diatonic thirds are harmonized with an added dissonant second. At R43, the second is outside of the underlying mode and creates alternating (0 1 4) and (0 3 4) pitch sets. At R50+2, the second is in the mode, creating parallel modal seventh chords.

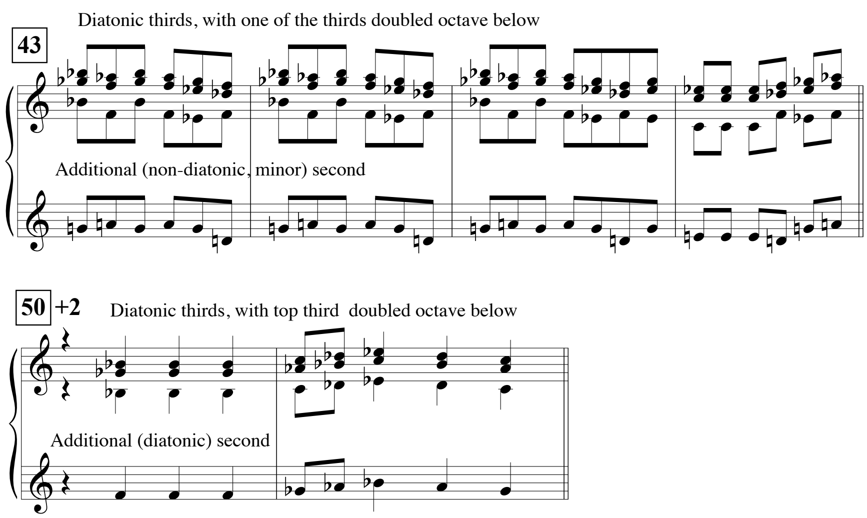
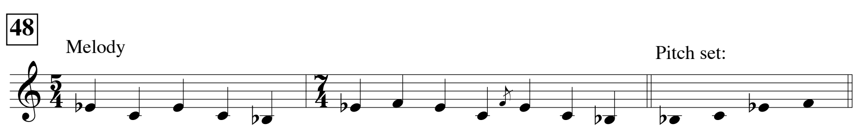


Figure 2.4.3: Comparison of R50+2 flutes/violas and trumpets at R28+4. R28+4 has parallel full diatonic seventh chords, while at R50+2 the fifth of the chord is missing.

Second, the diatonic thirds are further emphasized by separating out into their own strand at R53: in retrospect, it would now seem that this parallel third pattern is the fundamental one, with an "added note" at R50+2. Finally, in addition to the passage at R43, there are several other passages in the work that involve similar “parallel thirds plus x” schemes of various sorts, making R50+2 fit in to a more general pattern. Much of the “Ritual of the Two Rival Tribes” uses variants of this technique, and it also permeates the settings of the “chorale” theme at the beginning of Part 2. (More on both of these sections will come later.) Considering R50+2 to be another variant of this pattern allows us to hear and feel a connection with these other passages.

There are also some further threads of our stacked fourths/fifths story in this first part of "Spring Rounds.” The first two bars of the R48 melody are limited to the same B♭–C–E♭–F (0 2 5 7) pitch set as the oboe and D clarinet melodies at R9, the stacked fifth bass line at R16, and the stacked fourth accompaniment at R46+1 (Figure 2.4.4). It is starting to seem like this may be the “ur-stacked-fifth/fourth” pitch set of the piece, or at least of Part 1.

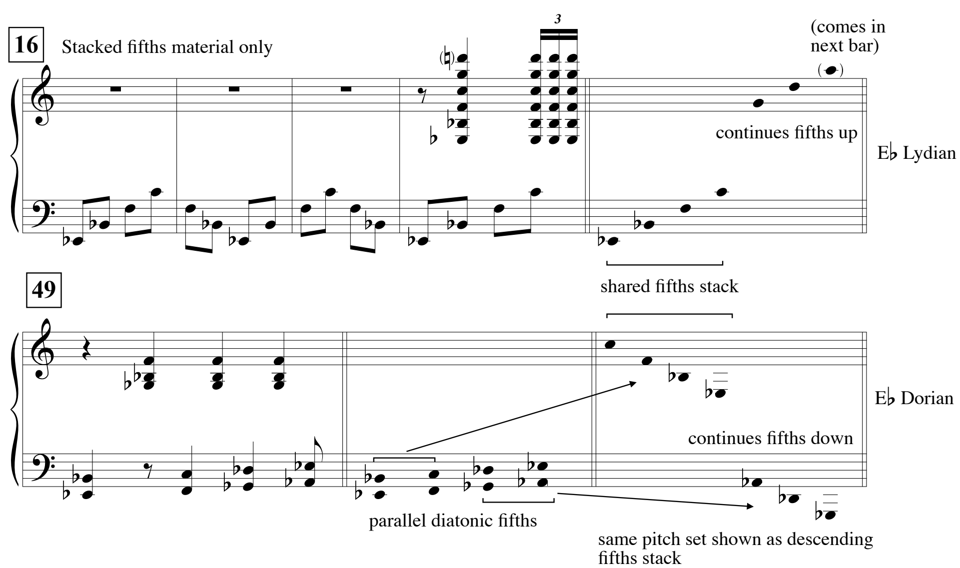
Figure 2.4.4: B♭-C-E♭-F (0 2 5 7) pitch set in first two bars of R48



The voicing of the E♭ minor 9 chord at R49 that is the effective ur-chord of the movement is also reminiscent of the stacked fifth bass line first heard at R16, emphasizing the E♭-B♭-F fifths stack (Figure 2.4.5). At R49, this R16 bass line pitch set also forms the first two parallel fifths in the bass line, which then continues its diatonic parallel fifth stepwise ascent until it adds up to a complete E♭ Dorian diatonic scale. There is a striking parallel here with R16+3. There, using the E♭–B♭–F–C fifths stack as a starting point, additional fifths were extended *up* – G-D-A – to create the E♭ Lydian pitch set. At R49, the same starting pitch set is extended *down* by fifths – A♭-D♭-G♭ – to create E♭ Dorian. Or, put a different way, both passages strongly highlight the interval of perfect fifth, and specifically the fifths E♭–B♭–F–C. R16+3 adds additional pitches to complete a diatonic set with all naturals – G-A-D, to create E♭ Lydian. R49 completes the diatonic set with all flats – G♭-A♭-D♭, to create E♭ Dorian (Figure 2.4.6).

Figure 2.4.5: R49 chord reminiscent of R16 stacked fifths bass line

Figure 2.4.6: Comparison of R49 and R16+3. Both take E♭–B♭–F–C fifths stack as starting point, and expand it three more fifths in opposite directions.



At R53, the harmony takes a dramatic turn in a far more dissonant direction. Although the parallel diatonic fifths bass line and the parallel diatonic third melody continue, the space in between is filled with highly dissonant parallel diminished-plus-major-seventh (0 3 6 11) chords. In one sense, it's not difficult to simply explain this passage as a bitonal juxtaposition of E♭ Dorian material in the bass and upper voices, with the parallel diminished-plus-major-seventh chords forming a separate harmonic stream in the middle (Figure 2.4.7). On the other hand, it's not at all clear at first glance why this works as well as it does. Where did these diminished-plus-major-seventh chords come from and why do they make sense here? What holds it all together?[69]

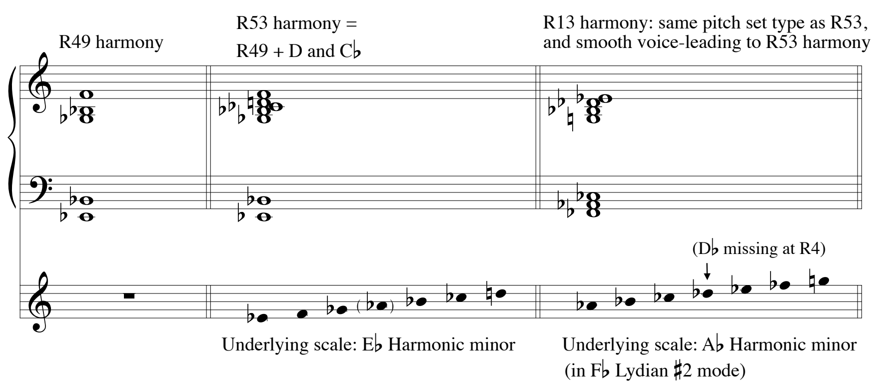
Figure 2.4.7: Harmonic streams at R53: E♭ Dorian outer parts, with parallel diminished-plus-major-seventh chords in the middle.

The key is the harmony in the first full bar of R53. We know in retrospect that this sonority can be broken apart into the separate harmonic streams outlined above, but we are not necessarily aware of this interpretation when it first sounds. In fact, the composite pitch set of this first chord is not far from what we've been hearing since R49. The E♭-G♭-B♭-F of the R49 ur-chord are all there, and two new pitches are added – B♮ and D. Initially, it simply sounds like the E♭ minor 9 ur-chord we've been hearing all along, intensified with two more added dissonant

[69] Whittall (1982, 46-47) emphasizes the jarring contrast in this sudden disruption at R53, and indeed this should not be minimized: "In *Le Sacre*, this [extended diatonicism] means that the stage is set for calculated disintegration: such purity cannot be allowed to survive."

pitches. More importantly, when we add the B and D, we end up with another example of a harmonic minor scale pitch set, like the one that made up the "Augurs" ur-chord back at R13, minus one note – the equivalent note missing in the other version of this harmony back at R4. Furthermore, it can be voice-lead to from the "Augurs" chord quite smoothly. Figure 2.4.8 clarifies these relationships. It is, of course, at a different pitch level and voiced quite differently, creating a somewhat different color, but it is similar enough that the harmony sounds familiar and "right" when it happens.

Figure 2.4.8: Relationship of R53 chord to R49 chord and "Augurs" ur-chord. The R53 chord is re-voiced to clarify its relationship with the other harmonies.

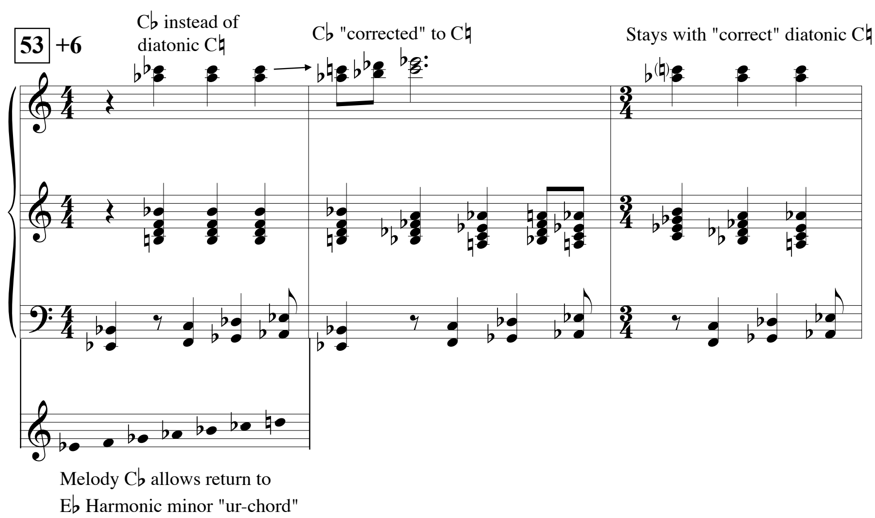


Starting in the next bar, the different harmonic strands become distinct entities and move independently, creating highly dissonant pitch sets. However, we do return to the same harmonic minor chord at R53+2 beats 1 and 2, R53+3 beat 1, and R53+6, giving it the sense of a "tonic" harmony – or "pole" to use Stravinsky's terminology (Figure 2.4.9).

Figure 2.4.9: "Tonic" harmonic minor chords at R53 (in boxes):

R53+6 is especially telling in this regard. Throughout the section from R53 to R54, the top parts continue to move in parallel E♭ Dorian diatonic thirds, with the sole exception of this bar. For some reason here, the top voice is on a C♭ rather than a C♮, just for this one measure, before it is "corrected" back to C♮ in the next measure. There's no good melodic or motivic explanation for this note change. However, there *is* a very compelling harmonic explanation. With the C♭, we once again have the entire harmonic minor scale chord from R53, even though the melody notes are a step higher here. If they were an E♭ Dorian *diatonic* step higher, with a C♮, that C♮ would clash with this harmony. So by altering the C to a C♭, Stravinsky is forcing the chord once again into the "tonic" E♭ harmonic minor harmony. Now that he's reminded us of the importance of this chord, in the next bar he can get back to his juxtapositions in all their glorious dissonance; the downbeat of R53+7 is the same as R53+6, but with the top melody note "corrected" to C♮ (Figure 2.4.10). This small detail dramatically clarifies what's going on here: there is both an underlying harmonic minor ur-chord as a taking off point, *and* a dissonant juxtaposition of unrelated harmonic streams that emanate out from this chord but take on independent lives

Figure 2.4.10: Melodic alteration to create E♭ Harmonic Minor "tonic" chord at R53+6.



It is similar in principle to what happens at R37. There, Stravinsky similarly starts with the C dominant ♯9 ♭9 ur-chord sounding as a single entity, before breaking it up into separate harmonic streams of dominant sevenths and major triads that move independently through an octatonic field harmony. At R53, however, there is no background scale unifying the strands when they diverge, leading to a much more raw and dissonant effect. It is the ability to navigate between these interpretations that gives Stravinsky so much expressive power. He is able to let things get extremely chaotic and dissonant and then he can turn on a dime and make them cohere into a larger composite harmony, reigning in the chaos just at its breaking point.

The harmonic relationship between the section starting at R49 and R53 is also strikingly pre-figured in the relationship between R28 and R30.[70] R28 and R49 are both essentially in E♭ Dorian, although both also have inflections of G♮ and thus E♭ Mixolydian. At R49, these G♮'s occur in alternation with the G♭'s as momentary brightenings of the mode (see Figure 1.3.1), while at R28 the G♮'s occur first as very subtle background brightening in Clarinet 3, and then as dissonant interruptions in the horns beginning at R29+2 (see Figure 2.2.15). Both R49 and R28 also include the same thematic material, prominent as the main melody starting at R51+2, and somewhat in the background in the trumpets starting at R28+4. Then at both R30 and R53, this E♭ material continues in some parts, while other parts introduce the exact same pitches foreign to E♭ Dorian: B♮ and D♮. From there, the E♭ material continues in some parts in both sections, even as the rest of the harmony moves away, although it moves away in quite different manners at R30 and R53.

Despite these similarities, the dramatic effect of these similar harmonic shifts could not be more different. Before R30, the E♭ Dorian material has been steadily building up steam and intensity, before it is suddenly cut short by the *subito piano* at R30, reinforced by a dramatic thinning of the texture from nearly *tutti* to only strings. Before R53, in contrast, the music has been chugging along in a rather static manner before it is suddenly interrupted by thundering percussion, *fortissimo* brass chords, and a dramatic *thickening* of the texture. These very similar harmonic shifts thus coincide with dramatic dynamic and textural changes in the music, but in opposite directions.

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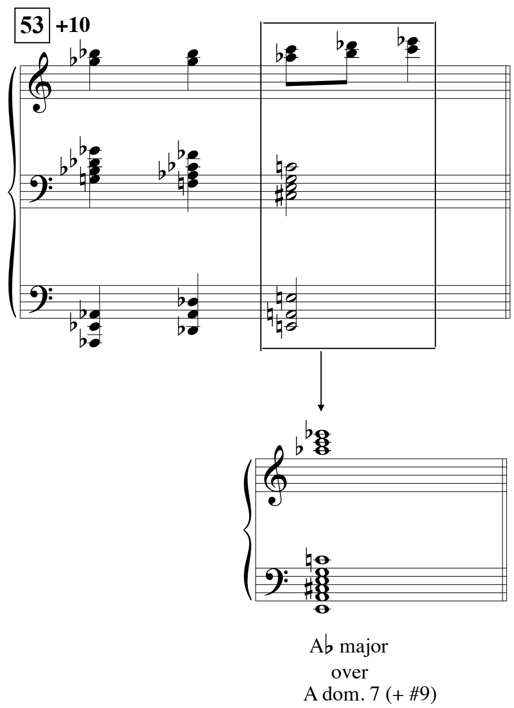
[70] Whittall (1982, 46-47) notes this similarity as well, but without going into very much detail.

Continuing on, in the bar before R54 the bass line finally breaks off from its E♭ Dorian fifths and the music reaches a sort of cadence. The final harmony arrived at has intriguing resonances with the "Augurs of Spring" ur-chord. Like the "Augurs of Spring" ur-chord, and many other harmonies we have considered, it juxtaposes half-step related units – in this case, A on the bottom and A♭ on top. In contrast to the "Augurs" chord however, in this one the *bottom* unit has a dominant seventh, while the *upper* unit is a triad (Figure 2.4.11).

Figure 2.4.11: Half-step juxtapositions in final chord before R54.



It is also similar to the R10 sonority at the end of the Introduction, especially the bottom unit, which is similarly a dominant seventh + ♯9 and even has the fifth in the bass, as at R10. The composite pitch set it creates ends up being very close to that of the "Augurs" chord, with only two half-step motions needed to move between them (B♭ to A, C♭ to C♮) (Figure 2.4.12).

Finally, its voicing, though spread across the range of the entire orchestra is also strikingly similar to the "Augurs" chord if we compress the registers – it even has the same E–E♭ major seventh span between the bass and soprano pitches (Figure 2.4.13).

Figure 2.4.12: Voice-leading between "Augurs" chord and chord before R54 pitch sets.

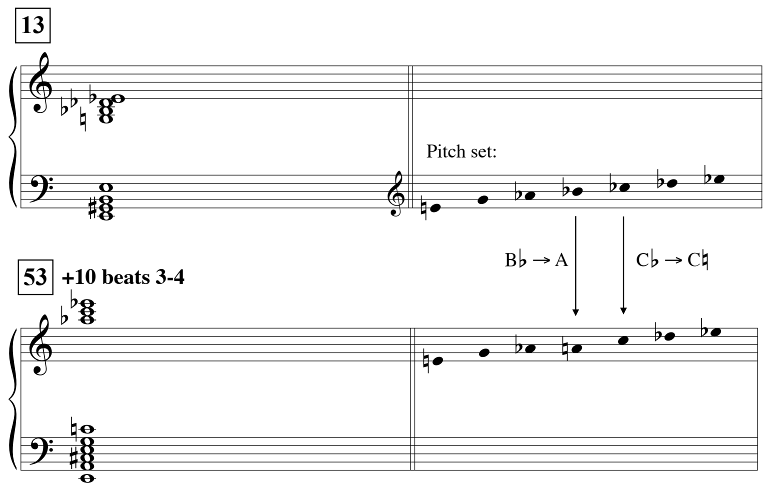
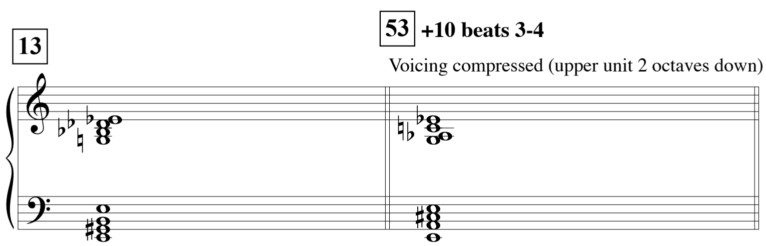


Figure 2.4.13: Similar voicing to "Augurs" chord if registers are compressed.



R54 begins with a brief melodic allusion to R16+4 (Figure 2.4.14). The next bar is an intensified version of R47, transposed down another fourth. There are obvious changes here in the addition of trills and sixteenth notes that intensify the texture, but there are also small changes in detail in the chromatic accompanying figure. Essentially, the placement of the minor third (or augmented second) interval shifts. At R47, this interval is always between the third and fourth notes of the pattern. At R54, however, in the first three bars, this interval is shifted to fall between the second and third notes. Then in the fifth bar, it is shifted again, this time to right before the *end* of the pattern (Figure 2.4.15). It is hard to find any particular reason why Stravinsky did this. The differences are barely audible amidst the hubbub of trills and sixteenth notes. I interpret it as further indication of Stravinsky's obsessive impulse to constantly introduce slight variations into his material, even when they are, for all practical purposes, inaudible.

Figure 2.4.14: Comparison of composite piccolo parts at R16+4 and R54.

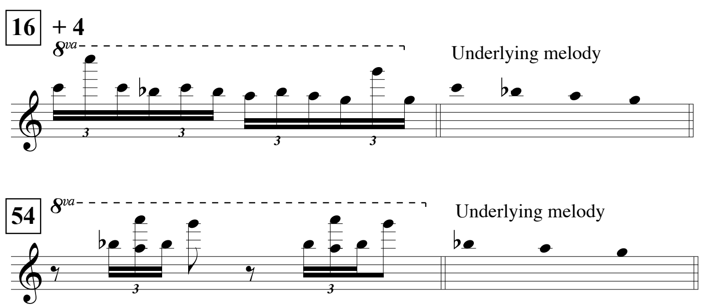
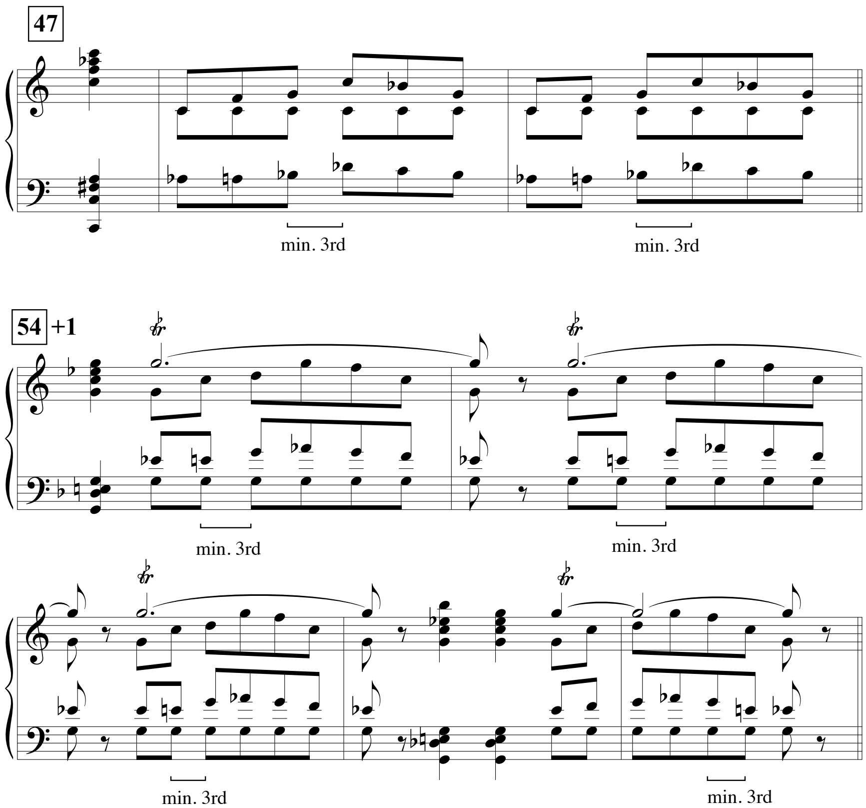
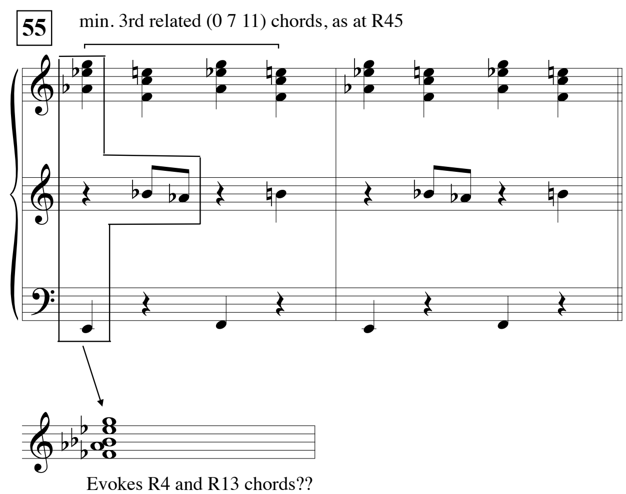


Figure 2.4.15: Slight variations in the harmony between R47 and R54+1. For clarity of comparison, octave doublings are removed at R54+1. Brackets show where minor thirds occur in the chromatic accompanying figures.



The first two bars of R55 are a bit of a mystery. The upper parts move by minor third in parallel (0 7 11) chords, reminiscent of R45. The first E bass note also forms the same composite harmony as the first chord of R45, transposed down a fourth, but then it moves up a half-step against the same upper chord. This first chord also perhaps evokes the F♭ Lydian ♯2 harmonies of R4 and R13, though this may be a bit of a stretch (Figure 2.4.16). Meanwhile, the horns have their own motive against all of this. The basic pitch frame of the passage is octatonic (E–F–G–A♭–B♭–B), with one of the lines doubled at the non-octatonic parallel fifth and major seventh. Later on, we'll also consider a surprising resonance between this moment and the mysterious trumpet melodies in the bar before R85 in Part 2. But fundamentally this moment, like the R45 passage which it is somewhat similar to, is difficult to explain. It certainly sounds "right" and doesn't stick out aurally as being somehow out of place. And yet it is very difficult to explain where it comes from or how it relates to the material around it.

Figure 2.4.16: R55 evoking R4 and R13 chords?



At R56, the pentatonic melody from R48 returns. It seems to be a repeat, but something quite subtle yet significant happens as it progresses. While the first two bars are an exact repeat of R48, in the third bar the melody is transposed up a major second. Not a diatonic second, but a *major* second, shifting it into a different mode – G Aeolian rather than F Aeolian. Stravinsky is able to achieve this harmonic shift so smoothly because the first two bars of the melody contain only four pitches – our old friend, the B♭–C–E♭–F (0 2 5 7) set – and these four pitches occur in both scales. Thus, he is able to interpret these four pitches as belonging to either scale and can easily shift their scalar meaning depending on which pitches he adds around them – what Tymoczko (2011, chapter 9) refers to as the "subset technique."

Figure 2.4.17: Modal shift by way of melodic transposition. R48 and R54 are compared bar by bar on two staves to show how the transposition in bar 3 of R54 changes the mode, while maintaining four common tones.

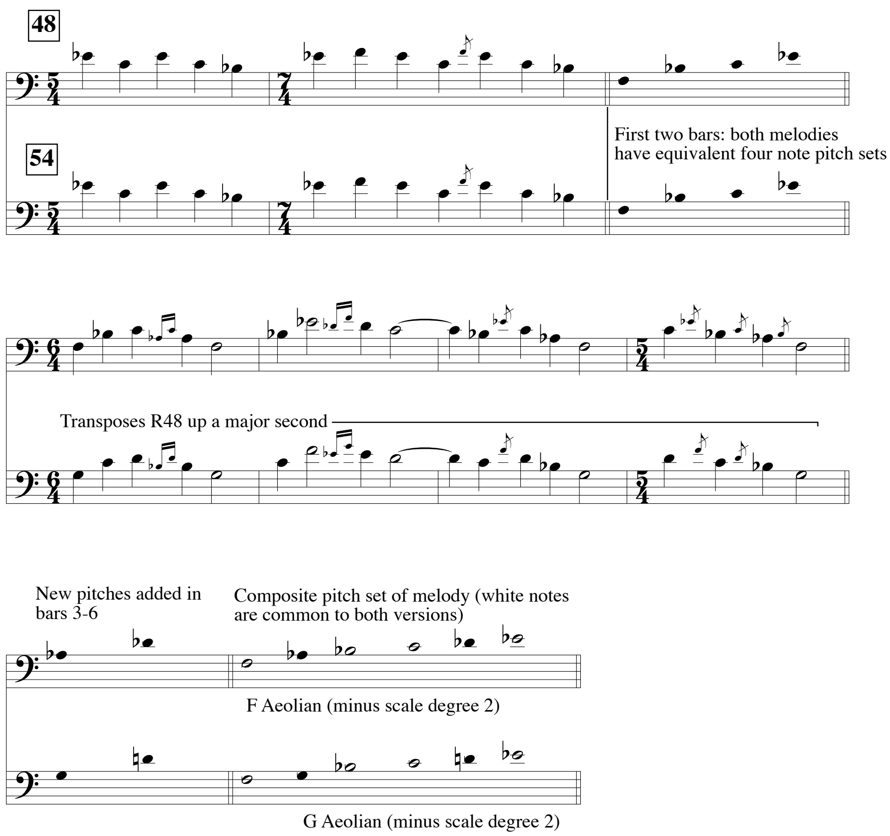
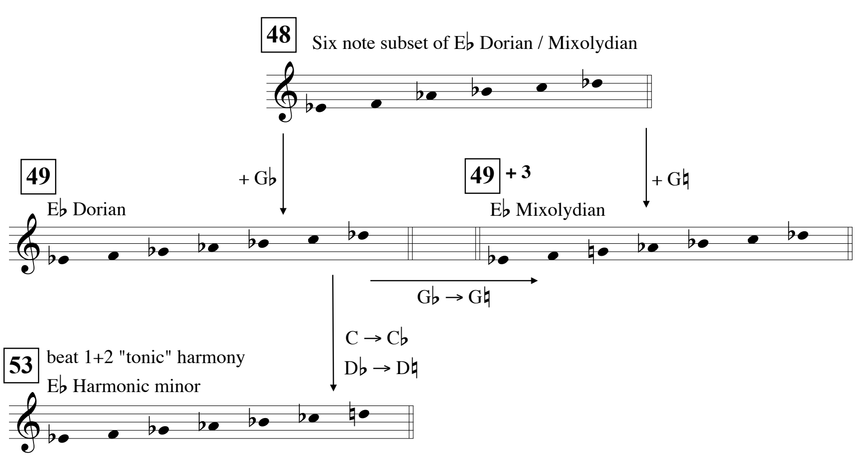


Figure 2.4.17 shows how this works. This is essentially the same procedure that Stravinsky used repeatedly in "Augurs," using transpositions of the melody to bring about modal shifts. The key point here is that even in the simplest of harmonic settings, Stravinsky is applying a similar basic technique. The purpose of this harmonic shift seems to be to turn a harmonic corner in order to set the stage for the next movement. It thus functions in a similar manner to the half-step down transposition of the bassoon melody at the end of the Introduction and the same transposition of the eighth note ostinato at R31. It is noteworthy that in each of these instances the harmonic shifts are subtle and disguised, rather than highlighted or dramatized. In order to achieve the effects he wants, Stravinsky's harmony does indeed still need to progress sometimes,

just as it did in previous eras. But he doesn't want the listener to be aware of this; he doesn't want to dramatize it as a Romantic composer would. He wants the listener's focus to be on his bold block juxtapositions – not the subtle harmonic shifts that set them up and enable them to work.

In summary, this movement throughout is heavily centered on E♭, exploring different colorations of E♭ scales. It first alternates between E♭ Dorian and Mixolydian (R49), with the stage set by a six-note melody at R48 that contains the six pitches that are common to both. At R53, we get another coloration of an E♭ scale, landing on a complete E♭ harmonic minor scale harmony. These three scales are very close to one another in pitch-class space, as Figure 2.4.18 shows. They also overlap with the scales from "Augurs of Spring," which also included both E♭ Dorian and E♭ Mixolydian, as Figure 2.2.22 showed.

Figure 2.4.18: Voice-leading between E♭ scales in "Spring Rounds"



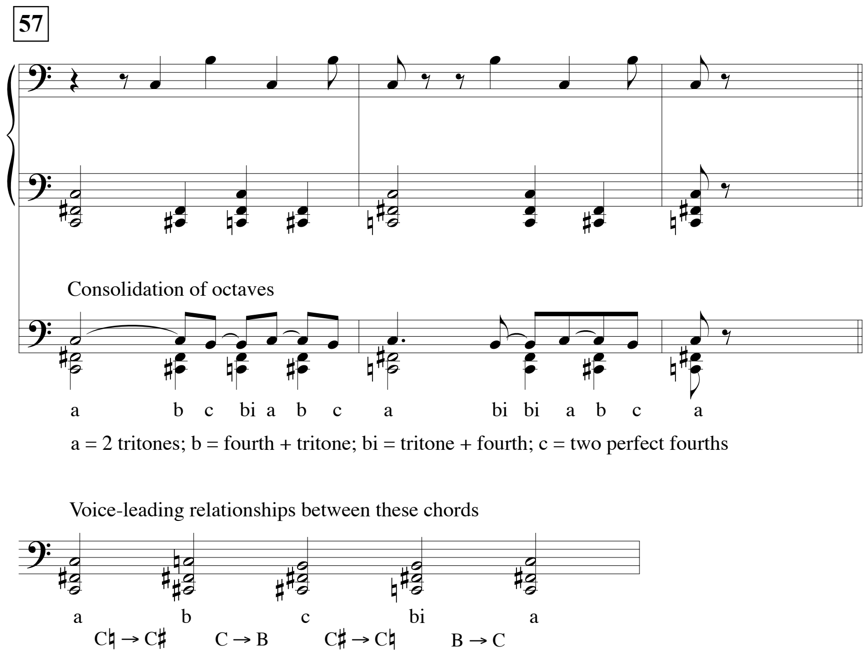
From here, the harmony pulls apart into separate strands of E♭ Dorian parallel fifths in the bass with high E♭ Dorian parallel thirds; and chromatically sliding parallel diminished-plus-major-seventh chords in the middle, intermittently unified by the return of the E♭ harmonic minor scale harmony. At R54, material similar to the end of the previous movement returns, and finally at R56 we return to the mostly pentatonic melody that opened the movement – though the second part of this melody is sneakily transposed up a major second, causing it to end in G Aeolian rather than F Aeolian, setting the stage for the next dance.

2.5 RITUAL OF THE TWO RIVAL TRIBES

R57 picks up on the material briefly presented at R43, spinning it out into an entire section. There are two basic components to this material: (1) low, half-step related tritones, fourths, and fifths; and (2) mid- to upper-register parallel diatonic thirds harmonizing a set of related diatonic melodies, often with a third harmony note added as well – sometimes also diatonic, but sometimes chromatic and dissonant. This dance doesn't have a germinal ur-chord in the way that "Augurs of Spring," "Ritual of Abduction," or "Spring Rounds" do, but instead has a sort of "ur-procedure," in the "parallel diatonic thirds + third pitch" game, which appears in a variety of guises.

In the first two bars in the low brass and timpani, we oscillate between tritone, tritone-plus-fourth, and stacked fourth chords, all related by half-step motion. The major seventh leaps are a salient melodic feature that obscures these patterns a bit, but if we consolidate the octaves, the underlying voice-leading becomes clear (Figure 2.5.1).

Figure 2.5.1: Voice-leading and harmony at R57.

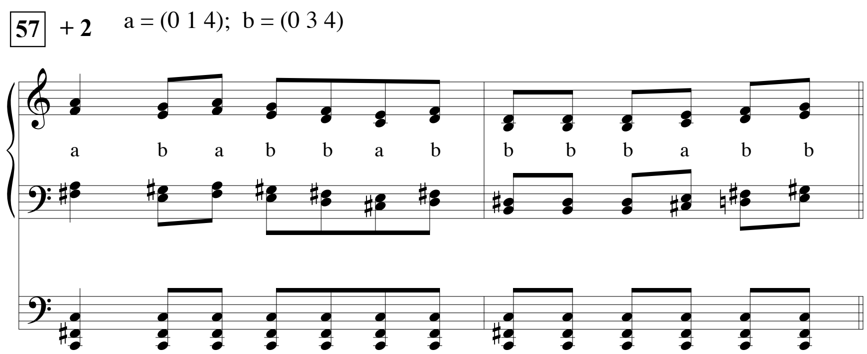


At R57+2, the bass voices settle onto a static C-F♯ tritone, and the passage is harmonically equivalent to R43+6, with the same pattern of (0 1 4) and (0 3 4) trichords harmonizing the melody above (Figure 2.5.2).[71] As at R43+6, it is voiced in two streams of thirds an octave apart, with the top set of thirds in a C diatonic set, and the bottom set doubling one note from the top set and adding a third pitch a minor second "off" from the diatonic set.

[71] As a side note, this passage exemplifies a particular melodic-contrapuntal tic Stravinsky has in this movement which is difficult to make sense of. The horn parts at R57+3 show it clearly: though the composite pattern we hear is that shown in Figure 2.5.2, the individual parts jump haphazardly between different harmony notes, rather than simply moving in parallel stepwise melodic lines. Similar patterning occurred in the strings at R43+2 and +6, although there the woodwinds and brass at least presented the material in its more straightforward step-wise motion form. The purpose of dividing it up like this is difficult to discern. In the very next bar, the oboes play a similar melody in simple parallel harmony, and the effect is not noticeably different. I am essentially ignoring this tendency in my analysis and treating patterns like this only from the perspective of the emergent melodic lines they create, as I do in Figure 2.5.2. But it remains a salient technique that I have yet to find a good explanation for.

(See section 2.3's analysis of R43 for the complete details on these patterns). The melody also is yet another version of the 1-2-3-4-5-4-3-2 pattern, here beginning with a descent and with some slight deviations from pure stepwise motion.

Figure 2.5.2: Harmony at R57+2.

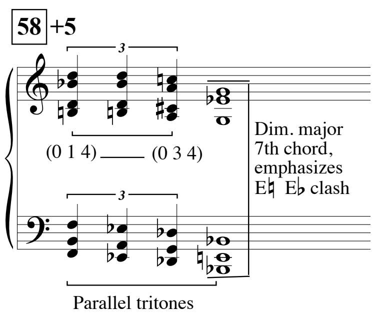


At R57+4, we have essentially the consequent of the phrase, but harmonized very differently, in triads from the C diatonic set, specifically F major and E minor. The white-note parallel triad descending sixteenth note scales in the woodwinds add to the white-note diatonic quality. Against this, however, the brass hit highly dissonant interruptions on G♯ and F♯. As we saw in Chapter 1, these are clearly "out" notes, intentionally clashing with the prevailing harmony. It is in fact exactly the same pitch set we had the last time there was a C diatonic pitch set, at R31, when a similarly pure C diatonic wash was interrupted by G♯ (spelled A♭ there) and F♯. And we even find the same octave displacement between the chromatic notes. The big difference, of course, is the much more pronounced weight given to the chromatic notes at R57+4, but the connection is unmistakable (Figure 2.5.3).

Figure 2.5.3: Comparison of R31 and R57+4.

R58 essentially repeats the same harmonic pattern of the preceding four bars. At R58+5, the two harmonic strains described above move at the same time, but in different ways. The bass moves down in parallel tritones, while above the horns pick up the alternating (0 1 4) (0 3 4) patterns from before (Figure 2.5.4). The starting and ending chords here are the same type: both are the diminished-major-seventh chord from R53.[72] This is also the composite chord type formed on the downbeat of R57+3. The voicing of the final chord, though, emphasizes the major triad component of it in a way that never happened at R53: the tubas and horns combine to make a second inversion E♭ major chord, while only the bassoons are on the clashing E♮.[73] We can think of this sonority as yet another offshoot of the E♮ + E♭ juxtapositions we have heard so many times up to this point.[74] As we will see, this harmonic idea is picked up once again at R62.

Figure 2.5.4: Harmony at R58+5.

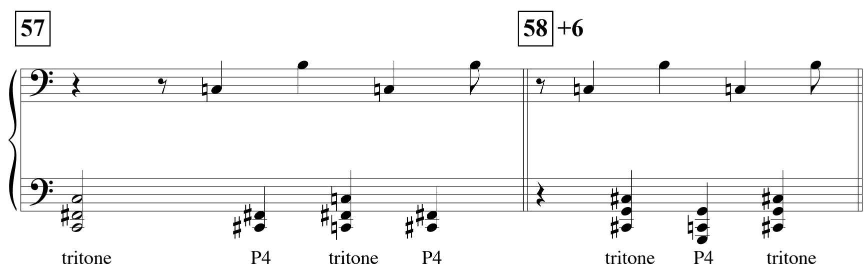


R58+6 is very similar to R57. The C to B major seventh is there, with tritones and fourths/fifths against it. But there is one small shift, with a G in place of the F♯ in the second voice from the bottom. Instead of a tritone against the C and a perfect fourth against the C♯, we now get a tritone against the C♯ and perfect fifth against the C. To make it feel more parallel, however, Stravinsky starts on a C♯ in the bass rather than a C♮, and then adds an extra low G

[72] Forte (1978, 24-26) also notes this connection.
[73] There is an intriguing discrepancy with the four-hand piano version here, which has tritone-fourth chords in the bass, and less emphasis on the E♭-major triad. It seems that perhaps in the process of orchestration, Stravinsky chose to decrease the level of dissonance and emphasize the upper triad of the final chord.
[74] For example, at R4, R10-R12, R13, and R18.

below the following C♮ to create a perfect fourth rather than perfect fifth. This makes the sequence of bass intervals – tritone, perfect fourth, tritone – the same in both instances, even though one of the pitches has shifted by a half-step, from F♯ to G. The end result is very similar, with motion between C and C♯ in one voice creating tritones and perfect fourths with the other voice (Figure 2.5.5). Most listeners would likely perceive R58+6 as a repeat of R57. But the subtle difference between them also must register on some level, creating some sense of variation or development. All of this said, it is undeniable that the primary effect of these passages is of visceral, aggressive pounding – not subtle, sophisticated shifts in harmony and voice-leading. As in many other passages, Stravinsky's harmonic sophistication lurks deep beneath the visceral, primitive-sounding surface.

Figure 2.5.5: Comparison of R57 and R58+6. F♯ moves to G, but now the bass note starts on C♯, creating the same sequence of bass intervals.



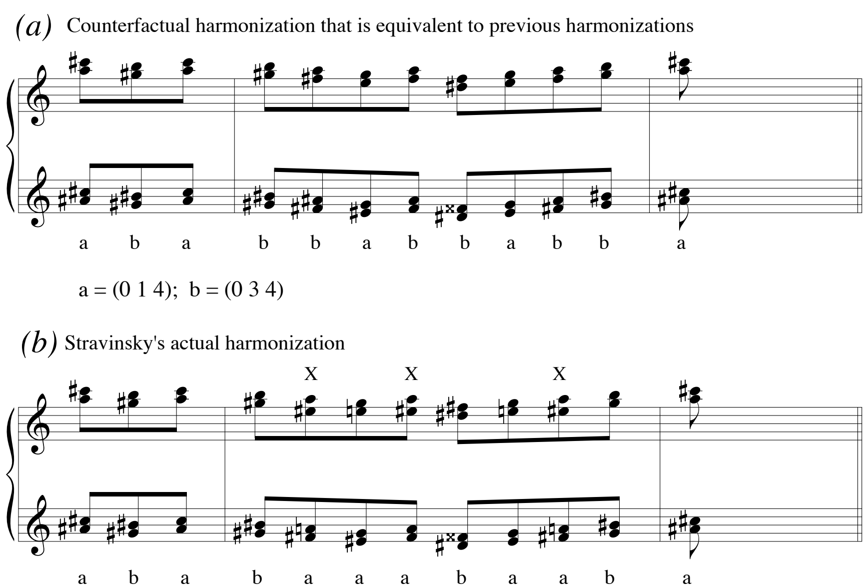
R59 returns to the R57+2 material again, but with different harmonic relationships between melody and bass. In the first bar, the horn pattern from R57+2 repeats, slightly compressed, while the bass below is a minor third higher than at R59. Halfway through R59+1, the pattern repeats again, but now the melodic material moves up a major third and the bass tritone moves up a major second (Figure 2.5.6). This is another example of a kaleidoscopic oscillation type of technique, as the two harmonic strands move by different intervals to create shifting harmonic relationships between them.

Figure 2.5.6: Two repeats of the R57+2 melody at R59, each time with a different relationship between the parallel melody parts (top two staves) and the bass tritones (bottom staff).

There is also a fascinating difference in how the harmonization of the melody unfolds here. Figure 2.5.7(a) shows how it would be harmonized if it were exactly like the horn version before; 2.5.7(b) shows what Stravinsky actually does. The difference is subtle. It is still the same

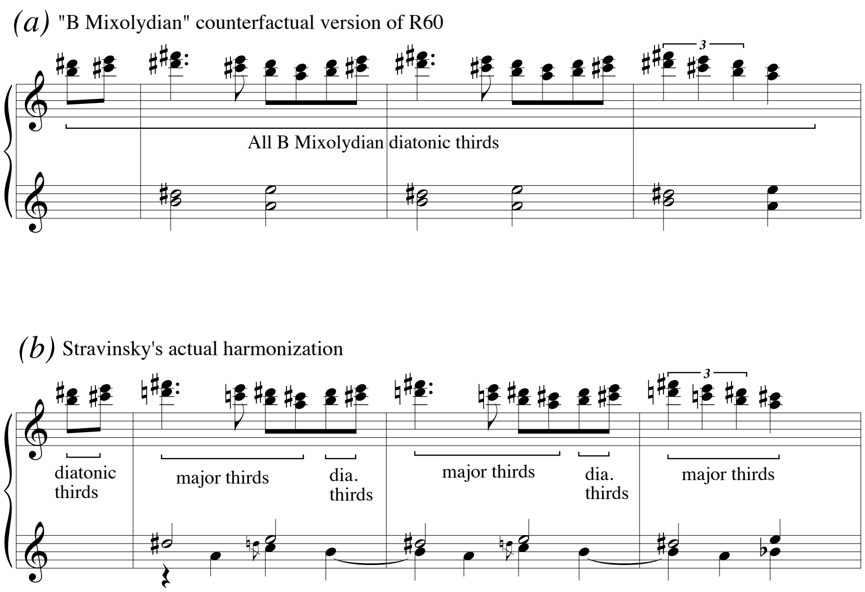
(0 1 4) and (0 3 4) pitch sets in play in both versions, but in (b), Stravinsky swaps the pitch sets for each other at the places marked with an "X." This also means that the top two lines no longer move in purely diatonic thirds. This time, the diatonic origins of the harmonization are superseded by variation in the sequence of (0 1 4) and (0 3 4) pitch sets . Again, it is a very subtle shift, but it strikingly illustrates the multi-layered quality of Stravinsky's harmonic practice.

Figure 2.5.7(a) and (b): Slight variation of harmonic pattern at R59+1. "X" marks chords that are changed in (b).



The next four bars essentially repeat material already heard. At R60, we get another melody built on an (0 2 3 5) tetrachord, and again following a basic 1-2-3-4-3-2 contour (starting on 2). The pick-up to this bar makes it seem like we will get a straightforward diatonic harmonization in B major.[75] However, on the downbeat, the lower voice goes to D instead of D♯, and proceeds in parallel major thirds rather than diatonic thirds – except for the same spot in the pick-up beat each time when it has a diatonic C♯ rather then a parallel-major-third C♮. Additionally, the background harmony is *almost* in B Mixolydian with a ♭2 inflection, but the timing of the motion is off. Figure 2.5.8(a) re-writes the passage in a clear B Mixolydian version to show the difference.

Figure 2.5.8: R60 (a) re-written in B Mixolydian and (b) in Stravinsky's version.

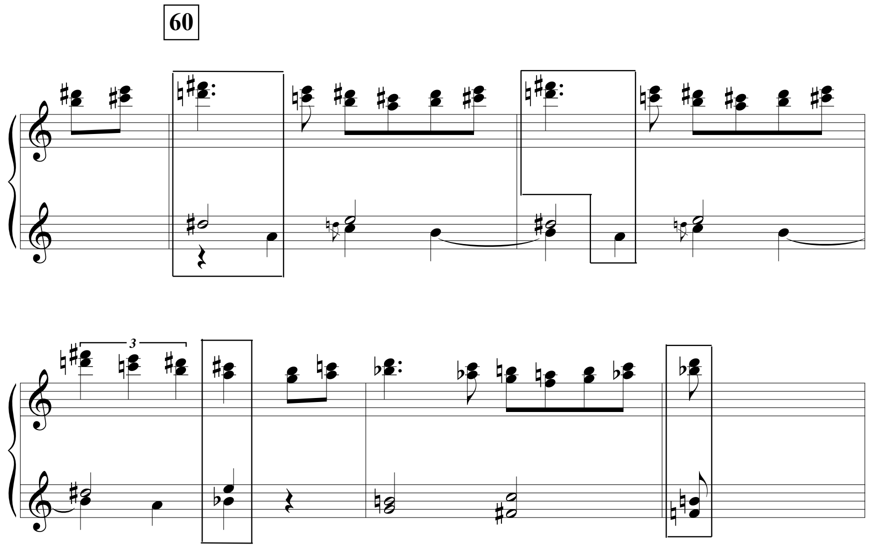


It is as if Stravinksy is intentionally straddling a line here, showing that he can harmonize his melody both in a diatonic context and in a chromatic interval-based context, and indeed can straddle a line right in the middle, hinting at both. Once again, the most strongly articulated harmonies, on the downbeats, are the diminished-major-seventh sonorities originally from R53,

[75] Indeed, Taruskin (1979, 123 and, in more detail, 1986, 313-315) presents a basically plausible B major functionally tonal interpretation of this passage.

but prevalent in this dance as well. The phrase also ends on a different example of this same chord in R60+2. The next phrase transposes the melody and accompanying thirds down a major third, and this phrase also ends on a diminished-major-seventh chord (Figure 2.5.9).

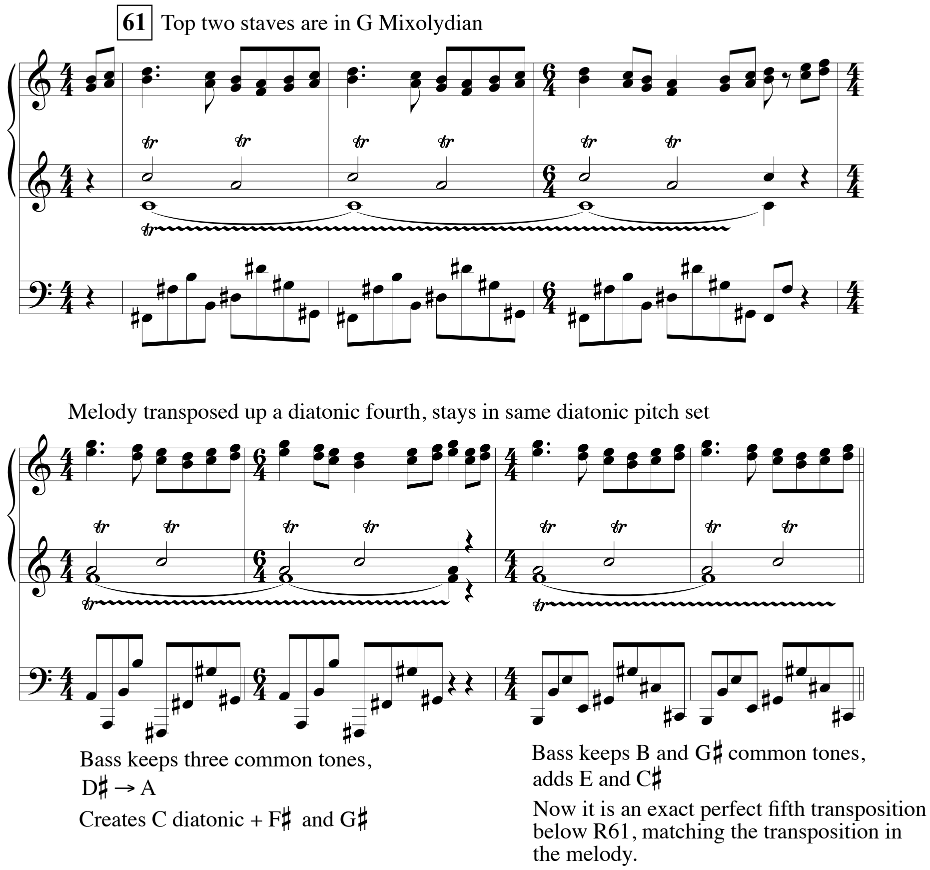
Figure 2.5.9: Diminished-major-seventh chords at R60 in boxes.



R60+4 is the same phrase and harmony again as the beginning of the dance (R57+2). Then in R61, we get the R60 melody again, now unequivocally harmonized in diatonic thirds. Combined with the clarinet and viola trills, we have a clear C diatonic pitch set (although E is missing). The mysterious pizzicatos underneath, on B, D♯, G♯ and F♯, gently clash with this. Then at R61+3, the melody is transposed up a fourth, but unusually for this work, it is a *diatonic* fourth, not a chromatic fourth. This causes it to remain in a C diatonic pitch set, shifting from G Mixolydian to C Ionian. An interesting thing happens with the accompanying pizzicatos here. At R61+3, the F♯, G♯, and B remain, but instead of D♯ we now have A. This creates a familiar pitch set – the same F♯ and G♯ against C diatonic that we had at R57+4 and R31. Then at R61+5, we have another shift, keeping the B and G♯, but now with C♯ and E instead of A and F♯. Now the pizz's are exactly a fifth lower than they were at R61, paralleling the transposition in the melody. If we zoom out, all that really happens from R61 to R61+5 is that Stravinsky transposes his material up a fourth (or down a fifth), with the sole exception of the B♮ in the lower third of the melody, which would be a B♭ if it were an exact transposition.

However, in typical Stravinskian fashion, the details obscure this straightforward relationship. First, the melody is transposed diatonically rather than chromatically, causing it to remain in the same pitch set. Second, the pizzicato accompaniment passes through one more set of pitches first before it lands on its fifth-down transposition. This intermediate pitch set is not a transposition and there's no obvious process in play. But it does include common tones with the sets on either side of it, and also creates our familiar C diatonic + F♯ and G♯ pitch set with the melody above. So while it has no obvious derivation from the versions on either side of it, it both shares common tones with them and also reminds us of a salient pitch set heard elsewhere in the work (Figure 2.5.10). Finally, the trilling violas, clarinets, and bassoons, and the pizzicato violin 2 part 1 imply F major triads for the entire passage (see the second system in Figure 2.5.10), creating a sort of pedal sonority in the background that is consonant with both transpositions of the melody.

Figure 2.5.10: Harmonic layers at R61.



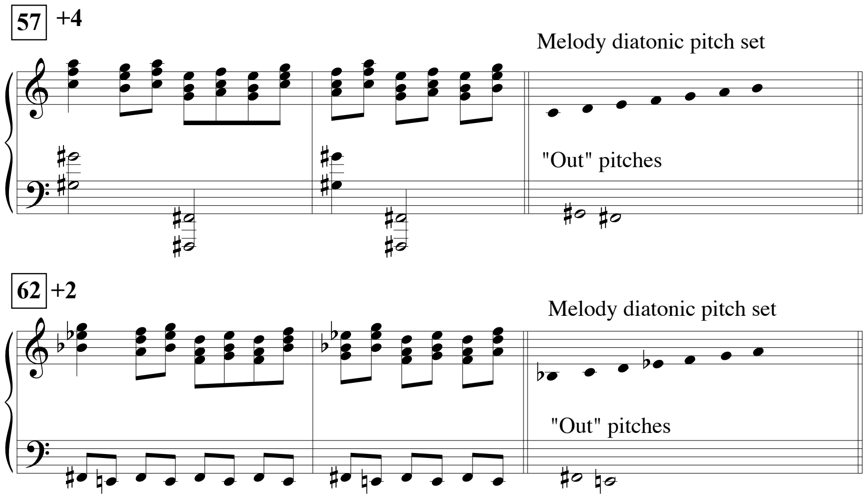
It is also interesting to note that the non-C-diatonic pitches present from R61 to R62 – F♯, G♯, C♯, and D♯ – are the same non-C-diatonic pitches present from R60+4 to R61 (as well as at the equivalent spots at R57+2, etc.). The composite set in both instances is eleven pitches total, with only A# missing. However, it is not only the composite pitch set, but also the way it is partitioned, that is similar in both passages. Both are dominated by C diatonic pitch content with the "black" notes acting as the "out" notes (Figure 2.5.11). This connects two very different approaches to harmony – field harmony and kaleidoscopic oscillation – with the same, similarly partitioned underlying pitch set.

Figure 2.5.11: Comparison of R60+4 and R61 pitch sets.

If we now look all the way back at the beginning of the entire piece, we find the same set and partitioning when we consider the first two thematic ideas presented in the work: the opening bassoon melody (C diatonic) and then the English horn melody at R2 (C♯, D♯, F♯, G♯), although Here these two pitch sets are juxtaposed temporally rather than harmonically.

At R62, the melody lands on an E♭ major triad, while the bass settles on oscillating F♯ and E, creating a very similar harmony to the chord at the end of R58+5. At R62+2, the melody is harmonized as it was at R57+4, but transposed down a major second. It has the same combination of diatonically harmonized melody with clashing dissonant pitches, but now those dissonant pitches form a bass ostinato rather than an interruption (Figure 2.5.12).

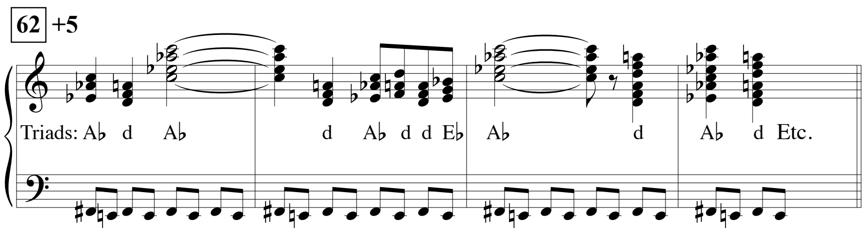
Figure 2.5.12: Comparison of R57+4 and R62+2. The pitch set at R62+2 is R57+4 transposed down a major second.



This is yet another example of how the same type of pitch set can create a different effect with different spacing and orchestration. Instead of interrupting dissonant slashes, we have a pedal tone throwing up a soft haze of dissonance into the diatonicism above.

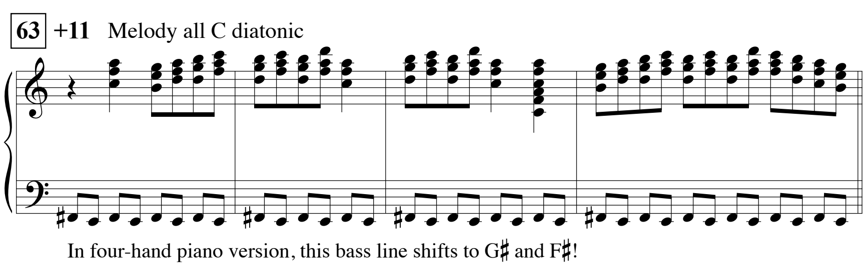
At R62+5, in addition to the E♭ major and D minor triads that have harmonized the melody thus far, we get A♭ major. This is a significant color change, bringing an octatonic flavoring when combined with the D minor, and emphasizing the "triadness" rather then the "diatonicness" of the harmonization (Figure 2.5.13). Essentially, he is building a diatonic melodic scale from the juxtaposition of the E♭ major and D minor triads – D–E♭–F–G–A–B♭ – and then completes the scale with the note C. But instead of harmonizing this C with one of the diatonic triad options, he uses A♭ major, which adds one more note to the otherwise purely diatonic collection

Figure 2.5.13: Harmony at R62+5. Upper case = major triad, lower case = minor triad.



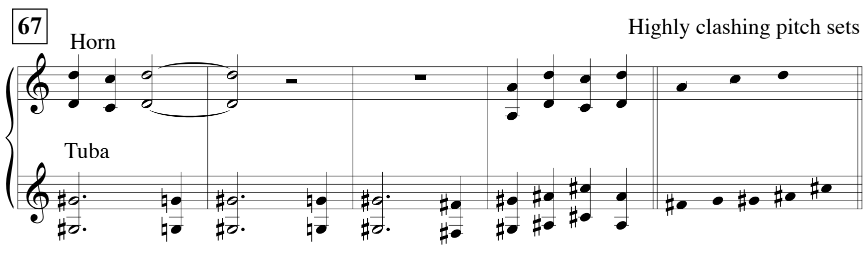
Beginning at R63+9, the upper parts are back in the C diatonic pitch set from R57+4 and R61. The melodic material expands on the previous C diatonic material, but the pedal below remains on E and F♯, rather than the F♯ and G♯ we had at R57+4 and R61. Fascinatingly, in the four-hand piano version, the pedal actually *does* shift up a whole step to F♯-G♯ here (Figure 2.5.14). The implication is that Stravinsky was originally thinking of more literally paralleling what came before, but probably found shifting the bass pedal to be too disruptive to the texture when he came to orchestrate it.

Figure 2.5.14: Harmony at R63+11.



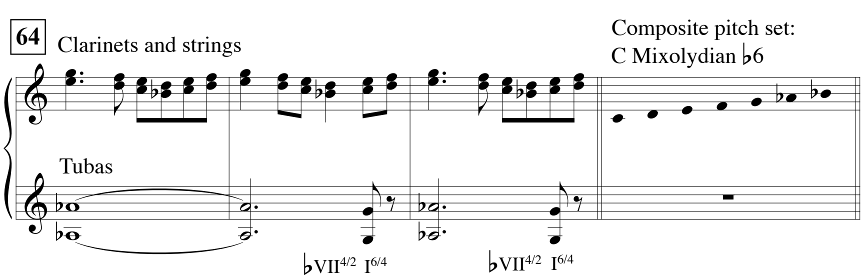
At R64, the melody from R60 returns, harmonized in parallel C Mixolydian diatonic thirds. We finally get the chromatic fourth transposition of R61 instead of the diatonic transposition of it at R61+3.[76] Eventually, this builds into one of the most fiercely dissonant sections of the entire work, with the prominent tuba and horn parts at R67 composed of highly clashing small pitch sets (Figure 2.5.15).

Figure 2.5.15: Highly clashing pitch sets between horn and tuba melodies at R67.



However, this extreme dissonance only emerges over time. When the tuba melody first appears at R64, the diatonic thirds plus the beginning of the tuba melody actually form a consonant seven-note mode of the acoustic scale, C Mixolydian ♭6. There is even the hint of a ♭VII7 to I modal harmonic progression in bars 2 and 3 (Figure 2.5.16).

Figure 2.5.16: Modal harmony at R64.



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76 There is another intriguing discrepancy between the orchestral and piano versions here. In the four-hand piano version, the lower of the melodic thirds descends to B♮ instead of B♭, putting it in C Ionian. When combined with the beginning of the tuba melody, this creates yet another version of the C diatonic + F♯ and G♯ pitch set – the second example of this pitch set that is in the four-hand piano version but missing from the orchestra version.

In bar 3, however, things start to pull apart. First, oboe 1 comes in on an A♮ above the melody, clashing with the A♭ below, joined at R65 by other woodwinds and strings. Then in bar 4, the tubas move down to F♯ instead of G, and in the next measure add C♯, which both clash strongly with the prevailing harmony. Finally at R65+2, the horns come in on a blaring D which, though consonant with the original C Mixolydian ♭6 mode, clashes markedly with the tuba G♯ and C♯. At R65+4, the brass come in with a flourish built out of alternating fourth-plus-tritone and tritone-plus-fourth chords – harmonically similar to the interruptions back at R15, as noted earlier. Then at R66 begins the build into one of the most harmonically dense and complex sections of the work, at R70 (Figure 2.5.17).[77]

Figure 2.5.17: Increasing dissonance after R64 (some octave doublings eliminated for clarity).

[77] Taruskin, characteristically, provides an octatonic interpretation of this passage, seeing it as two juxtaposed Dorian tetrachords a tritone apart: G♯-A♯-B-C♯ in the tubas and D-E-F-G in the upper parallel thirds. He especially emphasizes Stravinsky's use of A♯ instead of B♭ in the "lower thirds" in the sketches as an indication of his octatonic thinking: A♯ is a member of the lower tetrachord and otherwise a very odd spelling choice for the parallel thirds (Taruskin 1996, 939-941). Van dan Toorn (1987, 127) has a similar analysis. It certainly is possible that this octatonic tetrachordal approach provides some sort of framework, but it leaves out material that I believe is quite central to the ultimate sound of the passage: the low F♯ in the tuba part, equally as prominent as the octatonic G, the C in the lower third of the melody, and the pedal A on top of it all. Hill (2000, 48) offers much the same critique. Even if Taruskin is correct about the origins of this passage in Stravinsky's compositional process, to me it does not sufficiently explain its ultimate sound and function – in particular, both the blatant diatonicism of the parallel thirds, and the profound sense of clashing and pulling apart.

(Figure 2.5.17 continued)

The key point here is that the highly dissonant conglomeration that we reach by R65+4 doesn't come out of nowhere, but builds gradually from a relatively consonant starting place. While the different motivic strands end up inhabiting highly clashing pitch sets, at the start they are united in a cohesive Mixolydian ♭6 scale, with dissonant notes added in only gradually.

To sum up, this movement is dominated by various types of kaleidoscopic oscillation games. In the bass, oscillations between various combinations of tritones and perfect fourths dominate, as at R57-R57+3, R58-R58+1, R58+6, R58+8, R59-R60, and R60+4-R60+6. The upper parts are dominated by parallel thirds, mostly diatonic, often with a third pitch added. In some cases, this third pitch is part of the same diatonic set, while in others it creates a dissonance with that set. In the purely diatonic cases, there is still almost always clashing material in *other* parts, creating a nearly constant color of diatonicness permeated by two to four "out" pitches. Figure 2.5.18 charts out much of the movement from this perspective, showing the diatonic sets and the juxtaposed "out" notes.[78] As the chart shows, for most of the movement it is a specifically C diatonic primary set that is juxtaposed with some combination of C♯, D♯, F♯ , and G♯. It is striking how many different ways Stravinsky finds to vary this basic juxtapositional pattern, and how many different harmonic effects he is able to achieve. Stacked fourths/fifths and half-step descents don't play a role in this dance, so there is no more plot to either of those stories.

[78] The textures are somewhat simplified for clarity, but nothing left out adds any additional pitch content.

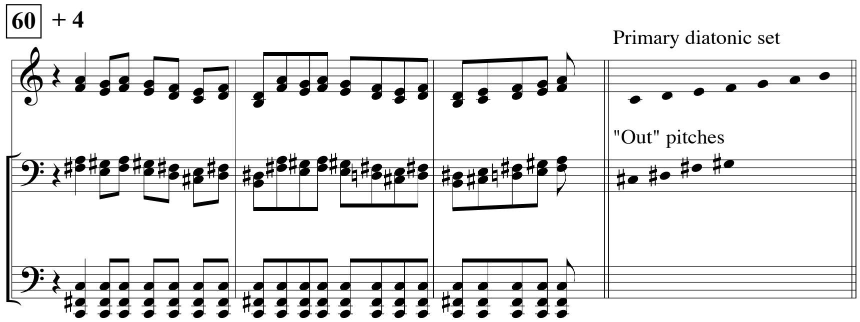
Figure 2.5.18: "Diatonic + out notes" pitch sets in "Ritual of the Two Rival Tribes."

57 **+ 2** (same patterns at R58)

57 **+4** (same patterns at R58+2)

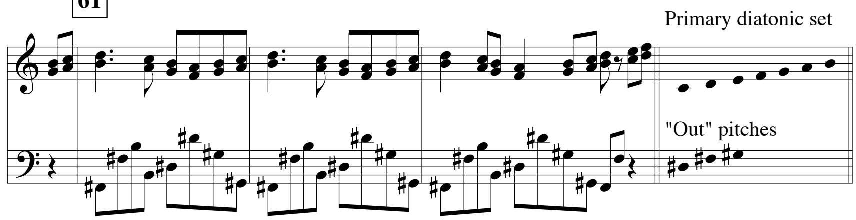
59

60 **+ 4**



(Figure 2.5.18 continued)

61

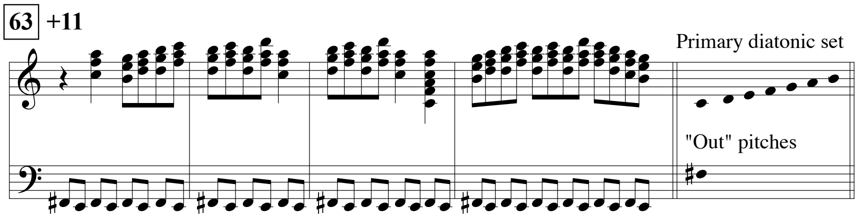


61 + 3

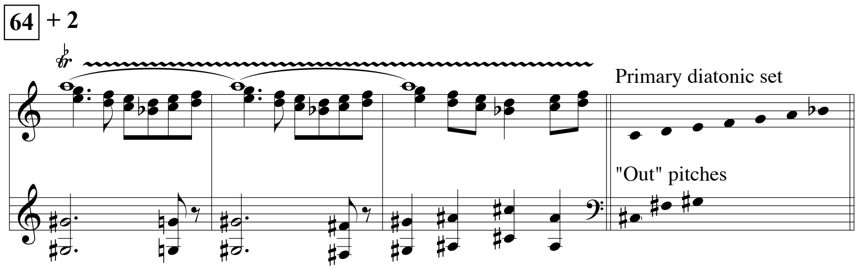
61 + 5

62 +2

63 +11



(Figure 2.5.18 continued)



2.6 PROCESSION OF THE OLDEST AND WISEST ONE

This dance grows directly out of the previous one, and culminates in one of the most dense and complex textures of the entire work. In order to understand the complex harmony in this section, we will first pull apart the different strands at R70 and then see if we can tease out any underlying logic in their juxtaposition. Once we get a handle on the composite harmony at R70, we'll step back and consider how R66-R70 leads into it.

Although there are effectively seven distinct motivic strands in play at R70, they can be sorted into three basic harmonic groups. "Harmonic Group A" consists of the blaring trumpet and trombone interlocked lines and the pedal D-G♯ tritone (with F♯ grace note) in the bassoons. The pitch set of this group is a six-note symmetrical scale centered on the D-G♯ tritone. "Harmonic Group B", prominent in the middle of the texture, consists of the highly dissonant combination of the high horn and tuba melodies from the preceding section. "Harmonic Group C" brings together the four-note descending scales in flutes and violin 1, the parallel tritone dotted rhythms in oboes and low horns, and the low parallel diminished seventh and then dominant seventh chords in low clarinets and low strings.

Figure 2.6.1 shows the seven motivic strands grouped into these three harmonic groups. For clarity, octave doublings have been removed and the bottom system uses the simpler voice-leading pattern in the clarinets, rather than the more complicated voice-leading in the strings (more on this in a bit). I have also re-notated it in 4/4 to clarify the patterns. (Stravinsky notates the section in 6/4 to accommodate the percussion cross-rhythms, but functionally the parts we are considering are all in a 4/4 meter).

Figure 2.6.1: The seven motivic strands and three harmonic groups at R70.

Motivic Strand 1 in Harmonic Group A adds up to a six-note symmetrical scale centered around the D-G♯ tritone. It is contained within both a harmonic minor and a harmonic major mode, and is also very close to the R53 chord. It also could be interpreted as alternating between the augmented chord that contains D and the diminished seventh chord that contains D – similarly symmetrical chords, one made up of major thirds, the other of minor thirds. Figure 2.6.2 shows these various interpretations. Motivic Strand 2 has the same pitches as the upper part of Motivic Strand 1: D, F♯, and G♯. Motivic Strand 2 thus further anchors Harmonic Group A to the D-G♯ tritone (Figure 2.6.3).

Figure 2.6.2: Interpretations of Motivic strand 1 at R70.

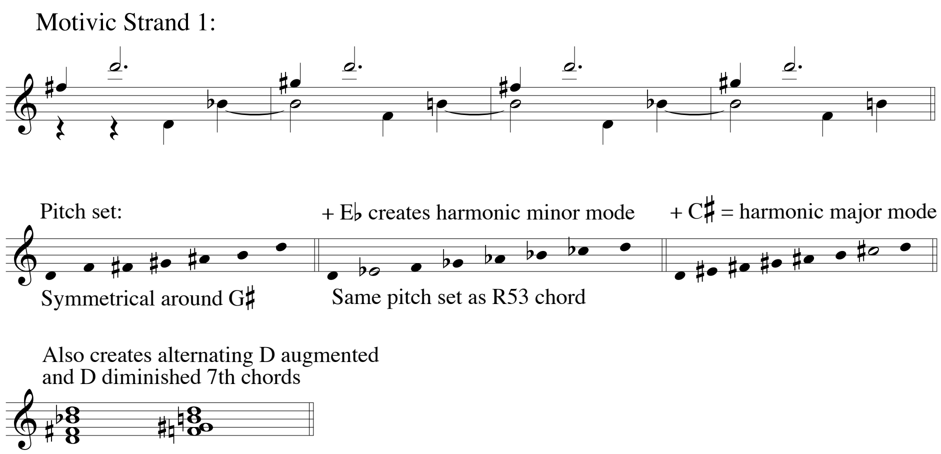
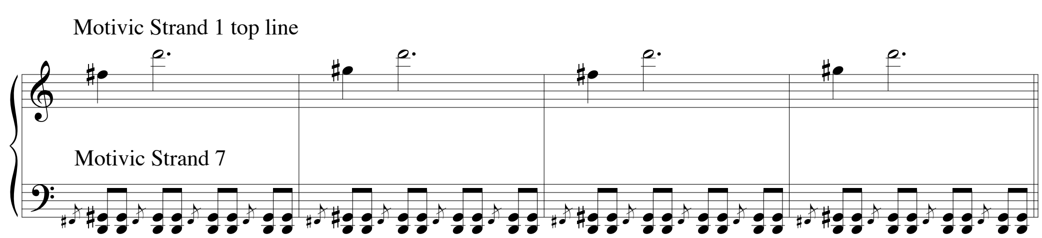


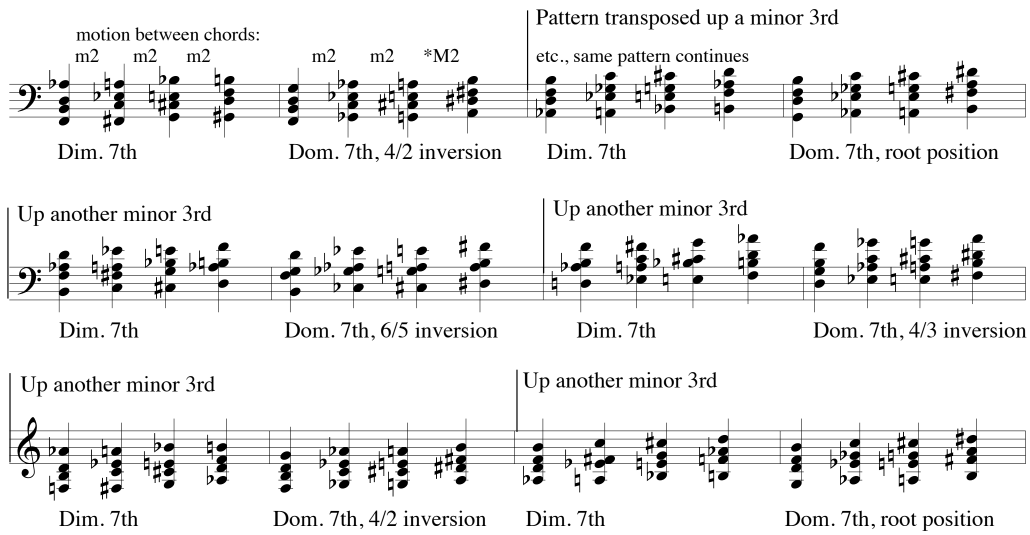
Figure 2.6.3: Same D-F♯-G♯ pitch set in top line of Motivic Strand 1 and Motivic Strand 2.



We have already looked at Harmonic Group B, as it is continuing from the previous section (see Figure 2.5.15). We will look a little bit later at how it fits with the other parts, but the only additional point to make for now is that starting at R70, the two melodies settle into a consistent, repeating 16-beat pattern (see Figure 2.6.1), lining up in the same way each time.

Harmonic Group C is anchored by Motivic Strand 7 (see Figure 2.6.1). This strand, in the clearer voice-leading version in the clarinets, alternates a “bar” (four beats) of parallel diminished seventh chords with a “bar” of parallel dominant seventh chords. The diminished sevenths rise by four half-steps, while the dominant sevenths rise by three half-steps and then a whole step. This pattern keeps repeating with the same chords, though the bass note starts a minor third higher each time, causing the whole figure to gradually rise, and the inversion of the dominant seventh chords to rotate (Figure 2.6.4).

Figure 2.6.4: Gradual rising, inversion rotation in Motivic Strand 7 (clarinets version). Repeated eighth notes are reduced to quarter notes for clarity.



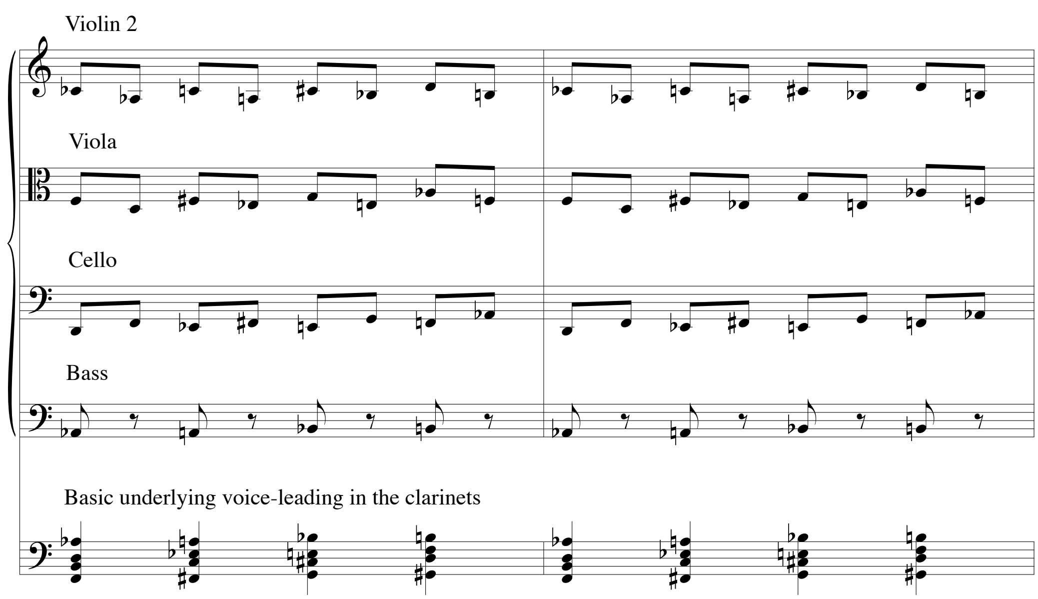
The string parts disguise this parallelism by using different intervals to move between these half-step related diminished sevenths. Due to the minor third symmetry of the diminished seventh chord, moving by a half-step plus or minus any multiple of a minor third will also lead a given voice to a tone within the diminished seventh a half-step higher. So at R70, the strings either move up by major third (half-step plus one minor third), or *down* by major second (half-step *minus* one minor third). Motivic strands 5 and 6 take part in this game as well. The oboes and horns of Motivic Strand 6 begin on the F-B tritone that is part of the first diminished seventh chord, and then move either down by major second or up by major third. The first violins in strand 5, meanwhile, move down by major seconds in a whole tone scale fragment.

It is a similar type of interval game to the one Stravinsky played at R30. There, because all parts moved by odd intervals, they alternated each eighth note between subsets of the two whole tone scales (see Figures 2.2.18 and 2.2.20). The dominant sevenths in the second "bar" are only *nearly* symmetrical, so the pattern becomes somewhat warped. In order to stay on harmony pitches, Motivic Strand 5 now alternates minor seconds and major seconds in an octatonic scale fragment. Motivic Strand 6 has the same first two intervals – down a major second and up a major third – but then moves down a minor rather than major second on the last beat. Due to the shift to dominant sevenths, it also has the effect of adding a "♭9" to the harmony on beats 2 and 4. Finally, the Motivic Strand 7 string parts no longer disguise the parallel voice-leading, reverting to pure parallel motion in minor seconds, with one major second at the end. Figure 2.6.5 shows these patterns. Beginning at R70+4, the Motivic Strand 7 strings settle into pure parallel stepwise motion for the diminished sevenths as well.

Figure 2.6.5: Harmonic Group C at R70, with intervals between beats labeled. In the first "bar," all voices move in multiples of minor thirds plus one minor second, allowing them to maintain the half-step rising diminished seventh chord underlying pattern. The switch to dominant sevenths in "bar" 2 distorts the pattern.

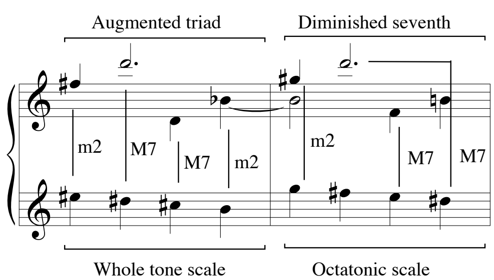
This whole harmonic group is a prime example of the kaleidoscopic oscillation idea on multiple levels. First, Stravinsky shifts between sets of very similar, but slightly different chords, the diminished sevenths and dominant sevenths. Second, he varies the chord sequence pattern slightly, with the lone whole-step ascent between the third and fourth dominant sevenths. Third, even though this eight-beat basic chord progression keeps repeating, he begins the bass a minor third higher each time, causing the inversion of the dominant sevenths to rotate on each repeat, and also causing the entire sequence to gradually rise. Finally, for the first three iterations of the pattern, he uses interval games in the strings to disguise the underlying parallelism of the voice-leading. He easily could have kept things more straightforward in the string parts and written something like Figure 2.6.6 – only diminished sevenths, only rising by half-step – and created a quite similar effect. But, as in so many other cases, he can't settle for something so simple and straightforward. He needs to add wrinkles and complexities. It is also worth noting that all of this intricate harmonic and voice-leading game-playing is ultimately practically inaudible, given the density of activity in the passage. The net effect is more of a low, gradually rising rumble than of any audible harmonic content.

Figure 2.6.6: Counterfactual simplified version of Motivic Strand 7 string parts: all diminished seventh chords, always rising by half step in all parts.



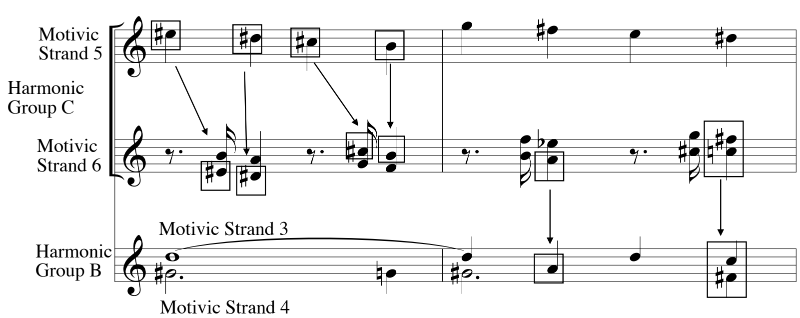
Within Harmonic Group C, Motivic Strands 5 and 6 also have interesting relationships with elements of other harmonic groups. Motivic Strand 5 alternates fragments of first a whole-tone and then an octatonic scale, as we saw above. This is similar to Motivic Strand 1, which alternates an augmented triad (implying a whole tone scale) and a diminished seventh chord (implying an octatonic scale). However, the two strands imply different versions of these scales that in fact clash with one another quite strongly. Indeed, seven out of Strand 5's eight pitches create minor seconds or major sevenths with one of the pitches in Strand 1. So at the same time that Strand 5 coheres harmonically with the rest of Harmonic Group C, it also clashes maximally with Harmonic Group A (Figure 2.6.7).

Figure 2.6.7: Relationship of Strand 1 and Strand 5 is highly dissonant; all Strand 5 notes except one form a minor second or major seventh with one of the Strand 1 voices.



Strand 6 initially aligns melodically with Strand 5, but in the second "bar" it departs. While it remains harmonically connected to Strands 5 and 7 (the rest of Harmonic Group C), melodically it partially latches on to Harmonic Group B, as Figure 2.6.8 shows.

Figure 2.6.8: Motivic Strand 6 melodically latching on to Strand 5 and Harmonic Group B (Strands 3 and 4). Shared melodic notes are in boxes with arrows connecting them.



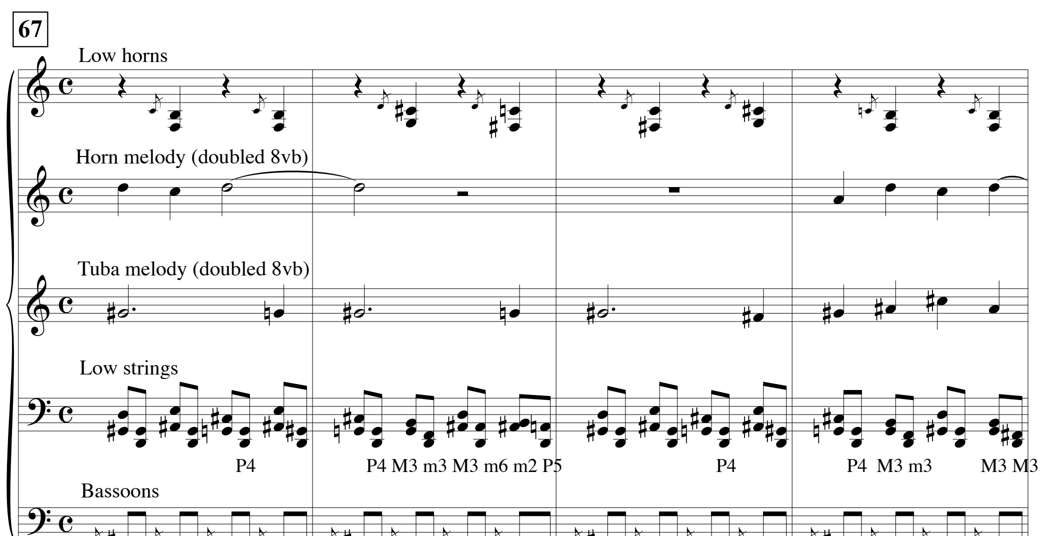
Given this dense layering of separate motivic units, what holds it all together? Gradual layering and simple repetition likely have something to do with it. Because the strands are added gradually, our ears can take them in as they arrive instead of being assaulted by the complete agglomeration without preparation. The total saturation level reached at R70 also repeats enough times that we have a chance to note the different components and focus in on different ones. A similar process happens with the percussion cross-rhythms: gradual layering and multiple repetitions give the ear a chance to process an extremely complex texture. But from a purely harmonic perspective, the key is Motivic Strand 2, with its bare D-G♯ pedal tritone. As we already saw, this same tritone is also emphasized in the top line of Motivic Strand 1, establishing it as the harmonic center of Harmonic Group A. This D-G♯ tritone is also the first and primary interval between the horn and tuba melodies that make up Harmonic Group B. Finally, this same tritone is also present as the bottom of the first diminished seventh chord in Strand 7 of Harmonic Group C, which recurs at the beginning of each eight-beat repetition. So each of the three Harmonic Groups feature this D-G♯ tritone as a central component and starting point of their harmony (Figure 2.6.9).

One way of viewing this section then is as an exploration of three different harmonic elaborations of this underlying tritone, all layered on top of one another. The end result has very high levels of dissonance, but manages to cohere due to this common underlying source.

Figure 2.6.9: D-G♯ tritone as underlying sonority of each Harmonic Group.. Examples of it are bracketed or boxed.

Now that we have made some sense of what is happening at R70, let's look at how we got to it. If we zoom out on the section from R66 up to R70, in some ways its development looks rather straightforward. At R66, the texture clears out leaving the very D-G♯ tritone just discussed, manifested in Motivic Strands 2, 3, and 4. From here, the texture gradually thickens. At R67, we get the first stirrings of Motivic Strands 6 and 7 in the low horns and low strings, respectively. The motion resembles and evokes Harmonic Group C, but is mysterious in its pitch structure. At R68, these strands are further developed and add more instruments, continuing up to R70. Meanwhile Motivic Strands 3 and 4 (the horn and tuba melodies) keep shifting their relationship to one another, until they finally land on their consistent pattern at R70. Finally, the percussion cross-rhythms enter one at a time (bass drum back at R64+2, timpani at R67, tam-tam at R68, and guiro at R70). This seems clear enough. However, when we zoom in and look at the details of the pitch content in Motivic Strands 6 and 7, it becomes a bit more mystifying. Both strands focus mostly (though not exclusively) on tritones, but it is hard to discern the logic and pattern behind their unfolding. Figure 2.6.10 takes a stab at least at labeling what is going on, but a deeper harmonic explanation remains elusive. In the end, it is perhaps best to regard them simply as a low rumble rather than as possessing meaningful harmonic content. As pointed out previously, even though these strands do settle into a structured harmonic and voice-leading pattern at R70, their net effect even there is far more textural than harmonic. Again in this movement, the stacked fourths/fifths and half-step descents are on break.

Figure 2.6.10: Harmonic development from R67 to R70. Low horn/oboe part: always tritones on F, F♯, G, G♯ or A, but no clear pattern or relationship to other parts, aside from four-bar repeat at R69. Low string parts: mostly tritones, but not always at beginning. Non-tritones labeled with their interval. No clear pattern or relationship to other parts aside from four-bar repeat at R69. By R68, tuba melody settles into consistent pattern that continues at R70. Horn melody continues to be unpredictable until R70.

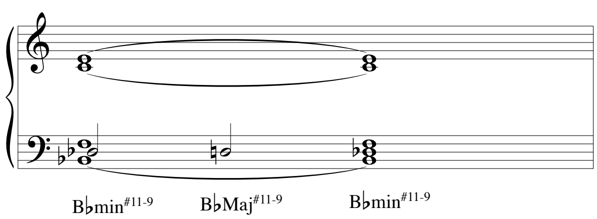


(Figure 2.6.10 continued)

2.7 THE KISS OF THE EARTH

This very short movement consists simply of three different chords, which are a bit difficult to explain in the context of the rest of the work. The first three bars oscillate between two harmonies: B♭ minor and B♭ major, both with added ♯11 and 9, as D♭ moves up to D♮ and back down to D♭ again (Figure 2.7.1).

Figure 2.7.1: Harmony in first three bars of "The Kiss of the Earth."



The Lydian quality of the D♮ version of the chord (B♭-C-D-E-F pitch set) is perhaps setting up the coloristically very similar C Lydian chords (C-E-F♯-G) that are so prominent in the next dance. The registrally distinct C and E are the common tones helping to lead between them (Figure 2.7.2). There is also an intriguing connection to a harmony later in the work: the mysterious oscillating chords at R87 in the Part 2 Introduction. The composite pitches of these first two "The Kiss of the Earth" harmonies are very close to the first harmony at R87 – only A♭ and G are missing. Furthermore, there are striking similarities in spacing and voicing, with both harmonies featuring B♭ minor/major on the bottom, with a C-E major third registrally separated above. At R87, the harmony is enriched by the addition of a minor seventh (A♭) to the "B♭ unit" and a fifth (G) to the "C unit", but the striking similarity remains (Figure 2.7.3).

Figure 2.7.2: Connection between "The Kiss of the Earth" second chord and C Lydian chords after R72: transposed up major second, C-E common tones

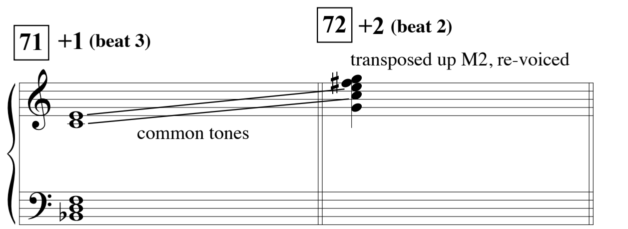
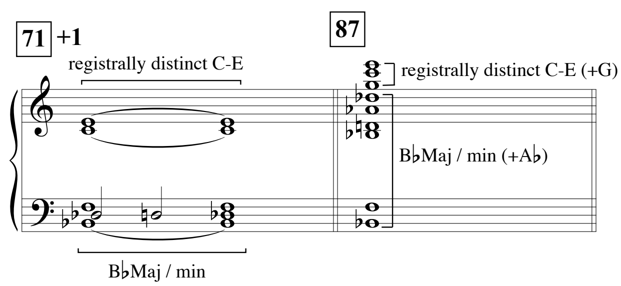


Figure 2.7.3: Connections between first two "The Kiss of the Earth" chords and R87

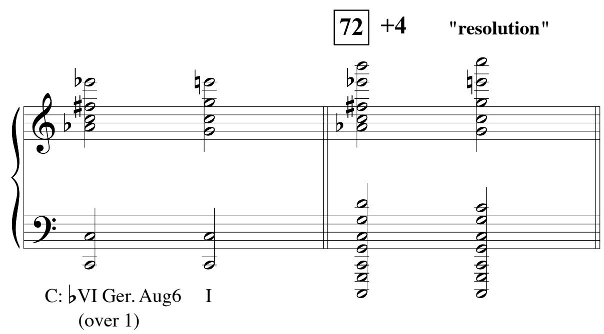


The chord in the fourth bar of "The Kiss of the Earth" represents a singular moment in the work, when all of the action stops and the sage bends down to place a kiss on the spring earth before the wild "Dancing Out of the Earth" that follows. It is also a striking and singular harmony, difficult to convincingly relate to anything else in the work.[79] One way to consider it is as a variant on a type of German augmented sixth chord that appears over scale degree one in the bass, and resolves to I. Stravinsky's chord adds a bit more complexity, adding two fifths above the low C, and a leading tone B♮ way up high on top. Nonetheless, if we resolve it in a similar

[79] Forte (1978, 65-66) is similarly struck by the singularity of this chord: "From the harmonic standpoint the movement is very peculiar: The number of harmonies is small, and one would expect all of them to be significant…This, however, is not the case. The movement ends with set 7-22…the only occurrence of the set in the work…"

manner to the German augmented sixth, it really does function quite similarly (Figure 2.7.4). And since the start of the next dance is at least to a certain extent “in C” it is conceivable to hear this sense of resolution, to some extent.

Figure 2.7.4: ♭VI German augmented sixth chord resolving to I over scale degree 1 in the bass, and similar resolution of the chord in the bar before R72.



Of course, this quasi-tonal interpretation of the chord is only a partial explanation of its ultimate effect. It is noteworthy not primarily for how it leads into the next chord, but simply for its own arresting quality. The registration and orchestration make it especially striking, with deep dark low fifths in the basses and cellos, and shimmering string harmonics above, all at a *ppp* dynamic. This truly is a singular moment in the work, that largely stands on its own, separate and distinct from what surrounds it. It is certainly conceivable then to think that Stravinsky would choose a singular harmony for this moment that doesn’t necessarily explicitly relate to the rest of the work.

2.8 THE DANCING OUT OF THE EARTH

This climactic dance is the summation of Part I, and incorporates many of the elements we have been discussing. Like the "Procession of the Oldest and Wisest One," it builds up layers of separate motivic strands, and the best way to make sense of it is to pull these strands apart and then put them back together again.

The first part of the dance, up to R75, has two layers: the bass line whole tone scale fragment (plus a pedal F♯-C tritone below), and the punctuations/fanfares above At first, these punctuations are on C Lydian chords (C major triad plus F♯), and then they are in the D Acoustic mode.[80] These combinations loosely parallel the end of the "Ritual of the Two Rival Tribes." Both at R64 and at R72, an upper unit built on a C major triad is juxtaposed over material centered on the F♯–G♯–A♯ whole tone fragment, as Figure 2.8.1 shows.

Figure 2.8.1: Sonorities at R72+2 already implied at R64.

[80] Taruskin puts an octatonic spin on the upper part (1996, 927), interpreting the G's and A's in the top voice as octatonically "filling in" the space between the bass line F♯ and A♯, in opposition to the bass line's whole tone filling. This interpretation, however, neglects all of the other pitches present in the upper parts and the, to my ear, much more significant and audible pitch sets they form (C Lydian chords and D Acoustic scales).

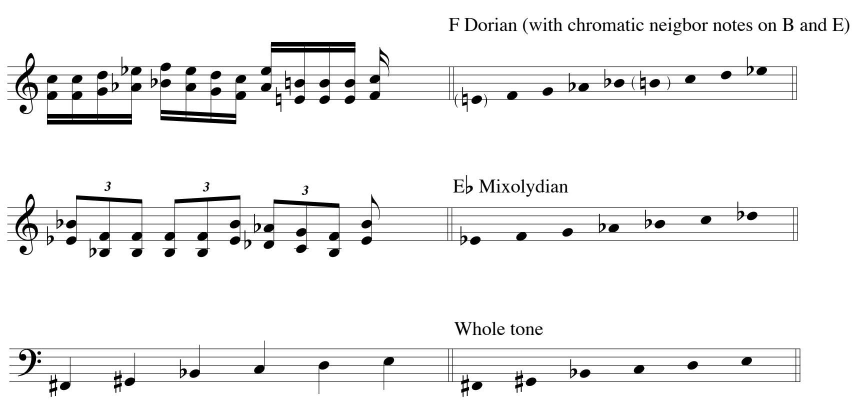
Then the shift to D Acoustic at R72+5 creates a strikingly similar sonority and pitch pattern to that of R65 (Figure 2.8.2). Both have a pedal A on top with diatonic thirds moving below, all over F♯-G♯-A♯ in the other harmonic strand (plus C♯ and sometimes G♮ at R65). The melodic contour is also strikingly similar. The main difference is that the thirds at R72 are in D Acoustic instead of C Mixolydian – we in effect have a voice leading between scales of B♭→B, F→F♯, G→G♯, creating a brightened version of the melody from R65.

Figure 2.8.2: Sonorities at R27+5 already implied at R65.

At R73+3, horn triplets on E♭ to B♭ first appear, foreshadowing the next section. Starting at R75, there are essentially three layers of harmonic activity, as Figure 2.8.3 shows. First, there is the F# whole tone set, which continues from before, now sometimes continuing up three more pitches to complete the entire whole tone scale F♯-G♯-A♯-C-D-E, and still undergirded by F♯ and C below. Above this, the horns and violas have a triplet figure in a four-note Dorian tetrachord, B♭-C-D♭-E♭, reminiscent in its pitch content of the ostinato from "Augurs."

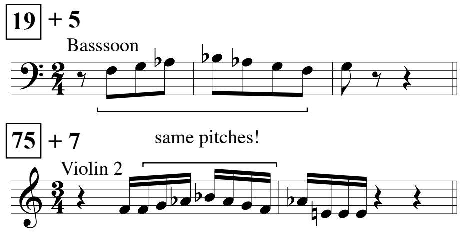
Eventually, this gets doubled a fifth higher (at R75+9), creating a composite pitch set of E♭ Mixolydian. On top of this, trumpets and violins have a sixteenth note figure in another four-note Dorian tetrachord 1-2-3-4-3-2 based pattern set on F, with a chromatic lower neighbor E: (E)-F-G-A♭-B♭.[81] This melody is highly reminiscent of the bassoon melody back at R19, with the same pitches and a similar pitch sequence, especially to the bassoon's second entrance at R19+5 – the E in R19 though, instead of a lower neighbor, forms the bass note of the underlying harmony (Figure 2.8.4).

Figure 2.8.3: Three layers of motivic/harmonic activity at R75



[81] Taruskin considers the E rather than the F to be the stable tone, and therefore interprets the figure octatonically: "The F, then, sounds forth as an unstable nonharmonic tone, an appoggiatura, resolved quite conventionally to the E with which the ostinato phrase concludes." (Taruskin 1996, 930). I find it very difficult to hear it this way. First, the F is established quite strongly as the "tonic" of this motive through simple repetition – twelve consecutive sixteenths in the trumpet on its first appearance at R75+6. Second, Taruskin's point that the phrase concludes on E is a bit misleading, since in every instance it immediately proceeds to the beginning of the next statement, on F – treating the E exactly like a leading tone that resolves back to the tonic to start the next phrase. While there certainly is a whiff of octatonicism, especially starting at R78 when the E♮ becomes more frequent, I find the diatonic quality (with a "raised 7" E♮) to be much stronger.

Figure 2.8.4: Comparison of 16th note melody at R75+7 and bassoon melody at R19+5.



This melody also spans the B♭-E descending tritone, like so many other melodic ideas in Part I. This figure later gets a doubled a fifth higher as well (starting at R76+3), which creates a composite pitch set for these parts of F Dorian plus chromatic neighbors on E♮ and B♮. This has the same pitches as the triplet pitch set, but with D♮ instead of D♭. If we again look back, now at R16+3, we see striking similarities. Here as well, we have an E♭ diatonic-based sonority with D♭ in the lower register and D♮ in the upper register (Figure 2.8.5). We also have the fifths E♭-B♭-F-C – our Part 1 "ur-fifths-stack" – strongly highlighted in both cases (Figure 2.8.6). And it is juxtaposed, at least some of the time, against C major-ish material. At R16, this was in the form of a C major arpeggio and C-D trilling, while at R76, it is the C-D-E of the whole tone scale. This results in our old friend, the C-D♭-D♮-E♭-E♮ cluster after R75, formed in a very similar manner as at R16, with E♭ Mixolydian material rubbing up against C major material in the same middle register (Figure 2.8.7). And for good measure, we even have E♮ and B♮ present at R75 (as chromatic neighbors), connecting it back to the E♮-E♭ juxtapositions that so characterized "Augurs."

Figure 2.8.5: D♭ versus D♮ at R16+3 and R76+4.

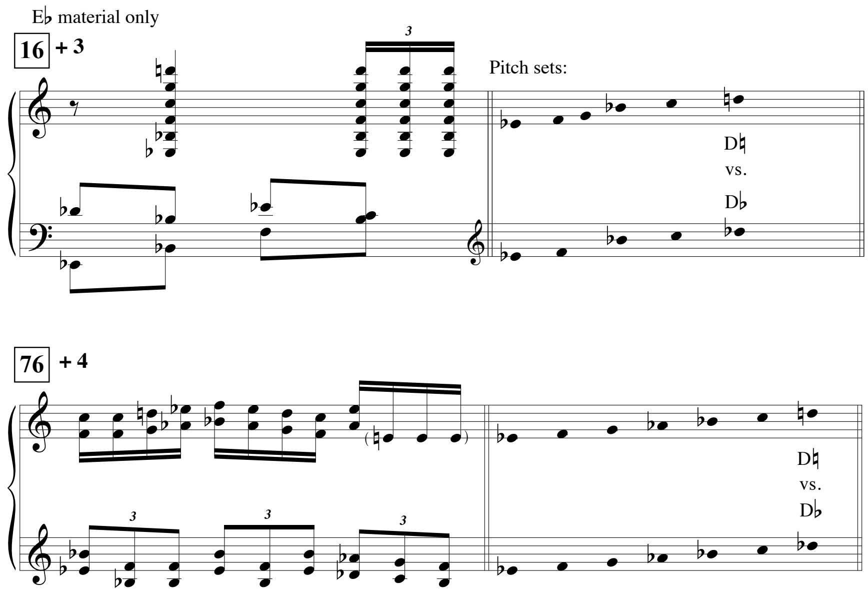


Figure 2.8.6: E♭-B♭-F-C fifths at R16+3 and R76+4

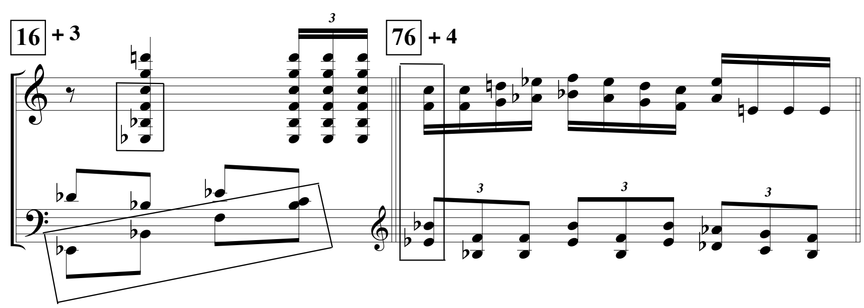
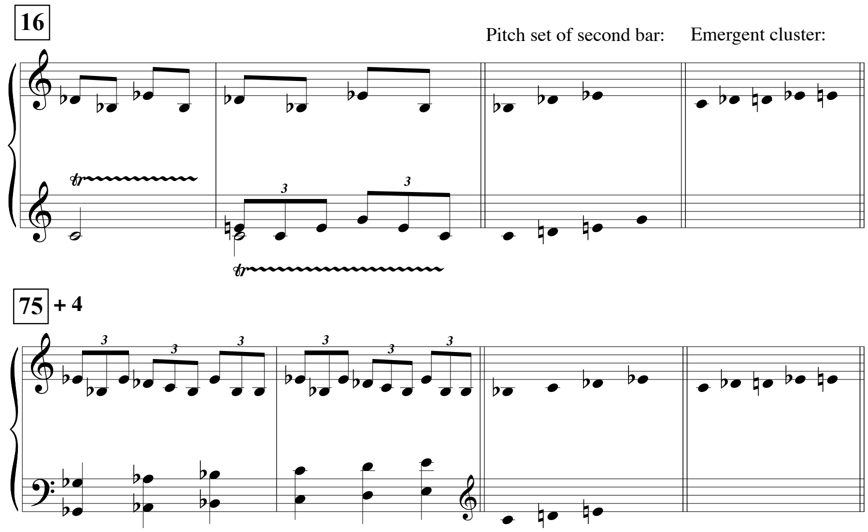
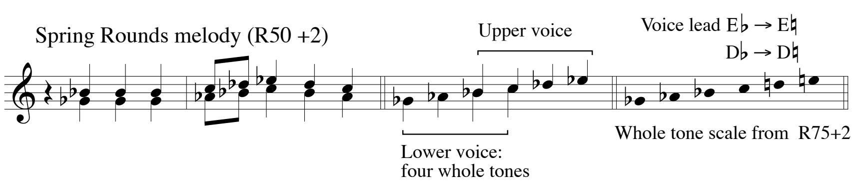


Figure 2.8.7: Whole tone bass line plus triplets create C-D♭-D♮-E♭-E♮ cluster at R75+5 in very similar manner as R16.



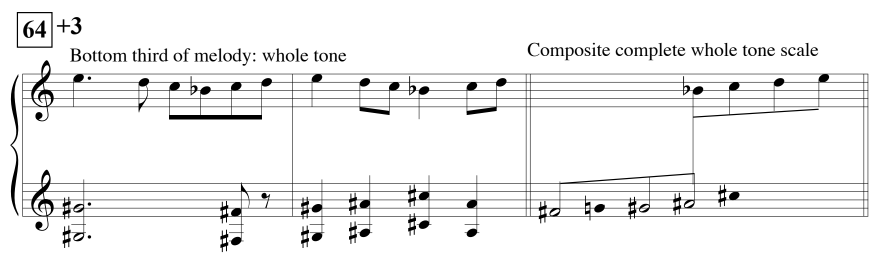
Although we haven't had such an out-and-out explicit whole tone scale before now, it has been hinted at earlier in the work. In "Spring Rounds," for example, the lower third of the harmonized melody, though appearing in a purely diatonic context, outlines exactly the first four pitches of the whole tone scale at R75, G♭-A♭-B♭-C. Indeed, in combination with the diatonic third above, it creates a sort of E♭ Dorian transposition of the whole tone scale from R75 (Figure 2.8.8).

Figure 2.8.8: Comparison of "Spring Rounds" melody and R75 whole tone bass line.



At R64, we already saw how the tuba melody outlines the first three pitches (F♯-G♯-A♯) of the R75 whole tone scale, and how it combines with the parallel diatonic thirds above to create strikingly similar harmony to R72. It is worth noting further that the bottom line of these thirds effectively completes the whole tone scale, descending E-D-C-B♭, where it connects up with the tuba's whole tone fragment (Figure 2.8.9). So while the whole tone scale at R75 is indeed fresh and striking, our ears have also been primed for it to a certain extent. We have heard those combinations of pitches before, just in a far less explicitly whole tone context. Stravinsky cleverly exploits the four-pitch whole tone subset present in diatonic scales to plant precursors for this explicit whole tone scale without us being consciously aware of them.

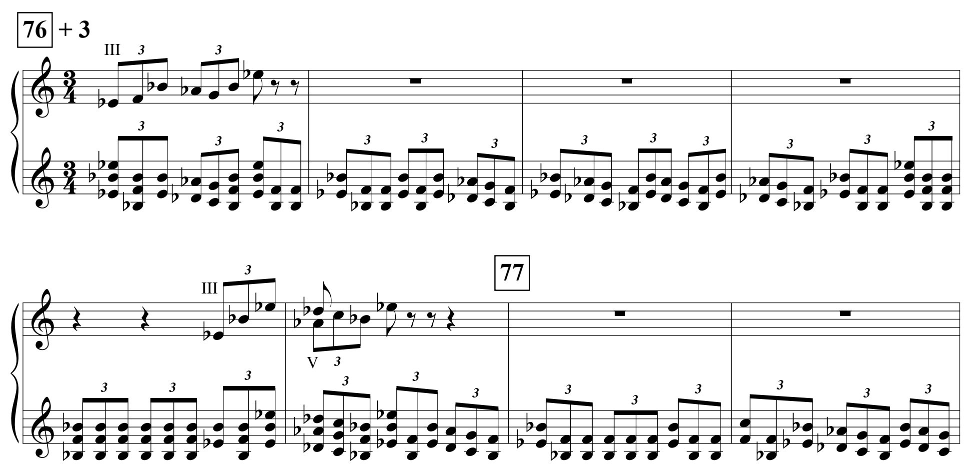
Figure 2.8.9: Composite whole tone scale implied by tuba melody and lower third melody of parallel diatonic thirds.



Everything from R75 to the end of the movement is an intensification of the basic sonority presented at R75, adding doublings at the fifth and octave, thickening the orchestration, and increasing the density of activity. The whole tone bass line gradually accumulates more instruments, adding clarinets and basses at R76, two bassoons at R76+2, and the other two bassoons and tubas at R78. Meanwhile, as we already saw, at R76+3 the sixteenth note melody is doubled a perfect fifth higher. Then at R77, it is also doubled an octave higher in violin 1, and is then joined by oboes at R77+8 and clarinets at R78. Finally, the triplet melody begins to be doubled at the perfect fifth at R75+9 and then at the octave at R76+6, also increasing its instrumentation from just two horns and violas at R75 to all eight horns by R78, and finally adding a tuba into the frenzy for the last two bars of the dance.

The patterning in the horns is intriguing. While the composite horn parts continue to create variants on the melodic patterns shown in Figure 2.8.3, starting at R76+3, individual horn parts sometimes pick out emergent melodies that highlight more fanfare-like patterns of rising leaps. Figure 2.8.10 shows the composite horn melodies on the bottom staff (which is also how this music is depicted in the four-hand piano version), while the top staff shows specific horn parts when they have these fanfare-like figures.

Figure 2.8.10: Bottom staff shows the composite melodies in the horns at R76+3, while the top staff shows individual horn parts with emergent fanfare-like melodies that pop out from this texture.



(Figure 2.8.10 continued)

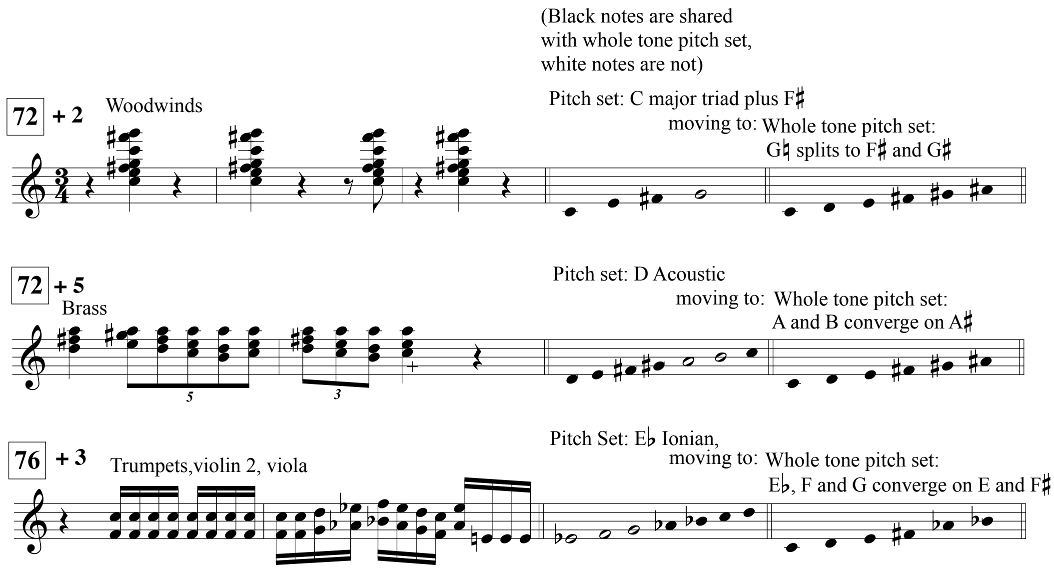
As we can see, the individual horn parts highlighted in Figure 2.8.10 add no new pitch material, picking out pitches already present in the underlying melodies. But due to their contour, these additional lines pop out of the texture, giving this layer decidedly more interest and complexity, as well as making it more idiomatically "horn-ish." It is similar to what we saw in the horn parts at R57+2 and throughout the "Ritual of the Two Rival Tribes," where mostly stepwise emergent melodies were similarly animated with leapy individual parts – although here the effect is much more audible and easy to make sense of than it was there. Stravinsky is, in effect, looking ahead to the "emergent melodies" technique pioneered by Steve Reich in the 1980s, when he used sustaining instruments or voices to pick out composite melodies from the pitch patterns of motoric mallet and piano parts. Stravinsky is thus casually and almost unnoticeably foreshadowing a compositional technique that would only become rigorously exploited decades later.

At R78, in addition to everything else going on, the C Lydian punctuations from the opening of the movement return in the high woodwinds, trumpets, and trombones; the whole tone scale finally gets to continue rising for four continuous measures; and the timpani and bass drum slow their rhythms to pounding eighth notes and quarter notes, bringing Part I to its frenzied conclusion.

As in "Procession of the Oldest and Wisest One," we can try to make some sense of the composite harmony by zeroing in on the common elements between the strands. There is significant overlap between the different scales and pitch sets in play, and they are also close to one another in pitch space. For example, at R75, the C Lydian chord has three of its four notes in common with the F♯ whole tone scale below it, (C, E, and F♯). The D Acoustic scale similarly has five of its seven tones in common with the whole tone scale (C, D, E, F♯, G♯). The horn and trumpet harmonic units, meanwhile, are first of all only one half-step away from one another (D→D♭). Secondly, the trumpet unit shares four notes in common with the whole tone scale (A♭-B♭-C-D), and its other three pitches converge by half step on the other two notes in the whole tone scale (E♭, F, G → E, F♯) (Figure 2.8.11). The whole tone scale, then, effectively acts as a glue holding other close voice-leading related harmonic units in place.[82]

[82] Whittall (1982, 47-48) views this movement as much more fundamentally discordant and would likely object to my attempts to find unifying connections between the different strands. He writes (48), "…the extreme tension of the ending [of "The Dancing Out of the Earth"] – given

Figure 2.8.11: Voice-leading relationships between layers in "The Dancing Out of the Earth."



Significantly, after a hiatus of several movements, the stacked fourths/fifths return to prominence in this movement, providing some closure to their journey through Part 1. First, the horn triplet motive highlights the B♭-E♭-F stacked fourth set. Then the trumpet sixteenth notes add an F-C fifth, creating, in combination with the horns, the ur-stacked- fourth/fifth (0 2 5 7) set of B♭-C-E♭-F. This is filled in with stepwise motion to create diatonic scales, as described above, but the stacked fifth framework remains clear.

To sum up, "The Dancing out of the Earth" brings together several prominent features of Part 1: the B♭-C-E♭-F (0 2 5 7) set with emphasized fifths; another version of the 1-2-3-4-3-2 pattern; juxtapositions of E♭ and C harmonic material; and the B♭-E tritone melodic span. Even

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the absence of purely rhythmic complexity – stems more from superimposition of the unrelated than from integration of the diverse" and a bit later, "…it is difficult to feel that the divergent components of the texture are subsumed into a higher unity which is itself of positive structural significance."

the seemingly new and fresh ascending whole tone bass line has been subtly foreshadowed by previous material.

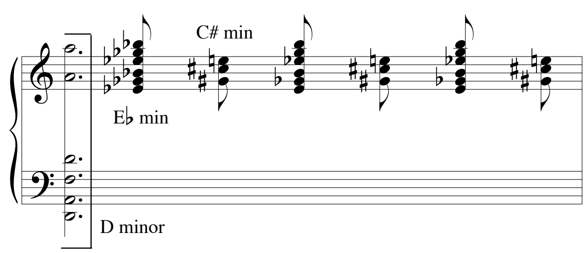
CHAPTER 3: ANALYSIS OF PART 2

Part 2 continues many of the approaches from Part 1, but the emphases shift. In general, there is far less diatonicism and field harmony, and more octatonicism and kaleidoscopic oscillation**.** Stacked fifths and fourths figure less prominently, while fourth-plus-tritone chords become more central. The half-step descent idea makes several important appearances, and also colors the entire progression from Part 1 to Part 2: whereas Part 1 tended to sit on E♭, Part 2 tends to sit on D. We will consider how these and other features play out in the detailed analysis of Part 2 that follows.

3.1 INTRODUCTION, FIRST SECTION

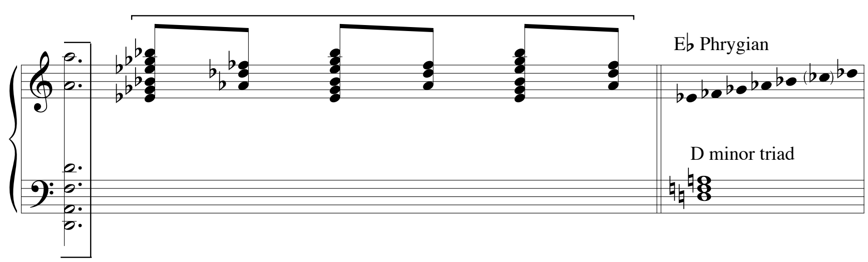
There are a number of different ways to consider the sonority that opens the Introduction to Part 2. The simplest way to describe it is three overlaid minor triads: a D minor triad in the bass, with oscillating E♭ minor and C♯ minor triads above (Figure 3.1.1). This interpretation captures something essential about the sound of the passage, with its emphasis on the color of the minor triad, on the half step relationships between harmonic units, and on the registral separation between the low D minor and the oscillating E♭-C♯ minor triads above.

Figure 3.1.1: R79 as combination of three minor triads.



On the other hand, the upper woodwind parts also cohere into a single diatonic scale – either C♯ Dorian or E♭ Phrygian (with one note missing), depending on whether the upper or lower triad is considered the "tonic." Since the E♭ chord sounds first, we'll consider it to be in E♭ Phrygian for the purposes of our analysis, while acknowledging some ambiguity. In this reading, there is a bitonal effect, with the E♭ Phrygian upper lines juxtaposed against the D minor triad below (Figure 3.1.2).[83]

Figure 3.1.2: R79 as bitonal juxtaposition

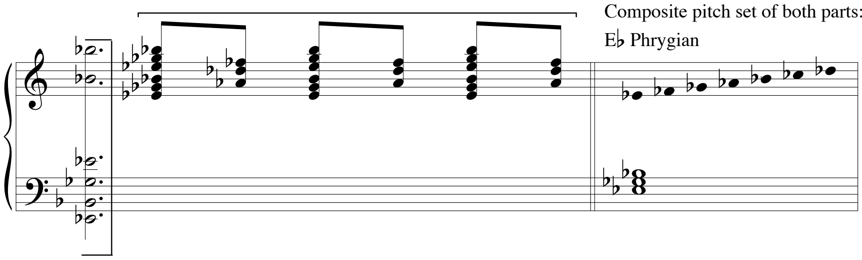


Furthermore, one of the parts is a half step "off" from the other, similar to many of the bitonal juxtapositions from the Part I Introduction. If the bottom triad shifted either up or down a half step, we would have a much more typical impressionistic harmony, in either pure C♯ Dorian or pure E♭ Phrygian, as Figure 3.1.3 shows. Instead, the bottom unit is a half step "off," just as it was at R4, R5, R9, and R10.

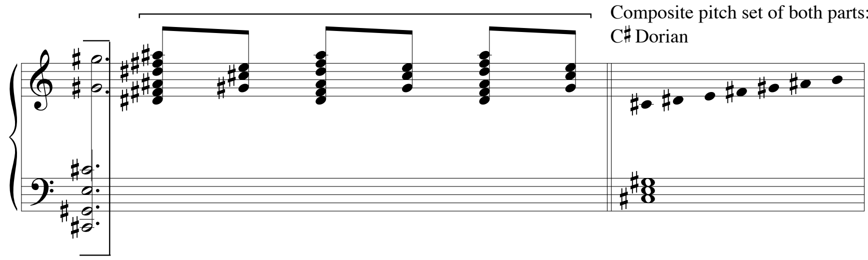
[83] This is Messiaen's interpretation as well (1995, 106).

Figure 3.1.3: R79 with half-step "corrections" of bass harmony.

(a) Bass unit "corrected" up a half-step, creating pure E♭ Phrygian.

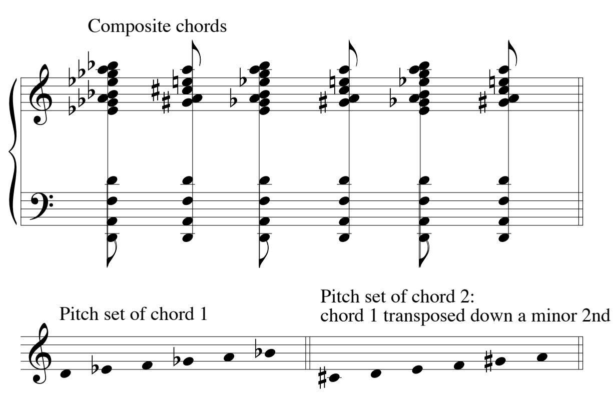


(b) Bass unit "corrected" down a half-step, creating pure C♯ Dorian.



This half step shift also allows Stravinsky to both allude to and undermine traditional tonal practice. In the two counterfactual examples above, one of the two upper register chords acts as a dissonant neighbor harmony to the main consonant harmony. Both are plausible tonal patterns, with the dissonance in 3.1.3(a) acting as a lower neighbor to the accented downbeat consonance, and the dissonance in 3.1.3(b) acting as an accented appoggiatura to the *offbeat* consonance. In both cases, the consonant harmony can be heard as the fundamental chord, with the dissonance ornamenting it. But shifting the bottom harmonic unit by a half step throws this patterning off completely. Instead of a controlled alternation of consonances and dissonances, now *both* the downbeat and offbeat are dissonant, and dissonant in the same way. If we isolate the composite pitch set of each eighth note, the harmony alternates between two equivalent six-note subsets of harmonic major a half-step apart (Figure 3.1.4). Even though the upper part oscillates between two different chords and the bottom part remains static, we nonetheless get the *same chord-type* on each eighth note, because the two oscillating chords are an equal distance from the pedal below (one half-step). This creates a unique effect of both harmonic oscillation (since the top part alternates different minor triads) and stasis (since the composite chord types are the same). It also has the effect of casting the underlying D minor triad in a subtly changing light, as it shifts from being the bottom triad to the top triad of the same chord type, even though it itself remains static. The major second oscillation in the upper unit thus creates an expectation of a "tonal" flow of consonances and dissonances, but the bass unit undermines it, creating instead a static alternation between two equivalent, dissonant harmonies.

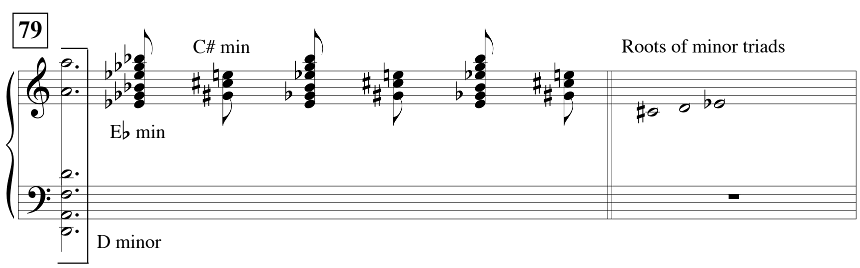
Figure 3.1.4: Composite harmonies at R79. Oscillates between six-note harmonic major subsets a half-step apart.



Another subtle but noteworthy aspect of the harmony here is the *ppp* A octaves in the oboes. This pitch belongs to the bottom D minor unit, but it has infiltrated the register of the upper C♯ and E♭ minor triads. By projecting the D minor harmony up into this higher register, the composite harmony becomes ever so slightly more pungent, with a dissonance in the heart of the otherwise consonant upper harmonic unit. Orchestration is key here. If these A's were too present, the upper harmony would become too biting, throwing off the subtle balance that makes this harmony so arresting. This upper register A also gains significance later on, when the section's main melody grows out of it, at R80+2. Its slight presence at the beginning of the movement subtly plants the seed for this emergence.

If we consider the roots of the three minor triads in play here – C♯, D, and E♭ – we also see the outline of the chromatic cluster that cropped up so many times in Part 1 (Figure 3.1.5). It certainly isn't audible as a cluster in this situation, and is not confined to the mid-range register where we typically found it in Part 1. But certainly the sense of juxtaposed half-step relationships, with E♭ and C♯ rubbing against D, is here. In the context of this cluster's journey through the whole work, I find it plausible to consider this one of its more understated variants.

Figure 3.1.5: Roots of triads at R79 imply the C♯-D-E♭ chromatic cluster from Part 1.



If we consider the harmony in the broader context of the journey from Part 1 to Part 2, this Part 2 opening sonority has the effect of a lowered, darkened version of the first harmonic arrival in Part 1, at R4. Both harmonies feature an "E♭ unit" on top of another unit a half-step away. At R4, this lower unit is a half-step above, on E♮, while at R79 it is a half-step *below* on D. Furthermore, at R4 the harmonic units are warm major triads and open stacked fifths, while at

R79 both units are colder minor triads. There is also a striking similarity in the voice-leading of the top voice, as it outlines the B♭ to E tritone in both (Figure 3.1.6).

Figure 3.1.6: Comparison of R4 and R79: both have melodic B♭–E motion, and both feature E♭ unit over another unit one half step away.

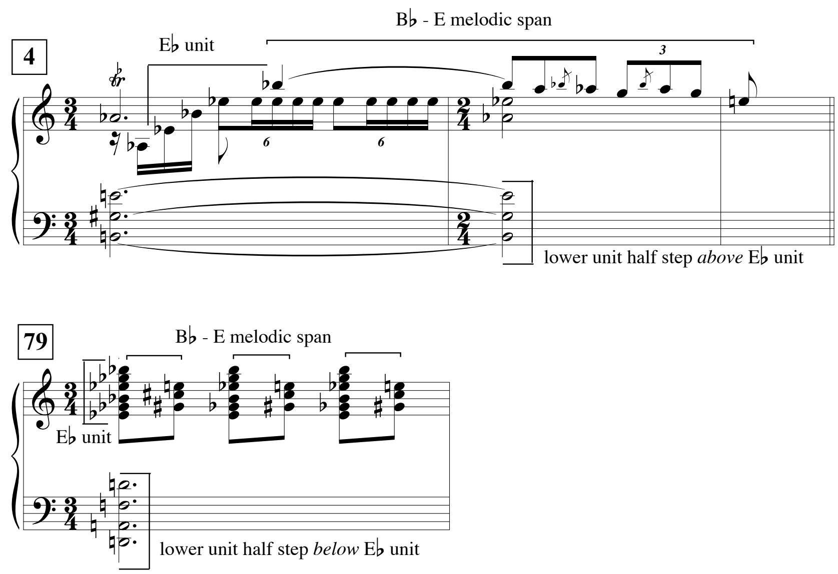
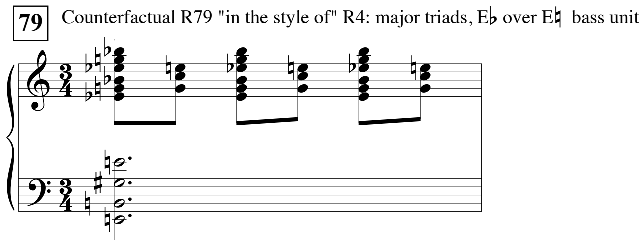
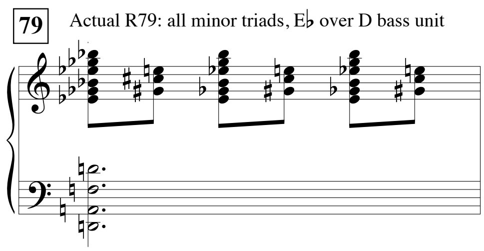


Figure 3.1.7 presents a counter-factual version of R79 set in the harmonic manner of R4, with major triads instead of minor triads, and with the bottom unit on E instead of D. Comparing this to the actual version at R79 shows the sense of deepening and darkening of R79 compared to R4.

Figure 3.1.7: Counterfactual R79 re-composed to parallel harmonic setting of R4.





This deepening and darkening, and juxtaposition of E♭ over D, has resonance with other key moments in both Part 2 and Part 1. For example, at R129, the ur-chord of "Ritual Action of the Ancestors" is very close to the pitch set at R79. The only note missing is A, and it has a similar sense of E♭ minor over D (Figure 3.1.8). This R129 chord is also almost equivalent to the "Spring Rounds" chord, with some re-arranging of the voices, and the bottom note dropped a half-step from E♭ to D. It is like the "Spring Rounds" chord with the bass note a half step "too low." (Figure 3.1.9). At R149, the "Spring Rounds" chord has now dropped a half step in *all* parts – it is the same exact chord and spacing, but now on D instead of E♭, and with an extra fifth added below (Figure 3.1.10).

Figure 3.1.8: Comparison of R79 and R129 harmonies. Same pitch set, minus A at R129. Both have sense of E♭ minor over D.

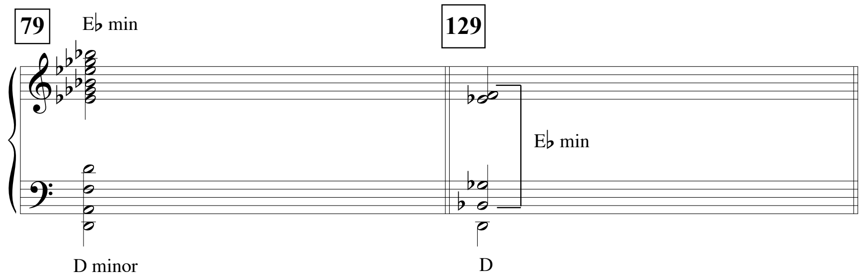


Figure 3.1.9: Comparison of R49 "Spring Rounds" chord and R129 chord. Same harmony (slightly re-voiced), but bass note moves down to D.

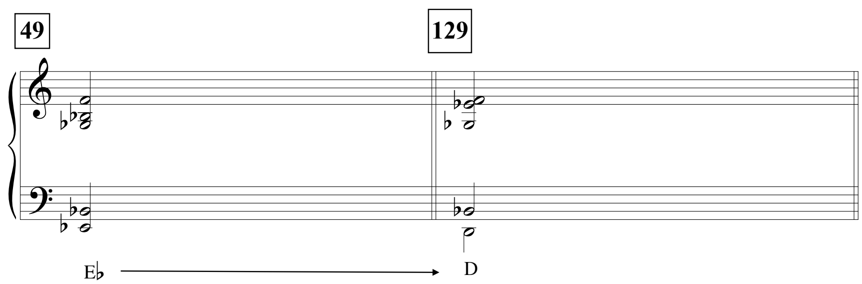
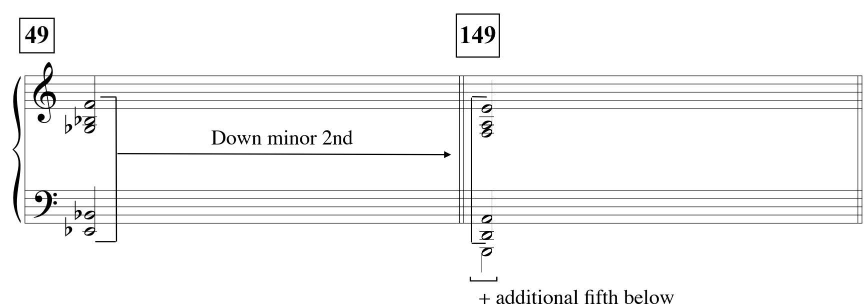


Figure 3.1.10: Comparison of R49 and R149 harmonies.



Finally, the opening sonority of the "Sacrificial Dance" is also quite similar. The voicing is a bit different – a D7 chord over an E♭–B♭ fifth, over a D at the very bottom – but it is nearly the same composite harmony as R79, minus the F and plus a C (Figure 3.1.11)**.** It is also very close to the iconic "Augurs of Spring" chord, transposed down a half-step and re-voiced (Figure 3.1.12).

Figure 3.1.11: Comparison of R79 and R142 harmonies.

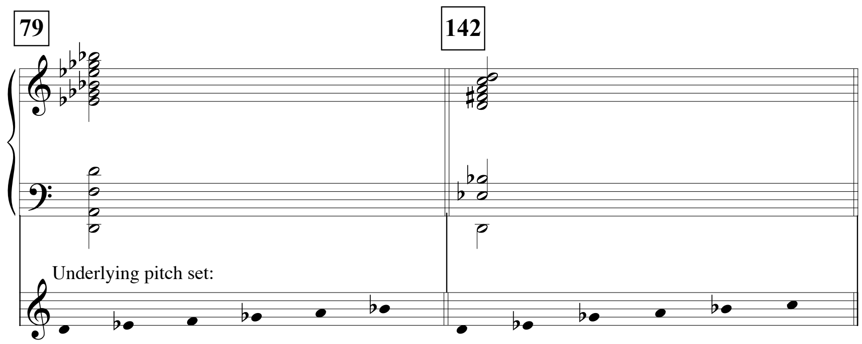
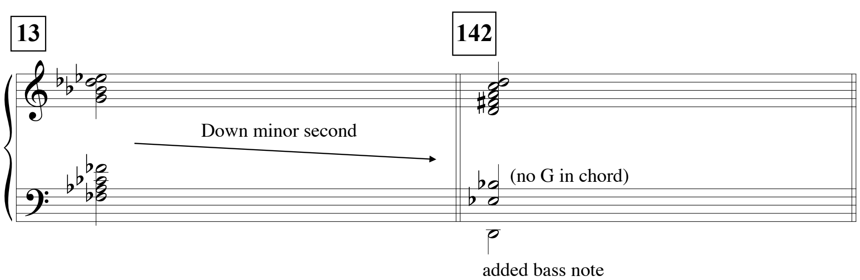


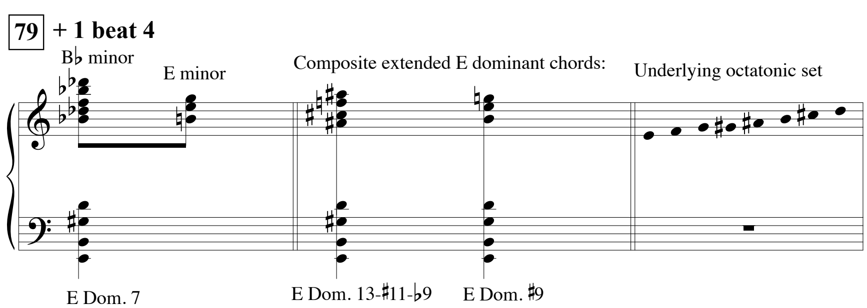
Figure 3.1.12: Comparison of R13 and R142 harmony. Same chord transposed down a minor second, with minor modifications in voicing. R13 harmony is notated an octave higher than it appears in the piece to clarify the relationship.



Considering all of these iconic harmonies together, we can see striking similarities between them, even as they are disguised by significant differences in texture and character. Furthermore, the Part 2 examples differ from those in Part 1 in that the bass notes, and sometimes other notes as well, are lowered by a half-step – an example of the sinking half-step pattern on a deep level. We will examine all of these relationships in more detail in Chapter 4, when we consider some of the work's large-scale patterns.

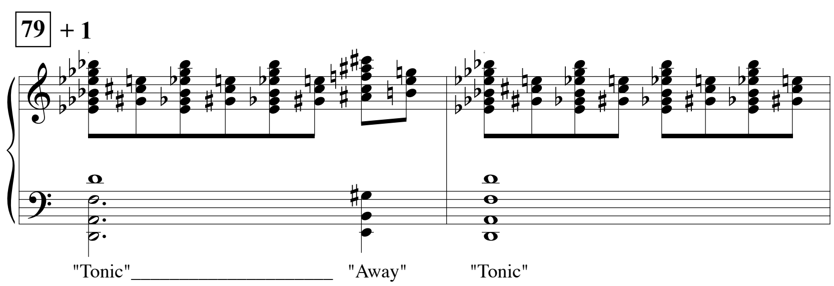
Moving forward, on beat 3 of the second bar of R79, the harmony shifts. The bass unit moves up to E Dominant 7, and the upper unit moves to B♭ minor and then E minor triads. They create a composite harmony of two different E extended dominant chords, with the whole beat adding up to a complete octatonic set (Figure 3.1.13). These same harmonies happen again in the bar before R80 on beats 2 and 4, alternating with the R79 opening harmonies. As at R79, the melodic motion also spans a tritone, and it creates a similar sense of both harmonic motion and stasis, but in a slightly different way. At R79, as we saw, we have the same chord type on the beat and the off-beat (juxtaposed minor second-related minor triads, as Figure 3.1.4 showed), but different pitch sets; at R79+1 beat 4, it is not the same chord type on the beat and off-beat, but the *entire beat* adds up to a single octatonic set. So in both cases, there is a consistency of harmonic color between the on-beat and the off-beat chords. At R79, this is because they are the same chord-type (but different pitch sets), while at R79+1 beat 4 it is because they come from the same octatonic set (but form different chord types). It is, in effect, a quick shift from Kaleidoscopic Oscillation to Field Harmony, with both based on oscillating minor triads over a pedal harmony.

Figure 3.1.13: Chord at R79+1, beat 4.



At the beginning of the Part 1 Introduction, the opening bassoon melody unexpectedly suggested a common practice functional harmonic progression, as we saw in Chapter 2 (see Figure 2.1.1). Similarly, there are some intriguing allusions to functional harmony at the opening of Part 2. Despite its dissonance, Part 2's opening harmony has a very strong sense of "tonic-ness," functioning as a target sonority that other harmonies gravitate toward. The second harmony, on beat four of bar two, functions as an "away" harmony that somewhat mimics the function of a "dominant," as it increases the tension and pushes back to the "tonic" (Figure 3.1.14).[84]

Figure 3.1.14: "Tonic-Away" harmony at R79+1.



In the bar before R80, we find a very common-practice-like ascending bass line harmonized by alternations between these "tonic" and "away" harmonies in different inversions,

[84] If we considered this passage in more literal functional tonality terms, the "away" harmony might be considered a "V/V." Or, we might consider the D minor-rooted "tonic" sonority to be a iv, followed by V in the key of A minor. Indeed, given that the piece begins and ends more or less "in A," this could seem a plausible way to interpret it. As argued previously in the critique of Cacioppo's article (see section 1.1.5), while I do believe that this kind of functional thinking could be behind some of Stravinsky's decisions, it is very difficult to argue that the music genuinely behaves in a functional manner. For this reason, I am not inclined to give a literal functional interpretation to these harmonies. At the same time, a distorted residue of functional usage does indeed lurk there, both in the sonorities themselves and in the voice-leading patterns that animate them.

before landing back on a "root position tonic" at R80. We even have one voice, horn 3, sustaining a common tone, much as a voice might sustain scale degree 5 in a common practice tonic-dominant progression (Figure 3.1.15). The voice-leading frame thus implies a standard common practice progression, but the actual harmonies are "off."

Figure 3.1.15: "Tonic-Away" progression at R79+5.

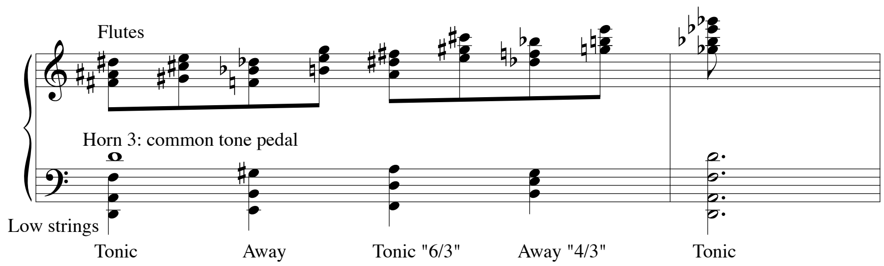
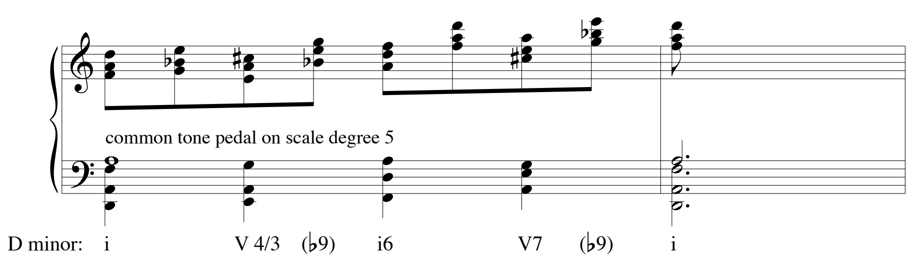


Figure 3.1.16 demonstrates a possible common practice progression that could be created with strikingly similar voice-leading. The effect is of an almost-familiar blueprint animated by deeply strange chords, a haunting, uncanny effect that perfectly captures the mysterious, nocturnal setting of the Part 2 Introduction. We are glimpsing familiar objects, but through a haze of twilight, shadows, and time.

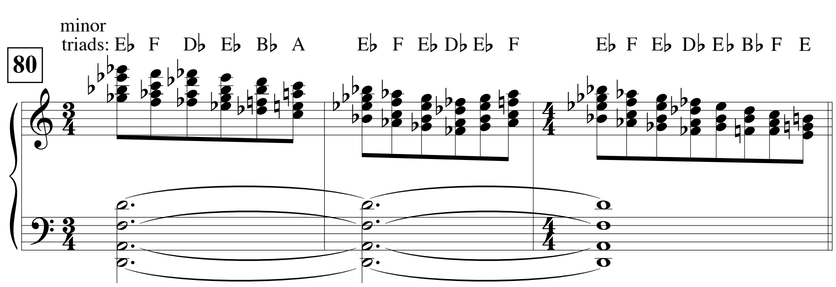
Figure 3.1.16: Common practice progression with very similar voice-leading.



From R80 to R84, the same basic harmonic texture continues from before: streams of minor triads in the upper unit, over triads, seventh chords, and eventually extended dominants in the lower unit. In addition, the melody that first appears at R80 continues to reappear, cohering harmonically with the lower harmonic unit, while gently clashing with the upper one.

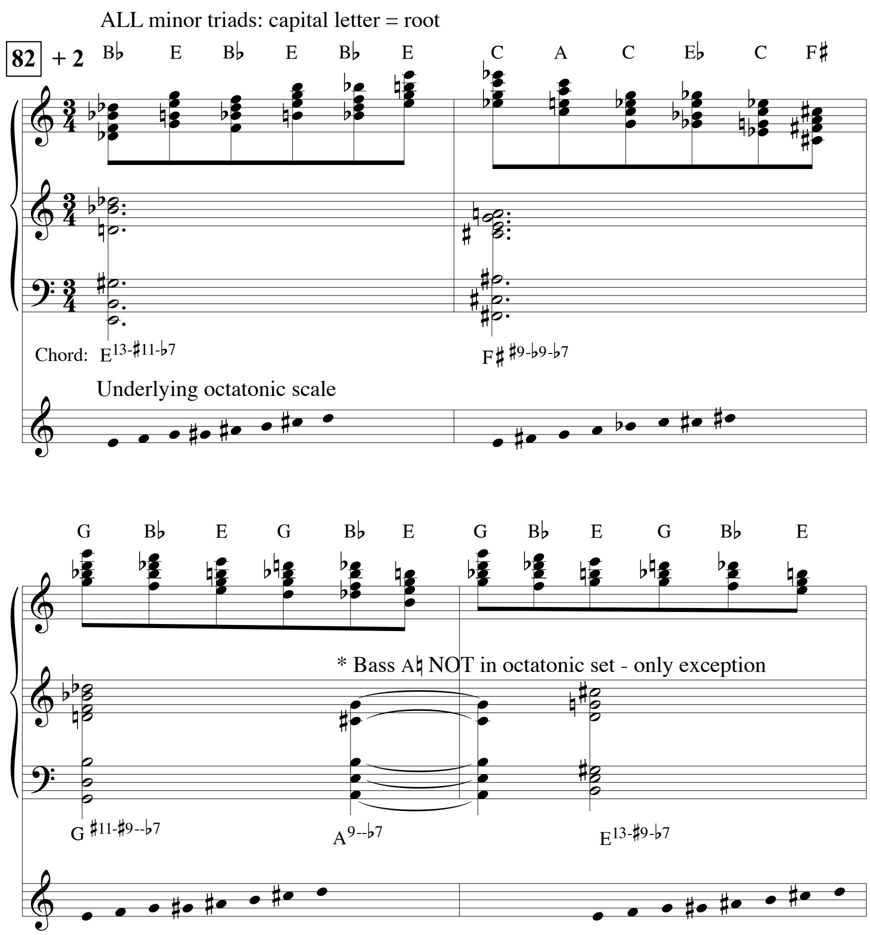
At R80, the "tonic" harmony returns, but now other minor triads are interspersed in the upper unit: in addition to E♭ and D♭ minor, we also have F, B♭, A, and E minor. These triads remain in circulation for the next three measures. D♭**,** E♭, and F are the most frequently used, with B♭ appearing twice under the melodic D♭, as a sort of substitution for D♭ minor, and A and E making single appearances as brief weak-beat passing harmonies. It is difficult to discern a deeper pattern governing the selection of these specific minor triads. Similarly, the melody they harmonize consists entirely of minor and major seconds, but without any clear pattern or derivation from previous material. The highly structured patterning of the preceding bars here gives way to a looser, freer play of oscillating minor triads (Figure 3.1.17).

Figure 3.1.17: Harmony at R80.



R82 repeats the harmony at R80, and then at R82+1 we are back on the opening R79 sonority, moving to the "away" octatonic E extended harmony again in the next bar. From here, the bass unit finally breaks free from the D minor and E7 harmonies and continues moving up through a series of extended dominant chords. As Figure 3.1.18 shows, the minor triads in the upper unit continue, but now they are always related by minor third or tritone, creating complete octatonic sets with the bass unit below (van den Toorn's "Model A").

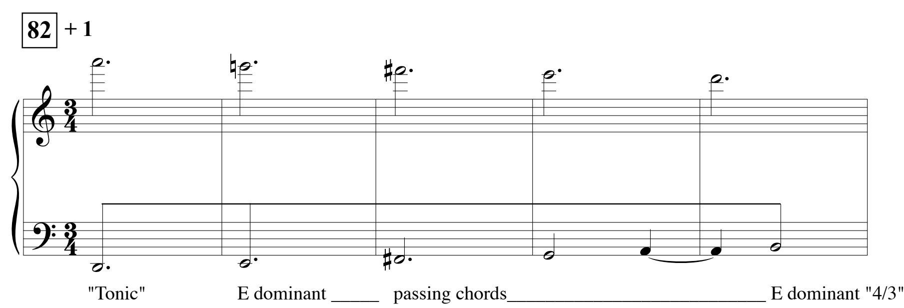
Figure 3.1.18: Harmony at R82+2. Extended dominant chords, with minor-third related minor triads above, create octatonic sets.



Stravinsky is again playing an "octatonic minor third game" like the one we saw in "Ritual of Abduction" at R39, R41, and R42 (Figures 2.3.7 and 2.3.9). But now the game is with minor third-related minor triads, rather than major triads and dominant sevenths. The only exception to this pattern is the chord that begins on beat three of R82+4, where the A bass note of the A dominant 9 chord falls outside the octatonic set of the rest of the measure. It is important to note that this A does not, at least to my ear, sound off or exceptional in any way. This shows that, while octatonicism certainly does provide a harmonic framework here, Stravsinky has no qualms about deviating from it slightly when it suits him, and this deviation does not cause any particular disruption to the harmonic flow.

A Schenkerian might plausibly read these four bars (from R82+2 to R82+5) as a prolongation of the E extended dominant harmony. Contrapuntally, there is a contrary motion wedge between the bass and soprano voices, and the bass harmony ultimately moves from a "root position" E dominant to a "4/3" E dominant (with the fifth in the bass) (Figure 3.1.19). It takes the same basic pattern we found in the bar before R80 (see figure 3.1.15), and extends it to five measures instead of one.

Figure 3.1.19: Prolongational interpretation of R82+1: contrary motion wedge between outer voices prolongs E dominant with motion from root position to "4/3" position.



Van den Toorn considers the octatonicism of these bars to be the defining harmonic feature of the entire section. He breaks the non-octatonic chords at R79 into their components from different octatonic sets which are then united after R82 (see "example 70" in van den Toorn 1987, 192). The three half-step-related minor triads at R79 are taken to be representatives of the three different octatonic sets, which are then explicitly separated out from one another, beginning at R82+1 (Van den Toorn's examples 71 and 72). As he writes, "From an initial triadic configuration seemingly without octatonic qualifications, an octatonic cohesion is thus brought to bear on the passage as a whole, and in the form here of a carefully patterned alternation between the minor triads and dominant sevenths of Collection III and those of Collection I" (Van den Toorn 1987, 193). While this reading does help to explain a sense of cohesion and direction in the passage, it gives very short shrift to the striking sonority that opens Part 2. Van den Toorn has nothing to say about this sonority in its own right, viewing it merely as preparation for the octatonicism to come. My reading is nearly the reverse of Van den Toorn's. I see the chord at R79 as being the fundamental ur-chord of the section, with the octatonicism after R82 serving simply as a convenient way of spinning out some harmonic progression and development. It is analogous to a common practice composer coming up with a bold and distinctive harmonic progression for his main theme, but then falling back on a standard circle of fifths sequence when he re-works the motives in the development section.

In this sense, the procedure is very similar to what happens at R37. There too, the initial setting of the theme is complex, dissonant, and distinctive, not purely octatonic, as the D-centered melody clashes with the (potentially) octatonic harmony below it. Later, especially at R42 and R44+3, octatonicism is used as a convenient way to build complexity while maintaining harmonic coherence, much as it functions after R82. A similar procedure is also used later in the "Ritual Action of the Ancestors:" while it becomes octatonic at R131 when the material begins to develop, the initial sonority at R129 is more interesting and distinctive than an octatonic sonority would be. (More details on this passage to come later). We will also see a similar procedure unfold in the "Sacrificial Dance." The octatonic's symmetrical structure and consistent color make it a useful tool for developing motivic ideas within a non-diatonic but harmonically consistent framework. But these same qualities tend to make it a poor source for thematic ideas and harmonies that are both distinctive and memorable. Stravinsky's use of the octatonic thus illustrates a deep understanding of its potential, but also of its pitfalls.[85]

The difference between my and van den Toorn's interpretation of this section is highly illustrative of the contrast in our general approaches. His concern is largely with unity and cohesion, so he is motivated to reduce even the most rich, mysterious, and complex sonorities (like the opening of Part 2) to underlying octatonic sets. I am far more interested in the surface harmonic features as entities unto themselves, rather than as expressions of deeper structures. To me, van den Toorn-style reduction eliminates and discounts exactly what is most striking and interesting about the work: the rich, complex, visceral surface harmonies. Rather than reduce them, I want to *expand* them, to consider all the different associations, functions, and explanations they could have.

Van den Toorn and I would agree, I believe, that Rimskian octatonicism is an important starting place for Stravinsky, but that in *The Rite* he moves well beyond it. For Van den Toorn (and Taruskin), he does this by submerging octatonicism into the background; while there are still some literal surface-level octatonic sections, they view its role as more of a background framework of larger scale pitch organization. For me, Stravinsky moves beyond octatonicism not by submerging it, but by building on it and adding to it, making it just one possible method among many for organizing non-diatonic but also non-fully-chromatic pitch structures.

[85] As Andriessen and Schönberger (1989, 229) colorfully put it: "Dogmatic and automatic use of this [the octatonic] scale leads to a malingering music, reeling around in circles, biting its own tail, scurrying hither and thither."

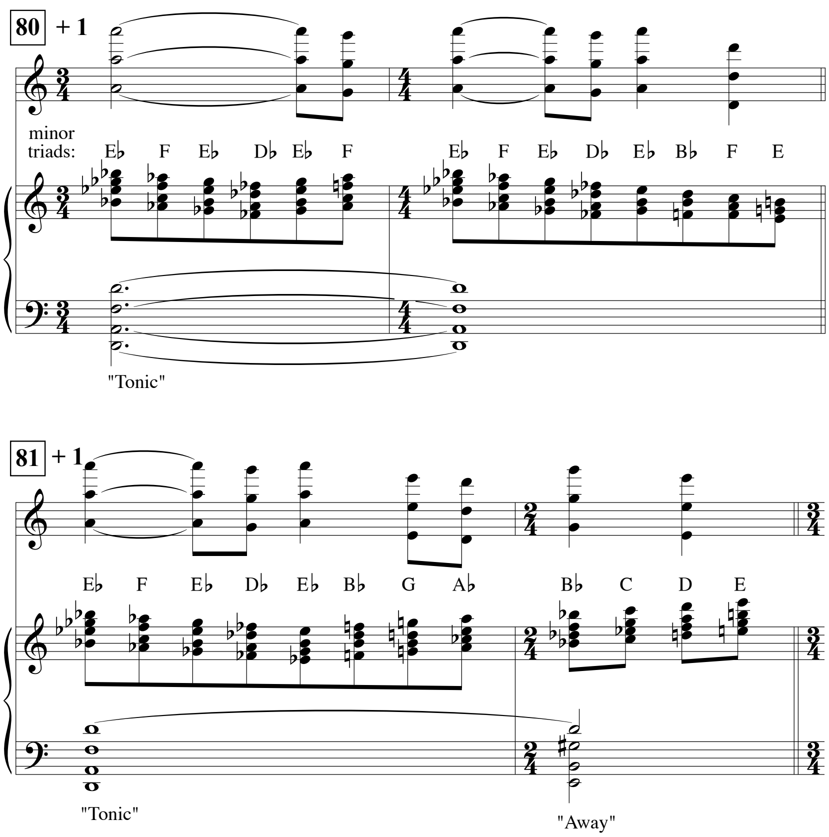
Continuing on, at R83, Stravinsky transposes the basic components of R80+1 to +2 and R81+1 to +2 up a major third. But he re-works them to create a quite different effect, disguising this transpositional relationship. The chords in the bass unit – F♯ minor and G♯7 – are a major third higher than the "tonic" and "away" harmonies back at R79 (D minor and E7), but the voice-leading between them gives them a softer impact. The F♯ minor "tonic" chord appears in first inversion, both at R83 and when it returns at R83+3, downplaying its tonic-ness. When the "away" G♯7 appears at R83+2, it is softened by a 4-3 suspension.[86] In fact, the only voice-leading movement across the barline is the bass descending one half-step, from A to G♯. This contrasts markedly with the moves to the "away" harmony in R79+2 and R81+2 when all voices move up together. The harmonic rhythm of these bass chords has also been regularized at R83, creating less forward momentum.

In the upper unit, the chords at R83 are exactly the chords at R80+1 transposed up a major third. From R83+1 to R83+2, they are the same as the chords from R81+1 to R81+2, transposed up a major third. They are voiced a little bit differently to create a slightly different, but very similar melodic contour, and the first bar this time is over the "away" rather than "tonic" bass chord. Meanwhile, the melody at R83+1 is the same as R81+1 to R81+2 transposed up a major third. The next two bars (R83+3 to R83+4) are almost a repeat, but with harmonic changes in the final bar. The net effect of these changes is to make the music gentler and more subdued. The orchestration contributes significantly to this as well, with only low strings on the bass unit,

[86] Hill (2000, 74) makes similar points about the first inversion chord at R83 and the suspension in the next bar.

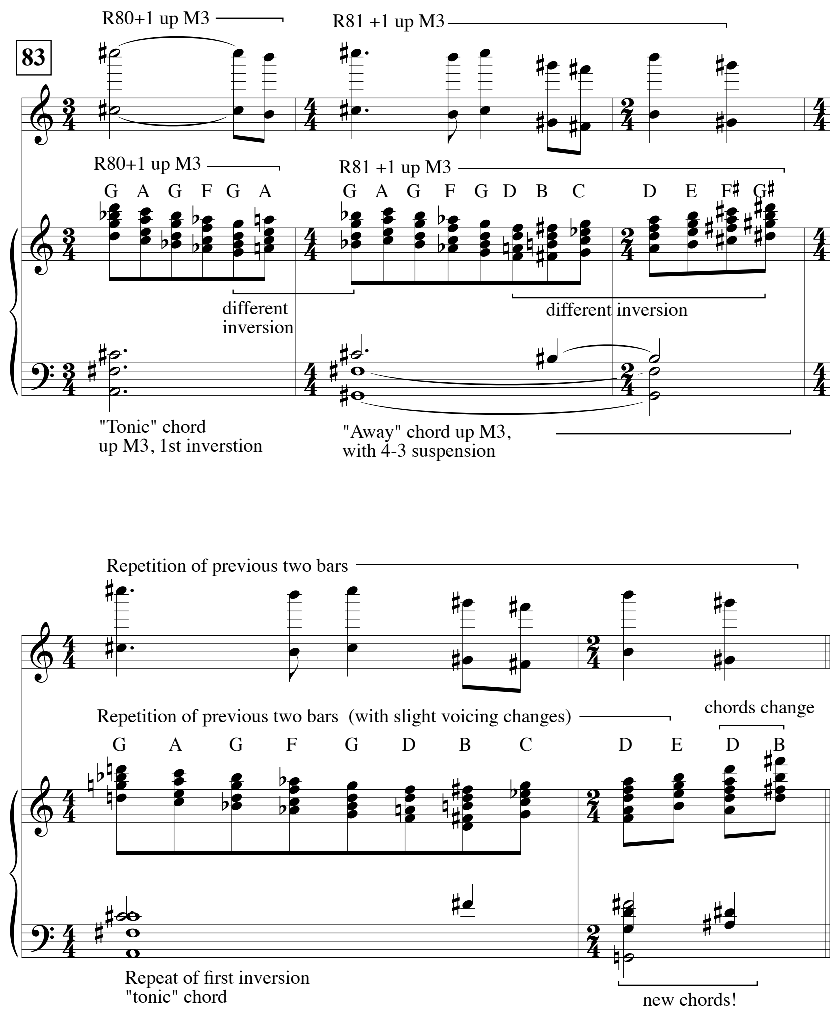
only oboes on the upper unit, and the wispy combination of alto flute and solo violin harmonics, two octaves higher, on the melody.[87] Figure 3.1.20 shows these relationships.

Figure 3.1.20: Comparison of R80+1 to +2 and R81+1 to +2 with R83.



[87] Messiaen similarly notes the major third transposition and the striking orchestrational changes (1995, 107).

(Figure 3.1.20 continued)



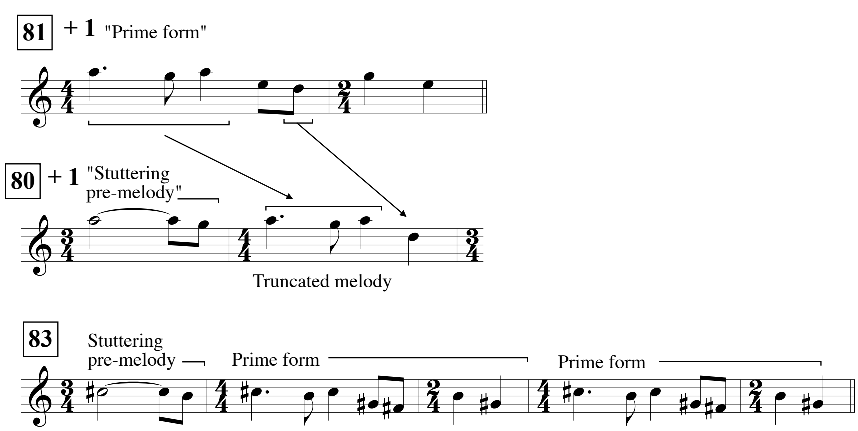
Zooming out now on this first part of the Introduction, we see that the net harmonic effect is largely static until it starts moving at R82+1, modulating up a major third by the end of the section. The sonority at R79, dissonant and complex as it is, functions as a tonic; although there is some motion away, it provides a clear harmonic anchor. At R82+1, as we saw above, the harmony finally starts to really move, with a mostly octatonic contrary motion wedge converging on E extended dominant. This then leads into a major third up transposition of the opening at R83, disguised by textural changes.

3.2 INTRODUCTION, SECOND SECTION, AND MYSTIC CIRCLE OF THE YOUNG GIRLS

At R84, there is a significant harmonic and textural shift. The material introduced here and in the rest of the Introduction shares much in common with the next dance, "Mystic Circle of the Young Girls," and flows seamlessly into it. For this reason, I will consider the rest of the Introduction and this next number together.

The chorale at R84 – a harmonization of the melody from the first part of the Introduction – is a recurring motive all the way up to R102, interspersed with several other ideas, acting almost like a rondo theme. Since it anchors this section, I will first consider its treatment throughout, before turning to the other material with which it alternates.

Figure 3.2.1: Melodic variants in first part of the Introduction



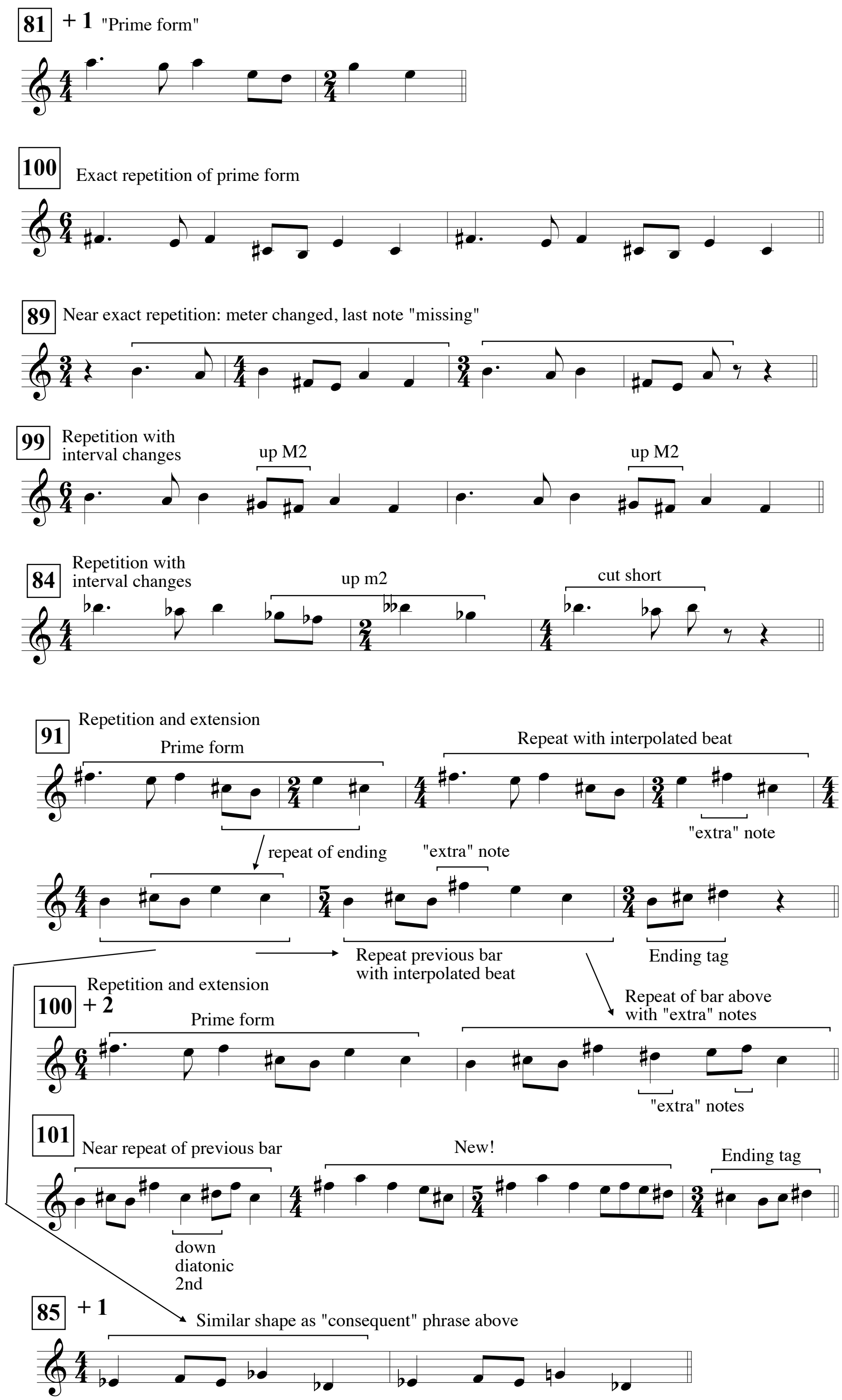
The one constant in the presentation of this chorale theme is variation. Even in the first part of the Introduction, we saw several different variants of this melody. It occurs at R81+1 in its "prime" form, and recurs again twice at R83+1, now a major third higher. The melody's first appearance at R80+2 is truncated, outlining the first four beats of the melody, but skipping the E eighth note (Figure 3.2.1). Also at both R80+1 and R83, there is a sort of stuttering "pre-melody," with the first two pitches of the melody occurring once, before the main melody kicks in.

Looking at the chorale melodies now, we can sort the melodic variations into four types. (Note that while the melody appears at several different pitch levels, I am not including exact transposition as a form of variation.) The first is exact or near exact repetition, as we find at R100 (exact repetition) and R89 – nearly exact repetition, although the meter has been changed, and the second repetition cuts off before the final note.

The second type parallels the shape of the melody, but changes some of the intervals. This happens at R99, with the eighth notes shifted up a major second, and at R84, where the fourth, fifth, and sixth beats of the melody are transposed up a minor second.

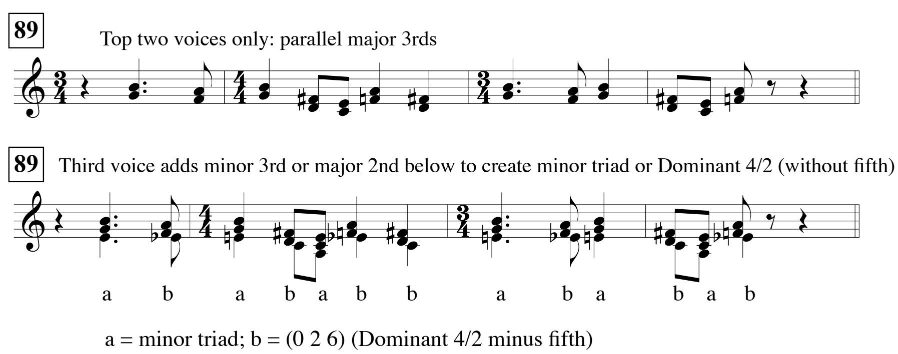
The third type begins with an exact version of the melody, but then spins it out into a longer melody, as happens at R91, R100+2, and R101. Considering these three passages in sequence, we can see how Stravinsky continues to build on and vary the patterns set up by the previous iteration. Finally, R85+1 is actually a different melody, but acts as a sort of consequent to R84, and can be considered a variant of the melodic extension in R91+4. Figure 3.2.2 shows these various transformations of the "chorale" melody.

Figure 3.2.2: Variants on chorale melody



Like the melody itself, the harmonizations also have several types of variants. R89 provides a good starting point for considering the harmony, with its simple oscillation between two closely related three-note chords: the minor triad and the 4/2 inversion of the dominant seventh chord (without the fifth), which are one half step away from one another in pitch space.[88] (For now, I am ignoring background sustained pitches and ostinatos in order to focus on the chorale harmonies, but we will add them back into the mix later). The top two parts move in parallel major thirds the entire time, while the third part adds either a major second or minor third below the lower note, to create one of the above two chords (Figure 3.2.3).

Figure 3.2.3: Chords at R89



This procedure is similar to various moments in Part 1, for example at R1, R43, R50+2, and R57+2. In all of these examples, two voices form a constant intervallic unit (either chromatic or diatonic), while a third voice adds a variable interval resulting in a flow of oscillating

[88] To be clear, I do not consider this second chord to be a "functional" dominant 4/2 in any sense. I could have opted to refer to it primarily as an (0 2 6) instead, considering it as a sort of perturbation of the basic minor triad color. However, to my ear, the dominant 4/2-ness of it is indeed audible and salient as a harmonic color of its own. Even if it is not functioning like a 4/2, to my ear it does still evoke the color and sense of tension present in a functional 4/2 chord.

harmonies that are similar but slightly different. As in the Part I examples, a sense of both parallelism and of oscillation co-exist**.**

This same oscillation of minor and 4/2 chords, with parallel major thirds on top, comprises the top three voices at R91, R100+2, and R101, although in these instances they combine with three more voices below to create far more complex composite harmonies. At R91, all six lines are played by solo violas; since the top three voices are the same color as the bottom three, they merge into a single dense harmony, obscuring the connection to R89. At R100+2 and R101, however, the top three lines are in the oboes, while the bottom three are in solo cellos, creating more audibly distinct streams.

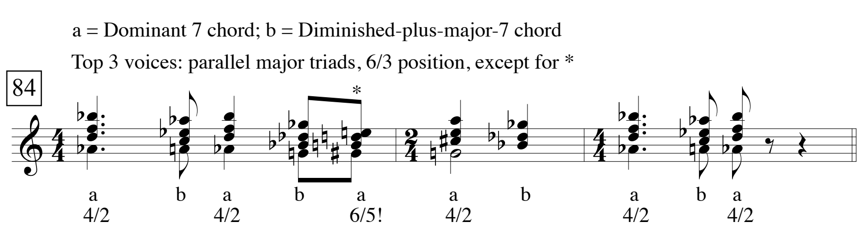
Figure 3.2.4: Oboes and cellos at R100+2. Oboes have same oscillation between minor triad and dominant 4/2 as horns did at R89. Chord labels apply only to oboe parts.

Figure 3.2.4 shows the oboe and cello parts at R100+2 and R101, labeling the oboe chords to show their correspondence with R89. Even as the melody is significantly extended, the upper three parts continue exclusively in minor triads and dominant 4/2 chords. (There will be further discussion of the composite chords formed with the cellos a bit later.)

A variant on this pattern occurs at R84. Here, rather than the top two parts moving in parallel major thirds, the top *three* parts move in parallel major *triads* (in 6/3 position). A fourth part is added below which creates either a dominant seventh or diminished-plus-major-seventh sonority, by adding a note a tritone away from either the third or fifth of the triad. Figure 3.2.5 shows how this works. It is a similar technique as at R89, but results in quite different harmonies.

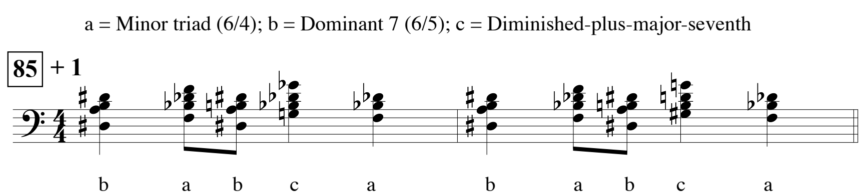
There is one slight wrinkle in the pattern at R84. All of the dominant seventh chords are in 4/2 position, with the sole exception of the last eighth note of the first bar, which is in 6/5 position. This moment also breaks the parallel major triad pattern, as the top three voices form an (0 3 5) pitch set instead for this one eighth note. This tweak of the pattern keeps the voice-leading much narrower – in particular, the bottom voice maintains its pattern of half-step oscillation. This is yet another example of Stravinsky's willingness to tweak a process in order to make way for other musical constraints to take precedence – in this case, close voice-leading and half-step oscillation in the bottom voice.

Figure 3.2.5: Harmony at R89: Parallel 6/3 major triads, with added fourth note to create either 4/2 dominant seventh or diminished-plus-major-seventh. Exception on last eighth of bar 1: no major triad in upper three voices, and chord in 6/5 position instead of 4/2.



R85+1 is a sort of hybrid of R84 and R89. While it has neither parallel major thirds nor parallel major triads, it restricts itself to the combined chord set of R84 and R89: minor triads from R89 (now in 6/4 position), dominant seventh chords from both (now in 6/5 position), and diminished-plus-major-seventh chords from R84 (Figure 3.2.6).

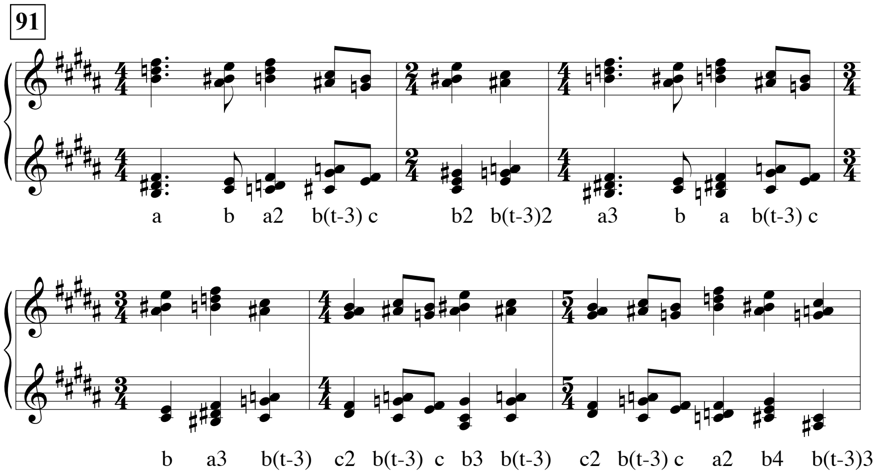
Figure 3.2.6: Harmonies at R85+1.



As we saw above, R91, R100+2, and R101 all use the R84 pattern in the top three voices. The bottom three voices do not form a particularly cohesive pattern of their own, but create composite six-note harmonies that can be understood as a series of variations on three basic underlying chords. We examined this process at R91 in Chapter 1. Figure 3.2.7 reproduces Figure 1.5.20 from chapter 1 to show how this works. R100+2 and R101 work in a similar manner, with further variation of the underlying patterns, as Figure 3.2.8 shows.[89]

[89] Though approaching it from a different perspective, Forte (1978, 81-82) views this passage in a fairly similar manner. He notes, for example, the similarities in the different pitch sets harmonizing each melody note. Rather than viewing these harmonies as a set of variants, however, he focuses on their connections to other pitch sets in the work.

Figure 3.2.7: Chords at R91 labeled as variants of three basic chords



Definitions of chords and their transformations:

a = (0 3 4 7) on B
a2: B → C, D♯ → D♮
a3: B → C

b = (0 2 3 6) on A♯ (C♯ in bass)
b2: + G♯
b3: + G♮; revoice with A♯ in bass
b4: + G♮
b(t-3): transpose down minor third
b(t-3)2: b(t-3) + E
b(t-3)3: revoice with A♯ in bass

c = (0 2 3 7) on E
c2: +A♯, G → G♯, E → D♯

Figure 3.2.8: Similar analysis of R100+2 and R101. Uses same chord definitions, and adds four additional transformations, in italics.

Definitions of chords and their transformations:

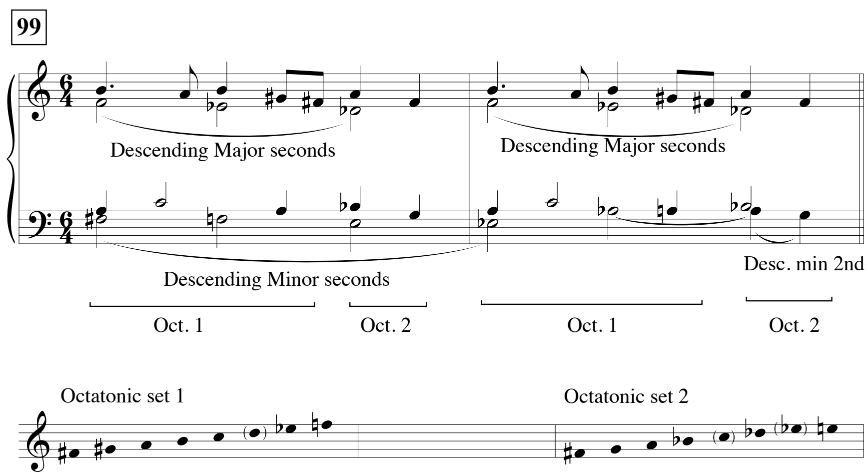
a = (0 3 4 7) on B
a2: B → C, D♯ → D♮
a3: B → C
a(t-3): transpose down min. third
a2(t-3): a2 transpose down min. third

b = (0 2 3 6) on A♯ (C♯ in bass)
b3: + G♮; revoice with A♯ in bass
b4: + G♮
b(t-3): transpose down minor third
b(t-3)4: b(t-3) +F#
b4(t+5): b4 tranpose up perfect fourth

c = (0 2 3 7) on E

R99 presents a more contrapuntal version of the chorale, with four independently moving voices. Under the melody in the soprano voice, the bass voice descends by minor seconds with the exception of one leap up a fourth. At the same time, the alto voice descends by *major* seconds, re-setting at the beginning of the second bar. The tenor voice meanwhile fills in the harmony in between with a combination of minor third and minor second motion. As far as I can discern, the harmonies seem to arise essentially as byproducts of these contrapuntal patterns, with background octatonicism ensuring a coherence to the resulting harmonies, as Figure 3.2.9 shows.

Figure 3.2.9: Contrapuntal patterns and background octatonic sets at R99. Octatonic set pitches in parentheses do not appear in the music.



At R99+2, a long, descending inner-voice chromatic scale provides the harmonic frame. Figure 3.2.10 shows only the melody and this chromatic descent to make the frame explicit, while Figure 3.2.11 presents the complete harmonization. As at R99, I sense that more is going on, but have found it difficult to make more specific claims about how the harmony is functioning.

Figure 3.2.10: Only melody and chromatic inner voice at R99+2.

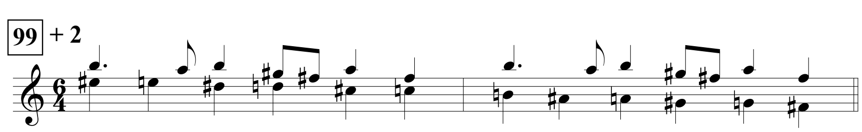


Figure 3.2.11: Complete harmonization at R99+2.

R100 picks up the inner-voice chromaticism with a simple chromatic ascent and then descent, alternating with the R89 chord pattern. Figure 3.2.12 shows the first three beats only of R100 and R100+1 to make this pattern clear. Figure 3.2.13 then shows the complete two measures with the material from R89 interspersed.

Figure 3.2.12: First three beats of R100 and 100+1 show the chromatic ascent and descent in the middle voice.

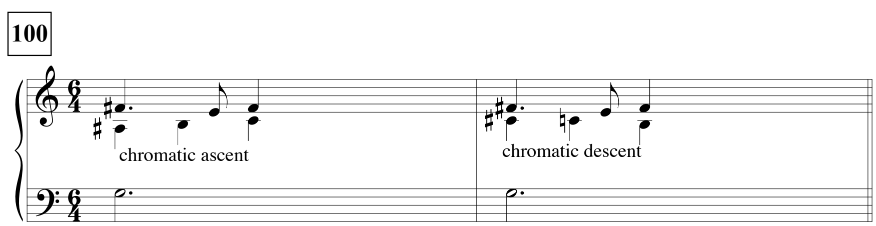
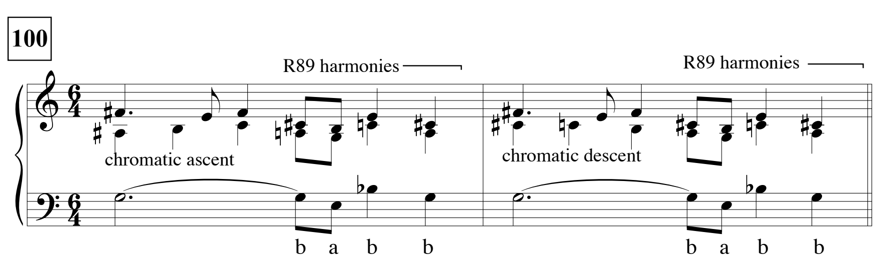


Figure 3.2.13: Complete chorale setting at R100.



a = minor triad; b = (0 2 6) (Dominant 4/2 minus fifth)

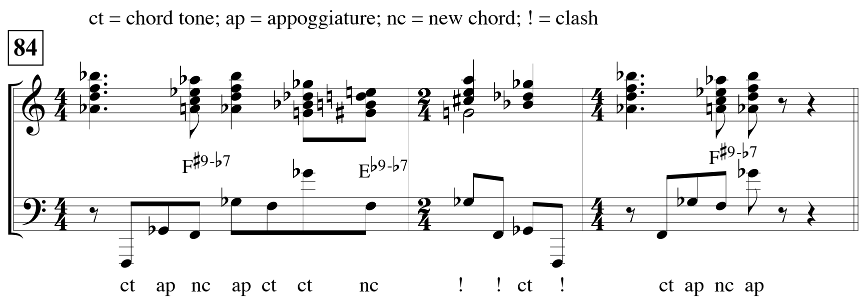
In summary, the settings of the chorales range from a quite straightforward alternation of two closely related chords (R84, R89) to a very complex series of harmonic variations built on these chords (R91, R101), to counterpoint-led harmonizations (R99), to hybrids of the first and third forms (R100). They are thus good illustrations of the rich variety of harmonic settings that Stravinsky's kaleidoscopic oscillation techniques can generate.

This is not quite the complete story, however, as many of the chorales are set against a background pedal or ostinato pattern. At R84, R85+1, R100, and R101, this background harmony strongly features the dissonant intervals of the minor ninth or major seventh, while at R89 and R91 there is a more consonant background. At R89, R100, and R101, the background is sustained pedal tones, while at R84, R85+1 and R91, it is a repeating eighth-note ostinato pattern. While these ostinatos and pedals are always clearly in the background, each time they appear they create a somewhat different effect, depending on their harmonic and rhythmic relationship to the chorale material.

R84 and R85+1 both feature the same ostinato built on leaping and then plunging F to G♭ minor ninths, and in both cases this pattern mostly coheres with the harmony, but with some exceptions. Figure 3.2.14 shows the range of harmonic effects the ostinato pitch can have at R84, from being a member of the chord already present, to acting as an appoggiatura to the chord, to forming a new coherent chord, to actively clashing with the chord.[90]

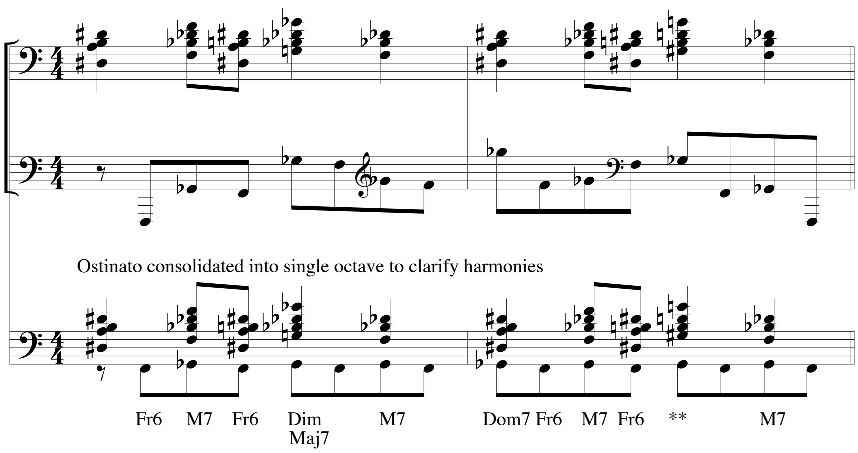
[90] Admittedly, these explanations of the harmonic effect of the ostinato are a bit subjective. Without the chord-defining rules of common practice tonality, how are we to say whether the ostinato pitch is an "appoggiatura" to a chord tone or is actually forming a new chord? How can we be sure that what I label as a "clash" is not in fact a new harmonic entity? I am essentially going by ear to make these calls, playing the chorales first without the ostinato, then adding it in and judging by ear what effect it has on the harmony. Whether or not the reader precisely agrees with my hearing is not the main point. The point is to illustrate that the ostinato does indeed have an effect. It cannot be disregarded as mere background, but colors how we perceive the chorale harmonies, subtly increasing the harmonic variety and complexity of the passage.

Figure 3.2.14: Chorale plus ostinato at R84. Ostinato note's function and new chords created by ostinato are labeled.



At R85+1, the ostinato has a more extreme impact on the prevailing harmony, as it effectively turns most of the dominant 4/2 sonorities into French augmented 6 chords, and most of the minor triads into major seventh chords. Figure 3.2.15 shows and labels the composite chords created by the ostinato and chorale combined. The net effect created by the addition of the ostinato in both of these cases is (1) to add some sense of movement and sweep to the otherwise rather static chorale material and (2) to add just a little bit more complexity to the harmony. In addition to the straightforward kaleidoscopic oscillation patterns discussed previously, we now have one more factor affecting the colors of the chords that flow by, creating both more varied and more complex composite sonorities.

*Figure 3.2.15: Chorale plus ostinato at R85+1. Bottom staff shows and labels composite chords. Fr6 = French augmented 6th chord; M7 = major seventh chord; DimMaj7 = diminished-plus-major-seventh chord; Dom7 = Dominant 7th chord; ** = no clear chord type created.*



R91 is the other place where the chorale is accompanied by an ostinato. Here, however, a quite dissonant chorale setting is accompanied by a consonant ostinato on the pitches B, F♯, C♯, and E – another (0 2 5 7) pitch set, and in fact the exact same pitches that make up the melody. The only clear harmonic connection between the dissonant chorale harmony and the ostinato is that both are rooted on B. Other than that, they effectively inhabit independent harmonic strands, until the second beat of R92+2. Here, the chorale moves to an unexpectedly consonant chord, merging with the ostinato into a gentle B extended dominant, or B Mixolydian sonority, as Figure 3.2.16 shows.

Another intriguing detail here is the horn 1 part at R92. It adds another counter-line which fits harmonically with the chorale, but also consists of the same (0 2 5 7) pitch set as the ostinato and the melody – B-C♯-E-F♯, with D added in the next bar (Figure 3.2.17). This highlights the common elements between the chorale harmonies, the melody, and the ostinato pitch set, and helps to glue them all together.

Figure 3.2.16: At R92+2, chorale harmony and ostinato merge into B extended dominant / B Mixolydian harmony.

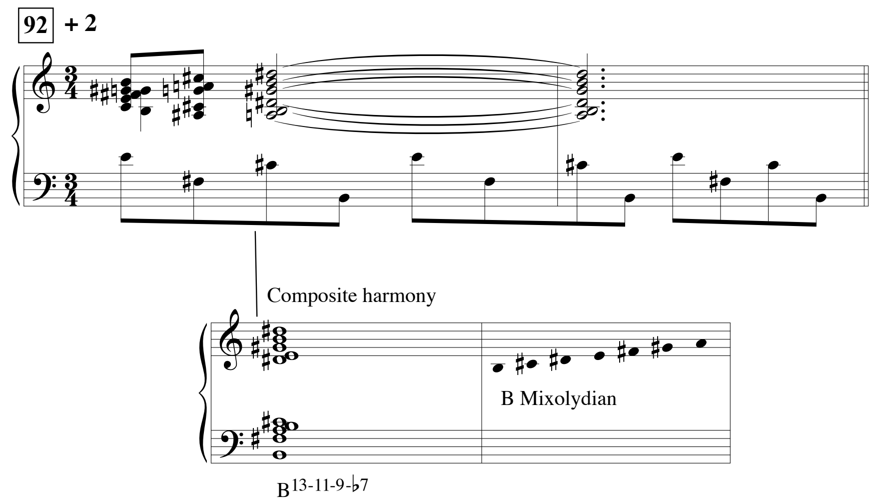


Figure 3.2.17: Horn 1 at R92 in relation to chorale and ostinato.

Finally, the ostinato itself has resonances with other parts of the work, both near and far. It grows immediately out of the cello melody in the bar before R91, which ends with the third and fourth pitches of the ostinato pattern (Figure 3.2.18). The same pitch set is also picked up by the lower seventh of the accompanying figure in the violins and cellos at R95 (Figure 3.2.19). It also relates back to the many similar stacked fifth (0 2 5 7) pitch sets that were featured throughout Part 1, as we will see in more detail in the "stacked fifths" section of Chapter 4.

Figure 3.2.18: Ostinato picks up on last two pitches of preceding cello solo.

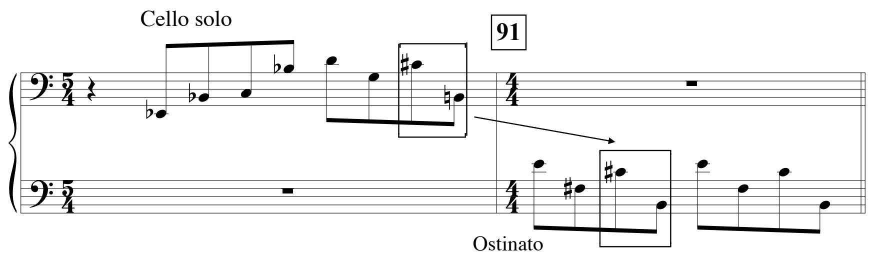
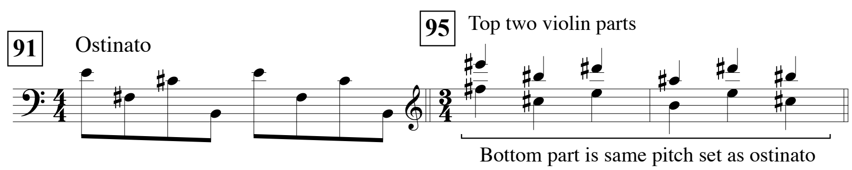
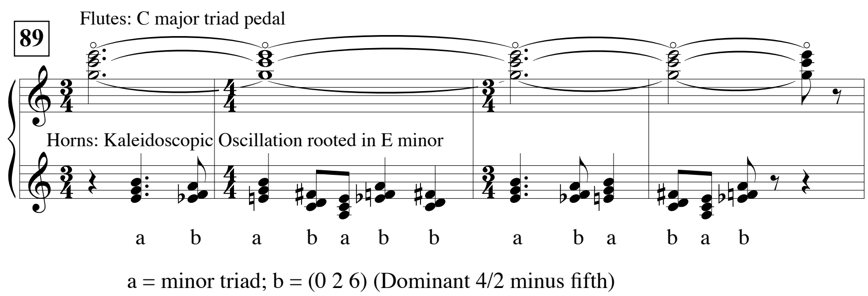


Figure 3.2.19: R91 ostinato pitch set taken up by lower violins at R95.



At R89, R100, and R101, the chorale is accompanied by sustained pedal pitches, which create a more subtle and subliminal effect on the harmony. At R89, a high, sustained C major triad in 6/4 position, a leftover resonance suspended from the previous section, creates a gentle clash with the chorale below. The G and E of the triad are consonant with the "tonic" E minor harmony of the chorale, while the C creates a poignant major seventh chord with it. This is quite similar to the effect of the eighth-note ostinato at R85+1, which similarly turned the B♭ minor triad that ended each bar into a G♭ major seventh chord. Because of the registral and timbral separation (high flute harmonics versus mid-register muted horns) the clash at R89 is very gentle. The effect is more of a slight haze floating above the chorale than of a harmony actively conflicting with it (Figure 3.2.20).

Figure 3.2.20: R89 chorale with background pedal harmony.



At R100, cellos sustain very soft tremolo harmonics on a G–F♯ major seventh, floating above the horn chorale. This interval is the outer frame of the harmonies in the first three beats of both measures, and the effect it creates is of a slight overtone shimmer. If we compare it to the two bars at R99, we can hear how it adds just a little bit of softness and warmth to the harmony. Although the interval is a major seventh, it doesn't feel particularly dissonant because it functions as an overtone projection of the outer pitches in the horn chord below (Figure 3.2.21).

Figure 3.2.21: R100 chorale with background pedal harmony.

R100+2 continues the G–F♯ major seventh pedal an octave higher in violin harmonics, but now the texture is much more dissonant. The chorale harmony itself is more dissonant, and so is the pedal's relationship to it. R101 ups the ante still more with another pedal on the C-B major seventh added in. It is still all in harmonics, and it floats well above the chorale, which softens the effect. Nonetheless, it adds significantly to the texture. If the upper sustained C major triad at R89 created a gentle haze above the chorale, the dissonant harmonics at R101 create more of an electric buzzing above an already far more dissonant version of the chorale (Figure 3.2.22).

Figure 3.2.22: R100+2 chorale with background pedal harmony.

It would be easy to discount the ostinatos and pedals in this section as mere background or decoration, but as the above examples show, they have a range of significant effects on the harmonies they accompany. And they embody an important characteristic of Stravinsky's harmonic practice in *The Rite* more generally: even though systematic processes are important, they are almost never the entire story. Instead, they are put through multiple layers of distortion, from distortion of the process itself, to the addition of more processes on top, to the addition of independent pedal pitches or ostinatos that cast the processes in subtly different harmonic lights.

Now that we have thoroughly analyzed the chorales, we will consider the other material with which they alternate, and then zoom out and try to get a larger sense of how the entire Introduction-"Mystic Circle" section unfolds. After the first chorale statement, at R84+3, we get the first statement of the mysterious trumpet duet theme that dominates the next section. Figure 3.2.23 shows the three variants of this duo.

Figure 3.2.23: Three variants of trumpet duet theme.

There are a few different ways to consider this duo harmonically. There is clearly an outward expanding wedge shape, with the top voice moving up two half-steps, from B♭ to B♮ to C, and the bottom voice moving octatonically down a tritone from B♭ to E, as Figure 3.2.24 shows. There is also a related wedge of expanding intervals, from unison to major second, minor third, major third, tritone, and minor sixth, as Figure 3.2.25 shows.

Figure 3.2.24: Outward expanding wedge shape of trumpet duet theme.

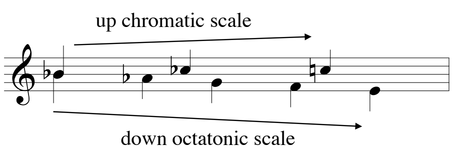
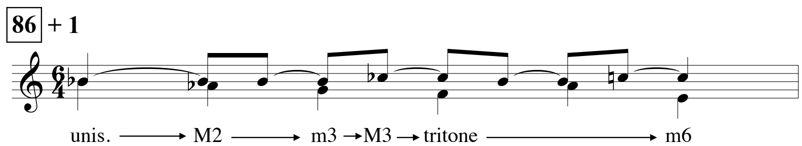


Figure 3.2.25: Expanding intervals of trumpet duet theme.



There are also several resonances between this passage and previous and subsequent events in the work. First, it is similar to strand 1 at R70, as it outlines both a diminished and augmented triad around the same central pitch, as Figure 3.2.26 shows. Looking ahead, there is also a similar pattern between the English horn and alto flute melodies in “Ritual Action of the Ancestors,” as Figure 3.2.27 shows.

Figure 3.2.26: Similar patterning of R86 and R70, strand 1.

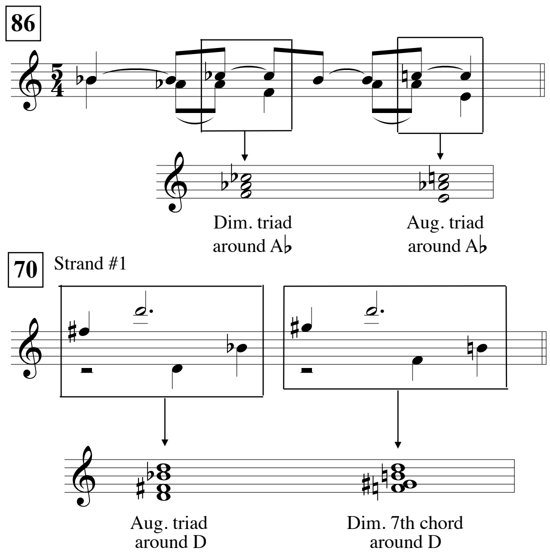
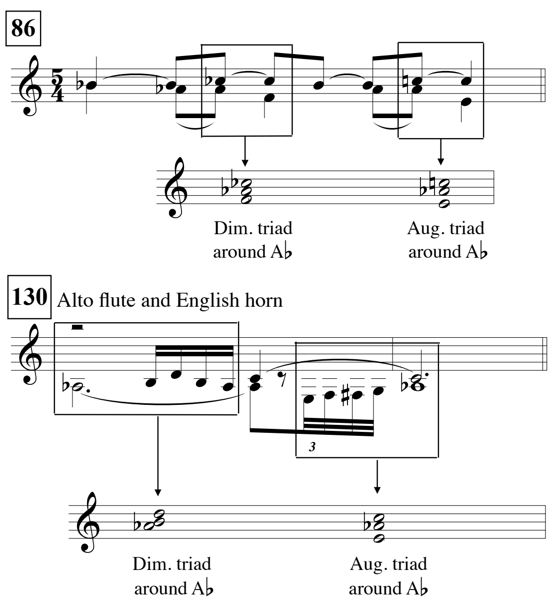


Figure 3.2.27: Similar patterning of R86 and R130, Alto flute and English horn parts.



The trumpet duet also turns out, a bit surprisingly, to be lurking in the composite texture at R55 in "Spring Rounds," (Figure 3.2.28). The bottom of the two lines is also strikingly pre-figured in the second part of the sixteenth note figure that begins at R75+7, consisting of exactly the same pitches, in the same order (Figure 3.2.29). Additionally, The B♭-B♮-C melodic span of the top line relates it forward to the brass melody on the same pitches, but in reverse, at R151 in the "Sacrificial Dance" (Figure 3.2.30).

Figure 3.2.28: R86 trumpet duet pattern embedded in the composite texture at R55.

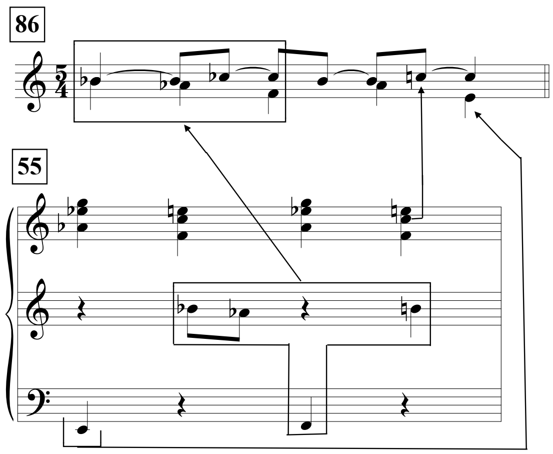
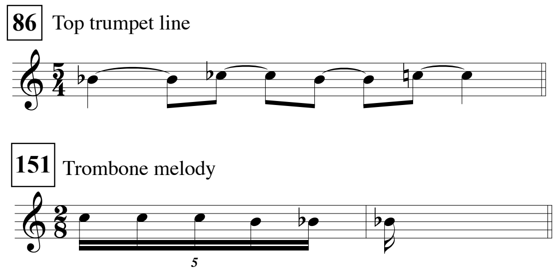


Figure 3.2.29: Bottom line of trumpet duet theme pre-figured at R75+7.

Figure 3.2.30: Comparison of top line at R86 and trombone melody at R151.



Finally, there is yet another example here of a B♭ to E tritone melodic span in the second trumpet part, connecting it back to the numerous other melodic B♭ to E tritone spans we have seen, for example at R4, R15, R26, R79, and R84.

At R86+3, major second-related parallel tritone-plus-fourth chords enter below the trumpet duet. These chords are clearly looking ahead to the tritone-plus-fourth chords that will dominate "The Naming and Honoring of the Chosen One." Another intriguing way to consider these chords is as a variant of the sonority that opens Part 2. Both feature an oscillation between the same chord type a major second apart, and both sets of chords include the fourths A♭–D♭ and E♭–B♭.[91] At R86+3, the direction is reversed, and a different pitch is added below to form tritone-plus-fourth chords instead of minor triads (Figure 3.2.31). Also similarly to the Part 2 opening, these chord changes are accompanied by B♭ to E melodic motion, now in the bass below, rather than in the soprano melody above (Figure 3.2.32). While tritone-plus-fourth chords did make a few very brief appearances in Part 1, this is also by far the most pronounced presentation of them thus far, setting the stage for their predominance later in Part 2.

[91] Van den Toorn (1987, 198) notes this connection as well, but focuses mainly on its potentially octatonic origin.

Figure 3.2.31: Comparison of upper part underlying harmonies at R79 and R86+3. Both have parallel fourths between D♭–A♭ and E♭–B♭, but move in opposite directions and add a different third pitch.

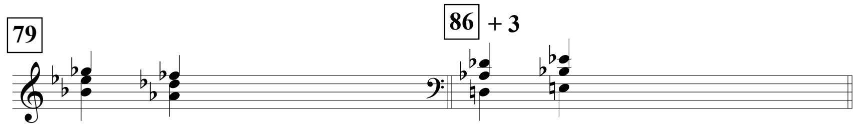
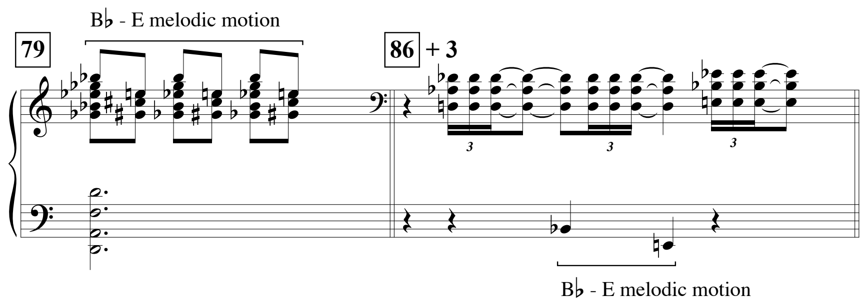


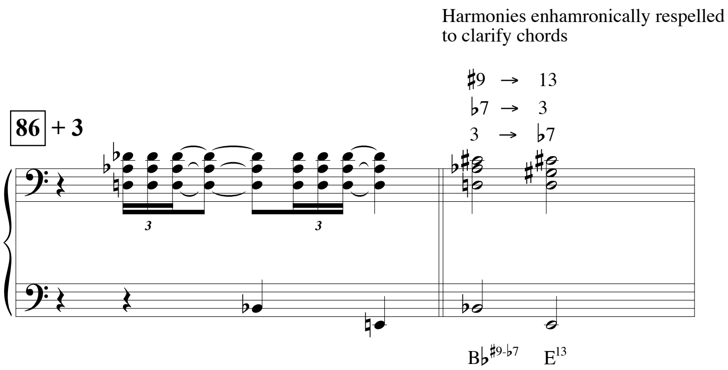
Figure 3.2.32: B♭–E melodic motion at R79 and R86+3.



Under the D-A♭-D♭ tritone-plus-fourth chord, the bass B♭ and E create two different extended dominant chords a tritone apart: B♭$^{\sharp 9\text{-}\flat 7}$ and E^{13} (Figure 3.2.33). This is a classic example of a "tritone substitution," the common jazz technique of substituting a dominant harmony with the chord a tritone away. The only difference between the chords is the tritone shift of the bass note, but functionally they are equivalent.[92] They have a similar color as well, as both are part of the same underlying octatonic set, and both include the 3rd and 7th of the dominant seventh chord, plus one more "color" pitch.

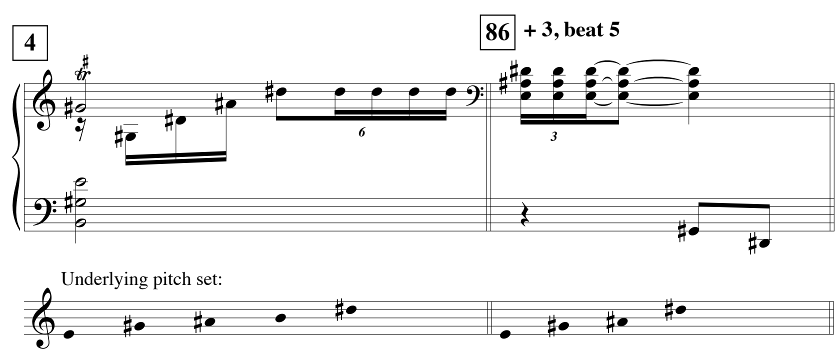
[92] Taruskin makes essentially the same point, connecting it to Stravinsky's knowledge of recent Russian harmonic practice: "[The two roots] lie, of course, a Korsakovian tritone apart; the passage is vibrant with echoes of two generations of Russian 'magic' harmony" (1996, 944).

Figure 3.2.33: Tritone substitution at R86+3.



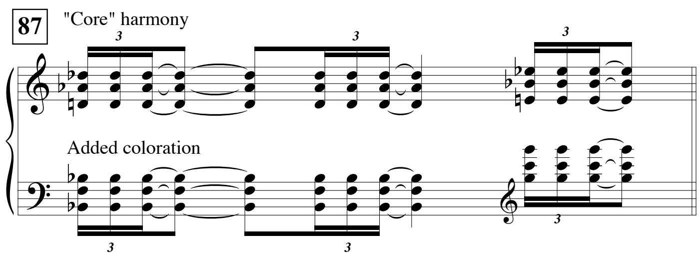
Under the next tritone-plus-fourth chord, the bass moves down to A♭ and E♭. The sonority created here is highly reminiscent of the arrival back at R4, and by extension of the variants on this harmony throughout Part 1 (Figure 3.2.34).

Figure 3.2.34: Comparison of harmonies at R4 and R86+4.



The section from R87 to R89 is essentially an elaboration on this chordal alternation, but with harmonic and orchestrational details that make it uniquely arresting. First, the difference in color between the two chords is heightened through orchestration, with the addition of a low B♭–F–B♭ in the cellos and violin 2 on the first chord, and a high harmonic G-C-G in violin 1 on the second chord (Figure 3.2.35). This creates a more pronounced contrast between a deeper first chord, and a wispier second chord.

Figure 3.2.35: Added color to chords at R87.



Along with this alternation, we also now have pedal pitches that have an important impact on the harmony. E♭ Clarinet, violin 1, and viola add a wispy C dominant 7 arpeggio up to a sustained flute second inversion C major triad over the first chord. This triad is audible both as a distinct layer in itself – a region of brightness floating above the murky harmonies below – and as an overtone extension of the harmony into a shimmering $B\flat^{13\text{-}\sharp 11\text{-}\sharp 9\text{-}\natural 9\text{-}\flat 7}$ chord – a chord which somewhat mimics the overtone series, with its mostly decreasingly spaced intervals (Figure 3.2.36). It also, in effect, overlays some of the "C-ness" of the second chord on top of the B♭–based first chord.

Figure 3.2.36: Complete chord at R87

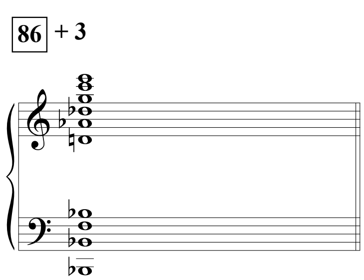


Figure 3.2.37(a): R87 without pedal notes as two oscillating chords.

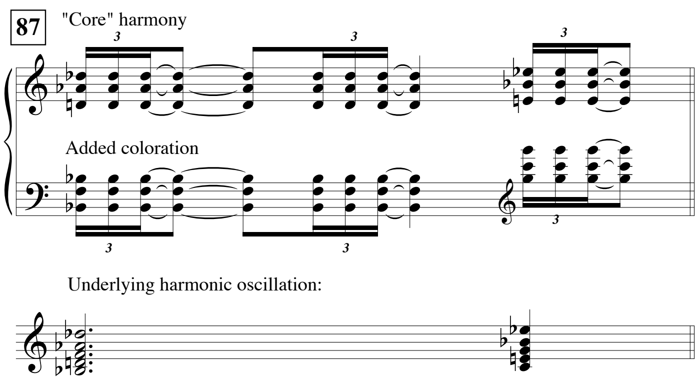
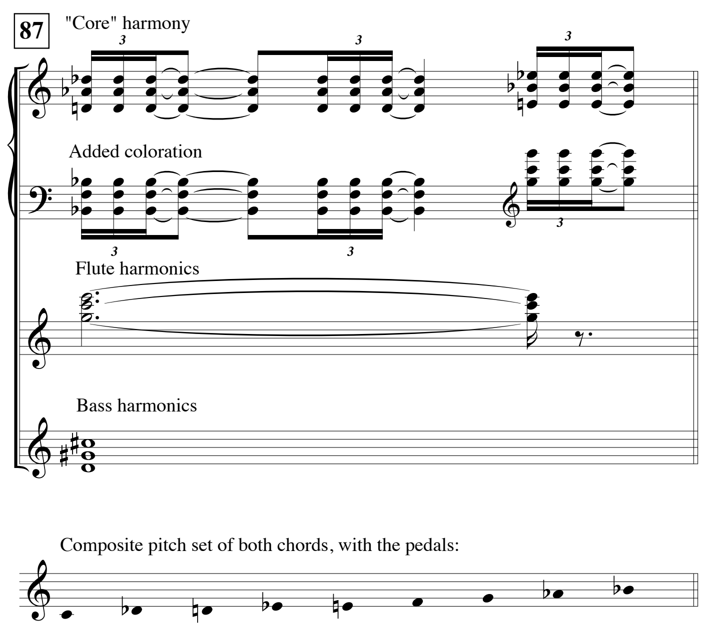


Figure 3.2.37(b): R87 with pedal notes as single complex sonority.



There is also a very soft, almost imperceptible pedal chord in harmonics in the contrabasses on D–A♭–D♭ – the pitches of the first tritone-plus-fourth chord. It is in the same register as the violins' triplet rhythms, and has the effect of a sort of sustain pedal, subtly prolonging the residue of that harmony against the second chord that follows. So while in one sense there is an oscillation between two different harmonies, in another sense both harmonies also coexist at the same time. Pedal pitches from one chord are prolonged against the other, creating a single underlying sonority and pitch set, as Figure 3.2.37 shows.

This is in fact the same composite pitch set as we found back at R27 (Figure 3.2.38). Both contain nine pitches in total, making the fact of their sameness a bit less noteworthy, since the total number of nine-pitch sets is limited. However, looking more closely, we can see some intriguing similarities in the details of how these sets are partitioned and animated. Both feature oscillation between D♭ and E♭ in one prominent voice, and motion from an F–B♭ fourth to a G–C fourth in another voice (though this motion is disguised by a huge registral leap at R87.) Figure 3.2.39 points out these similarities.

Figure 3.2.38: R27 has same composite pitch set as R87 (see Figure 3.2.37(b)).

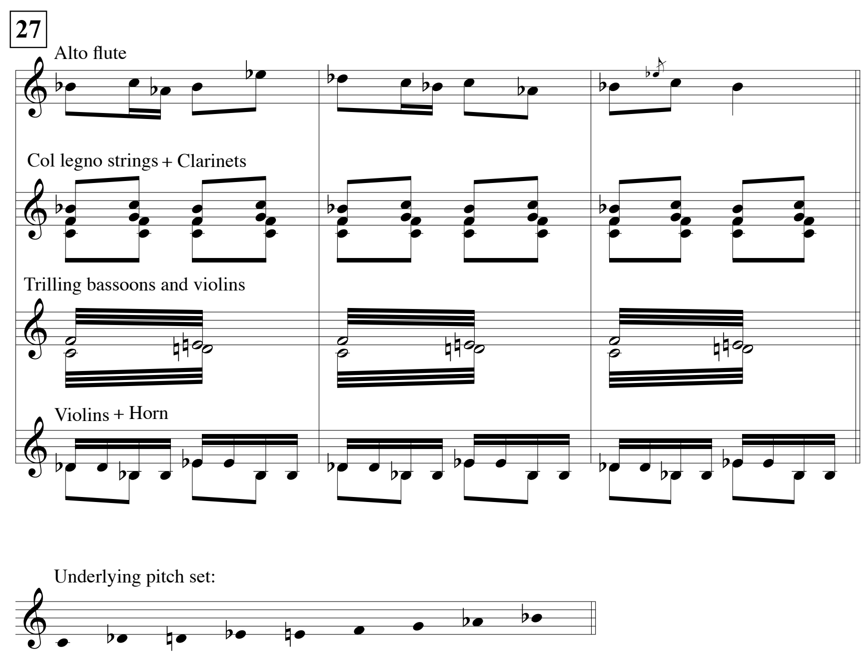
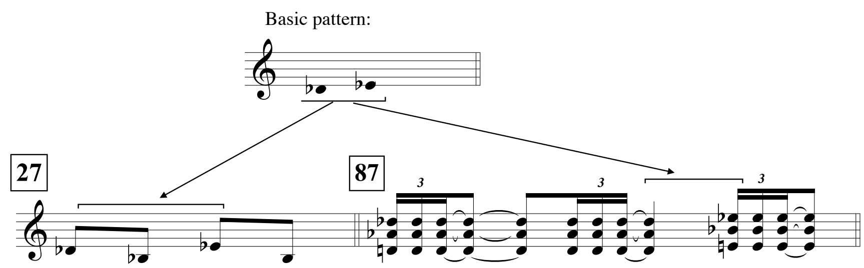
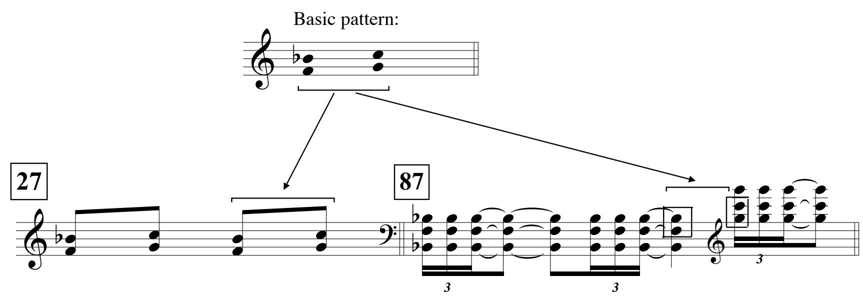


Figure 3.2.39: Similar patterning at R27 and R87.





As we saw in the previous chapter, there is also an intriguing connection between the first chord at R87 and the opening harmony of the work's briefest movement, "The Kiss of the Earth" (R71+1). Both harmonies feature B♭ minor/major on the bottom, with a C-E major third registrally separated above. At R87, the harmony is enriched by the addition of a minor seventh (A♭) to the "B♭ unit" and a fifth (G) to the "C unit", but the striking similarity remains. Figure 3.2.40 reproduces Figure 2.7.3 to remind us of this connection.

Finally, the trumpet duet melody, now in clarinets and horns, is also added into the mix. Most of its pitches are consonant with either chord, though the C♭ and F both clash with the second, C dominant chord. Perhaps as a result, on its first two iterations, the duet melody begins against the B♭ chord and ends against the C, with the first chord effectively harmonizing its first three beats and the second chord harmonizing its last two beats (Figure 3.2.41).[93] In its last two statements, it doesn't line up as precisely with the chord changes.

Figure 3.2.40: Connections between first two "The Kiss of the Earth" chords and R87

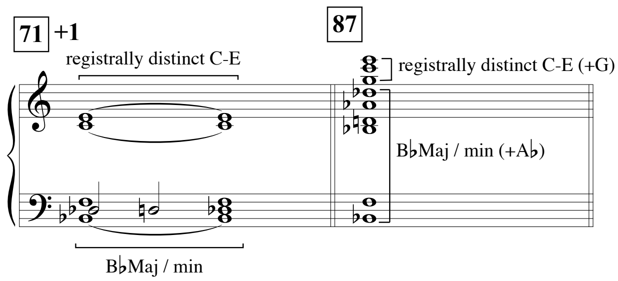
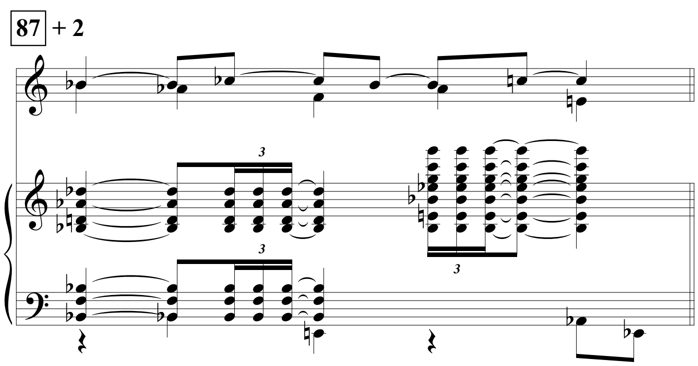


Figure 3.2.41: The "trumpet duet" melody at R87+2 is harmonized by the accompanying chords.

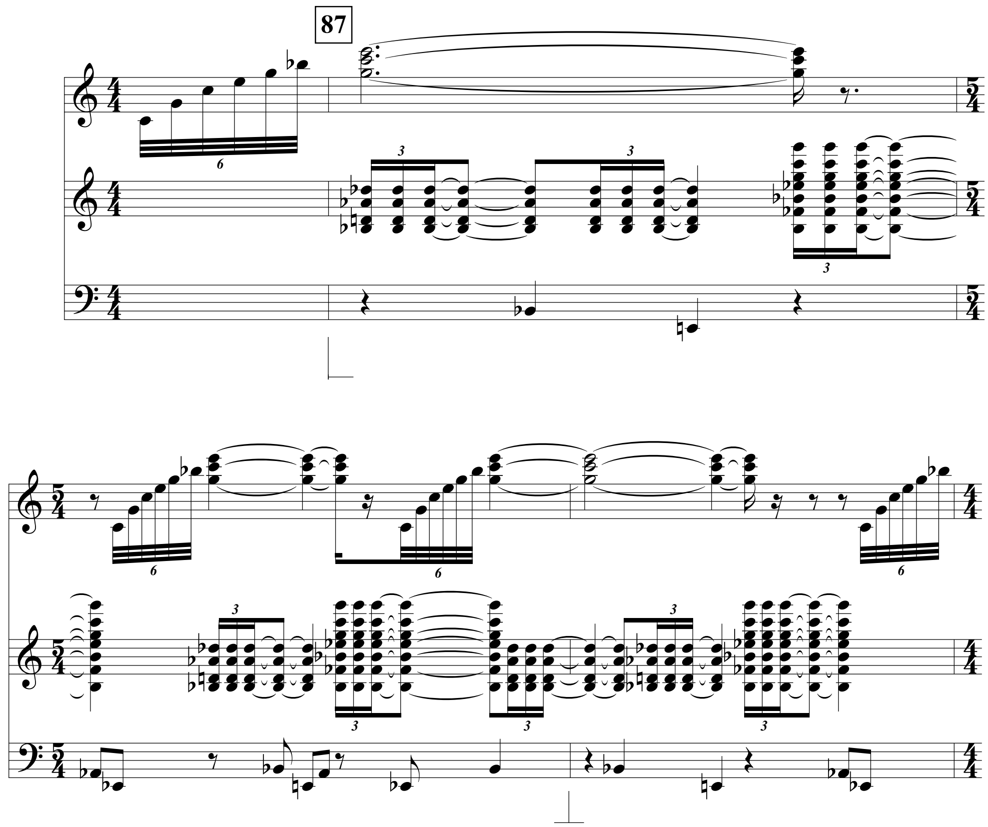


The section at R87 has the effect of several different harmonic jigsaw pieces put together in a variety of patterns, but it is in fact built on a process that is much more repetitive than it first appears. Starting at R87, a nine beat pattern repeats exactly (with one small exception to be discussed below), four times, in all parts except for the "trumpet duet" melody. This pattern is difficult to see in the score because it is obscured by meter changes. Figure 3.2.42 shows a

[93] Van den Toorn (1987, 197) makes a similar point, characteristically focusing on the two different octatonic collections that contain the pitches of each harmony.

reduction of these parts, first as notated, and then re-written in 9/4, to make the pattern of repetition clear.[94]

Figure 3.2.42(a): R87 as notated, without "trumpet duet" melody or sustained double bass pedal. Brackets mark the beginning and ending points of the repetition. (For clarity, the viola version of the C dominant arpeggio sweep stands in for all the parts performing a similar gesture).



[94] Van den Toorn (1987, 199-200) notes this nine-beat pattern as well, but does not seem to view what I call the "non-trumpet duet melody parts" as being synced up the way I do, instead claiming that *all* of the different parts "…repeat according to periods or cycles that vary independently of one another…" In this case, however, his octatonic bias actually seems to distort his rhythmic analysis. Because he sees the upper C major flute chord as derived from the same octatonic set as the second chord in violin 2 (i.e. the R87 beat 4 chord), when these components do not line up, he concludes that it is because they are moving in different rhythmic cycles, which rhythmically displace the "original" harmony. But in fact, there is a precise pattern of alternation happening here. The high C major chord in fact *only* comes over the *first* chord, with the second chord in every instance entering precisely when the high C major chord stops. This forms an alternating pattern between the two parts that is exactly the same in every nine-beat grouping. So in fact the high C major triad always "belongs" to the first B♭ chord, *not* the second C chord, thereby conflicting with van den Toorn's octatonic reading.

(Figure 3.2.42(a) continued)

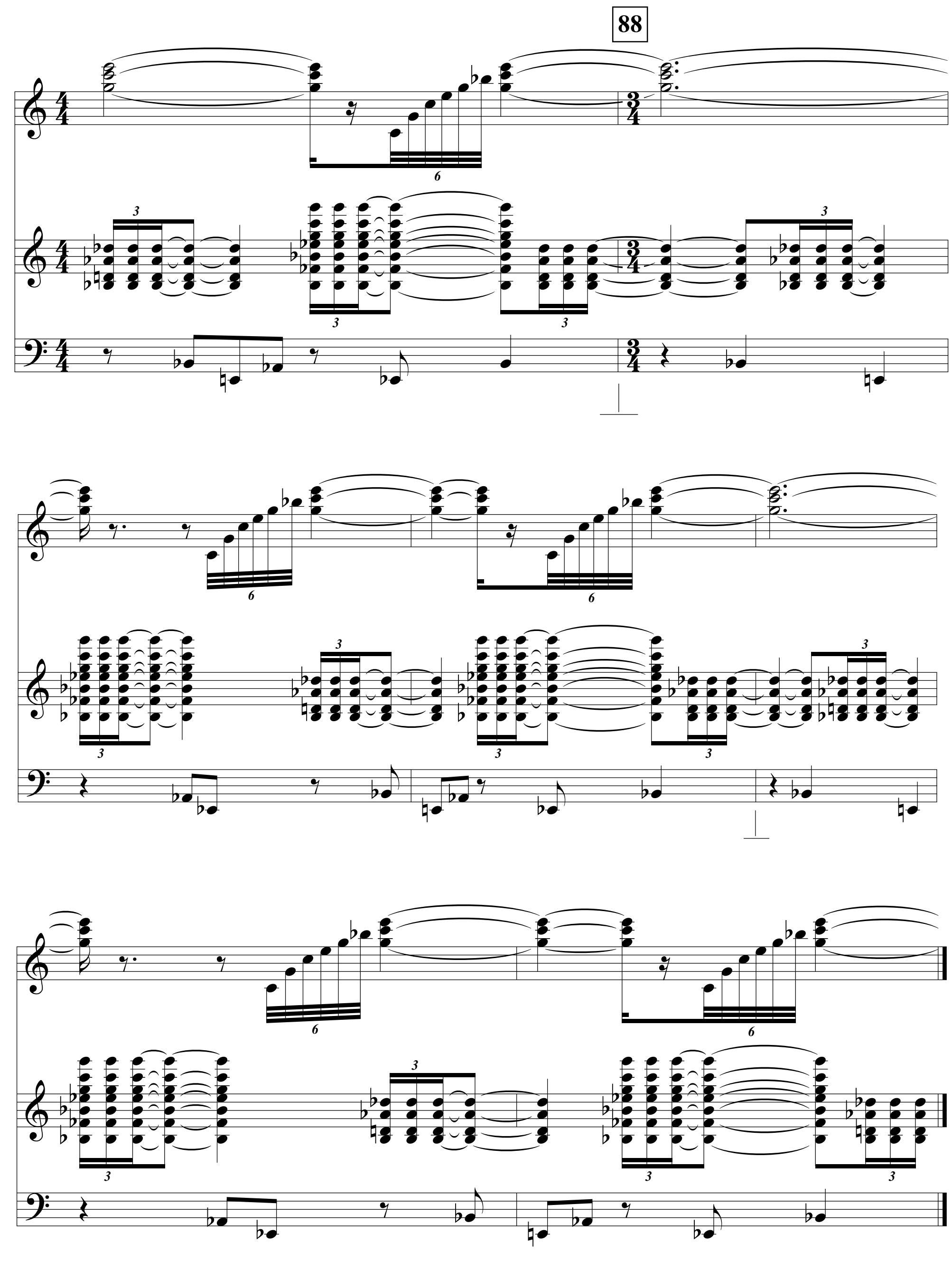
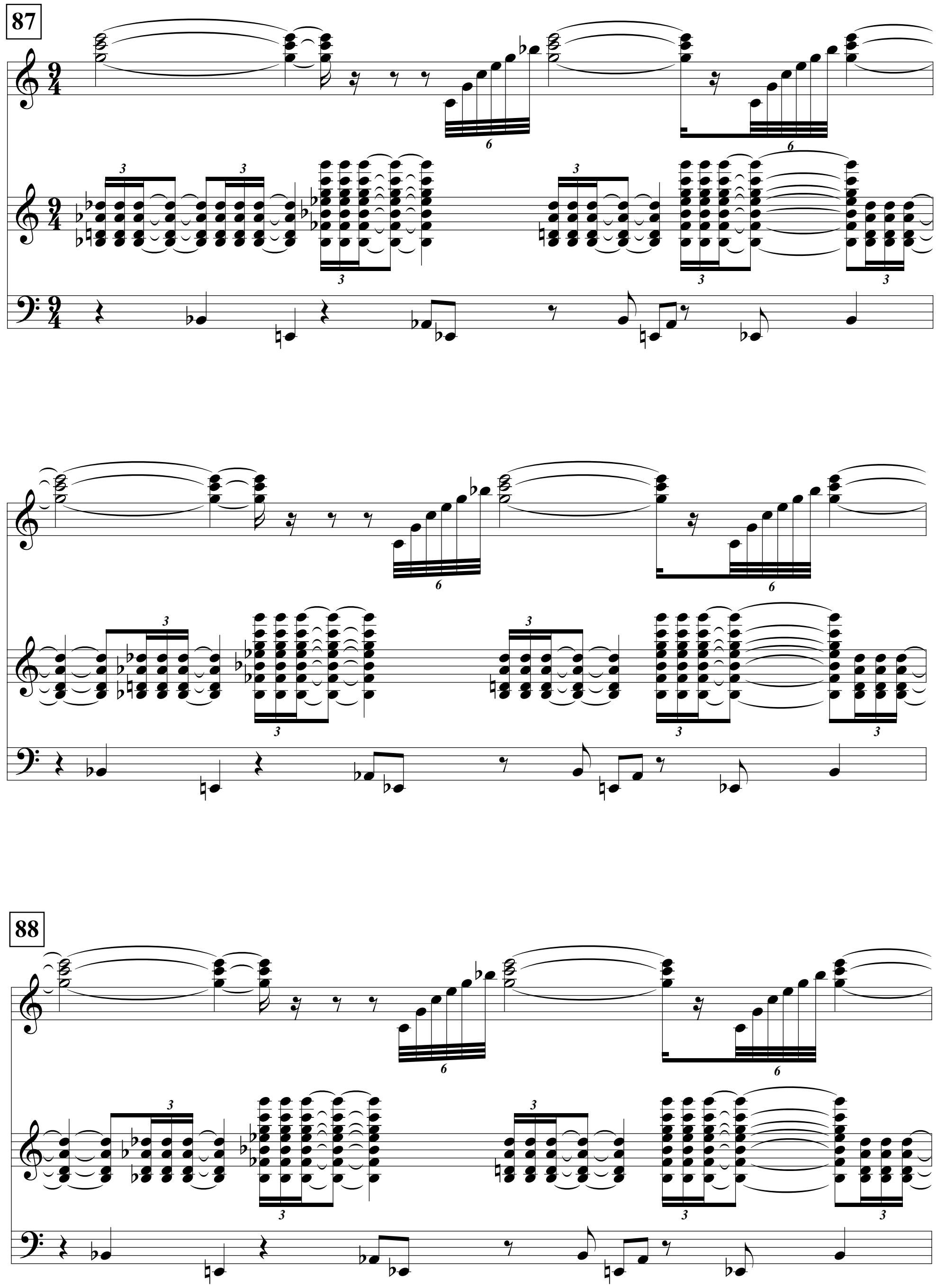
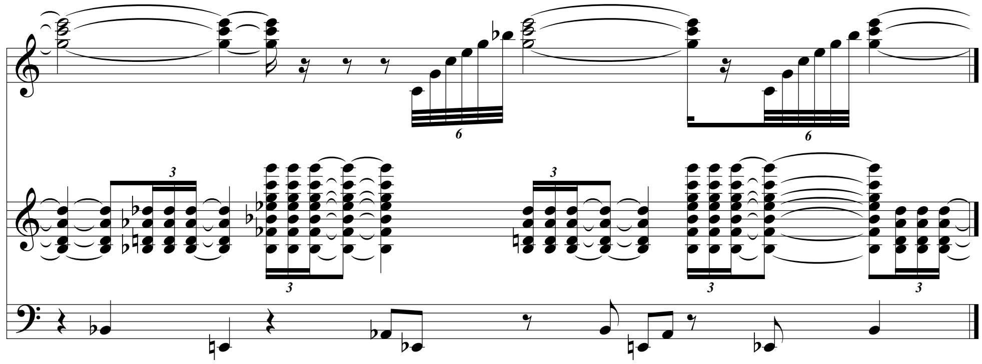


Figure 3.2.42(b): Same parts re-notated in 9/4, to more clearly show the underlying pattern. Now every "bar" is exactly the same (with one exception at the beginning of the first bar, middle part, to be discussed below).



(Figure 3.2.42(b) continued)



This underlying repetition is obscured in several ways. First, the downbeat of R87 is altered to give it a stronger sense of a beginning. Whereas normally the second violins and cellos play their triplets on the pick-up to the first beat in the pattern, here they play them an eighth-note later, *on* the beat. Meanwhile, the C dominant flourish in the first violins, violas, and E♭ clarinet comes a whole beat *later* than usual so that the high C major chord lands on the downbeat of R87, rather than a beat before the downbeat as it does in subsequent iterations. Because the first version of the pattern is the *exception*, it makes it difficult for the ear to identify that a repetition is happening at all. Finally, the "trumpet duet" melody (now in clarinets and horns) operates independently of this pattern of repetition. Its starting point determines where we hear – and where Stravinsky notates – the downbeats. This further obscures the repetitions in the other parts, since our ears are drawn to the metrical accent of this melody.[95]

At R90, the trumpet duet melody appears once more, now a fourth lower, in the horns, low strings and bass clarinet. The horns and contrabasses match the pattern originally laid out in the trumpets, though now with an octave separation between the parts. Stravinsky also adds a

[95] For other analyses of the rhythmic structure of this passage see Boulez 1968, 99-104, and Messiaen's very similar analysis (1995, 107-111).

fifth above the bass in the cellos, creating parallel fifths under the melody. Then he adds a simple countermelody in the bass clarinet, and finally in the last measure adds an expressive cello line that is mostly, though not exclusively, picking out pitches already present in other parts. Figure 3.2.43 shows an additive path leading from the basic form of the trumpet duet melody to this rich and murky final setting of it.

Figure 3.2.43: Step-by-step derivation of R90 from R86.

There is also an intriguing set of allusions to "Spring Rounds" here. The first two beats of R90 create the "Spring Rounds" opening sonority, though with the F and G♭ in sequence rather than sounding simultaneously (Figure 3.2.44). Then the melodic motion to G♮ at the end of R90 parallels the harmonic move from E♭ Dorian to E♭ Mixolydian from R49+2 to +3 (Figure 3.2.45). Additionally, the bass motion at R90 begins from the same place but inverts the contour of the bass motion at R49 (Figure 3.2.46). At R49, the bass line moves up alternating major and minor seconds, E♭–F–G♭–A♭, while at R90+1 it moves *down* alternating minor and major seconds, E♭–D–C–B.

Figure 3.2.44: Comparison of first two beats of R49 and R90.

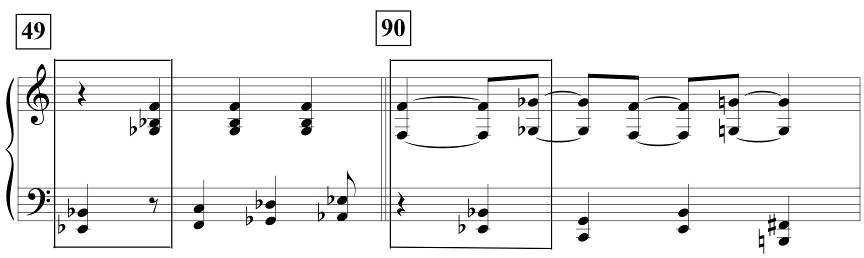


Figure 3.2.45: G♭ to G♮ motion at R49+2 and R90.

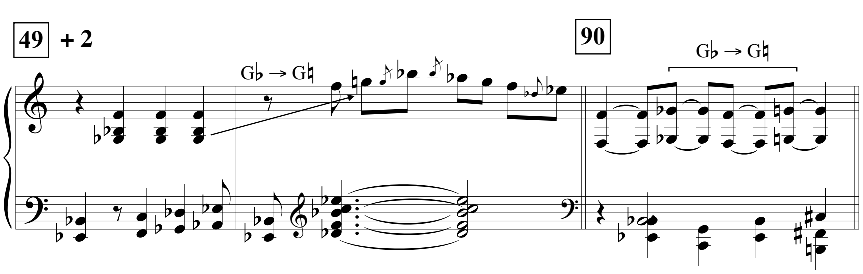
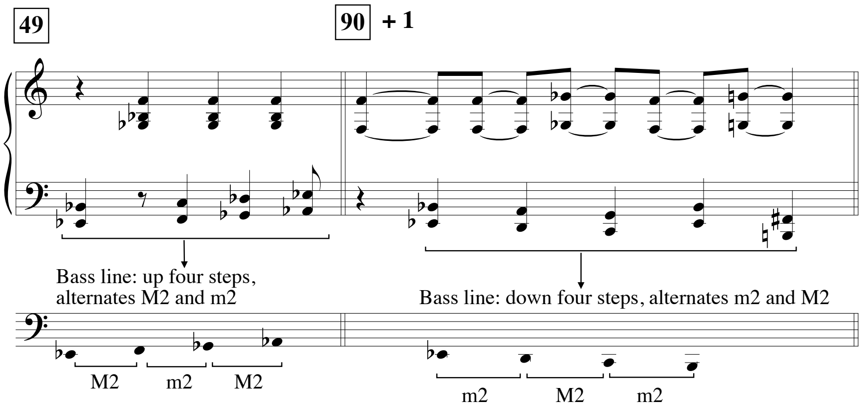
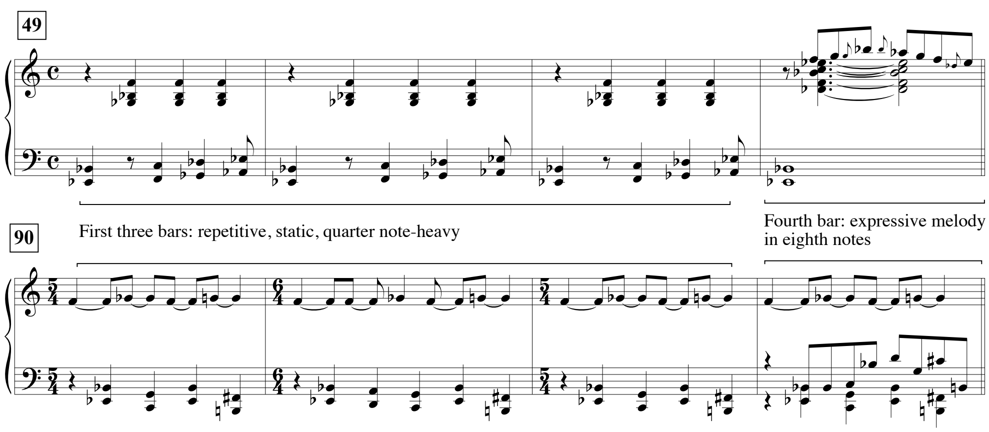


Figure 3.2.46: Bass line motion at R49 and R90+1.



On the level of the phrase, the first four bars of R49 and R90 are also strikingly similar. Both have three repetitive, static, quarter note-heavy measures, followed by a contrasting fourth bar with a much more expressive melody in eighth notes (Figure 3.2.47).

Figure 3.2.47: Comparison of phrase structure at R49 and R90.



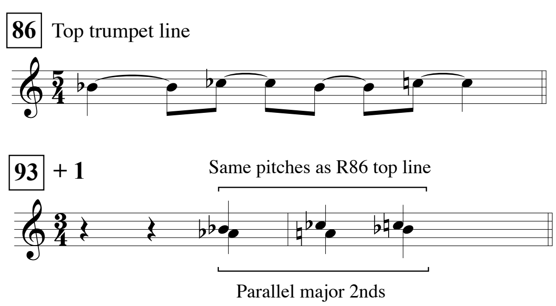
Finally, there is one more very interesting relationship between these sections: the on-the-beat and syncopated parts are exactly switched, as can also be seen in Figure 3.2.47 above. At R49, the bass line begins on beat one and then proceeds in syncopated off-beats, while the treble part begins on beat two and articulates on-the-beat quarter notes. At R90, the situation is reversed: the *treble* part begins on beat one and proceeds to move on the syncopated off-beats, while the *bass* line begins on beat two and moves in on-the-beat quarters.

The end result is a very complex relationship between R49 and R90. There are some qualities of repetition and parallelism: the similarity between the opening sonorities of R49 and R90; the similar G♭ to G♮ motion; and the similar rhythmic and expressive progression of the phrases. There are also some elements of inversion, in the reversal of direction of the bass line and the registral swapping of the rhythmic patterns. And there is also an element of contraction, with the G♭–G♮ motion occurring over the course of each measure at R90, instead of over the course of a whole phrase at R49. Yet none of these relationships are exact, and all apply only to some aspects of the musical texture, but not others. Furthermore, R90 is much more readily identifiable as a variant of the trumpet duet theme, since it was heard shortly before and is easily derived from it (see Figure 3.2.43). The connections between R90 and R49 are striking and unmistakable; yet they also operate across a huge distance and are heavily disguised.

Perhaps more than anything else in the work, this particular connection boggles the mind as to how Stravinsky came up with it. Did he actually originally derive R90 from "Spring Rounds," and only then work his way back from R90 to the original version of the trumpet duet theme? Is there some deeper pattern that Stravinsky was working with first that was the root of both the trumpet duet theme and "Spring Rounds?" Was this just a lucky accident that he consciously capitalized on – upon transposing the trumpet duet theme down a fourth, did he suddenly realize its potential connection to "Spring Rounds" and then choose to highlight it by separating the registers and adding the bass line fifths? Or was the whole thing purely subconscious, and my above analysis would be news to him? It is impossible to know, of course, barring the magical appearance of some hitherto undiscovered definitive sketch, but also impossible not to wonder about!

After another statement of the chorale, discussed previously, R93 picks up the pitches of the upper trumpet duet melody in its original transposition, but now moving in parallel major seconds (Figure 3.2.48).

Figure 3.2.48: R93 adds parallel major second to pitches from R86 top trumpet line.



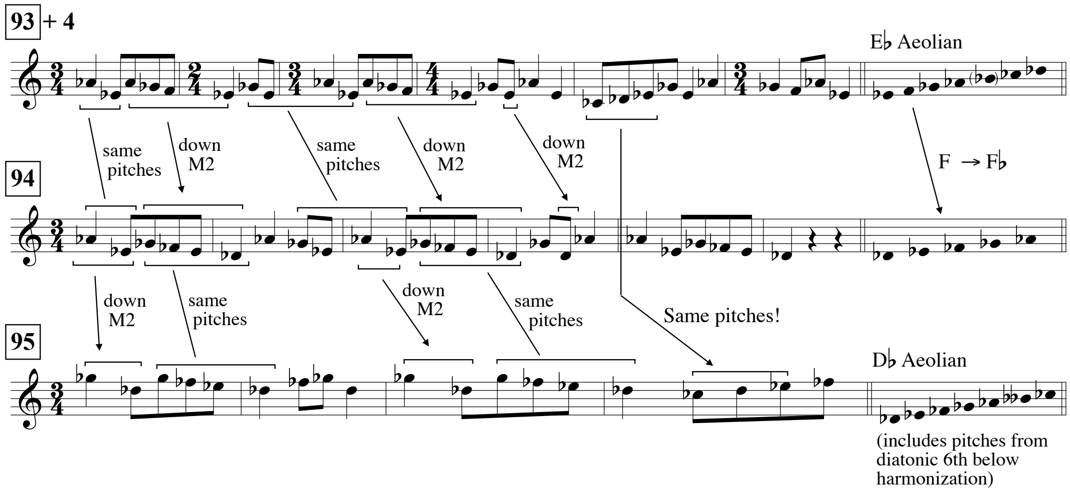
We considered the section at R93 as an example of the interval game technique in Chapter 1. This means that rather than a field of pitches or a flow of oscillating chords, the frequent, systematic use of specific intervals gives the passage its characteristic harmonic color. The highlighted interval is, first, the major second, which moves in parallel to form the accompaniment from R93 up to R94. At R94 the major seconds continue, but the major seventh also becomes highlighted, first in the parallel major seventh harmonization of the clarinet melody at R94, and then in the accompanying string figures beginning at R94+5. Finally at R95+2, in addition to the continuing major second and major sevenths in the accompaniment, the melody is harmonized in parallel diatonic sixths. Figure 1.6.1 is reprinted here as Figure 3.2.49 to remind us of how this works.

Figure 3.2.49: Interval games at R93

The interplay between diatonicism and chromaticism is especially rich here. At R93, chromatically moving parallel major seconds undergird the purely diatonic melody. Then at R94, this diatonic melody is harmonized at the parallel chromatic interval of the major seventh, while the chromatic major seconds continue below. In the bar before R95, a new accompaniment figure begins; like the melody before, it is diatonic in its melodic intervals, but harmonized in parallel major sevenths. Finally, at R95+3, the diatonic melody is now harmonized *diatonically* rather than chromatically, moving in parallel *diatonic* sixths – still against the diatonic accompaniment in parallel major sevenths, as well as the chromatic accompaniment in parallel major ninths.

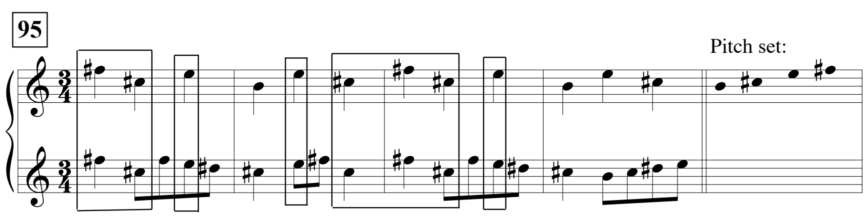
The simple diatonic melody itself is also transformed on each iteration, subtly shifting from one diatonic set to another. It begins at R93+4 with an E♭ Dorian tetrachord, E♭-F-G♭-A♭. At R93+8, C♭ and D♭ are added into the mix to create a nearly complete E♭ Aeolian set (only B♭ is missing). The melody at R94 begins with the same two pitches, but then the next four are transposed down a major second, pushing it into a five note D♭ minor subset. (I am ignoring for now the parallel major seventh harmonization above). From a voice-leading perspective, the only shift is that F has moved down to F♭. At R95, the first two pitches are transposed down a major second from R94, while the next four pitches remain where they were at R94. The net effect from R93+4 to R95, then, is a transposition down a major second, from E♭ Aeolian to D♭ Aeolian, as Figure 3.2.50 shows. But rather than making this transposition happen directly, the second statement of the melody (at R94) changes some melodic intervals while keeping others constant, in order to have common tones with both transpositions. One further fascinating detail is the rising eighth note figure at R93+8, which is not included in the version of the melody at R94. At R95+3, it returns *at the same pitch level* as at R93+8, even though the rest of the melody has been transposed down a major second. Once again, then, at R93, we find a complex overlaying of multiple processes that all contribute to the composite harmonic effect of the passage. And, as in many other places in the work, a straightforward transposition is intentionally obscured.

Figure 3.2.50: Transformation and transposition of R93+4 melody. While the melody is ultimately transposed down a major second, on each repetition only some of the melody is transposed down a major second, while some remains at the same pitch level as the previous statement. (The parallel seventh harmonization at R94 and parallel diatonic sixth harmonization at R95+2 are not included.)



An additional intriguing pattern in this section is the relationship between the melody and accompaniment at R95. The lower seventh of the accompaniment (in the middle first violin and lower cello parts) nearly follows the main melody notes exactly. For the first three measures of R95, it doubles the on-the-beat melody note on every beat but one, shadowing and quasi-doubling the melody. But it also has its own distinctive motivic identity emphasizing fourths, and its underlying pitch set adds up to the stacked fourth (0 2 5 7) B-C♯-E-F♯ set – the same exact set that formed the melody and background ostinato at R91 (Figure 3.2.51).

Figure 3.2.51: Melody and lower seventh of accompaniment figure at R95. Boxed notes are doubled.



Stravinsky could have written it to more literally double the main melody notes, or more explicitly make counterpoint with them – Figures 3.2.52 and 3.2.53 show examples of each of these. Instead, he opts for an intriguing hybrid that nearly parallels the melody, but also has an independent motivic and harmonic structure of its own that relates it back to another recent ostinato, at R91.

*Figure 3.2.52: R95 accompaniment figure changed to literally double melody notes, but no longer has consistent pattern. Notes marked with * have been changed from original version.*

Figure 3.2.53: R95 re-written to create explicit counterpoint between melody and accompaniment, while remaining in the same pitch set.

On top of this, Stravinsky adds a parallel major seventh above, a quasi-shadowing of the accompaniment figure at the major seventh that alludes back to the explicit parallel melodic major sevenths at R94. Finally, below, Stravinsky continues the parallel major ninths from before (see Figure 3.2.49**.**) Once again there is a sense of multiple processes intersecting in a rich and complex web of relationships.

Looking again at these parallel major sevenths, we can see that the *upper* seventh melody also has powerful resonances with other parts of the work. Its pitch set is (enharmonically respelled) B♭-C-E♭-F – the exact same (0 2 5 7) set that so dominated Part 1 but has so far been absent from Part 2. So at the same time that it plays an interval game as a major seventh shadow of the accompaniment figure, it also subtly brings back one of Part 1's most important pitch sets (Figure 3.2.54).

Figure 3.2.54: Upper major 7th of accompaniment figure at R95 brings back Part 1's central B♭-C-E♭-F (0 2 5 7) set.

The mysterious five measure passage from R97 to R98 is ripe with references to other passages in the work, both near and far. First, it continues the viola major ninths from the previous section, but now as a pedal on D♯ and C♯. In the fourth and sixth measures, it also picks up the parallel major sevenths from the previous section. It also explicitly invokes the C♯-D-E♭ cluster that we have heard so many times throughout the piece, when the flute A-D motion enters over the D♯-C♯ pedal (Figure 3.2.55). This is also highly reminiscent of the horn melody back at R40, which similarly highlighted a melodic D-A fifth against C♯ and E♭ (Figure 3.2.56). It also alludes to the opening of Part 2, with its D unit (the D-A fifth) against C♯ and D♯ – although the manifestation of these relationships is significantly pared down (Figure 3.2.57).[96]

[96] Hill (2000, 79) makes much the same point.

Figure 3.2.55: C♯–D–E♭ cluster at R97+2.

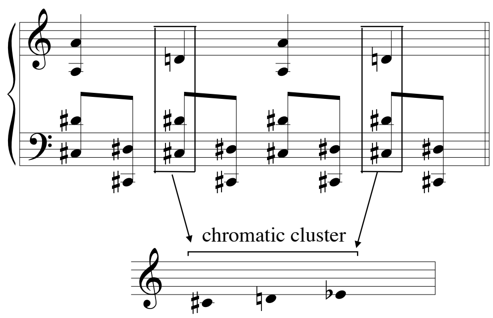


Figure 3.2.56: Comparison of R97+2 and R40. Same A-D pattern in melody, against D♭ and E♭ in accompaniment (plus G and B♭ at R40).

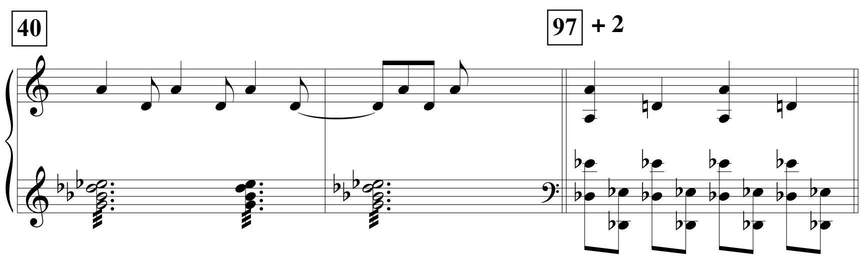
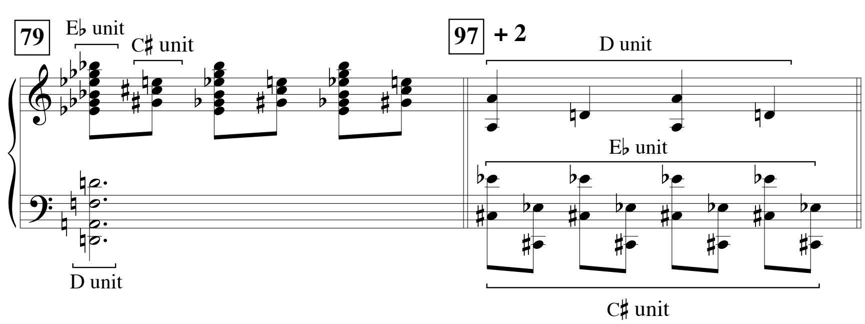
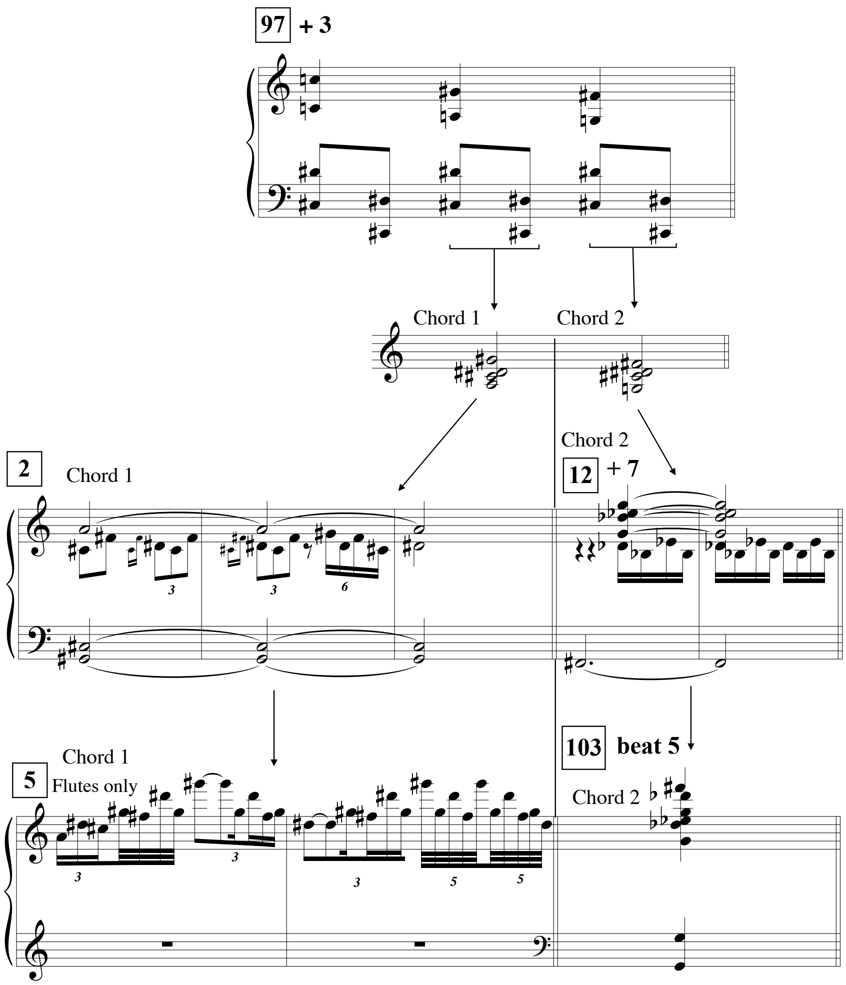


Figure 3.2.57: Comparison of R79 and R97+2. Both have C♯, D, and E♭ "units," but R97+2 is much more bare bones.



At R97+3, the chords created by the combination of the melodic parallel sevenths and the background ostinato also evoke other important sonorities in the work. Beat two of the bar is the harmony from R2 and the flute part at R5, while beat three is the harmony of the chord that leads into the “Augurs of Spring,” as well as the chord just before “The Naming and Honoring of the Chosen One” (Figure 3.2.58).

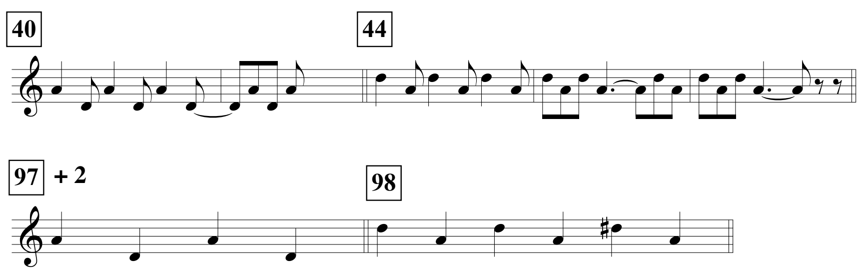
Figure 3.2.58: Relationship of R97+3 harmonies to other important chords in the work.



R98 is a more dissonant variant on the same pattern. The A-D descending fifth has now become a D-A descending fourth, in a strikingly similar manner to the change in the horn melody from R40 to R44 (Figure 3.2.59), with a move to D♯ instead of D♮ for the last iteration of the pattern in each bar. Meanwhile, the D♯-C♯ pedal becomes an eighth note ostinato in the

English horn. In addition, weak beat bass notes are added, and harmony notes are added in the horns and second trumpets. While the harmony continues to be centered around the C♯-D-E♭ cluster, it is otherwise quite mysterious here, a sort of distorted mirror of the R97 material. This effect is heightened by the colorfully murky orchestration, with muted horns and trumpets combining with English horn, low flutes, bass clarinet, and low pizzicato strings.

Figure 3.2.59: Comparison of melodic changes from R40 to R44 and R97+2 to R98.



At this point, we have considered almost all of the music in the Introduction and "Mystic Circle." All that remains is the closing/transition music into the next dance. The Debussyan fanfares in the bars before R101 and R102 function rather traditionally as a theatrical signaling of the dramatic change that is about to occur. The first one is an E Dominant 13 / Mixolydian harmony, while the next one is transposed up a fifth to B Dominant 13 / Mixolydian – the same harmony we landed on back at R92+2. At R102, this fanfare figure now alternates with minor seventh leaping bellows in the horns, accelerating into the monumental orchestral flourish at R103, followed by the eleven percussive thwacks in the next bar that lead into "The Naming and Honoring of the Chosen One." It is questionable how much the harmony matters at a moment like this, since the impact of the music is driven so much by texture, rhythm, and gesture.

Nonetheless, we will go ahead and consider the harmony here in detail, with the caveat that its impact may be minimal.

As hectic as R103 sounds, there really are only two different primary parts happening: the wild triplet melody passing through the brass, and the mostly chromatic accelerating rush in the woodwinds and strings (Figure 3.2.60). The brass triplets give the general impression of an intervallically expanding wedge shape, but not in any systematic way. A traditional theorist might expect this dramatic and powerful melody to have deep connections to other motives in the piece, but as far as I can discern, it does not. This singularly dramatic moment is built on its own singular material. Rather than creating "coherence" by motivically connecting this moment to other parts of the work, Stravinsky creates a more powerful dramatic effect by making it stand out as something separate and distinct. Although the dramatic effect is reversed, it is similar to the approach Stravinsky took to the final chord in the short "Kiss of the Earth" movement (see Section 2.7). There, a similarly singular moment in the work was likewise animated with its own distinct musical material, with little connection to material in other parts of the work. In both cases, the conventional analytical wisdom that significant musical moments ought to organically connect to the work as a whole is stood on its head.

The rushing chromatic material begins in parallel minor triads, and morphs into parallel tritone-plus-fourth chords on beat 3, as Figure 3.2.60 shows – perhaps symptomatic of the shift from minor triads at the opening of Part 2 to the tritone-plus-fourth chords that dominate the next section. The final harmony reached on beat 5 of R103, though over in a flash, is significant: it has the same pitch classes as the chord that comes in on R12+7 beat 3, but with the F♯ on top instead of on the bottom (Figure 3.2.61).

Figure 3.2.60: Two primary parts at R103.

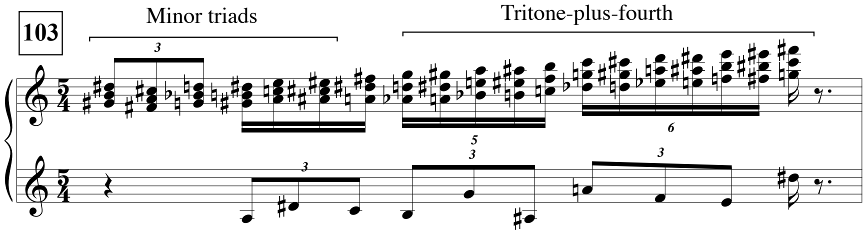
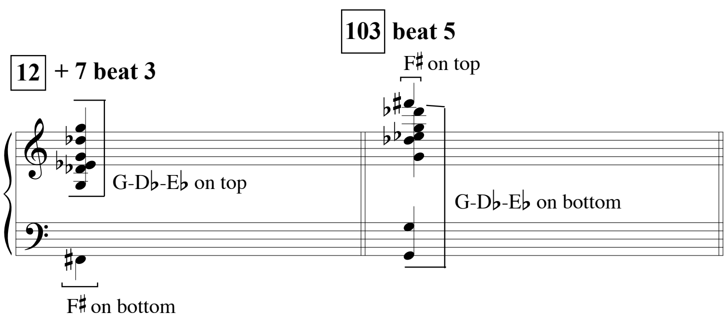


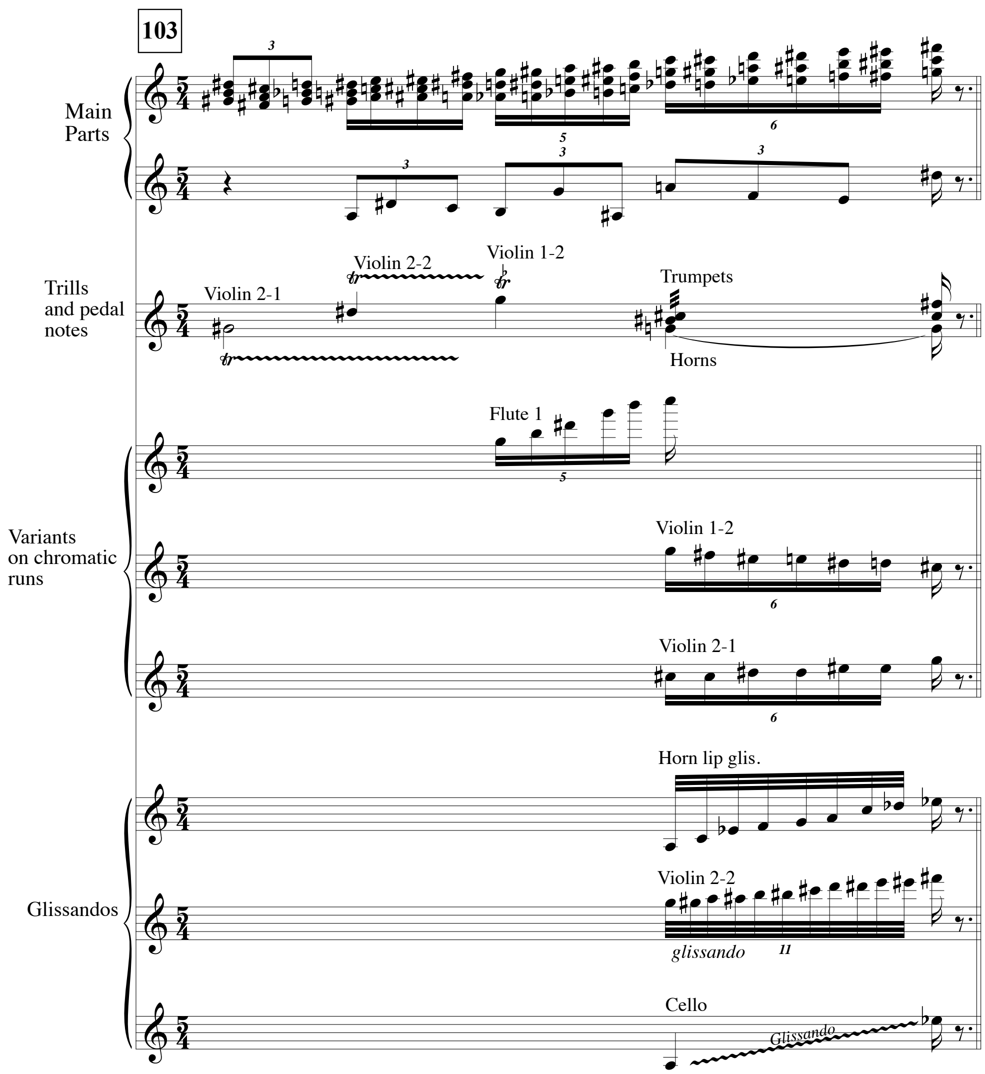
Figure 3.2.61: Comparison of chords at R12+7 beat 3 and R103 beat 5.



In other words, in both Part 1 and Part 2, the transition from slow introductory material into driving dance material is set up with essentially the same harmony, though with the registral position if its key elements switched.

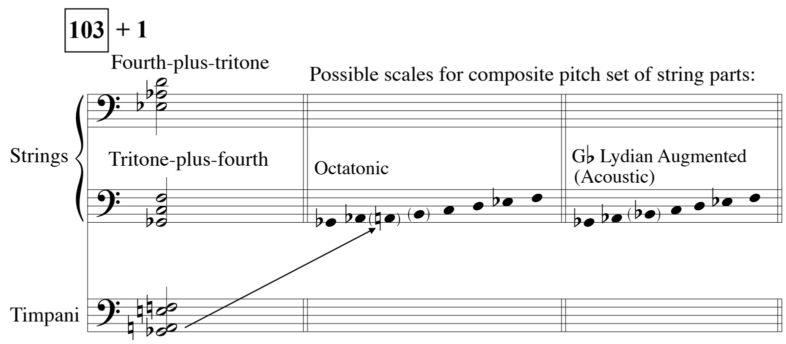
In addition to these two streams, there are several other parts going on that add more textural busyness and create momentum, but don't fundamentally change the harmony. On the first three beats, these include "chord tone" trills and tremolos in the violins, and rising major thirds (instead of minor seconds) in flute 1. On beat 4, the texture gets more complex in the final push upward. Violin 1 part 2 has a chromatic scale going down instead of up; violin 2 part 1 plays a whole tone scale at half the rate of the chromatic scale in the other parts; violin 2 part 2 and cello have glissandos covering a huge range, rather than the chromatic scale sextuplets in other parts; the trumpets add a fluttertongued quarter note; and last but not least, horns 5 and 7 add a ripping lip glissando on the upper pitches of the F overtone series, creating a dramatic surge into beat five. Figure 3.2.62 outlines these additions to the texture.

Figure 3.2.62: Additions to the texture at R103, categorized by type. Excerpts of specific instrumental parts are only included when they deviate from one of the "main parts."



The chord in the next bar, the 11/4, is for all practical purposes non-harmonic, as whatever pitch content might be present is inevitably obliterated by the bass drum and four timpani. In the four-hand piano version, this harmony consists of two interlocked tritone-plus-fourth chords that add up to six pitches that could be part of either an acoustic or octatonic set (Figure 3.2.63). This harmony is consistent with what comes in the following movement, and we will therefore consider it in more detail in the next section. In the orchestral version, the strings play these same pitches, but the four timpani add G♭, A, E, and F – all except E are also in the same octatonic set, but the E forms a chromatic cluster with the F and E♭ on either side of it. When combined with the bass drum, the entire effect becomes essentially purely percussive without effective pitch content.

Figure 3.2.63: Chord at R103. String parts could be subset of either octatonic or G♭ Lydian Augmented. The timpani push the set toward ocatonic, but also add a dissonant E♮. In combination with bass drum, the net effect is non-harmonic.



In the end, this first large section of Part 2, which includes both the Introduction and "Mystic Circle," is difficult to summarize succinctly, as there are a lot of different components to it. The first part of the Introduction, up to R84, sets the tone, and is centered on the juxtaposed E♭-minor / D-minor ur-chord, a harmony which, as we have seen, has deep resonances with other important moments in the work. The parallel minor triads in the treble part then take on a life of their own, combining with extended dominant harmonies in the bass to spin out octatonic-rooted harmonic progressions. The chorale theme that dominates the rest of the section also gradually emerges, floating above. At R84, the opening texture and harmonic framework abruptly stop with the first statement of the chorale theme in its characteristic chorale-like harmonization. This chorale theme acts as a sort of rondo-theme through the rest of the section, though every time it appears it is varied in multiple ways – melodically, harmonically, and texturally. Between statements of the chorale theme, two main themes predominate, first the "trumpet duet" melody from R84 to R91, and then the diatonic alto flute melody, from R93 to R97. Aside from the passage from R87 to R89, the entire section is dominated by kaleidoscopic oscillation, with the harmonies changing every bar, and even every beat in many cases. This contrasts markedly with the field harmony that so dominated Part 1 – and with the largely pedal-bound harmony of the next three dances.

3.3 THE NAMING AND HONORING OF THE CHOSEN ONE

In "The Naming and Honoring of the Chosen One," fourth-plus-tritone chords come into their own. At R104, ignoring for now the bass A pedal, we find oscillation between three closely related chords: a tritone-plus-fourth chord on G, a fourth-plus-tritone chord on G♯, and an (0 4 11) major seventh-minus-the-fifth chord on G♯. These chords are all related by half-step motions, as Figure 3.3.1 shows. Up until R106, the harmony oscillates exclusively between these three chords, as Figure 3.3.2 shows. The color of the harmony throughout this dance is very much dominated by the fourth-plus-tritone chord and its inversion tritone-plus-fourth – the first two chords above. The third chord functions as a sort of variant on this – a fourth-plus-tritone-chord with the middle note dropped a half step. Stravinsky very easily could have limited his chords to the first two, with a similar effect, as Figure 3.3.3 shows. But having one more chord in the mix greatly increases the range of possibilities for Stravinsky's jigsaw-like approach to unpredictably oscillating between chords, as Figure 3.3.2 showed.

Figure 3.3.1: Voice-leading between chords at R104.

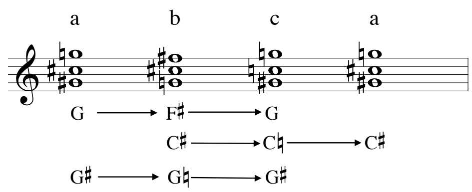


Figure 3.3.2: Oscillation between chords from R104 to R106 (using letter labels from previous example)

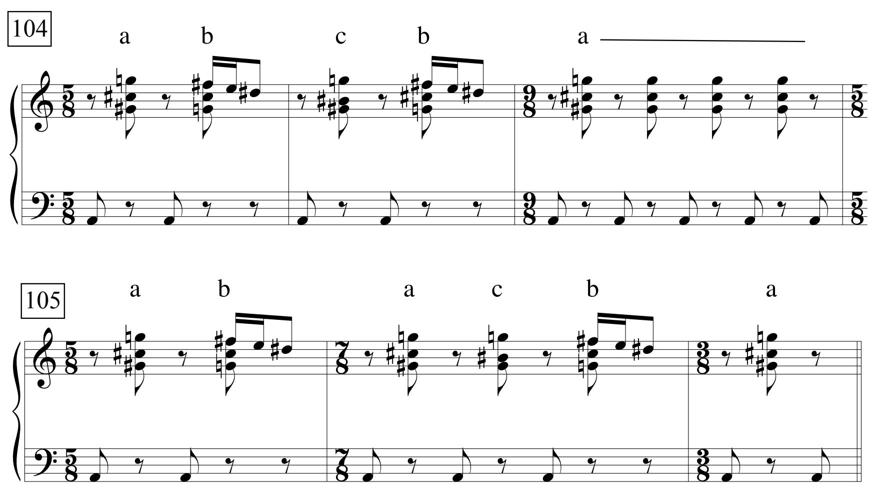


*Figure 3.3.3: Counterfactual R104 with only chords a and b. ** marks where chord c comes in Stravinsky's version.*

The A bass note also impacts the harmony, creating the effect of different colorations of an underlying A extended dominant. The first chord creates an A chord with both a major and minor seventh – a sonority that will become important again in the "Sacrificial Dance" – while the second chord creates an extended dominant $A^{13-\sharp 11-\flat 7}$. The third chord again functions as a variant on the first chord, a sort of "minor" version of it, with C♮ instead of C♯. Heard with functionally tonal ears, this whole first section of the movement could have the effect of a big functional dominant pedal on A – though of course it never resolves the way we would expect a functional dominant to do.

R106 is another rush upward, a shortened version of R103. In the next measure, the juxtaposed chords from R103+1 return, now alternating on each eighth note – almost. Figure 3.3.4 shows an alternate version of this passage in which this is indeed the case. A fourth-plus-tritone chord on D♯, and a tritone-plus-fourth chord a minor third away on F♯ alternate, adding up to a nearly complete octatonic set. What Stravinsky actually does is a little bit more complex, as he creates a voice exchange between the B♯ and D♯ in the two different voices (Figure 3.3.5). The same composite pitch set is maintained, as well as the basic voice-leading patterns, but we now have four different chords in circulation instead of two. This is yet another prime example of Stravinksy adding just a bit more complexity into a system of chordal oscillation.

Figure 3.3.4: Simplified version of R106+1: two chords alternate, adding up to six of eight notes of an octatonic set.

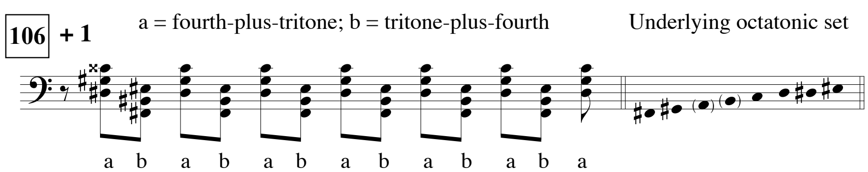
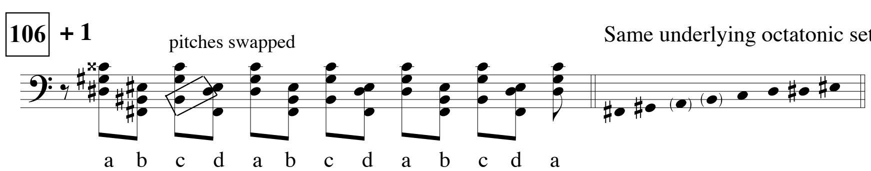


Figure 3.3.5: Stravinsky's actual version of R106+1: voice-exchange creates four chords alternating, but still same underlying pitch set.



These same patterns continue up until R109, with constant re-arranging of the jigsaw puzzle pieces. At R109, a descending scale is harmonized with alternating fourth-plus-tritone and tritone-plus-fourth chords, with a fourth voice adding first a major sixth and then a minor sixth below the top note. Two bars later, there is a very similar pattern, but this time it starts on a tritone-plus-fourth instead of a fourth-plus-tritone, and the alternation continues from there, with each melody note harmonized opposite to what it was two bars earlier. The added fourth note continues as before. Additionally, there is one further beat and scale step down. Figure 3.3.6 shows how this works. A simpler and quite similar version would have the same pattern in both bars (Figure 3.3.7), but as is so typical, Stravinsky makes it more “kaleidoscopic” by introducing subtle variations that result in every chord being slightly different from the other.

Figure 3.3.6: Harmonies at R109 and R109+2.

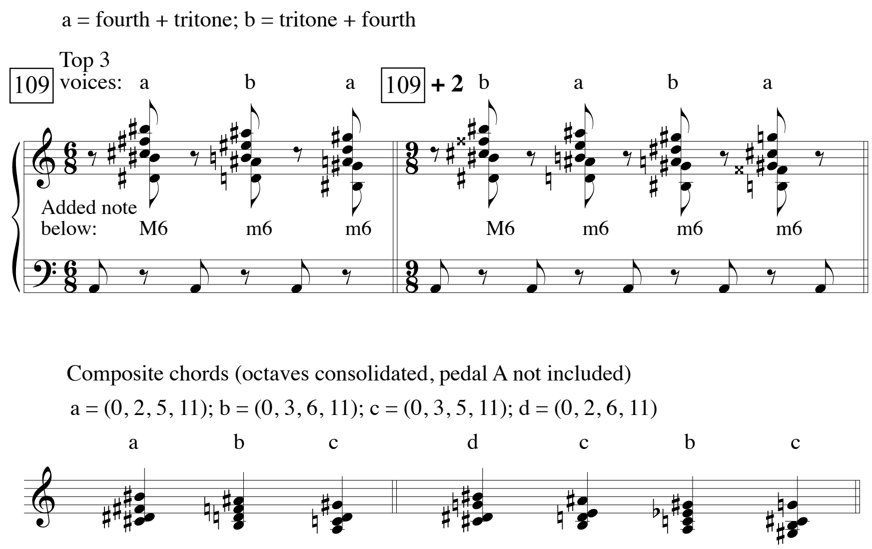
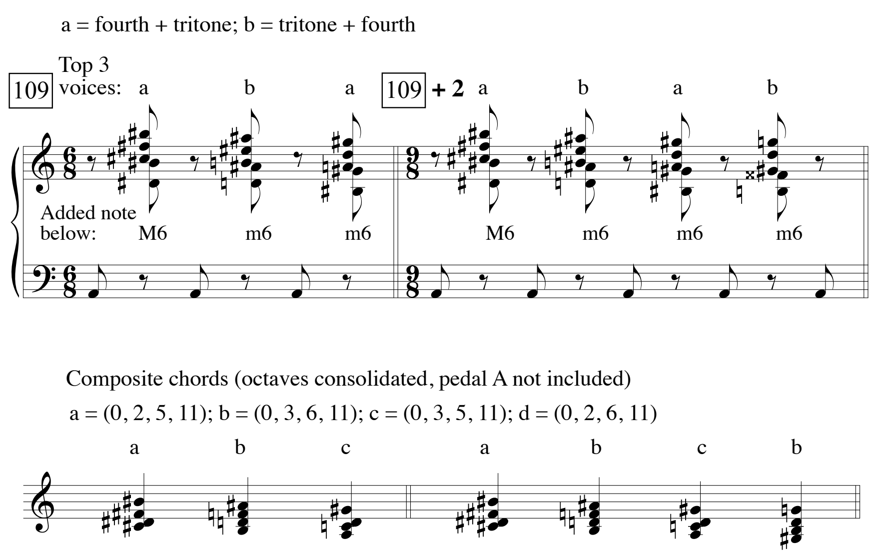
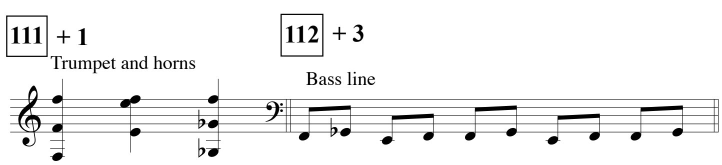


Figure 3.3.7: Counterfactual simplified version of R109 and R109+2, with same pattern in both bars.



At R110, the R104 material returns for four more bars, with continued shuffling of the three chords, before moving on to the "B" section at R111. Here, the central pitch shifts to F, and the tonality is primarily F Phrygian, with inflections of E♮ (raised scale degree 7) and B♭♭ (lowered scale degree 4). The blaring horns and trumpet surround the central F with its minor second neighbors on G♭ and E♮ – a pattern that continues in the bass line at R112+3 (Figure 3.3.8).[97] The upper part of the off-beat triplet melody in oboes and strings consists of the whole-tone subset of the F Phrygian scale – the same subset that we found in the lower third of the melody in "Spring Rounds" (Figure 3.3.9). The bottom harmonizing part is mostly in F Phrygian as well, but with the addition of a B♭♭ lowered scale degree 4 sometimes forming a major seventh with the A♭ above. This A♭ is also harmonized with a B♭ in some cases, forming a diatonic minor seventh below. The position of the non-diatonic B♭♭ in relation to the top part rotates so that it is in a different position on each repetition, as Figure 3.3.10 shows, with similar patterns occurring at R113.

Figure 3.3.8: Brass R111+1 and bass line R112+3 both surround F with G♭ and E.



[97] Boulez (1968, 111) further points out the switching of the placement of the chromatic neighbors in this pattern at R112+3 (F-G♭-E) versus R111+1 (F-E-G♭).

Figure 3.3.9: Upper melody part at R111+1 has same pitches as lower part in "Spring Rounds" melody.

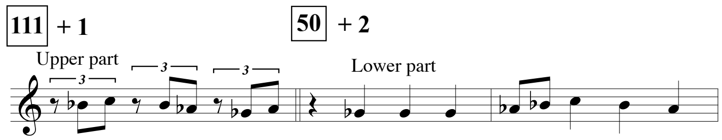
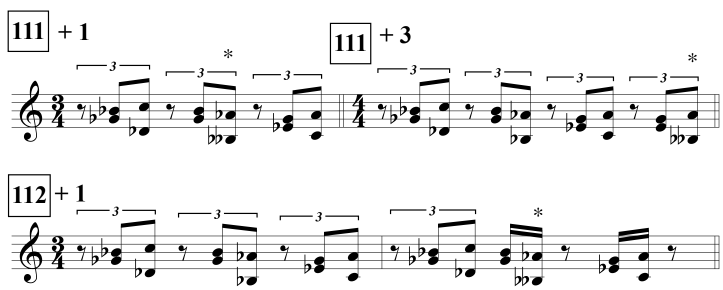


*Figure 3.3.10: Rotation of the B♭♭ in R111 melody harmonization. B♭♭ marked by *.*



The bar before R113 continues surrounding an F pedal with G♭ and E, now with the tritone-plus-fourth chords from the first part of the movement on top. The basic bass line pattern is that shown in Figure 3.3.8, but as Figure 3.3.11 shows, Stravinsky's orchestration makes it a bit hazier and gruffer, superimposing several different simultaneous variants to create frequent half step juxtapositions. This continues at R114, now with the F-G♭ major seventh leap especially emphasized – a reference perhaps to the accompanying figure back at R84 and R85+1 (Figure 3.3.12).

Figure 3.3.11: Simultaneous bass line variants at R112+3.

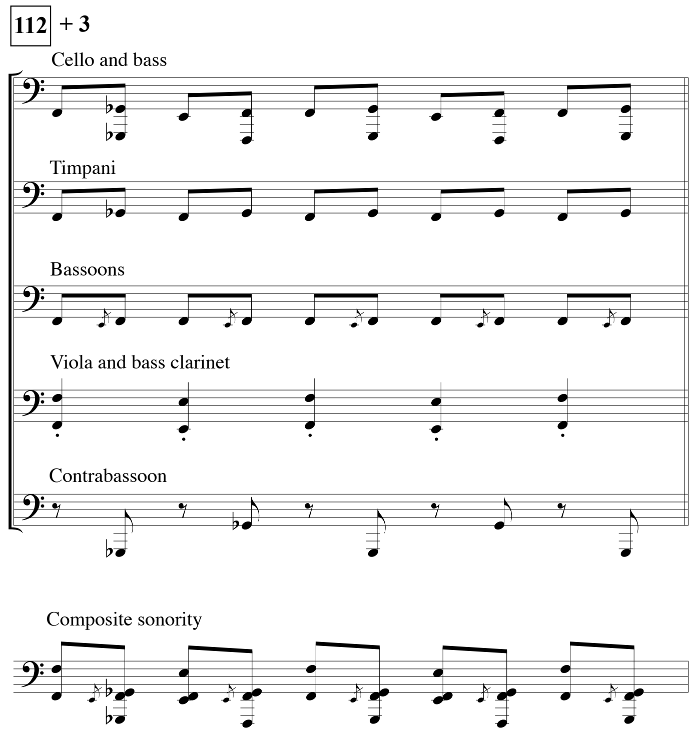
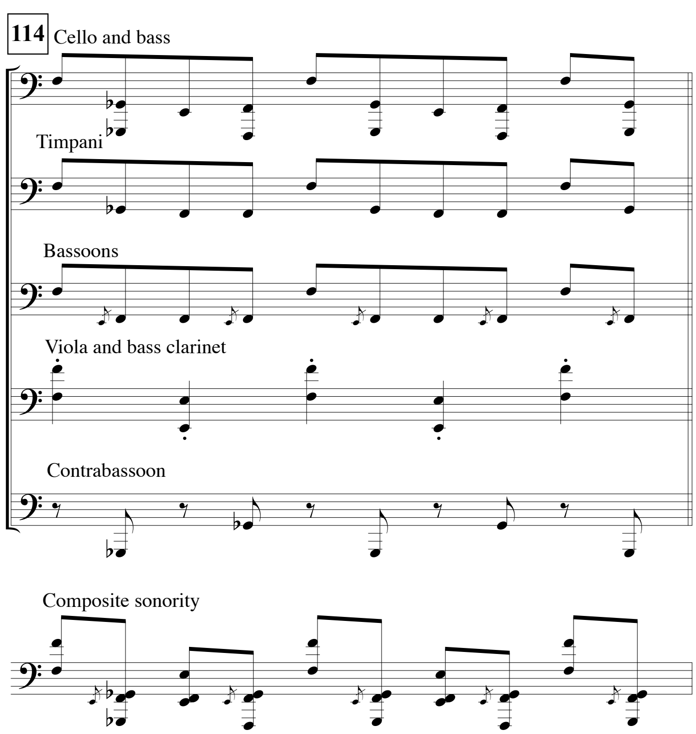


Figure 3.3.12: Simultaneous bass line variants at R114.



The top line of the off-beats, meanwhile, outlines a very simple melody on B♭, C, and D♭, harmonized with alternating tritone-plus-fourth and fourth-plus-tritone chords highly reminiscent of the harmony at the beginning of the movement (Figure 3.3.13). At R114+2, only the top two pitches of the pattern remain, now surrounded by an E-D♯ major seventh, further intensified at R115 with octave doublings and the addition of woodwinds and horns (Figure 3.3.14). It is as if the half-step relationships in the bass line have now infiltrated the upper part as well, adding another half step into the mix: now D♯ has been added to the G♭, F, and E half-steps. This also has the effect of bringing back the E♮-E♭ juxtaposition and major seventh span that was so central to sections of Part 1.

Figure 3.3.13: Offbeat chords at R112+3 alternate tritone-plus-fourth and fourth-plus-tritone.

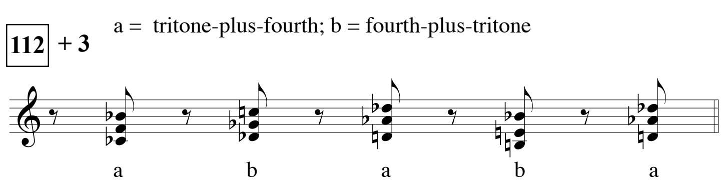
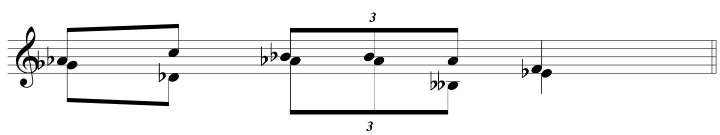


Figure 3.3.14: At R114+2, bottom pitch of chord drops out, replaced by pedal on E–D♯ major seventh.

At R115+1, as the bass ostinato continues, a brass fanfare interrupts with material similar to the offbeat triplets from R111+1 (Figure 3.3.15). The top melody voice is similarly in F

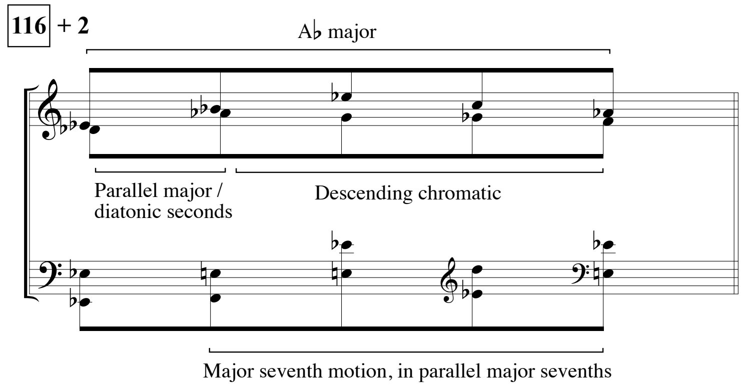
Phrygian, while the lower voice is similarly mostly in F Phrygian, but with a B♭♭ ♭4. Against this, woodwinds and strings have flourishes in E♭ Dorian (the same pitch set as F Phrygian)

Figure 3.3.15: Brass fanfare at R115+1.



Finally at R116+2, everything comes to a halt, and there is a sort of cadential figure in rhythmic unison leading to the return of the "A" material. The harmony here appears to be the result of interacting processes that don't necessarily have very much to do with one another, in a similar manner to the passage at R45. The top line continues its diatonic melody from before with a strong A♭ major flavor. The second voice also continues its patterning from before with parallel major / diatonic seconds below the top voice, but then it breaks into a chromatic descent. The bottom two parts, meanwhile, continue to focus on major sevenths and the chromatic cluster around E, F, and G♭, now with E♭ and D as well. The bottom line leaps major sevenths F to E to E♭ back down to E♮, while the line above follows it in parallel major sevenths, E, E♭, D, down to E♭ (Figure 3.3.16). This passage thus takes several harmonic ideas from the preceding material – diatonic melody and harmonic major seconds / major sevenths from the brass fanfares, and minor second motion from the bass line – and freely layers them on top of one another. The composite harmonies on each eighth note are artifacts of these interacting processes, rather than having any governing process of their own.

Figure 3.3.16: Cadential figure at R116+2.



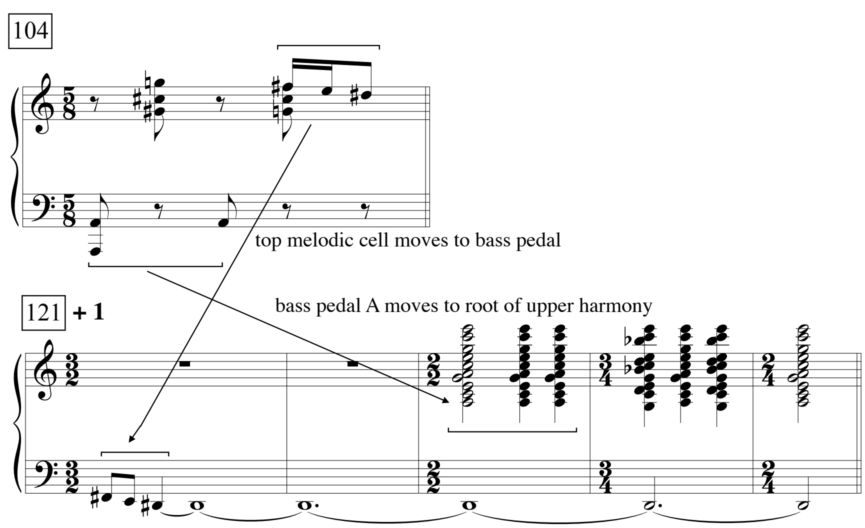
At R117, the A material returns with another measure of upward rushing, parallel to R107. This is followed by a consolidated recap of the rest of the A material. R117+1 up to R118+1 repeats R104 to beat 1 of R106 (minus the start of another upward rush at R106.) Then R119 up to R121 repeats R109 up to R111, with two chord switches (compare R120+1 and +3 to R100+1 and +3). In effect, R106 up to R109 is cut this time around.

To sum up, fourth-plus-tritone chords and their inversion tritone-plus-fourth chords give this dance its distinctive sound. Although they are constantly rotating through different versions, they act as the ur-harmony for the dance, providing the basic harmonic color that undergirds it. That said, it is always a bit more complicated, with variants on these harmonies, added notes, and pedal pitches constantly adding additional color and complexity. Three-note chromatic clusters are also an important element. They appear harmonically in the juxtaposition of the G♯-C♯-G♮ fourth-plus-tritone chord over the A pedal that dominates the A section, which contains the G♮-G♯-A cluster. And they appear melodically in the B section's F-G♭-E-F bass line (see Figures 3.3.11 and 3.3.12). This dance is also very pedal-bound and harmonically static. The A section is rooted on A, the B section (R111) on F, with no other real harmonic motion. Indeed, after the extensive harmonic development of the Part 2 Introduction and "Mystic Circle," this dance is striking for how harmonically static it is, and it sets the stage for the next two similarly pedal-bound dances that follow.

3.4 EVOCATION OF THE ANCESTORS

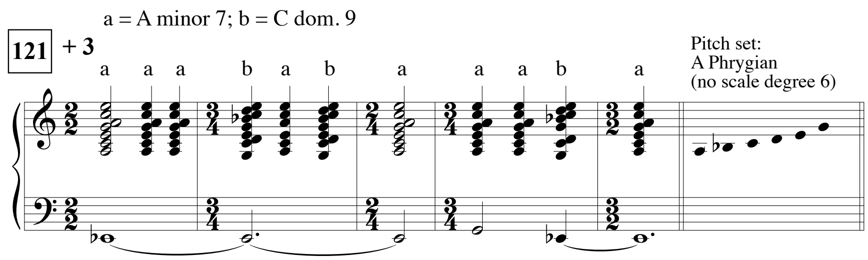
This dance begins by swapping the positions of the harmonic material of the previous section. The high F♯-E-D♯ melodic cell from "The Naming and Honoring" drops into the bass and forms a pedal, while the low A pedal from the previous dance jumps up to become the basis of the upper harmony (Figure 3.4.1).

Figure 3.4.1: Comparison of R104 and R121+1. Top melodic cell moves to bass pedal; bass pedal A moves to root of the upper harmony.



The harmony for this dance consists almost entirely of alternations between A minor seven and C dominant 9 (with G in the bass), in different registers, densities, and orchestrations, all over the low E♭ pedal. It is basically an A Phrygian field harmony over a dissonant pedal note below, although scale degree 6 (F) is missing (Figure 3.4.2). As in the previous dance, a low pedal tone is nearly constant.

Figure 3.4.2: Harmony at R121+3.



At R123+4 and R126+2, an E♭ is added in the melody, functioning as a sort of "blue note" ♭5 scale degree against the E♮ below. It also projects the dissonant E♭ pedal below up into the harmony of the upper voices. Figure 3.4.3 shows how this works at R126+2, since the texture is clearer there, but it functions similarly at R123+4. At R123+6, an F♯ is added to the melody, and the B♭ disappears, pushing the mode in an A Dorian (♭2) direction (although scale degree 2 is now missing – see Figure 3.4.4).

Figure 3.4.3: Harmony at R126: E♭ added to the melody, creates a "♭5" inflection, and projects bass pedal into upper register.

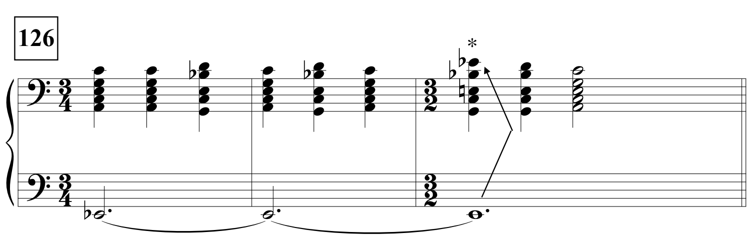
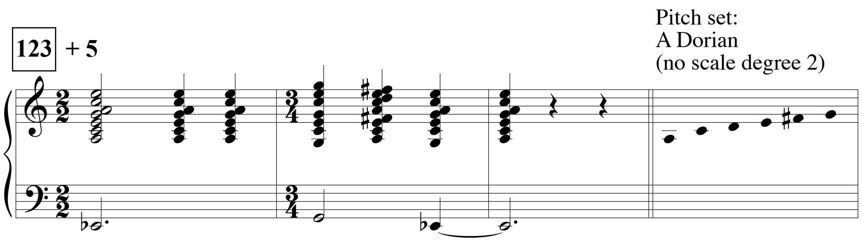


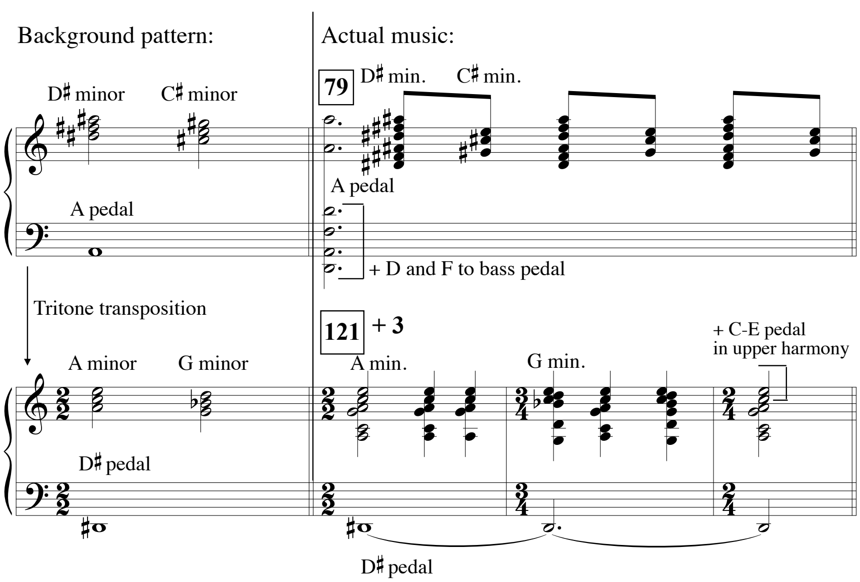
Figure 3.4.4: Harmony at R123+5: F♯ added to melody, pushing it toward A Dorian.



It is instructive to consider the details of how the voice-leading works here. The chords broken up into a stationary C-E pedal in some voices, with A minor 7 alternating with G minor in the others, as Figure 3.4.5 shows. This alternation of minor chords a major second apart, over a dissonant pedal below, is highly reminiscent of the opening of Part 2, with its alternation of D♯ and C♯ minor triads over D minor below. Indeed, if we were to consider the A at R79 to be the "primary" pedal note – a proposition supported by its doubling in multiple octaves, its projection into the upper harmony, and its later importance as the central pitch of the movement's main melody – then we can see R121 as a sort of tritone transposition of R79. The minor triad oscillation shifts from D♯-C♯ to A-G, while the dissonant pedal shifts from A to E♭. Because of the tritone relationship between the upper triad and the pedal, this transposition also has the effect of the A and D♯ swapping roles. At R79, A is the pedal and D♯ is the root of the upper harmony; at R121, D♯ is the pedal and A is the root of the upper harmony (see Figure 3.4.6).

Figure 3.4.5: Upper harmony at R121+3 as two streams: C-E constant pedal, and A minor 7 to G minor oscillation.

Figure 3.4.6: Background tritone transposition relationship between R79 and R121.



It is of course not nearly this straightforward in the final sonorities generated. Both sections contain two additional pitches that dramatically change the harmonic color, in different ways. At R79, these are the additional pitches of the D minor triad, D and F, that form the lower harmonic unit with A, and cast a far murkier light on the oscillating minor triads above. At R121, these “extra” pitches are the C-E pedal in the same register as the oscillating minor chords, which help to unify and homogenize the upper register harmony, downplaying the “oscillating minor triad-ness” of it. And of course the passages have dramatically different effects due to their registral, orchestrational, rhythmic, and character differences. Nonetheless, both passages do have a similar sense of two-chord oscillation over a dissonant pedal, and I find it intriguing to posit this tritone transposition relationship lurking in the background, linking them together.

This dance also presents a rare example of an E♭ pedal, so common in Part 1, in Part 2. It also explicitly highlights the E♭-A tritone relationship, bringing into sharp relief two of the important pitch centers of the work. We will examine this further in the next chapter when we consider large-scale harmonic patterns in the piece.

At R128, the bassoons hang on to an A minor triad, and then gurgle down to a D–B♭ dyad – a subset of the G minor chord that alternated with A minor 7 throughout the movement, which become the common tones to the “ur-chord” of the next dance.

3.5 RITUAL ACTION OF THE ANCESTORS

As described previously, the opening sonority in “Ritual Action of the Ancestors” is very similar both to the “Spring Rounds” chord, and to the harmony that opens Part 2 (Figure 3.5.1). As soon as the English horn melody enters, however, the harmonic framework shifts. The English horn’s A♭ has a very strong sense of tonic, since it so strongly emphasized metrically and melodically. This would make the underlying field harmony A♭ Acoustic (A♭-B♭-C-D-E♭-F-G♭), although ultimately the background chord acts more like white noise percussion.[98] The

[98] Tymoczko (2002, 75) identifies the same pitch set, but considers the bass D to be the “primary pitch.”

E♮ that starts the 32nd-note chromatic pick-up has the effect of a ♭6 inflection of the mode (Figure 3.5.2).

Figure 3.5.1: Harmony at R129 similar to R49 and R79.

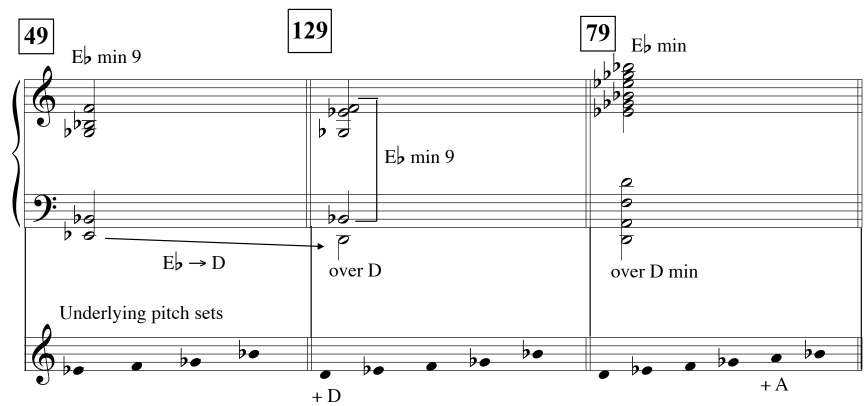
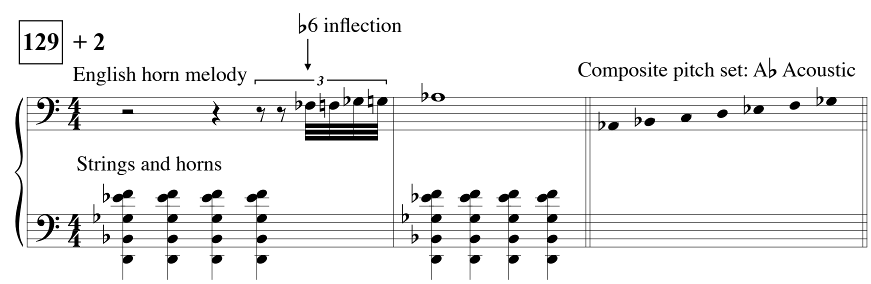


Figure 3.5.2: English horn melody plus background chord creates A♭ Acoustic (C not present yet, but occurs soon in alto flute melody).

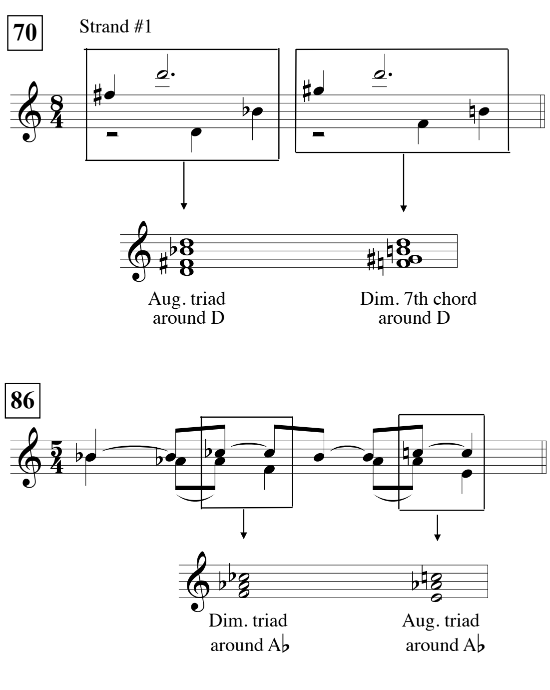


The alto flute melody at R130 noodles around pitches that resolve to scale degree 3. The first three versions strongly imply a common practice-like common-tone-diminished-chord progression (Figure 3.5.3). There is also a connection to the trumpet duet melody back at R86, as we saw earlier, with both outlining diminished and augmented triads centered around A♭.[99]

Through similar logic, we also tied it back to strand #1 at R70 (Figure 3.5.4).

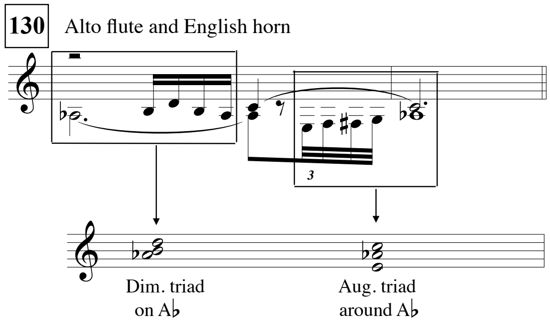
Figure 3.5.3: R130 as a common-practice common tone diminished chord progression.

Figure 3.5.4: Comparison of R70 Strand #1, R86 trumpet duet, and R130 English horn-Alto flute duet. All feature movement between diminished and augmented chords based around the same pitch.



[99] Hill (2000, 84) also notes the connection to the trumpet duet melody.

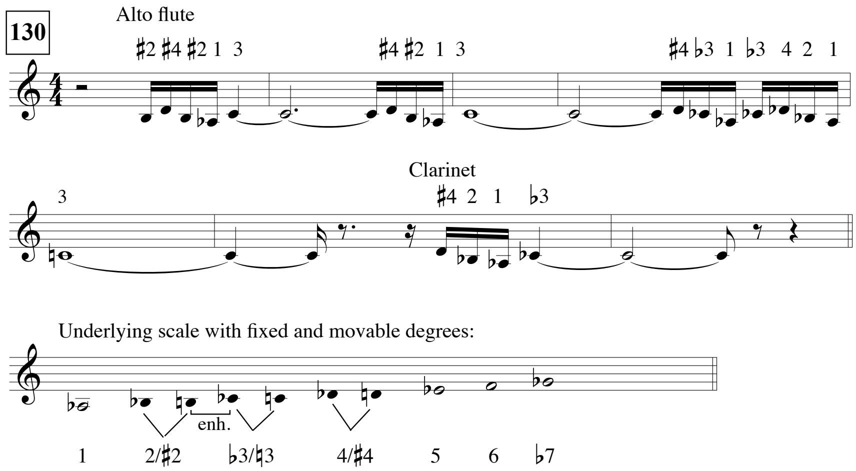
(Figure 3.5.4 continued)



At R130+3, on the fourth beat, the alto flute figure now creates more of a sense of A♭ Dorian, with scale degrees 3 and 4 lowered a half-step. Another explanation is the movable scale degree technique. Scale degrees 2, 3, and 4 exist in two forms, with the alto flute line exploring the change in color of switching from the sharp to the "natural" forms of degrees 2 and 4, and from the natural to flat forms of scale degree 3.[100] An interesting wrinkle is that "sharp 2" and "flat 3" are the same pitch enharmonically, with the context determining how the B♮ /C♭ functions. At R130+5, the clarinet presents yet another spin on this, with ♯4, ♮2, and then settling on ♭3, enharmonically equivalent to the alto flute's ♯2, but now acting as a stable interval against the A♭, creating a more "minor" sonority (Figure 3.5.5). It is a similar technique to the D clarinet melody back at R4, which explored three different inflections of scale degree 2, ultimately filling in all of the chromatic space between E and B♭ (see Figure 2.1.9).

[100] Tymoczko (2002, 75) hints at a similar interpretation of oscillating modes: "But [the alto flute B at R130] could well be taken to be harmonic, in which case the alto flute's sinuous melody would represent an alternation between E♭ *harmonic* and melodic minor."

Figure 3.5.5: Movable scale degree interpretation of R130 alto flute and clarinet melodies.

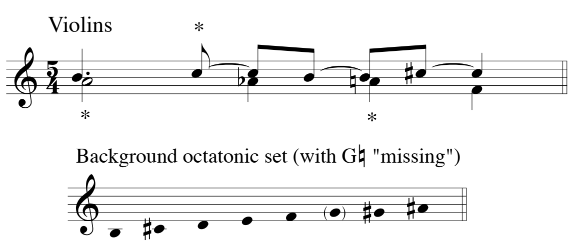


The section from R131 up to R135 is one of the most thoroughly octatonic sections of the work, and one of the most well-explained by van den Toorn's octatonic theories. The brass melody at R132 consists of a Dorian tetrachord (G♯-A♯-B-C♯), while the other parts add the rest of the octatonic set below (almost – G♮ is missing) (Figure 3.5.6).

While this section is undoubtedly dominated by an octatonic framework, there are some notable deviations as it progresses. At R133, fluttery major seconds on A♭ and B♭ enter in violin 2, doubled by sustained oboes. These are within the underlying octatonic set. However, three bars later they shift up a half-step to A♮-B♮, and become the starting point for a shimmering restatement of the R86 trumpet duet theme. The top B♮ is still a member of the underlying octatonic set, and so are both pitches of the final dyad, F-C♯ . In between, however, the A♮ and C♮ are both outside of the underlying octatonic set. They end up functioning as a "suspension" (the A) and an "upper neighbor" (the C) within the octatonic context (Figure 3.5.7).

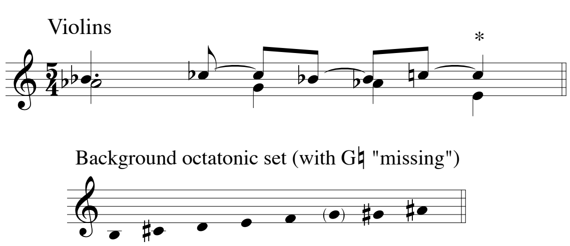
Figure 3.5.6: Octatonicism at R132.

Figure 3.5.7: Relation of violin parts to octatonic background at R133+3. Notes with asterisk are outside of the background octatonic set.



The half-step shift up at R133+3 is noteworthy. The A♭-B♭ major second at R133 is the same pitch level that the trumpet duet melody first appeared, and continued to reappear, at R86 and after. It is also the same pitch level as the harmonically similar English horn and alto flute parts at the beginning of the dance, as we saw in Figure 3.5.4. Why then the half-step shift at R133+3? If it remained at the A♭-B♭ pitch level, all of the pitches except for the final pitch of the upper part would fit within the underlying octatonic set, as Figure 3.5.8 shows. This, however, creates a very different effect, as the pattern now *ends* on a dissonance in relation to the other parts. By making the half-step shift, Stravinsky causes the duet instead to *begin* with a dissonance that *resolves* into the final harmony. Stravinsky also could have shifted the A♭-B♭ at R133 up a half-step to be consistent, but then it would have been dissonant on its entry, rather than being a harmonically neutral textural change. What all of this indicates is the degree to which Stravinsky, despite the high levels of dissonance in *The Rite*, continues to be mindful of qualities of consonance and dissonance.

Figure 3.5.8: R133+3 with violins down a half-step at the "correct" pitch level. Now only the final pitch in the upper voice is outside the underlying octatonic set.



At R134, the melody from R132 climactically returns, in the midst of a dense and busy texture. Again, it is almost exclusively octatonic, with a G♯-A♯-B-C♯ melody Dorian tetrachord set against the rest of the octatonic set in classic Van den Toorn-ian "Model B" fashion.[101] There is, however, one glaring exception to the octatonic rule in the blaring brass countermelody, built from descending diatonic fourths (Figure 3.5.9). This countermelody reminds us of all the other

[101] Taruskin analyzes it similarly (1996, 939-941).

stacked fourth/fifth moments in the work, and in particular of the very similar accompaniment pattern from R95 (Figure 3.5.10). It also creates a relatively dissonant harmonization of the melody, while at the same time casting the melody's Dorian tetrachord in a decidedly diatonic light, as Figure 3.5.9 shows. It is, indeed, a good illustration of van den Toorn's claim for the dual nature of the Dorian tetrachord as a bridge between diatonicism and octatonicism; here it exists as a member of both sets simultaneously.

Figure 3.5.9: Same octatonic set at R134, but now the counter-melody also forms a diatonic G♯ Dorian set with the melody.

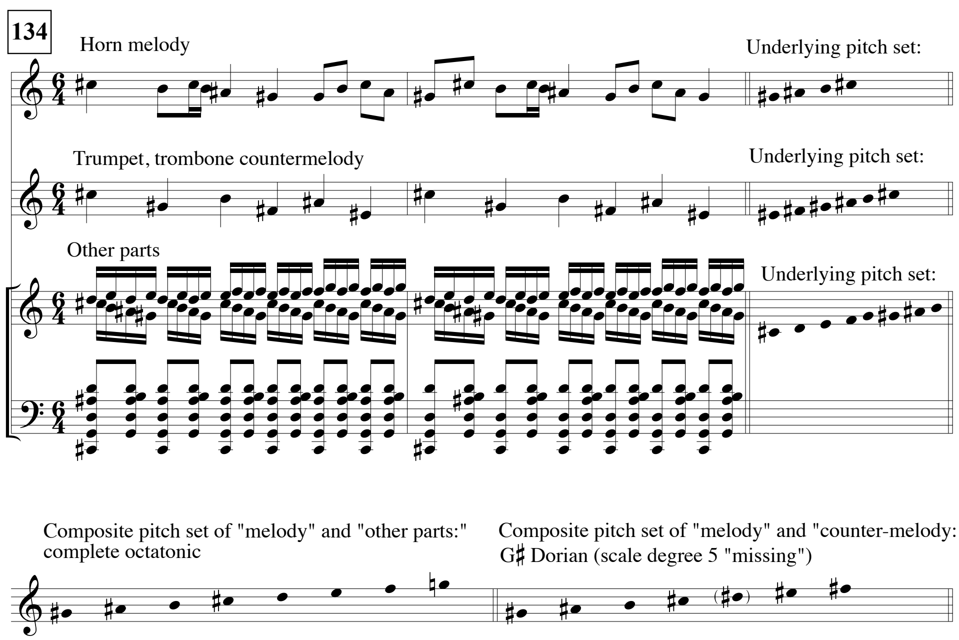
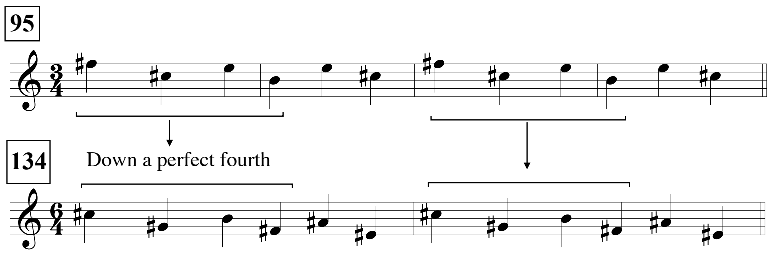
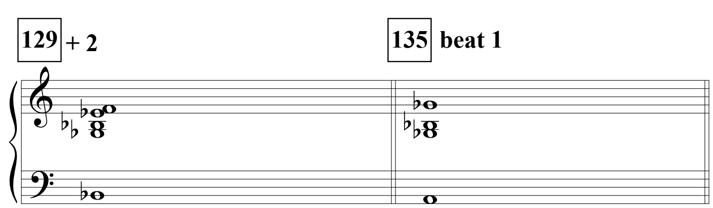


Figure 3.5.10: Counter-melodies at R95 and R134.



The downbeat of R135 is similar to the chord that opens the dance (R129+2), but without the top E♭ and F, and with the addition of an A, creating a perfect fifth with the bass note (Figure 3.5.11). It is also very similar to the Part 2 opening sonority, also with the E♭ and F from that chord "missing," as Figure 3.5.12 shows. Beat two is the same chord transposed down a minor second, though this relationship is disguised by the melody, which jumps up a minor third, and is harmonized with a major third instead of a minor sixth below (Figure 3.5.13). Beat 3 is reminiscent of the *second* harmony of the Part 2 opening, also with two pitches "missing" (Figure 3.5.14). Its chord type is also the inversion of that of the first two beats of the bar. More specifically, it is the second chord inverted, and then re-voiced to put the D-A fifth in the bass – which connects it to the first beat chord as well (Figure 3.5.15).[102]

Figure 3.5.11: Similar harmonies at R129+2 and R135.



[102] Forte (1978, 105) also notes the inversional relationship between these chords.

Figure 3.5.12: Similar harmonies at R79 (first chord) and R135 beat 1.

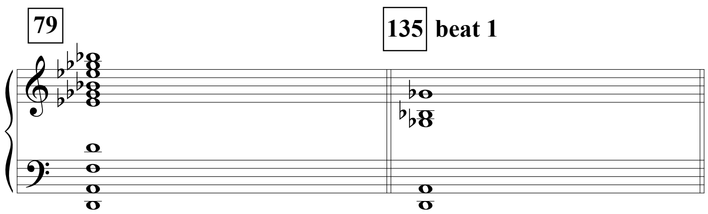


Figure 3.5.13: Simplified voice-leading at R135 shows minor second transposition relationship between first two chords.

Figure 3.5.14: Comparison of R79 second chord and R135 beat 3.

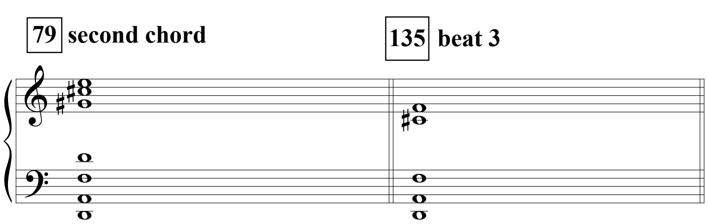
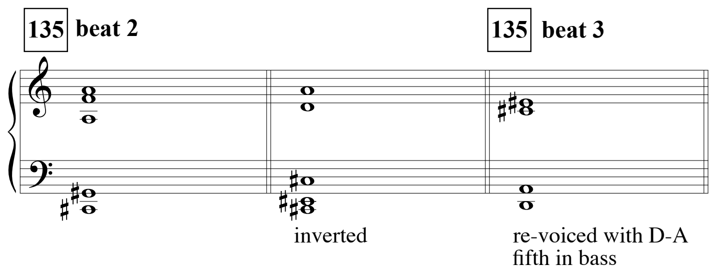
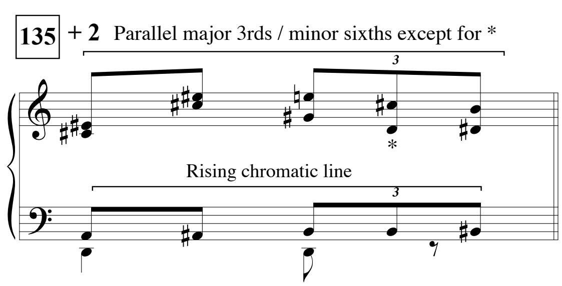


Figure 3.5.15: R135 beat 3 is inversion of R135 beat 2, re-voiced to create same low D-A fifth as in beat 1 chord.



R135+1 repeats the previous three beats, but now on beat three of the pattern (beat one of R135+2), the melody leaps up an octave, before continuing back down to the "tonic" chord again on the next downbeat. The harmonies in this bar seem to arise more from contrapuntal motion between the parts than from considerations of the sonorities themselves, as Figure 3.5.16 shows.

Figure 3.5.16: Harmony at R135+2. Upper parts move in parallel major thirds / minor sixths, except for note with asterisk, over chromatic motion below.



R135+3 repeats R135, but without the low C♯-G♯ fifth on beat 2. The removal of this low fifth – which, incidentally, *is* present in the four-hand piano version – helps to enable the minor third transposition that happens in the next bar. Transposing this pattern up a minor third creates a striking connection to the English horn melody from the opening of the dance, as it essentially turns it around and runs it in reverse (Figure 3.5.17). The line a major third above also reverses the contour of the alto flute answer, though a bit more abstractly (Figure 3.5.18).

Figure 3.5.17: R136 second voice runs opening English horn melody in reverse.

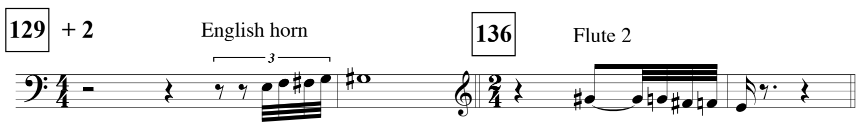
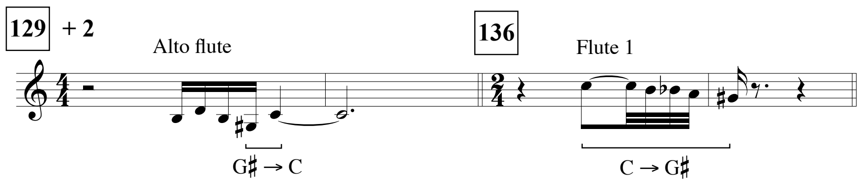


Figure 3.5.18: R136 top voice approximates a reversal of R130 alto flute melody.



At R138, we have one more statement of the R132 theme, the most climactic yet. Once again, it has a strong octatonic underpinning, but with one "out" note, this time the very bottom bass C♮ (Figure 3.5.19). This is very similar to the harmony at R134, but the low C creates a stacked fifth C-G-D sonority at the bottom, and takes advantage of the open low C strings on the cello and extended bass, giving even more boom to the harmony.

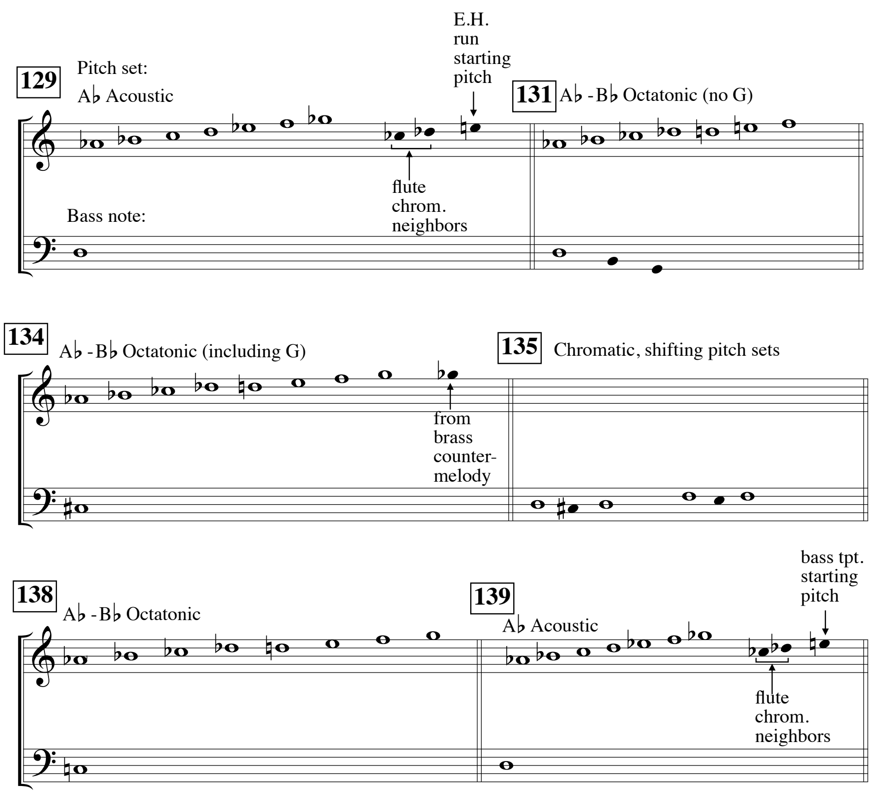
Figure 3.5.19: Pitch set at R138: all octatonic, with low C pedal "outlier."

R139 returns to the harmony from the beginning of the dance, with a compressed recap of the English horn and alto flute melodies, and the closing clarinet melody prolonged into an extended coda / transition into the "Sacrificial Dance." The transitional passage starting at R140 does not appear to relate very directly to other material in the piece. Gesturally, the free-wheeling clarinet / bass clarinet melody somewhat evokes the murky bass clarinet motive from the Introduction (first heard at R6), but the pitch content – primarily a combination of D♭-C♭ and C-E♮ / E♭ oscillations – is distinctively different. As we saw earlier at R71+4 and again at R103, here again a dramatically important turning point in the work gets its own distinctive material, rather than organically connecting to the work's central motivic or harmonic ideas.

Zooming out, we can see that this dance has a similar harmonic approach as the first part of "Ritual of Abduction" and the first part of the Part 2 Introduction. All three are harmonically anchored by distinctive ur-chords (and indeed the Introduction chord is built on a very similar pitch set), and then make use of (mostly) octatonic sets as they spin out their material. Indeed, the overall harmonic progression in this dance is strikingly simple. It starts with an acoustic set, moves to an octatonic set with which it shares four pitches (D, F, A♭, and B♭), and then back again to the opening acoustic set. The details, however, add some interesting wrinkles to this basic pattern. Both the acoustic and octatonic sections include "color" pitches from the other set, which help to bring the two sets closer to one another. And even though the same octatonic set occurs three times, each time it is over a different bass note. This creates a descending half-step bass pattern D-C♯-C♮, which then rises back up to D at the return of the acoustic set.[103] Figure 3.5.20 distills the basic harmonic progression of the movement, showing the pitch sets, bass notes, and added "color" pitches of each section.

[103] Krebs 1987 focuses especially on these bass neighbor notes to D, seeing them as an example of a deeper pattern of neighbor notes permeating the entire work.

Figure 3.5.20: Basic harmonic progression in "Ritual Action of the Ancestors." Underlying pitch sets are shown on top staff, bass notes on bottom staff. Main pitches are white, added "color" pitches are black, with their source indicated.



3.6 SACRIFICIAL DANCE

As we saw earlier, the opening sonority of the "Sacrificial Dance" has numerous connections to other parts of the work. First, its pitch set is strikingly similar to that of the opening of part 2.[104] Second, it is also very close to the "Augurs of Spring" ur-chord, transposed down a half-step.[105] Figure 3.6.1 shows both of these relationships.

[104] Forte (1978, 70) notes this similarity as well.

[105] Boucourechliev (1987, 92-93), Walsh (1988, 49), and Hill (2000, 50-51) note this connection as well.

Figure 3.6.1 (a): Similar pitch set between Part 2 opening harmony and beginning of "Sacrificial Dance."

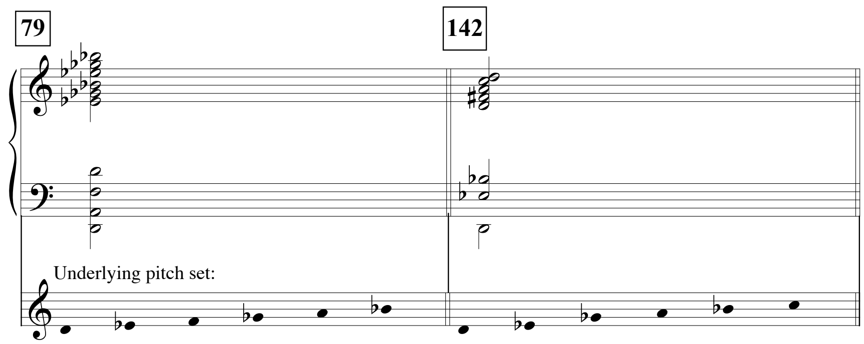
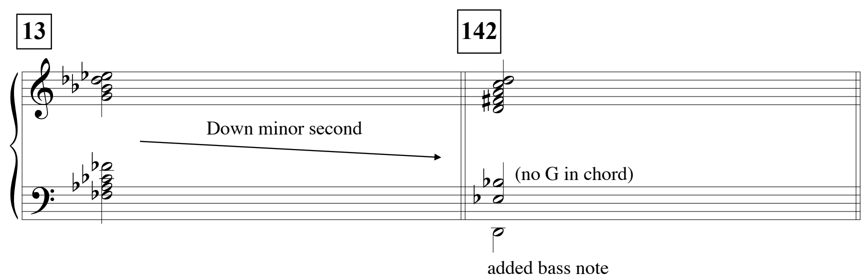


Figure 3.6.1 (b): "Sacrificial Dance" chord very close to "Augurs of Spring" chord, transposed down a minor second ("Augurs of Spring" chord transposed up an octave here for ease of comparison).



In the third bar, the chord subtly changes. The low E♭-B♭ fifth disappears, and is replaced by C♯ and E♭ half steps around D. This new chord also has deep resonances with other parts of the work. First, it once again highlights, very explicitly, the C♯-D-E♭ cluster that we have seen so many times before, in the same register in which it typically occurred in Part 1 (Figure 3.6.2). Relatedly, it references the many other circumstances in which a D unit (here a D dominant seventh chord) is juxtaposed against C♯ and E♭, as at R37, R40, R79, and R97 (Figure 3.6.3).[106]

[106] Hill (2000, 86) makes a similar point, but only with respect to the opening of Part 2.

Figure 3.6.2: C♯-D-E♭ cluster in chord at R142+2.

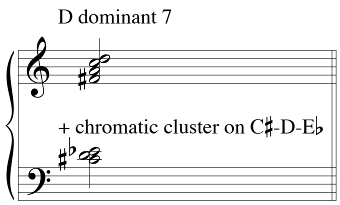
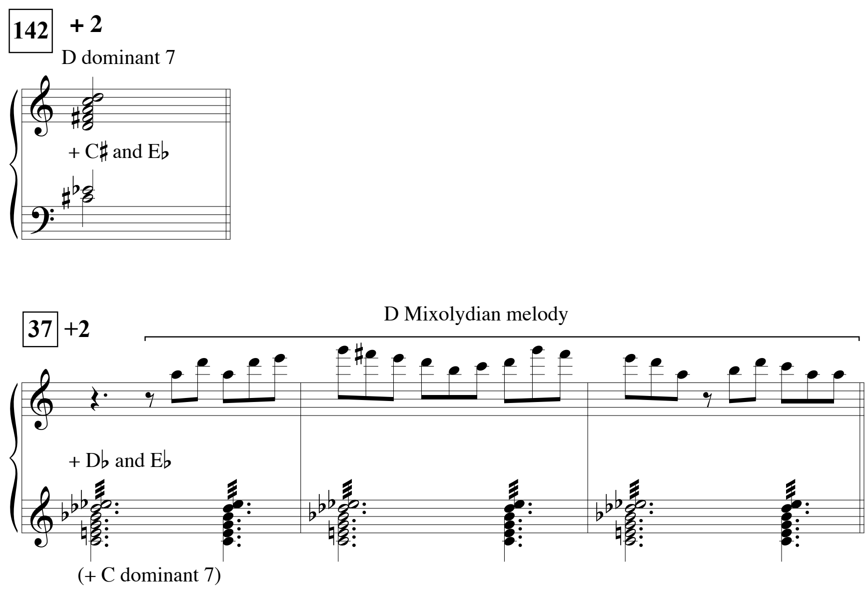
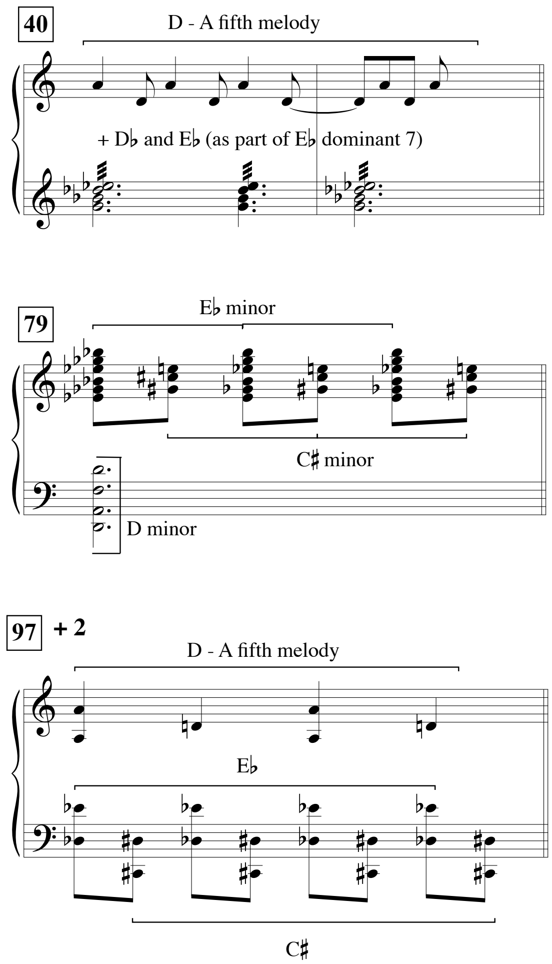


Figure 3.6.3: Juxtaposition of "D unit" against C♯ and E♭ at R142+2, and in other places throughout the work.



(Figure 3.6.3 continued)



The next two chords are very closely related to this one: a C dominant seventh with added D♭ and E♭; and a C♯ dominant seventh with added C♮ and D♮. The third chord is an exact transposition of the first chord, while the fourth chord returns to the first chord with slightly different voicing. The second chord, meanwhile, is almost the same as the others, but slightly different. Instead of surrounding the root of the seventh chord with half-steps, it maintains the D♭ and E♭ from the previous chord, which, significantly, creates the chord from R37 (Figure 3.6.4). It is a similar sonority to the surrounding chords – a dominant seventh plus two additional dissonant pitches – but it is also different in two significant ways. First, it does not contain a chromatic cluster, and second, its pitches are contained within an octatonic pitch set. It also allows Stravinsky to reference another very important sonority heard earlier in the work (R37), as well as to maintain tighter voice-leading. Figure 3.6.5 shows an alternate version where the second chord is the same chord type as the others, to illustrate the difference.[107]

Figure 3.6.4: Chords at R142+4.

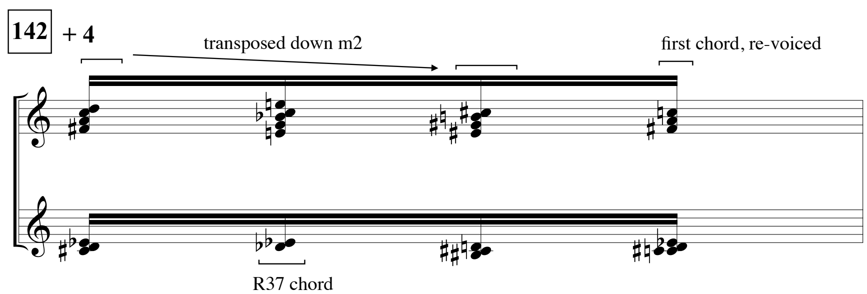
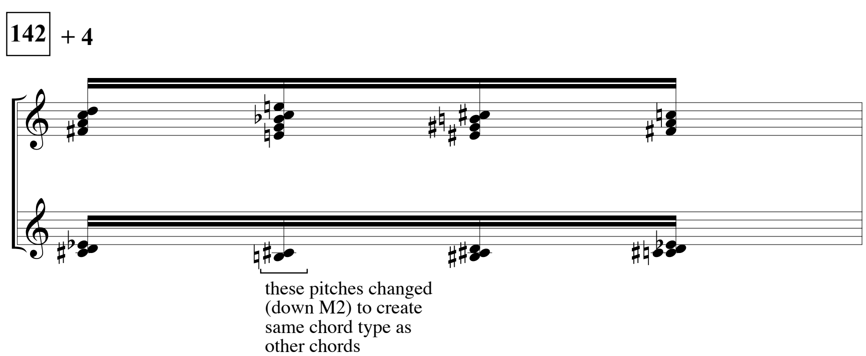
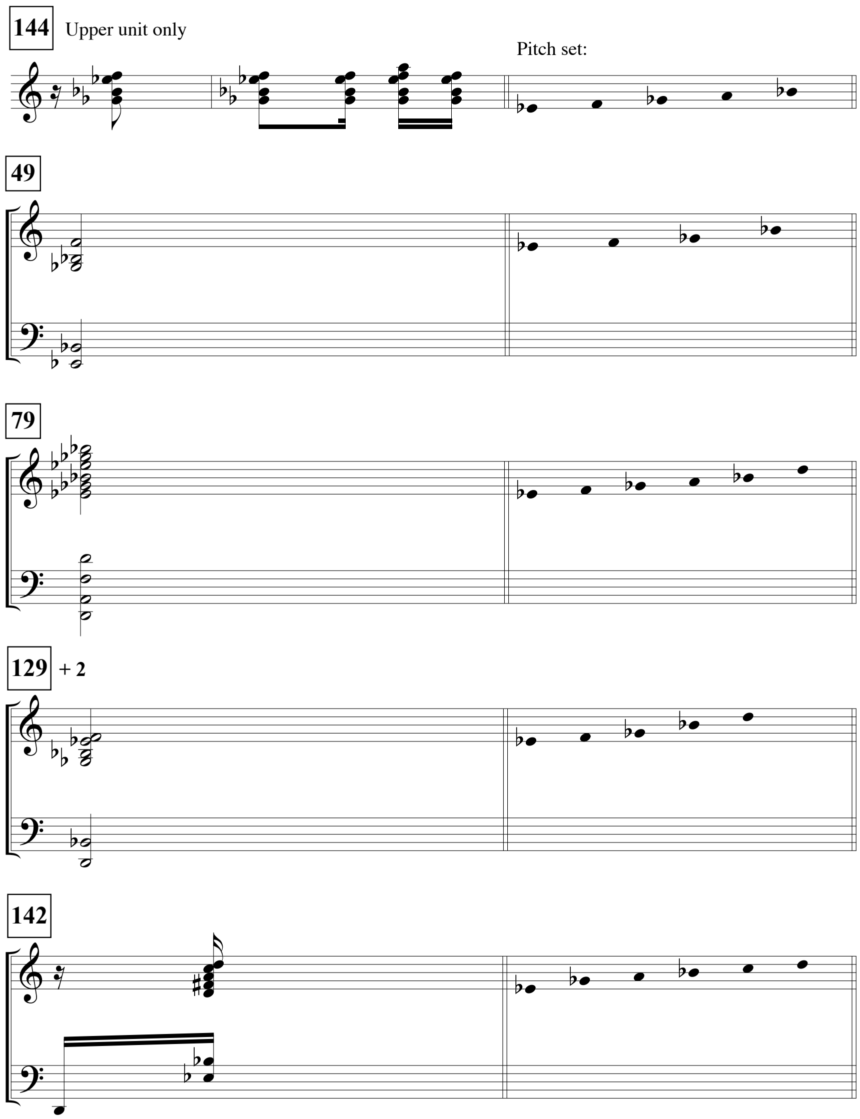


Figure 3.6.5: Second chord at R142+4 altered to be same chord type as the other chords.



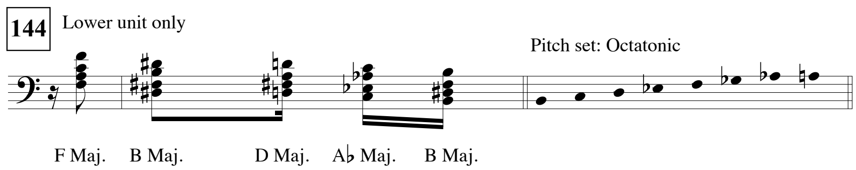
[107] Cacioppa (1992, 133-134) makes some similar observations about these chords, but focuses on their potential functional meaning, rather than their resonances with other harmonies in the work.

Figure 3.6.6: Upper unit at R144 is very similar to other harmonies and pitch sets in the work.



The next few bars continue to move through these same chords, unpredictably varying the rhythm. At R144, we get some new harmonies that can be logically divided into upper and lower units. The upper unit, an E♭ minor triad plus F and A, is closely related to the sonority that opened Part 2, as well as to the "Ritual Action of the Ancestors" ur-chord, the "Spring Rounds" ur-chord, and the first chord of the "Sacrificial Dance," as Figure 3.6.6 shows. The lower unit moves through minor third-related major triads, adding up to a complete octatonic set, in a "Model A" octatonic minor third game similar to what we saw at R42 (with major triads and dominant seventh chords) and R82+2 (with minor triads), as Figure 3.6.7 shows.[108]

Figure 3.6.7: Octatonic minor third game in lower unit at R144.



The upper unit pitches cohere with this octatonic set, with the exception of the B♭. Figure 3.6.8 presents an alternate version where the B♭ is replaced by a B♮, putting the upper unit in the same octatonic set as the lower unit. In a way, this is a more "coherent" sequence of sonorities: there is a single underlying controlling scale and the resulting chords have a similar color. But it is also far less rich and interesting. In Stravinsky's version, the B♭ causes the first and third composite chords to join the family of interrelated pitch sets from Figure 3.6.6, while the second and fifth composite harmonies create colorful B Lydian (♯4, major 7) chords, and the fourth creates a complex extended A♭ dominant harmony.

[108] Messiaen (1995, 126) similarly analyzes this harmony as an upper part in E♭ minor (plus A) and lower part in "mode 2" (his term for the octatonic set).

Figure 3.6.8: B♭ replaced with B♮ in upper unit at R144 to create pure octatonicism (with enharmonic re-spellings to clarify harmonies).

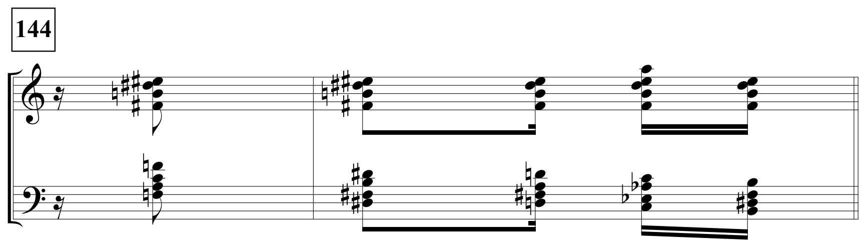
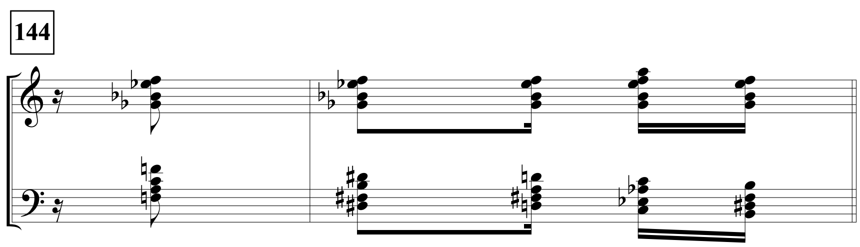


Figure 3.6.9: Complete harmonies at R144.



In the end, the progression of minor third-related major triads, and the associated octatonicism, does indeed drive the harmony, but the upper unit creates both more colorful chords, and deeper resonances with other important harmonies in the work.[109] These basic patterns of chords continue all the way up to R149, kaleidoscopically re-arranged.

At R149, as described earlier, we arrive at a harmony that is the "Spring Rounds" chord transposed down a half-step, with an extra fifth added below (Figure 3.6.10). I have always heard this chord as having a D minor quality, but it is also entirely plausible to consider it G dominant / Mixolydian.[110] The total pitches present form the first five steps of a D minor scale, D-E-F-G-A.

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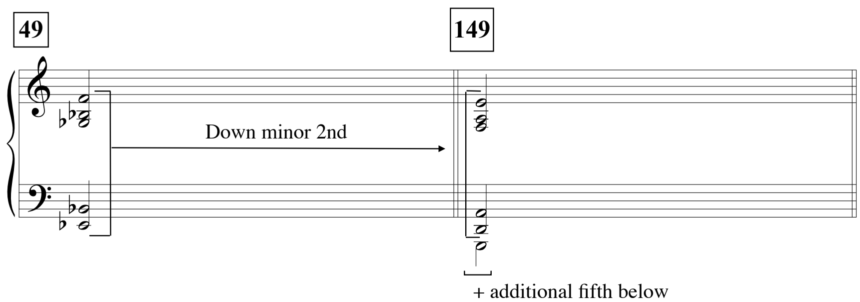
[109] Van den Toorn (1987, 201-204) also notes the octatonic framework, but not the upper unit's resonances with other harmonies in the work.

[110] Cacioppo indeed considers it rooted on G, and treats it functionally as a "iv^{13-9-7}" in D.

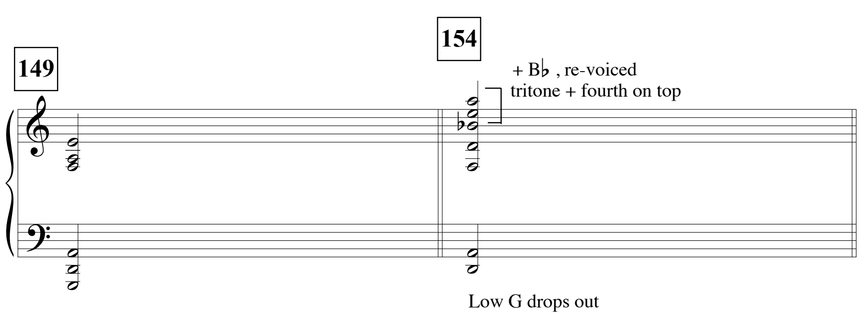
At R151, the chromatic trombone melody adds C and B♮/B♭ to this pitch set, creating D Aeolian / Dorian.

Figure 3.6.10: R149 is "Spring Rounds" chord down a minor second, plus a fifth below.



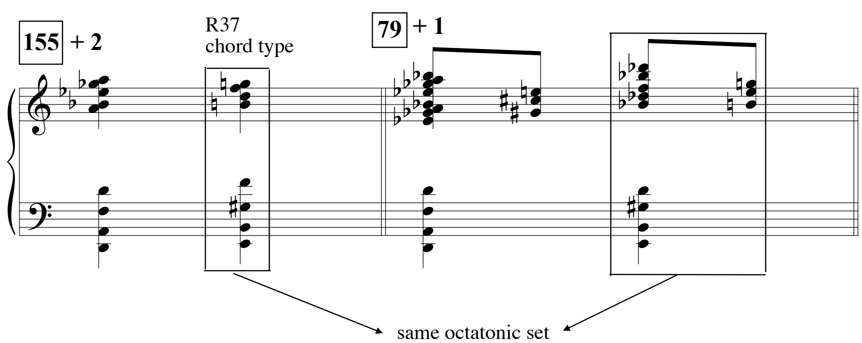
This basic harmony continues until things begin to intensify at R154. First, the low G drops out, and we unequivocally add a B♭ to the harmony, with a tritone-plus-fourth sonority highlighted on top (Figure 3.6.11). This tritone-plus-fourth sonority has mostly appeared in highly dissonant, chromatic contexts, most notably in "The Naming and Honoring of the Chosen One." Here it effectively serves as a bridge from the diatonic harmony that has prevailed since R149, and which it initially fits within, to the more dissonant harmonies that follow.

Figure 3.6.11: Comparison of R149 and R154 chords.



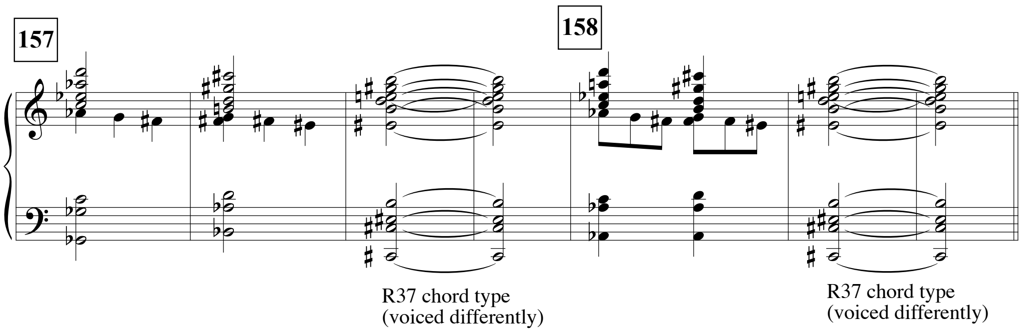
Then at R155+1, the chromatic trombone melody from before (now screeching in piccolo, E♭ clarinet, and D trumpet) introduces a dissonant G♯. In the next bar, there is a subtle shift in the harmony, with the E moving to E♭ and the addition of an F♯, picked up from the final note of the previous bar's chromatic melody. This creates a chord with the same pitches, and very similar spacing, as the harmony that opened Part 2. The next chord, on beat 3 of R155+2, is very similar to the "away" harmony back at R79+1, beat 4. Although the pitches are a bit different, it similarly forms an extended E dominant harmony, with an E major triad in the bass, and other pitches from the same octatonic set above. The chord it *does* form is none other than the Dominant ♯9-♭9 chord type from R37 (transposed) that so dominated "Ritual of Abduction" (Figure 3.6.12).

Figure 3.6.12: Comparison of R155+2 and R79+1 chords.



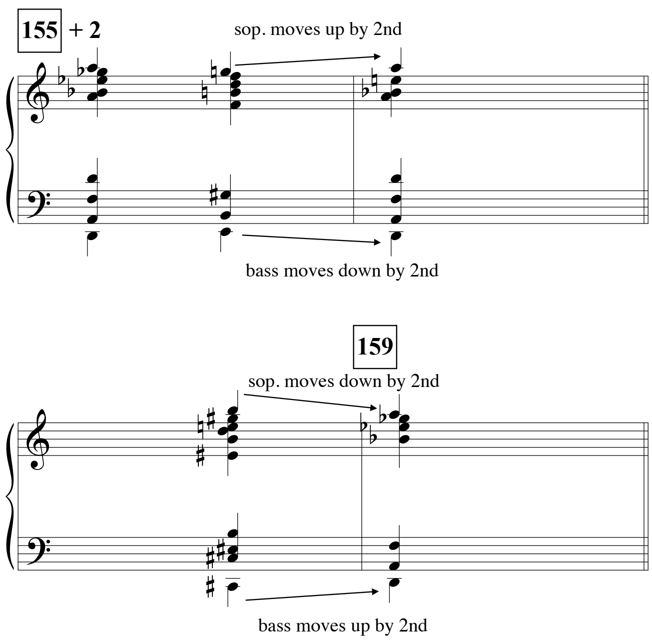
In the next bar (R155+3), the D Aeolian harmony is back, moving once again to the R79-derived harmonies at R156+1, and then back again in the next bar. In the bar before R157, it moves again through the "E dominant" harmony, and up to a chord on F♯, paralleling the motion from the bar before R83 into R83, although with quite a different harmony built on the F♯. From R157 up to R159, the music moves through different extended dominant chords, arriving climactically at R159 on the R79 chord once again. It is difficult to tell a compelling story about these chords, other than that they are all potentially octatonic (meaning they all fit within octatonic sets and thus have similar colors); and the one rooted on C♯ is also the R37 "Ritual of Abduction" Dominant ♯9-♭9 chord type, as was R155+2 beat 2, though it is voiced a bit differently (Figure 3.6.13).

Figure 3.6.13: Harmonies at R157. Texture and rhythm are simplified to clarify the harmony.



At R159, this Dominant ♯9-♭9 chord moves back to the Part 2 opening harmony that we had at R155+2. If we compare this moment to R155+2, we see a very interesting harmonic and voice-leading relationship. In both places, a Dominant ♯9-♭9 chord moves back to an extended D minor-based chord, but in each case the Dominant ♯9-♭9 chord has a different root and the voice-leading is reversed. In both places, the outer voices converge on a D-A fifth by step. At R155+2, the soprano moves up by step, G to A, while the bass moves down by step, E to D. At R159, in contrast, the soprano moves *down* by step B to A, while the bass moves *up* by step C♯ to D (Figure 3.6.14). This is a striking illustration of common practice-like voice-leading in the outer voices – with both resolving in contrary motion by step to a perfect fifth – animated by deeply non-common-practice-like inner voices and harmonies.

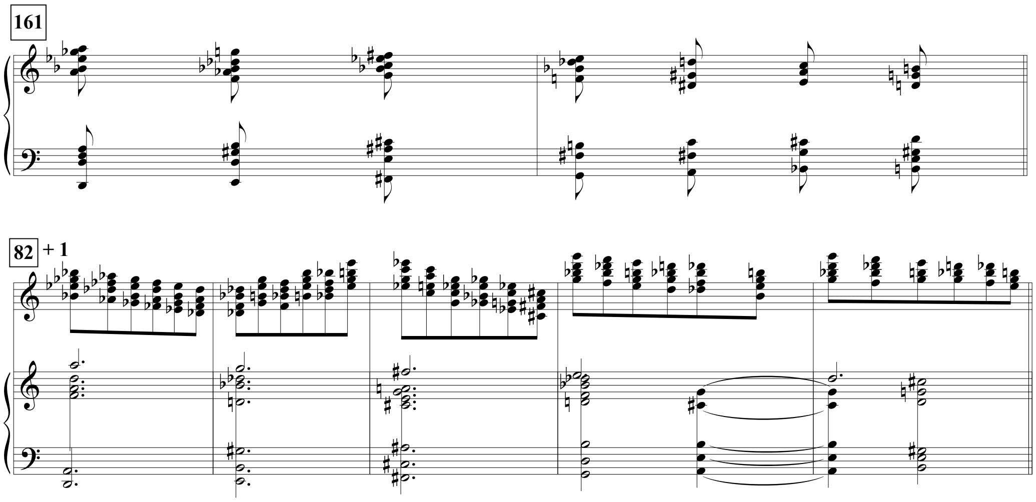
Figure 3.6.14: Outer voices voice-leading at R155+2 and into R159



Starting at R159, the harmonic parallelism with the opening of Part 2, hinted at repeatedly before, becomes explicit. Beat two of R160 moves again to the "E Dominant" harmony, and then the two measures at R161 parallel almost exactly the chords from R82+1 up to R83, as Figure 3.6.15 shows.[111]

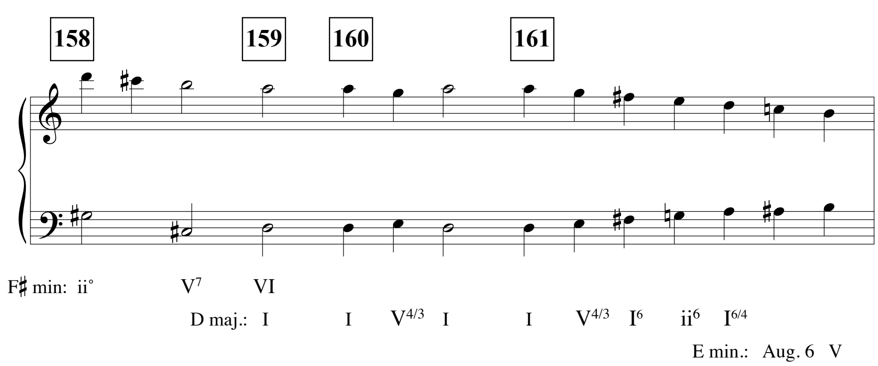
[111] Forte (1978, 119), van den Toorn (1987, 193-196), and Hill (2000, 23-24) note this connection as well, in particular with reference to this chord progression's appearance in the Sketchbook. The sequence of composition indicated by the Sketchbook establishes with a high degree of certainty that this progression was first composed for the "Sacrificial Dance" and was only later in the compositional process consciously appropriated for use in the Part 2 Introduction.

Figure 3.6.15: Comparison of harmony at R161 and R82+1. For clarity, the texture at R161 is simplified to show underlying chords only. The example is laid out such that the chords at R161 appear directly above the similar chords at R82+1.



R159 to R162 also continues the common practice-like voice-leading between the outer voices. Figure 3.6.16 shows just the soprano and bass voices from R158, with a plausible functional harmonic analysis of the chords potentially implied by their motion. The chords Stravinsky uses of course have very little to do with these functional possibilities, but the logic and familiarity of the contrary motion voice-leading frame helps to give the harmonies a sense of focus and direction.

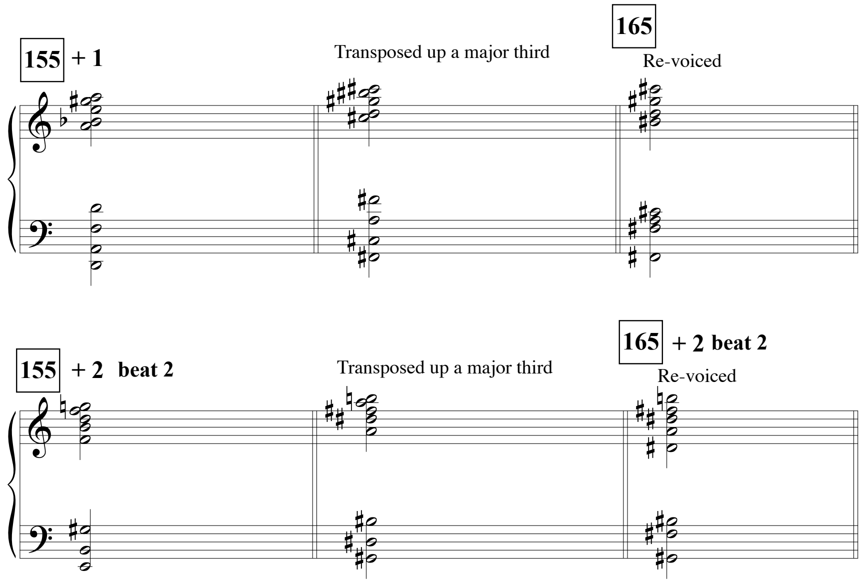
Figure 3.6.16: Outer voices at R158, with implied functional progression.



At R162, the R149 chord returns, now down a whole-step on C (or F). It is striking that this transposition is a major second down, considering how frequently we have encountered *minor* second down transpositions earlier in the work.[112] At R163, the trombone half-step quintuplet melody returns, and R163 to R164+2 exactly parallels R151 to R152+1, down a major second. R165 is an important turning point. The texture suddenly intensifies with trills and chromatic neighbor figurations and an eventual acceleration, and the harmonic parallelism with the R149 section breaks down. Instead of the reset that happens at R153, at R165 the intensity only continues and increases. The initial harmonies here are very close to being a major third transposition up from the section at R154. The downbeat at R165 is the R155+1 chord transposed up a major third and re-voiced, while the chord on beat 2 of R165+2 is the R155+2 beat 2 chord transposed up a major third and re-voiced (Figure 3.6.17). Here, to increase the intensity more quickly, Stravinksy does not bother with re-stating the milder R154 version of the chord, but jumps right into its more dissonant variant from R155+1. There is yet another intriguing parallel with the opening of Part 2 here. As we saw in Figure 3.1.20, the section at R83 is a well-disguised transposition of R80+1 up a major third, in a similar manner to R165's major third up transposition of R154. It is unlikely that any listener would hear this connection explicitly, but it may help to give the "Sacrificial Dance" its sense of inevitability – we have heard these same basic harmonic patterns before, even if we are unaware of it.

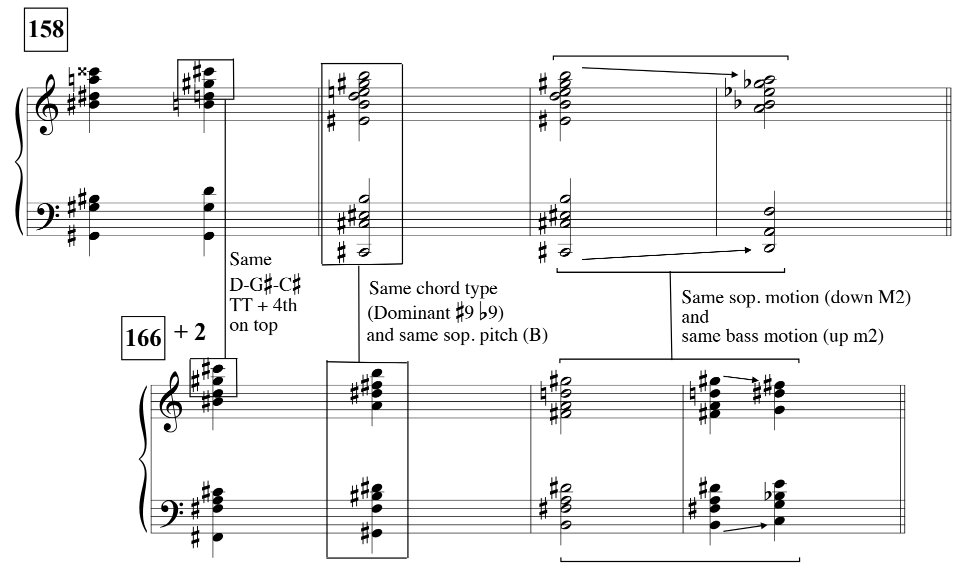
[112] Cacioppo 1992 gives a functional reason for the modulation here, considering it "III" in D minor (while at R149 it was on "iv.") As discussed previously, I can possibly imagine Stravinsky *conceiving* of it in this manner, but I don't believe it actually *functions* in this way.

Figure 3.6.17: First two chords at R165 are major third up transpositions of the chords at R155+1 and R155+2 beat 2.



After two alternations of the above chords, two bars before R167 the harmony moves up through octatonic extended dominant chords on B and C. There is a complex set of connections between R165-R167 and R157-R159. As we saw above, the first two R165 chords are a major third up transposition of two of the R155 chords. The first of these chords also shares the top three pitches – a D-G♯-C♯ tritone-plus-fourth sonority – with the R157+1 chord and the R158 beat 2 chord. The second chord, another Dominant ♯9-♭9, is the same chord type as the R157+2 chord, and also shares the same soprano pitch, B (even though its root is G♯ rather then C♯.) This makes the soprano motion between the two R165 chords the same as that between the R157+1 and R157+2 chords (C♯ to B), despite different harmonies. Finally, the motion into the cadence at R166+4 parallels the voice-leading into R159, with the soprano in both moving down by major second and the bass in both moving up by minor second. These relationships are most succinctly shown by comparing R158 and R166+2, as Figure 3.6.18 does below.

Figure 3.6.18: Comparison of chords at R158 and R166+2.



R167 to R174 is an abbreviated recap of R142, down a half-step – yet another example of the large-scale half-step descent that we have seen on several other occasions.

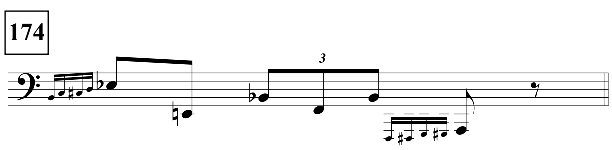
R174 erupts in a burst of percussion and is one of the most harmonically anarchic sections of the piece. It perhaps best epitomizes the early perceptions of many that *The Rite* was a haphazard orgy of discordant sounds without method or logic. As we have seen in only a few other places in the work, the only real explanation for the harmony here is an overlaying of essentially unrelated threads, held together (if indeed it does hold together) through repetition and the sheer boldness of their juxtaposition.[113]

The first thread is the bass/percussion line, which continues for the duration of the section, shown in its basic form in Figure 3.6.19. It highlights the E-E♭ major seventh that was

[113] On a subjective note, I have always personally found this section and the similar material at R181 to be the least compelling music in the entire work. Might this be because it seems to lack the careful concern for vertical sonority that characterizes even the most dissonant and dense passages of the rest of the piece?

such an important interval in Part 1, as well as the E♭ to A tritone. It also hints both at a stacked fourth F-B♭-E♭ set and also at both the tritone-plus-fourth and fourth-plus-tritone on E♮, all important sonorities from earlier in the piece. That said, in most performances any sense of actual pitch content is minimal due to the smearing bass grace notes, trombone glissandos, and barrage of percussion.

Figure 3.6.19: Bass and percussion motive at R174.



Layered on top of this the horns enter on blaring D octaves that become the starting pitch of a whole tone melody (Figure 3.6.20). At R176 and again two bars later when the whole tone melody lands on F♯, a *sff* C-G fifth hits an eighth note later in the woodwinds and horns, perhaps evoking the C Lydian hits from "The Dancing Out of the Earth," which similarly appeared over a whole tone scale below. They even have the same exact piccolo grace note pattern leading into them (Figure 3.6.21). In the next bar there is a strange variant of the whole tone melody in non-whole-tone parallel thirds that also ends on a C-G fifth. At R177, against the continuing bass line and blaring D's, the third-harmonized eighth-note melody continues, culminating in another whole tone version in the bar before R180.

Figure 3.6.20: Whole tone melody at R175.

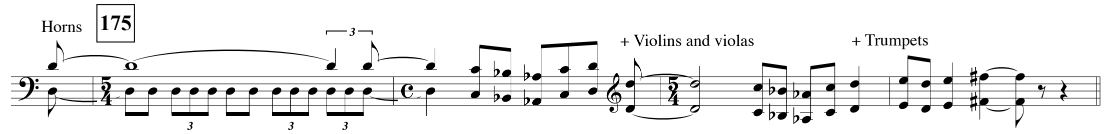
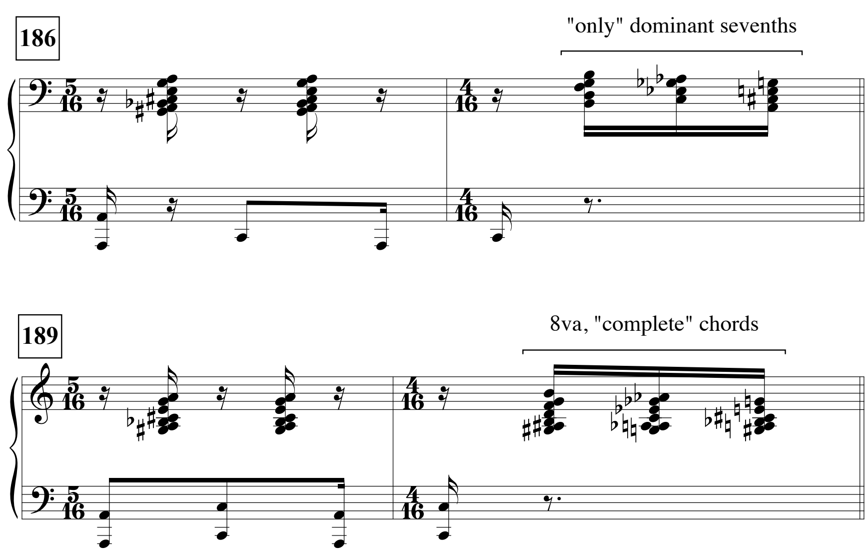


Figure 3.6.21: Comparison of C Lydian hits at R72 and R176.

R180 is another return to the material from the beginning of the movement, now back at the "correct" pitch level of D. But it lasts only seven bars before the percussive fury of the previous section returns in an even more intensified form. At R181, the same bass-percussion line is back, along with the blaring D's that periodically spin off into whole tone melodies. Now, though, the accompanying harmony is a bit more regular, consisting primarily of parallel major triads. These triads start off moving down by half-step and later move up by whole step, but the specific patterning is difficult to predict or explain. One more element is added to the mix at R184, with a screeching perfect-fifth-plus-many-octaves-up transposition of the bass line, in the piccolo trumpet, E♭ clarinet, and finally piccolo.

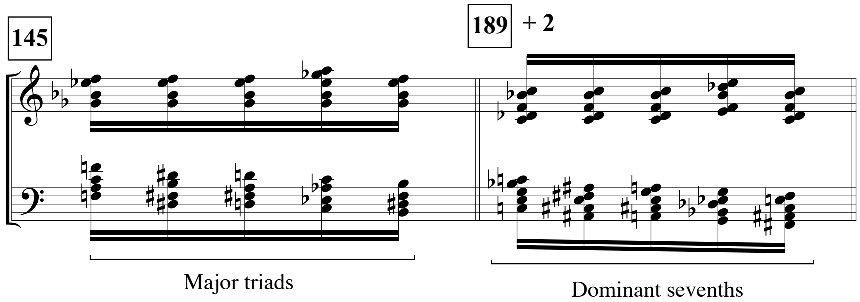
At R186, the “A” theme returns once again, now in A rather than D or C♯. It is lower in register with a sparer instrumentation, and correspondingly less dense harmonies. While the first bar includes the “complete” dominant-seventh-plus-chromatic-neighbors chord from the beginning of the movement, bar two consists of “only” pure dominant sevenths. This is likely the result of registrational and orchestrational considerations: having the complete chords in such a low register would have made things too muddy. Indeed, at R189+1 the same pattern occurs an octave higher, but now with the “complete” harmonies (Figure 3.6.22 compares them).

Figure 3.6.22: Comparison of R186 and R189.



R189+3 is almost the music from R145 transposed into A, but now with minor third related dominant sevenths in the lower part rather than major triads – a slight *thickening* of the harmonic texture that perhaps balances out the *thinning* at R186 (Figure 3.6.23).

Figure 3.6.23: Comparison of R145 and R189+2.



From R190 to R192, the R186 material continues, intensified by another octave rise and continued registral thickening of the texture. Even though the harmony remains essentially static, registral and orchestrational changes (as well as rhythmic procedures, of course) create a sense of forward momentum and build.

R192 picks up the brief closing gesture from R148 (up a perfect fifth) and expands it out for the next 45 bars, nearly to the end of the piece. There are two basic components here. The first (the "antecedent") is the rising figure which, like R148, juxtaposes downward moving octatonic minor third related harmonies (now dominant sevenths instead of major triads) on the bottom with harmonic major material above (Figure 3.6.24). The second component is the purely octatonic "consequent" which has the same dominant sevenths in the horns (A, E♭, F♯) with an added flat ninth in violin 2 and viola (Figure 3.6.25). At R193+4 the consequent adds another step above with the same harmonic pattern and at R194+2 it adds yet another step above, with a C dominant 7, all still within the same octatonic minor thirds cycle of dominant 7ths (with added flat 9ths in the violins) (Figure 3.6.26).

Figure 3.6.24: “Antecedent” harmony at R192.

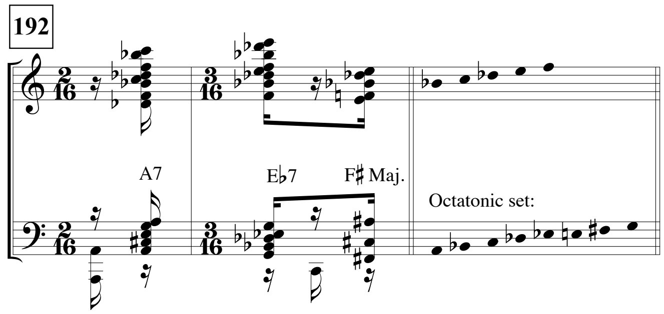


Figure 3.6.25: “Consequent” at R192+2

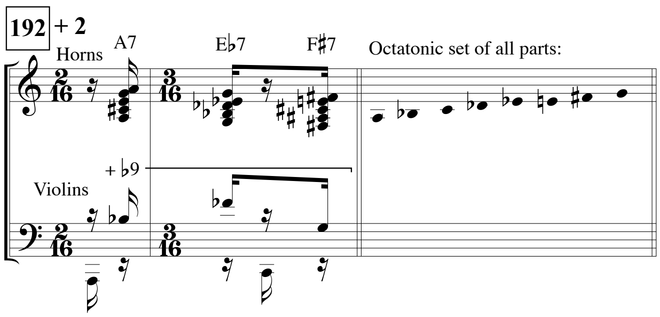
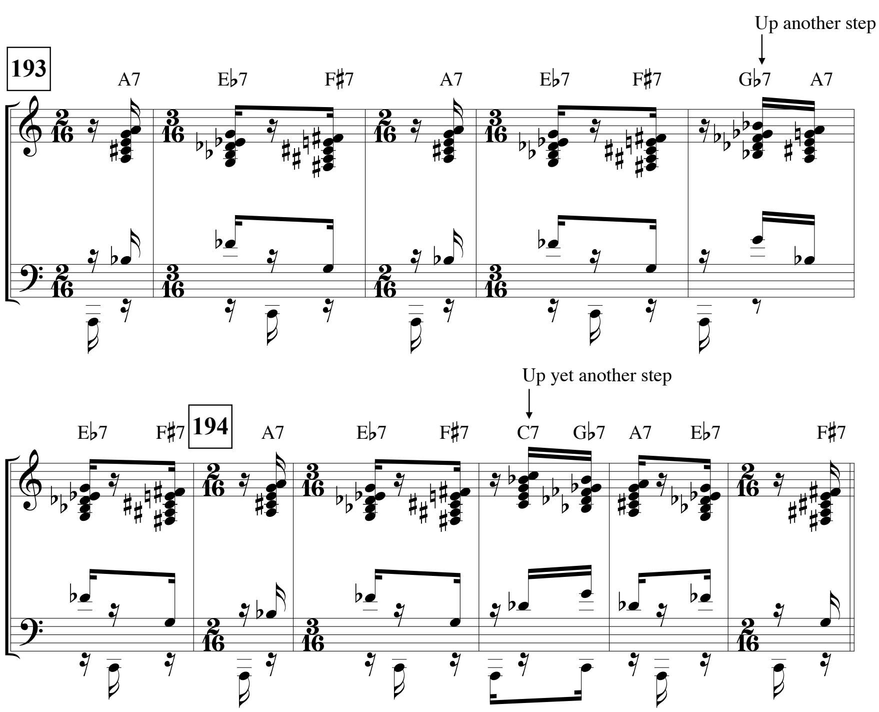
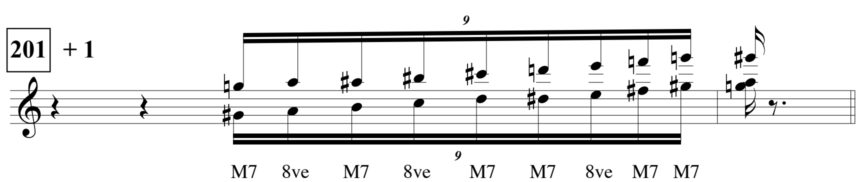


Figure 3.6.26: Additional steps in the consequent at R193+4 and R194+2.



At R196, the music gets stuck on the antecedent, which adds one step higher at R197+1. From here on, the development is purely rhythmic, until at R201+1 one more step up is added to the pattern, with a G-F♯ major seventh then left hanging in the violins. The very ending of the piece is really more gesture than harmony. At R201+1 the flutes have a run in (mostly) alternating major sevenths and octaves, followed by an upbeat shriek and downbeat thump. The flute run to me has the effect of "failed" octaves – like two instruments trying to play the same pitches, but too beleaguered to do so successfully. It makes sense dramatically as the sacrificial virgin's last exhausted attempt to stand up, but it seems a stretch to ascribe too much meaning to the actual pitches (Figure 3.6.27).[114] The final harmony of the run and the following "shriek" are both a G-G♯-A cluster spread over two octaves, and also have resonances with other moments in the work (Figure 3.6.28). The final harmony, shown in Figure 3.6.29 is difficult to relate to anything else of significance in the piece.[115]

Figure 3.6.27: Flute runs at R201+1, with the intervals between the parts indicated (either major seventh or octave).



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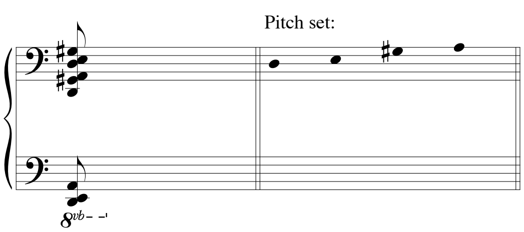
[114] Taruskin (1996, 938) notes that each flute part consists of two octatonic pentachords from different collections, with one exception in the second half of the alto flute run. This may well be, but I would still hesitate to ascribe too much harmonic significance to it. Taruskin also connects it to the flute and piccolo grace note rips in "The Naming and Honoring of the Chosen One." This idea of this final run as a dessicated, beleaguered version of those earlier confident, aggressive rips is compelling.

[115] Forte (1978, 130) connects this harmony to R2 in the Part 1 Introduction, as well as the bass line at R87. However, both of these other examples are inversions of the final chord pitch set, are at different transpositions, are in very different registral arrangements, occur much earlier in the work, and are not especially significant moments harmonically or dramatically. I find it quite difficult to believe that any sort of connection between them could actually register, even for the most sophisticated listener at the most subliminal level.

Figure 3.6.28: Resonances between "shriek" harmony at R201+2 and other G-G♯-A clusters in the work.

Figure 3.6.29: Final harmony of the work.



Many have commented on the difficulty of bringing a piece like *The Rite* to a close. Even before the ending, the work has almost never had any real sense of harmonic closure or cadence; the primary method of ending one section and starting the next has been build-up and interruption. What do you do when you have your final build-up and there is nothing left with which to interrupt it? Personally, as much as I love the work, the ending almost always feels a bit disappointing. Perhaps this is inevitable: it is exactly those qualities that make the piece so uniquely compelling that also make it nearly impossible to bring it to a satisfying close.

From a harmonic perspective, Stravinsky's approach to harmony also makes it nearly impossible to find the "right" chord to sum everything up. There is no tonic triad, no prime form of the row, no single fundamental harmony. As I have argued and will argue further in the next two chapters, the harmony works as a complex web of interlocking relationships. Each harmony is a node, connected to others in many different ways, but no single harmony forms the center of this network or sits at the top of a hierarchy. Therefore, no harmony is able to assert its priority to be convincingly final. Given this reality, and the theatrical nature of the original work, Stravinsky's focus instead on gesture and timbre for the final moments of the work may have been the most viable approach. Or perhaps he simply miscalculated or failed to effectively deliver the ending he envisioned.[116]

[116] An interesting, but perhaps impossibly bold and presumptuous exercise would be for a composer well-versed in *The Rite's* idiom and techniques to attempt to compose a more satisfying ending to the work.

CHAPTER 4: ZOOMING OUT: LARGER PATTERNS, CONNECTIONS, GENERALIZATIONS

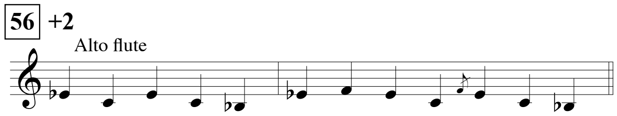
Now that we have considered the whole piece in detail, it is time to zoom out, look at patterns and connections between different parts of the work, and start drawing some conclusions. It is important to emphasize again that this is a not a neat and tidy piece, easily summed up with a few Big Ideas. All generalizations and conclusions are necessarily partial, and some parts of the work are difficult to fit into any of the patterns and schemes that we will identify. Nonetheless, by generalizing at least some of the patterns and techniques in play, we can gain some insight into what makes the piece work the way that it does. And as composers, we can come away with a number of concrete ideas to apply to our own work.

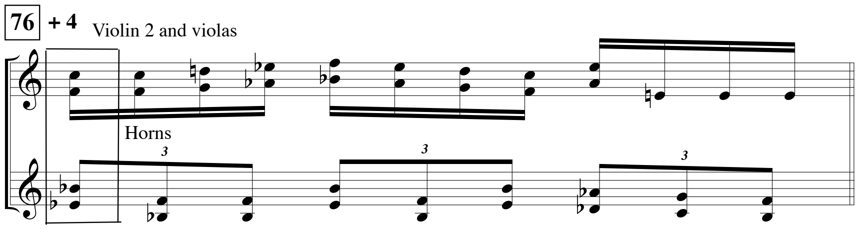
4.1 STACKED FIFTHS / (0 2 5 7) SETS

One of the central melodic and motivic sets in *The Rite* is the (0 2 5 7) set, often (though not always) expressed as stacked fourths or fifths. In our Part 1 analysis, we traced this set's journey extensively. The specific set of stacked fifths rooted on E♭ –
E♭-B♭-F-C – is the central (0 2 5 7) set in Part 1, making numerous significant appearances, as Figure 4.1.1 shows.

Figure 4.1.1: Appearances of E♭–B♭–F–C (0 2 5 7) set in Part 1.

(Figure 4.1.1 continued)

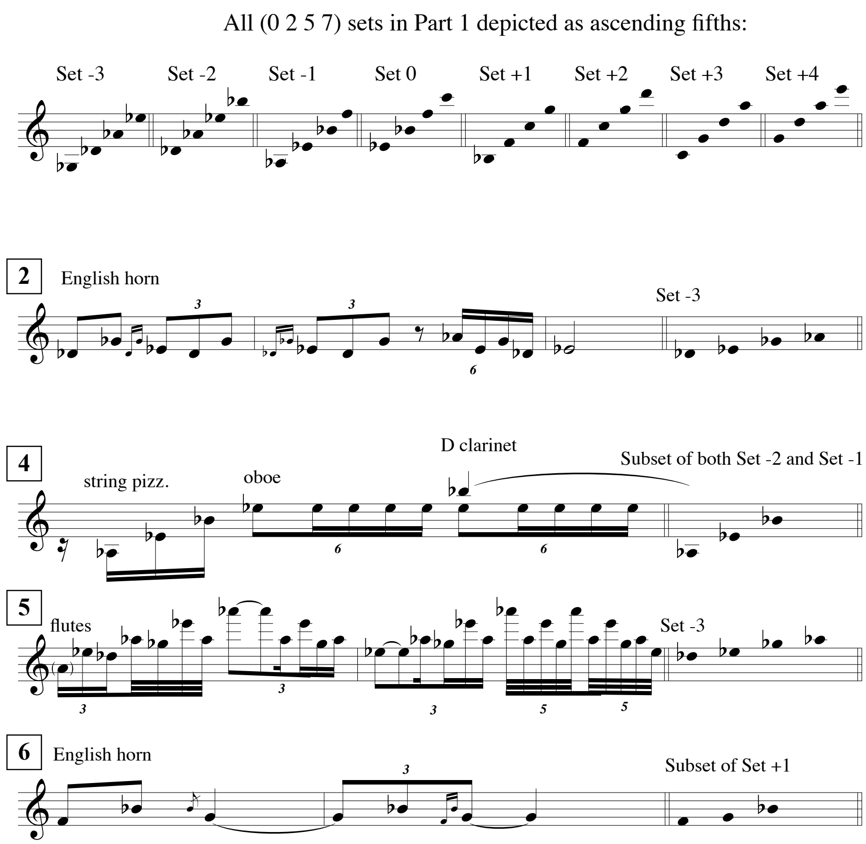




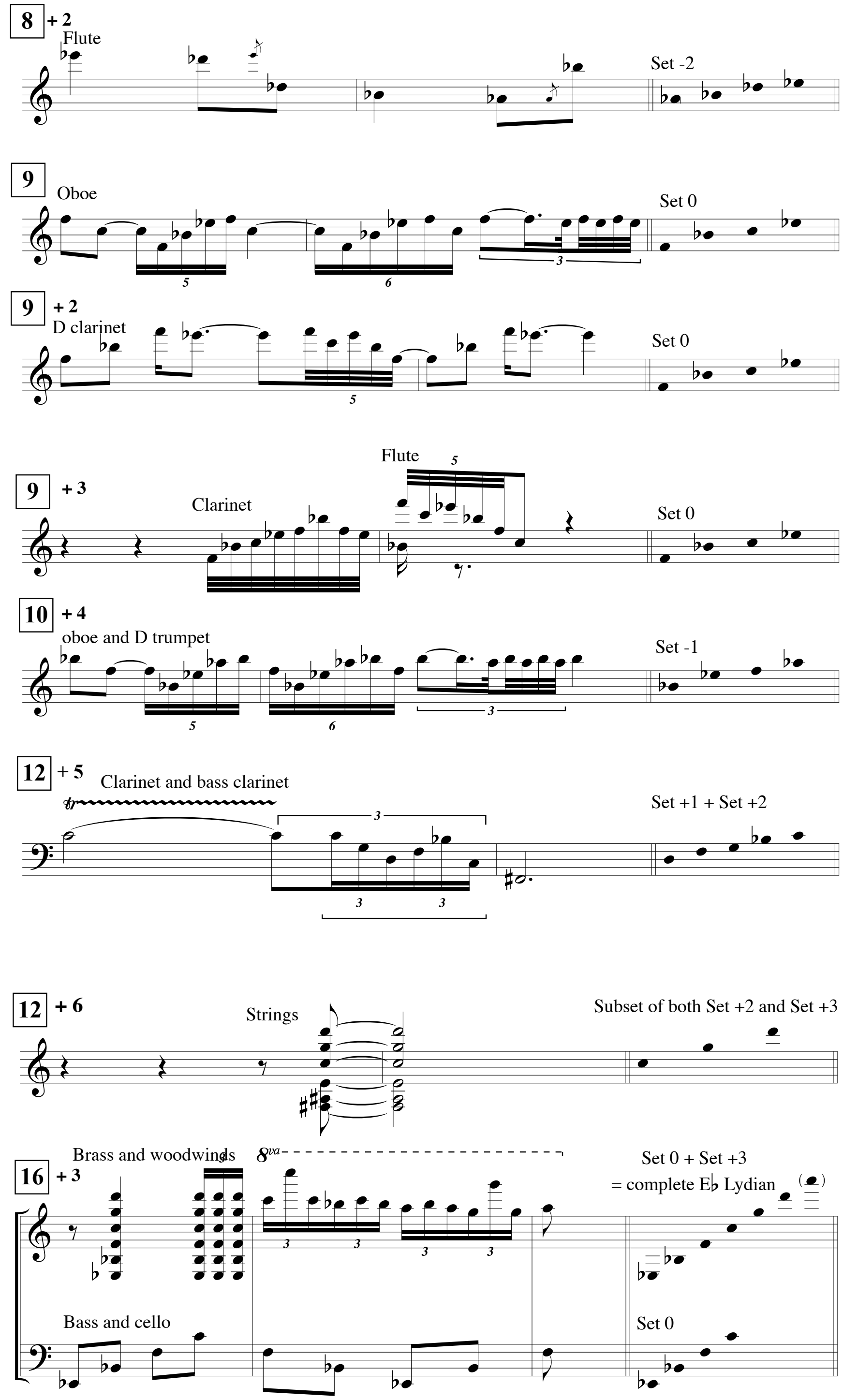
There is also a very general pattern in Part 1 of (0 2 5 7) sets tending to rise up a ladder of ascending fifths. In the Introduction, all of the (02 5 7)'s numerous appearances involve one of the four (0 2 5 7) sets that include E♭ and they also generally rise from the lower ones to the higher ones over the course of the section (see Figure 2.1.30). In "Augurs of Spring" we find a general pattern of motion up from E♭–inclusive sets to the C-G-D-A set at the end of the movement, mirroring the dance's motion from an E♭-centered world to a C-centered world. "Ritual of Abduction" initially continues the fifths rise with a G-D-A-E set in its opening melody, and then re-sets down to the A♭-E♭-B♭-F set, followed by a completely systematic rise up a fifth on each restatement of the theme to the F-C-G-D set at R54+1 (see Figure 2.3.23). Before this final statement of the theme, however, comes the first part of "Spring Rounds," which extends the central E♭-B♭-F-C fifths stack *down* to A♭, D♭, and G♭, creating an E♭ Dorian mode (see Figure 2.4.6).

Stacked fifths and (0 2 5 7) sets are then on hiatus for the next three movements, appearing again in "The Dancing Out of the Earth," with a return of the central E♭-B♭-F-C stack (see Figure 2.8.6). Figure 4.1.2 presents all of the (0 2 5 7) and stacked fifths motives and melodies in Part 1. The central E♭-B♭-F-C set is labeled as “Set 0” with positive numbers for the sets above it (i.e. “Set +1” for B♭-F-C-G) and negative numbers for the sets below it (i.e. “Set -1” for A♭-E♭-B♭-F). This representation helps to bring home the points that the E♭-B♭-F-C set remains central throughout, and also that while there is a *tendency* for sets to rise up the ladder of fifths, it is far from exact or systematic.

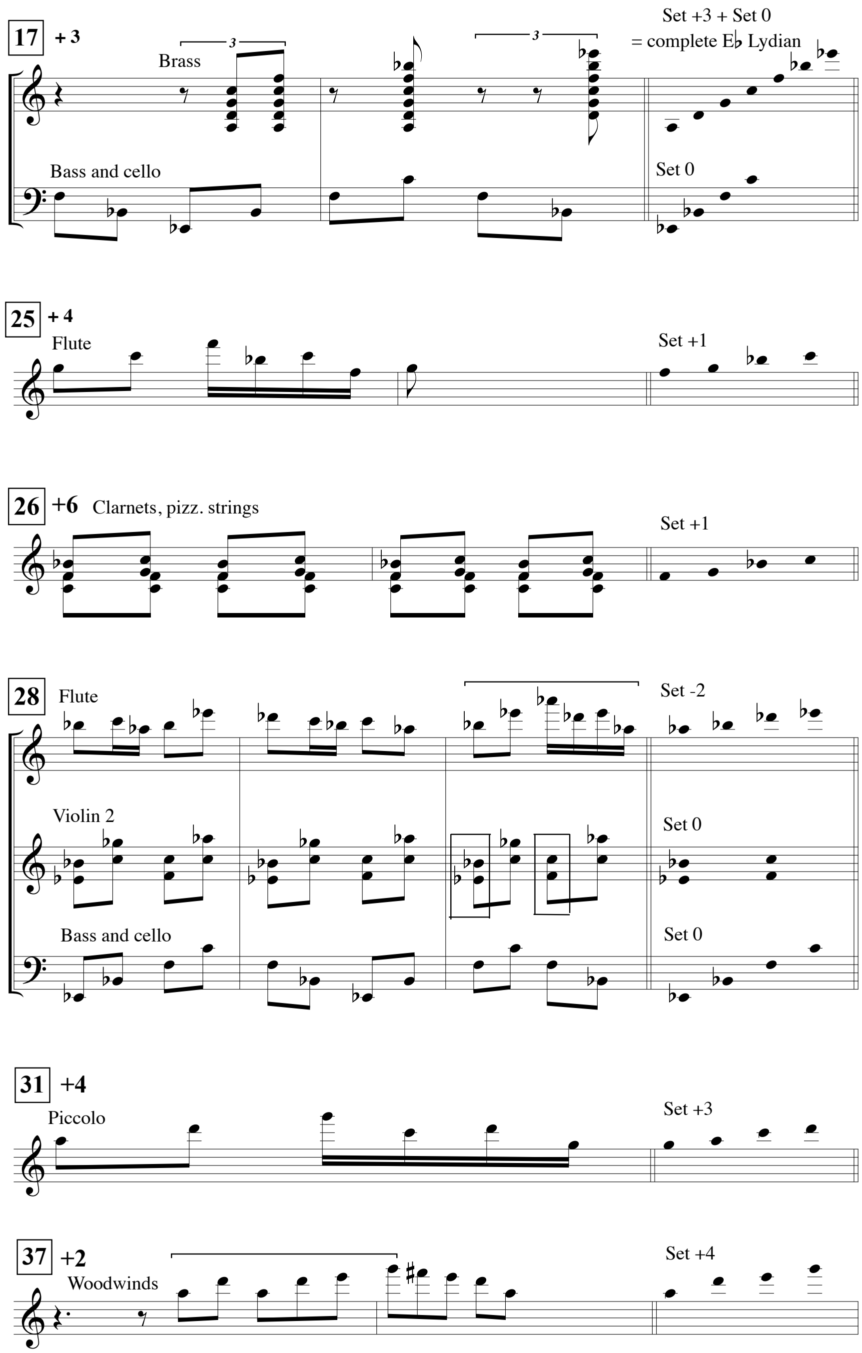
Figure 4.1.2: All appearances of (0 2 5 7) and/or stacked fifths in Part 1. The central E♭– B♭-F-C stack is “Set 0” with positive numbers for the higher sets and negative numbers for the lower sets.



(Figure 4.1.2 continued)



(Figure 4.1.2 continued)



(Figure 4.1.2 continued)

(Figure 4.1.2 continued)

In Part 2, stacked fifths are far less salient, but (0 2 5 7) sets still make quite a few appearances, almost all of them in the various statements of the "chorale" melody from the Part 2 Introduction. This is first heard in full at R81+1, and consists of the pitches from the highest (0 2 5 7) set reached in Part 1, at the beginning of "Ritual of Abduction:" G-D-A-E. From here, the Part 2 (0 2 5 7)'s consist of still higher sets: A-E-B-F♯ at R89, E-B-F♯-C♯ at R91, R95, and R100, and B-F♯-C♯-G♯ at R83 and R139 (Figure 4.1.3). The highest of these sets is also one fifth *down* from the *lowest* stacked fifths set from Part 1, as Figure 4.1.4 shows, effectively completing an entire ascending fifths cycle across the piece as a whole. While Part 2 doesn't work its way through these (0 2 5 7) sets in any sort of systematic way, it is striking that the sets featured in Part 2 are exactly those that are *not* included in Part 1 (except for the very first Part 2 set, which overlaps with the highest set from Part 1). The only other exception is the major seventh shadow at R95, which subtly brings back Part 1's central E♭-B♭-F-C stack one last time (Figure 4.1.5).

Figure 4.1.3: All appearances of (0 2 5 7) melodic sets in Part 2, depicted as ascending fifths. The lowest one overlaps with the highest (0 2 5 7) from Part 1, and the others are not found in Part 1 at all. The sets continue the numbering system from Figure 4.1.2, beginning with "Set +3."

All (0 2 5 7) sets in Part 2 depicted as ascending fifths:

Figure 4.1.4: The highest (0 2 5 7) in Part 2 is one fifth down from the lowest (0 2 5 7) in Part 1.

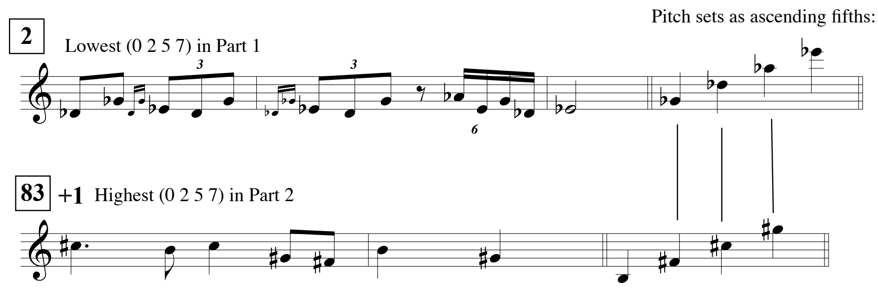
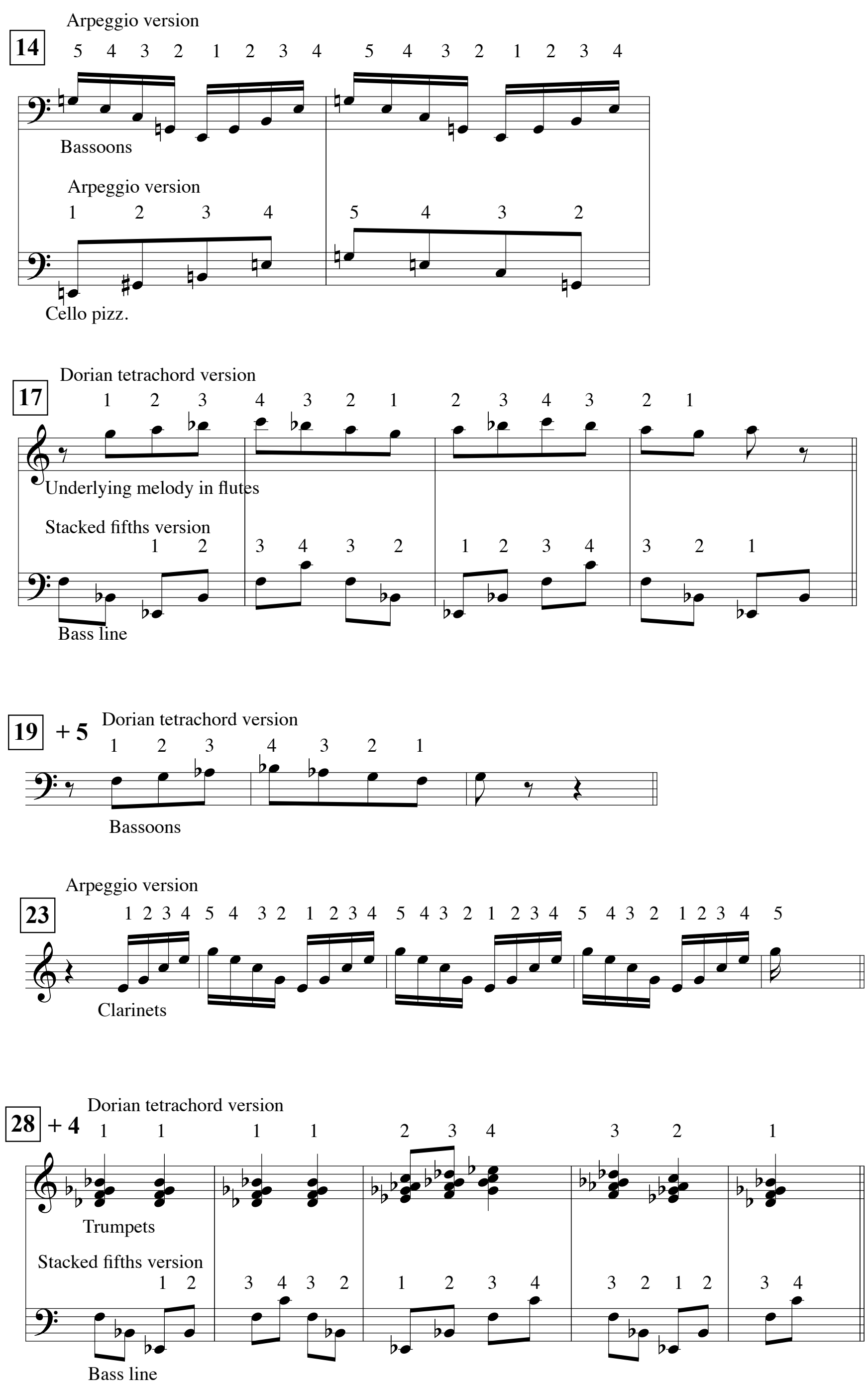


Figure 4.1.5: Return of E♭-B♭-F-C (0 2 5 7) set as major seventh shadow at R95.

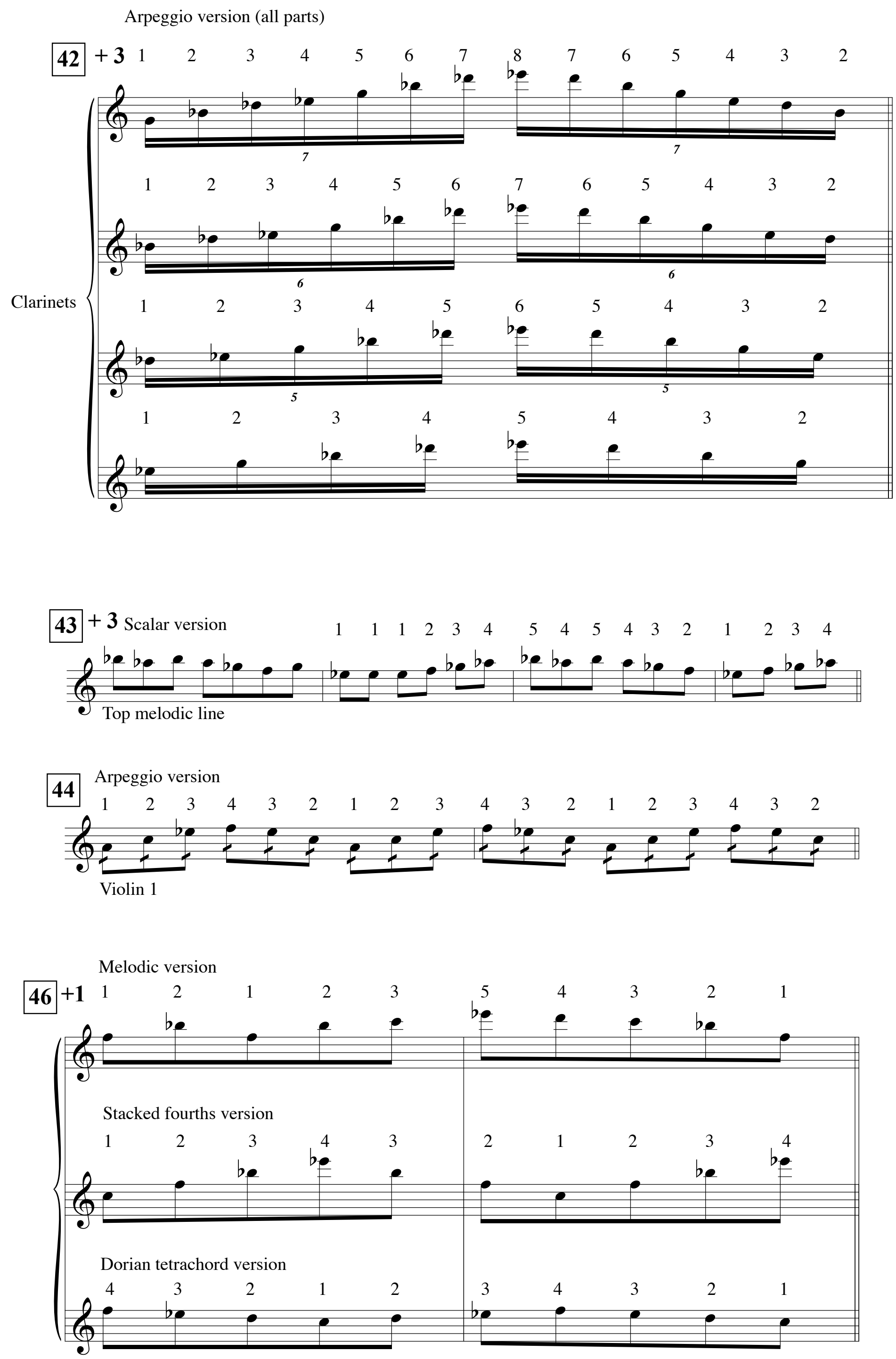
4.2 1-2-3-4-3-2 PATTERNS

Another pattern that was central to Part 1 but much less significant in Part 2 is the 1-2-3-4-3-2 pattern, which manifested in a wide range of different contexts. While the basic contour of ascending and descending steps remains constant, the total number of steps in this pattern is variable, as are the units that make up the steps, ranging from scale steps to arpeggio steps to stacks of fourths/fifths. Figure 4.2.1 presents all explicit appearances of this pattern in Part 1 (except for exact or near-exact repetitions, including transpositions). These examples are the most explicit and uncontroversial ones. One could find many additional examples of more abstracted or speculative versions of this pattern; once you begin viewing motives in Part 1 through the lens of this pattern, it seems to pop up everywhere. I have not been able to detect any particular pattern or process behind how and when this technique is deployed. It seems to function at a quite deep background level as one of the primary generators of motivic material in Part 1.

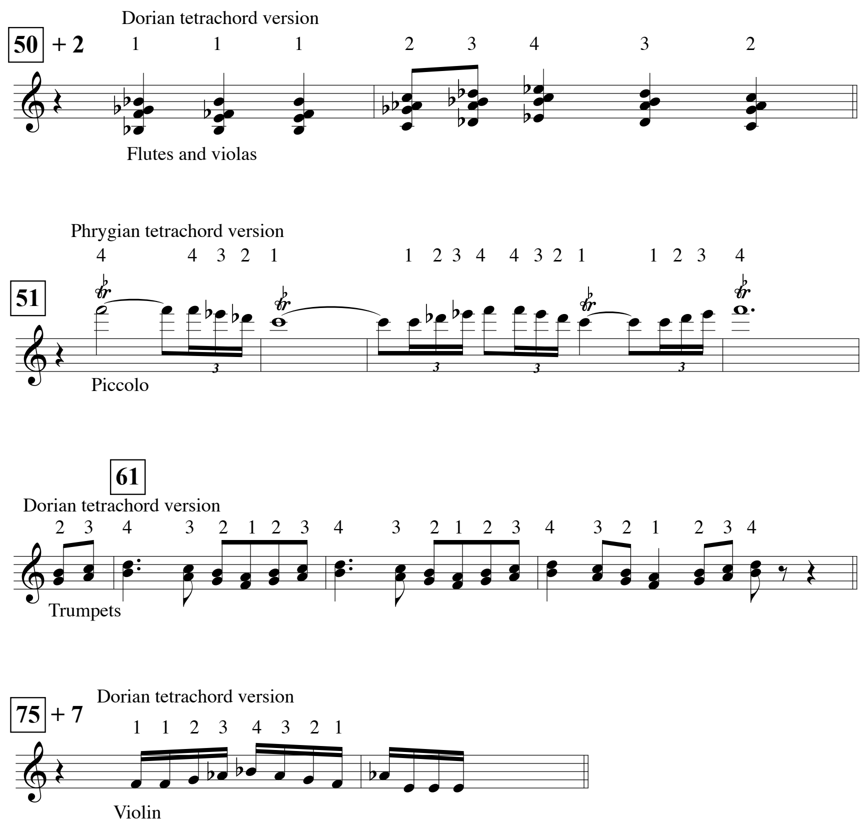
Figure 4.2.1: 1-2-3-4-3-2 based patterns in Part 1.



(Figure 4.2.1 continued)



(Figure 4.2.1 continued)



4.3 CHROMATIC CLUSTERS

Another pattern we have continually run into over the course of our analysis is a three- to five-note chromatic cluster, most typically around the central pitch D_4.[117] Figure 4.3.1 shows all examples of clusters throughout the piece. 4.3.1(a) shows explicit D_4-centered clusters, 4.3.1(b)

[117] To be clear, I am referring only to *harmonic* clusters here, not to melodies of consecutive half-steps. There are quite a few examples of consecutive half-step melodies as well, but I consider them a less noteworthy feature of the piece than the harmonic clusters. Although the pitches in these clusters do not *always* all happen at exactly the same time, they belong to fields of pitches that are in operation concurrently creating an effect, at least to my ear, of "sounding" together.

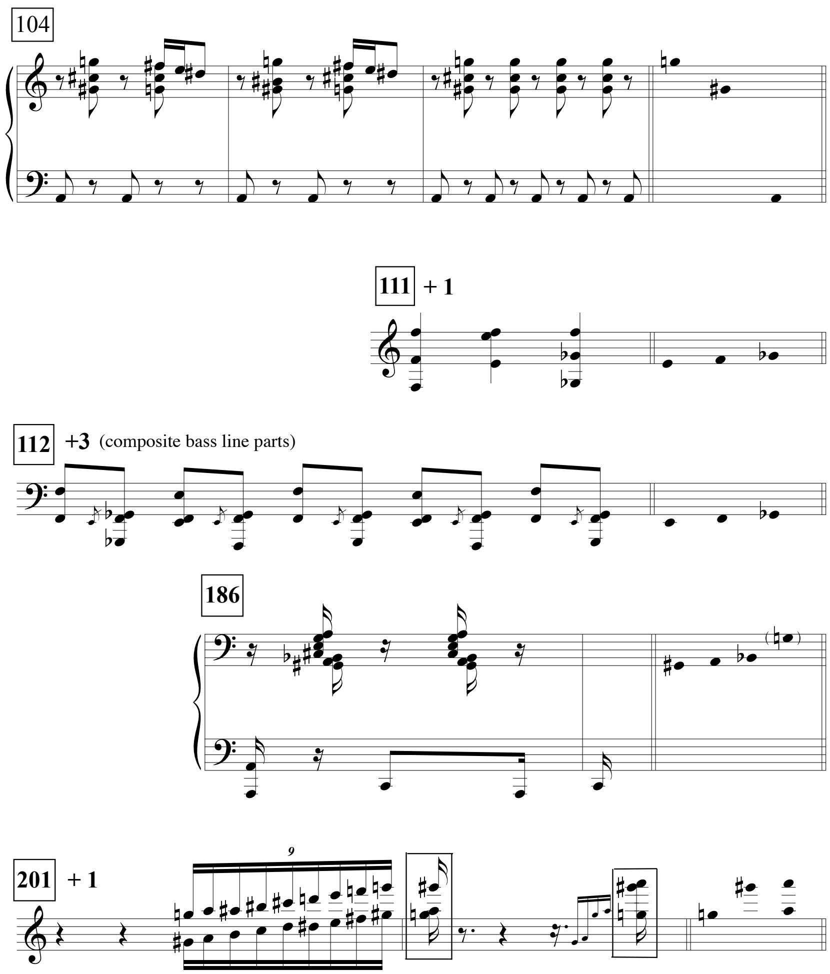
shows somewhat more abstract or speculative D-centered clusters, and 4.3.1(c) shows clusters around other pitches.

Figure 4.3.1(a): Explicit D_4-centered clusters.

(Figure 4.3.1(a) continued)

Figure 4.3.1(b): More abstract / speculative D-centered clusters.

Figure 4.3.1(c): Clusters around pitches other than D.

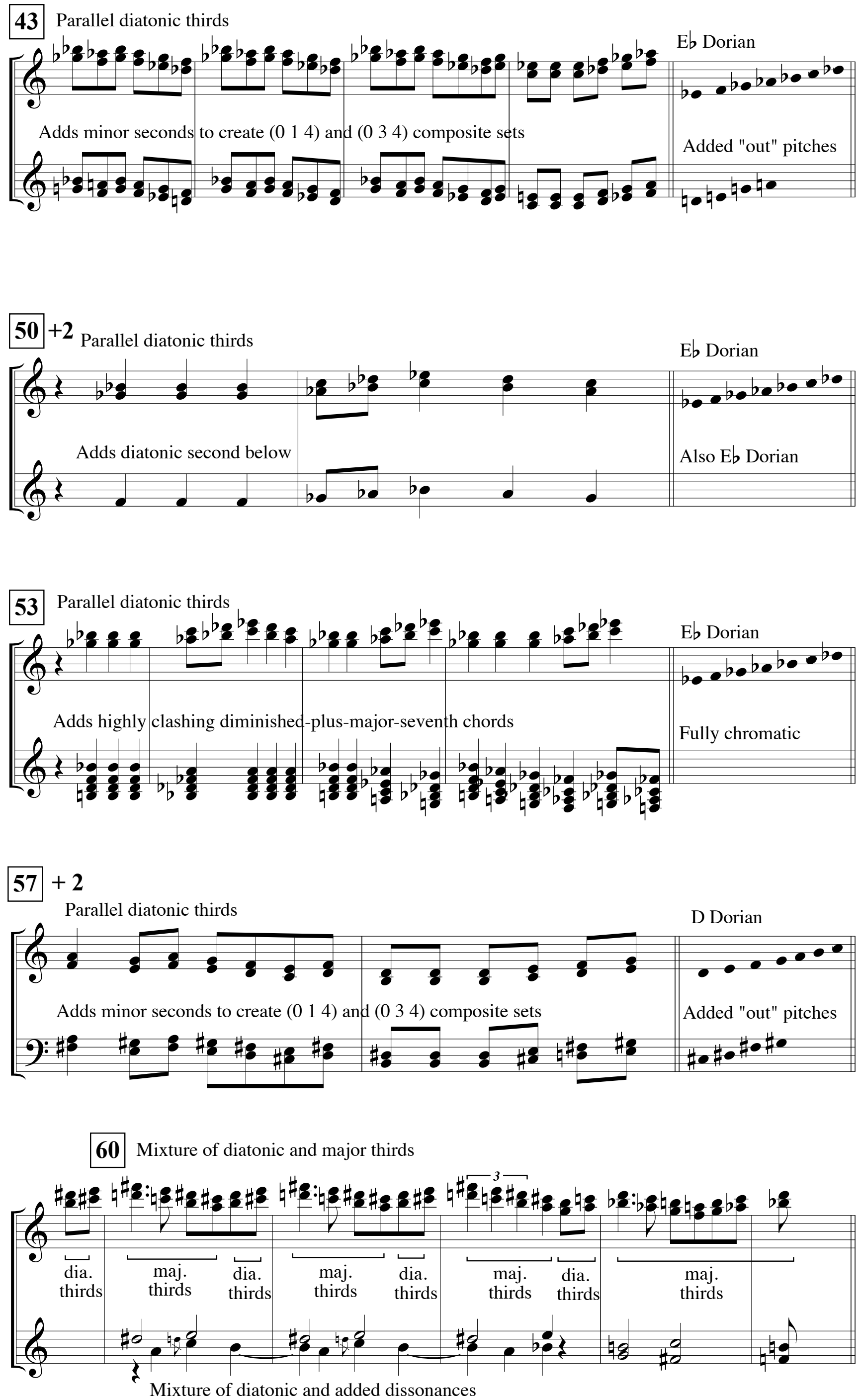


In many cases, the clusters come about as a result of juxtapositions of consonant sets that clash with one another. All of the examples from "Augurs of Spring," for instance, result from the intersection of consonant C and E♭ material, with C contributing the pitches C-D-E and E♭ providing the E♭ and D♭. This is also more or less the case in "The Dancing Out of the Earth," although there the C-D-E comes from the upper half of an ascending whole tone scale. In "Ritual of Abduction," the juxtaposition is more of D verses E♭ material, as at R37+2 and R40. In still other places, the half-step juxtapositions themselves are more starkly highlighted, as at R70, R79, R97+2, and R111+1. At R201+2, the three half-step octave displaced cluster is all there is, the last harmony we hear before the final crashing chord. Finally, in some places the clusters form an essential component of the section's basic ur-chord and cannot really be chalked up to a juxtaposition at all. Examples of this include the chords at R104, and especially the main chords of the "Sacrificial Dance" at R142+3 and throughout the dance's "A" material. The cluster is thus emblematic of Stravinsky's approach to harmony more generally: it is both a distinguishable harmonic object with an identity-unto-itself *and* the "side effect" of a variety of different types of juxtapositions.

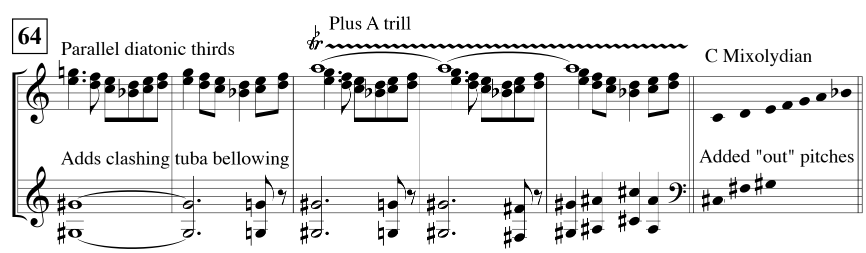
4.4 PARALLEL THIRDS PLUS X

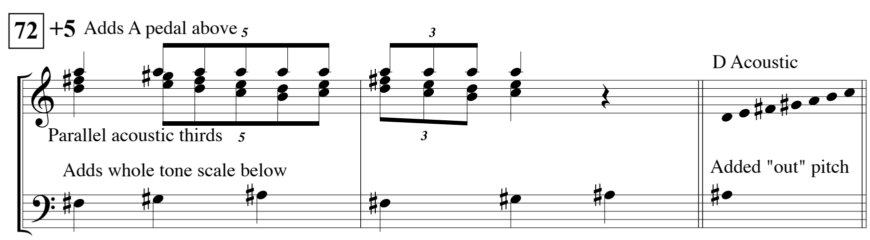
Another pattern we came across frequently in a variety of guises is the "parallel thirds plus X" scheme. This is a specific example of the more general kaleidoscopic oscillation technique, highlighted here because of its ubiquity throughout the piece. In most cases, the thirds are diatonic, though in some they are parallel major thirds. There are a range of different "X's" added to the thirds, but they are generally disruptive in some manner, adding dissonance or other special coloration to the thirds. It is striking that parallel thirds are so prominent in the work, given that they are such a standard pattern in tonal music. The "X" is thus the vital element, allowing Stravinsky to reference the tonal practice of parallel thirds while simultaneously throwing a wrench in it. The similar technique with parallel fourths at the very beginning of the work can be seen as another variant on this approach. Figure 4.4.1 shows all examples of this "Parallel Thirds Plus X" scheme, with explanatory notes.

Figure 4.4.1: All examples of "Parallel Thirds Plus X" scheme.

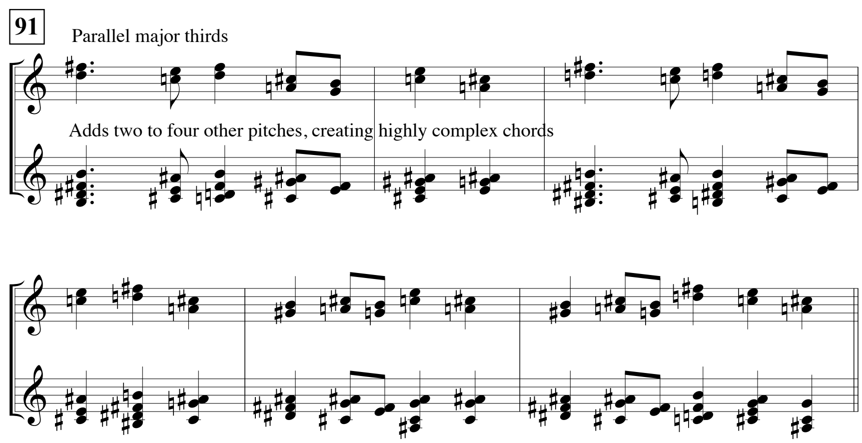


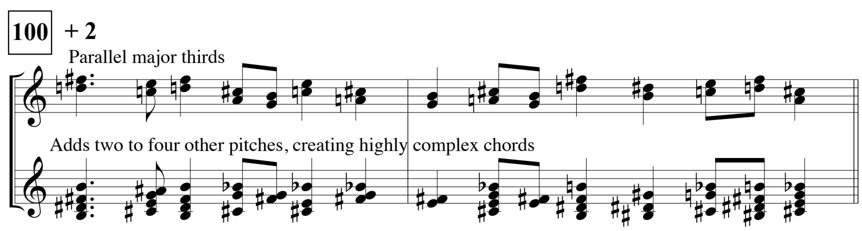
(Figure 4.4.1 continued)



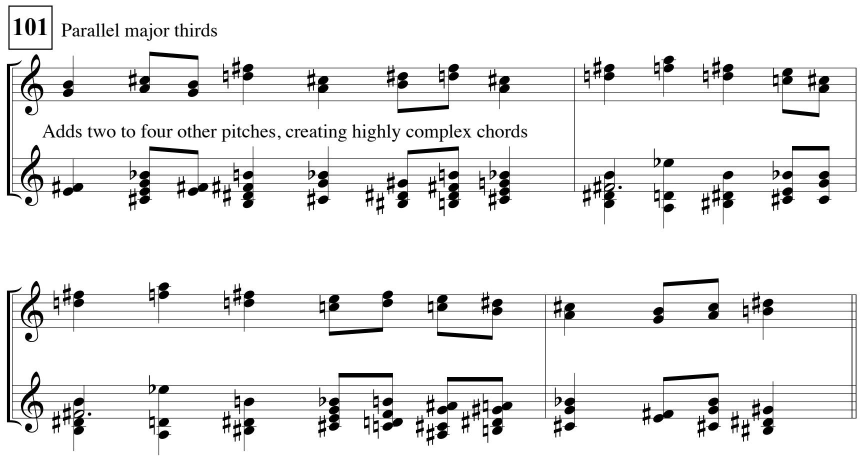


(Figure 4.4.1 continued)





(Figure 4.4.1 continued)



4.5 TONAL ALLUSIONS

Attempts to apply a functional harmonic framework to *The Rite* are problematic, as we saw when we considered Curt Cacioppo's functional interpretation of the work in Chapter 1. But allusions to tonal practice, often warped or distorted, are a vital element of the piece's expressive power. There are several different categories we can sort these tonal allusions into: (1) brief, localized functional progressions; (2) stereotypical tonal melodic or harmonic patterns that are distorted by the other material around them; (3) functional tonality-like voice-leading patterns animated by non-functional harmonies; and (4) prolonged dissonant sonorities that can potentially be derived from passing chords and appoggiaturas with a functionally tonal origin.

Genuinely functional progressions are very rare.[118] The only unequivocal instances of functional harmony I can find occur at R47, R54, and in the first three bars of the piece. There

[118] As discussed in Chapter 1, there are a number of other places where it is possible to interpret a series of pedal points in functional relationship to one another. But since they do not create a sense of directionality or forward momentum, it seems quite a stretch to claim genuinely tonal functions for them.

are also a few arguable "V-I" type progressions, for example across the barlines into R37 and R57 (G to C in the bass in both), as well as the F♭-E♭ "♭II-I" into R16 – although in all of these cases, the sheer length of the pedal point on the "dominant" strongly undermines any potential functional hearing of the passage. The most striking of these functional progressions is the very opening of the work. It sets the stage for a more-or-less functional approach to harmony, but is almost immediately undermined by the chromatically descending parallel fourths at Rehearsal 1.

Moving on to the second category, stereotypical tonal patterns that are not treated in a functionally tonal manner permeate the work. This is the case, first, of many of the melodies. These melodies, as we have seen, consist of small diatonic subsets, and could easily be set in a functional harmonic context. Countless Romantic-era tonal settings of simple folk and folk-like melodies attest to this fact. Stravinsky, however, consistently subverts the melodies' functionally tonal implications in a number of ways. First, when he does set the melodies in a purely diatonic context, he treats the diatonic set as a static, pedal-bound pitch field, rather than as a source for dynamic chord progressions. This is the case, for example, with the melodies at R28, R31, and R32 in "Augurs of Spring," which float through non-progressing, pedal-bound washes of E♭ Dorian, C Ionian, and F Acoustic, respectively. It is also true of the "Spring Rounds" melody after R50: Although there is perhaps a sense of progression from I to IV within each bar, as the bars pile up it becomes repetitive and static, with each bar doing exactly the same thing as the previous one. It doesn't progress forward toward a goal the way functional harmony does, but endlessly cycles. In these cases, the underlying diatonicism of the melodies is reinforced, but the harmony is static rather than progressive. In "Ritual Action of Ancestors" the diatonic subset melodies at R132, R134, and R138 are similarly set over a non-progressing pedal-bound wash, but this time the set is octatonic rather than diatonic.

In other cases, the harmony more explicitly undermines the melodies' diatonicism. The melodies at R16+4, R17, and R25, for example, are harmonized with multiple different, clashing diatonic sets, creating ambiguity over which set the melody should be considered to belong to. At R19 and R37, the melody is set over a static, pedal-bound harmony, but this harmony is highly dissonant and non-diatonic. The diatonic melodies throughout "Ritual of the Two Rival Tribes" are set in a mostly diatonic context, but with two to four clashing "out" pitches. At R1, R3, and R93, the melodies are set over slithering chromaticism with no relationship either to diatonicism or functional harmony. Finally, at the end of the Part 1 Introduction (R10-R12), in "Procession of the Oldest and Wisest One," and in "The Dancing Out of the Earth," multiple different diatonic (and non-diatonic) melodies with conflicting pitch sets are piled up on top of one another.

When Stravinsky sets his melodies chordally, rather than over a pedal, he does so with a range of kaleidoscopic oscillation games of varying levels of density and dissonance that bear little relationship to functional harmony. This is the case, for example, with the many different harmonizations of the "chorale" melody in the Part 2 Introduction (see Figures 3.2.3 through 3.2.8).

Another stereotypical tonal pattern Stravinsky uses is parallel diatonic thirds. These permeate the piece, as we saw in the "parallel thirds plus X" section above. As we saw, this stereotypical tonal pattern is constantly subverted by the added "X" (see Figure 4.3.1). This transforms one of the most characteristic, almost clichéd textures of tonal music into something with far more tension.

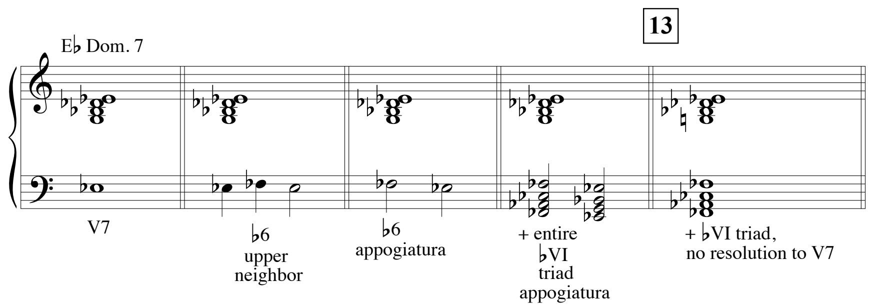
The third category, functional-like voice-leading patterns animated by non-functional harmonies, characterizes much of the Part 2 Introduction, as well as parts of the "Sacrificial

Dance." As we saw in Section 3.1, the striking sonority that opens Part 2 immediately both alludes to and undermines functional harmony and voice-leading. In the upper register, there are two oscillating minor triads, a major second apart. Taken on their own, it is plausible either that the first chord could be the "tonic," decorated by an off-beat lower neighbor; or that the second chord could be the "tonic," decorated by an on-beat appoggiatura. But the bass harmony is right in the middle of both of them, a half-step away from each, undermining both interpretations. Instead of a controlled alternation of consonances and dissonances, now *both* the downbeat and offbeat are dissonant, and dissonant in the same way, forming the same chord-type with the bass harmony below. The major second oscillation in the upper unit creates an expectation of a "tonal" flow of consonances and dissonances, but the bass unit undermines it, creating instead a static alternation between two equivalent, dissonant harmonies.

As the music progresses, there are two stretches of common practice-like voice-leading between the soprano and bass animated with mysterious, non-functional chords, first at R79+5, and then from R82 up to R83 (see Figures 3.1.15, 3.1.18, and 3.1.19). The "Sacrificial Dance" has many harmonic parallels with the first part of the Part 2 Introduction, as we saw in Section 3.6. In particular, the R82 progression recurs almost exactly at R161 in the "Sacrificial Dance," similarly evoking a functional voice-leading frame containing non-functional harmonies (see Figure 3.6.15 and 3.6.16). These passages create some of the most uncanny music in the work, as familiar voice-leading patterns are animated by deeply strange harmonies.

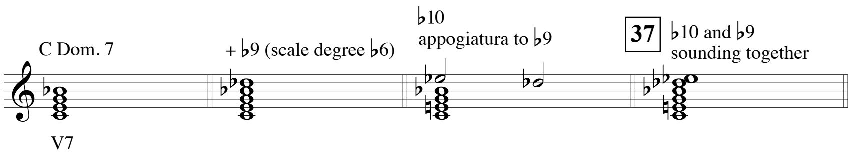
Finally, one way to explain several of the work's most iconic block harmonies is as very extended prolongations of functionally tonal passing dissonances. For example, the bottom F♭ major triad of the "Augurs" chord can be seen as a prolonged ♭VI appoggiatura against the V7 above. Scale degree ♭6 inflection against V is a very common sound dating back hundreds of years. The “Augurs” harmony intensifies this inflection by adding in the entire ♭VI triad rather than just the ♭6 scale degree. Figure 4.5.1 shows a step-by-step development from a standard tonal deployment of the ♭6 inflection against V7 to the extreme version on display in “Augurs.” Indeed, the “resolution” of the F♭ to E♭ at R16 lends support to this interpretation – although it would be a stretch to try to assign the E♭ a genuinely “dominant” function here.

Figure 4.5.1: Functional derivation of “Augurs of Spring” chord.



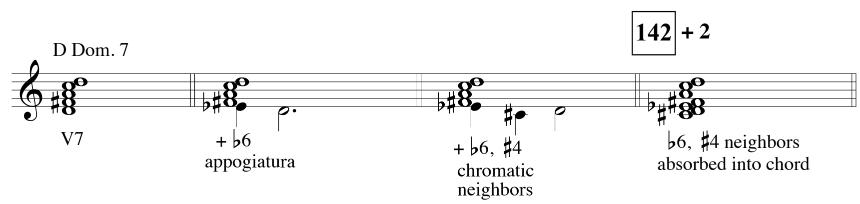
Both the “Ritual of Abduction” and “Sacrificial Dance” ur-chords similarly build on the ♭6 inflection against V7. Adding the ♭6 scale degree on top of a V7 creates a V♭9, a chord which, certainly by Beethoven’s time, could function as a relatively stable dominant in its own right. Scale degree ♭7 could then act as an upper neighbor above this ♭6, creating a juicy, but tonally completely allowable clash with the raised scale degree 7 below. At R37, this ♭7 scale degree becomes absorbed into the chord as well, no longer needing to resolve down to ♭6. Figure 4.5.2 shows how the R37 chord arises from simply prolonging the upper neighbor to a V♭9 chord.

Figure 4.5.2: Functional derivation of R37 chord.



The "Sacrificial Dance" chord, in its second version at R142+2, similarly adds the ♭6 scale degree to a V7 chord, but now also adds the ♯4 scale degree below, effectively surrounding the root of the V7 with its chromatic neighbors on either side. Again, these are pitches that could very plausibly happen *sequentially* in functionally tonal music, but are now happening *at the same time*. Pitches that began as chromatic neighbors are absorbed into the chord proper, as Figure 4.5.3 shows.

Figure 4.5.3: Functional derivation of R142+2 chord.



What is particularly striking about these three iconic harmonies is that all contain the D♭-E♭ major second as a distinct subset, but in each of them these pitches function differently. In "Augurs," they form the root and seventh of the E♭7 and, because of the voicing, appear as the top two pitches in the chord. In "Ritual of Abduction," they are also the top two pitches, but now function as the ♭9 and ♭10 of the chord, the "added dissonances" to the dominant seventh below. Finally in "Sacrificial Dance," though now voiced at the *bottom* of the chord, they similarly function as the “added dissonances,” but now as ♭9 and ♯7. Figure 4.5.4 shows these differing functions of the D♭ and E♭ in the different chords.

Figure 4.5.4: Different functions of the E♭ and D♭, labeled by scale degree number.

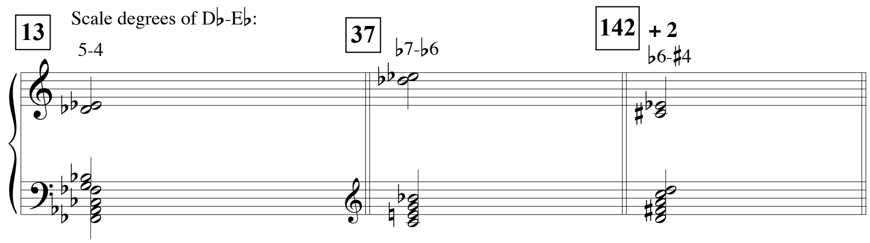
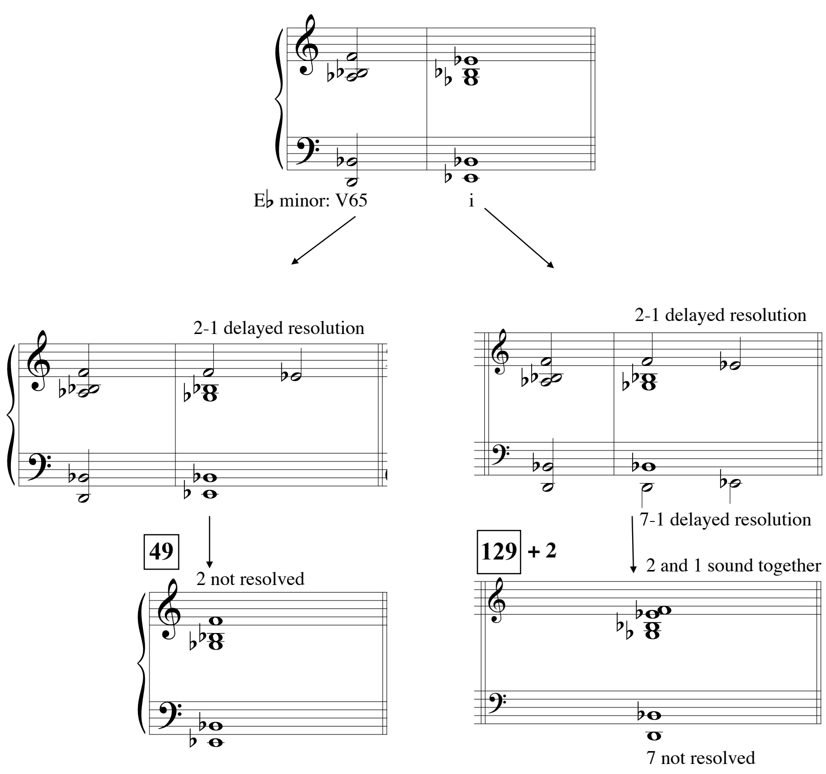


Figure 4.5.5: Functional derivation of “Spring Rounds” and “Ritual Action” chords.



The “Spring Rounds” and “Ritual Action of the Ancestors” ur-chords can be considered in a similar manner. “Spring Rounds” simply absorbs scale degree 2, which would “normally” need to resolve down by step, into the chord as a stable ninth. “Ritual Action” is similar, but in addition to scale degree 2, it also hangs on to raised scale degree 7 in the bass. Furthermore, it adds in scale degree 1 immediately below scale degree 2, causing the suspended pitch and its resolution to sound simultaneously. Figure 4.5.5 shows a standard V6/5-i progression in E♭ minor, and how both the “Spring Rounds” and “Ritual Action” chords can be derived from it by simply not resolving scale degrees 2 and 7.

This is clearly not the only or necessarily the best way to hear or understand these harmonies. We have already considered all of them from a variety of other angles that are also compelling – mainly, as various types of juxtapositions and verticalizations of scales. But this tonal derivation is another *potential* way of considering them that, when taken in the context of the whole range of tonal allusions throughout the work, is compelling.

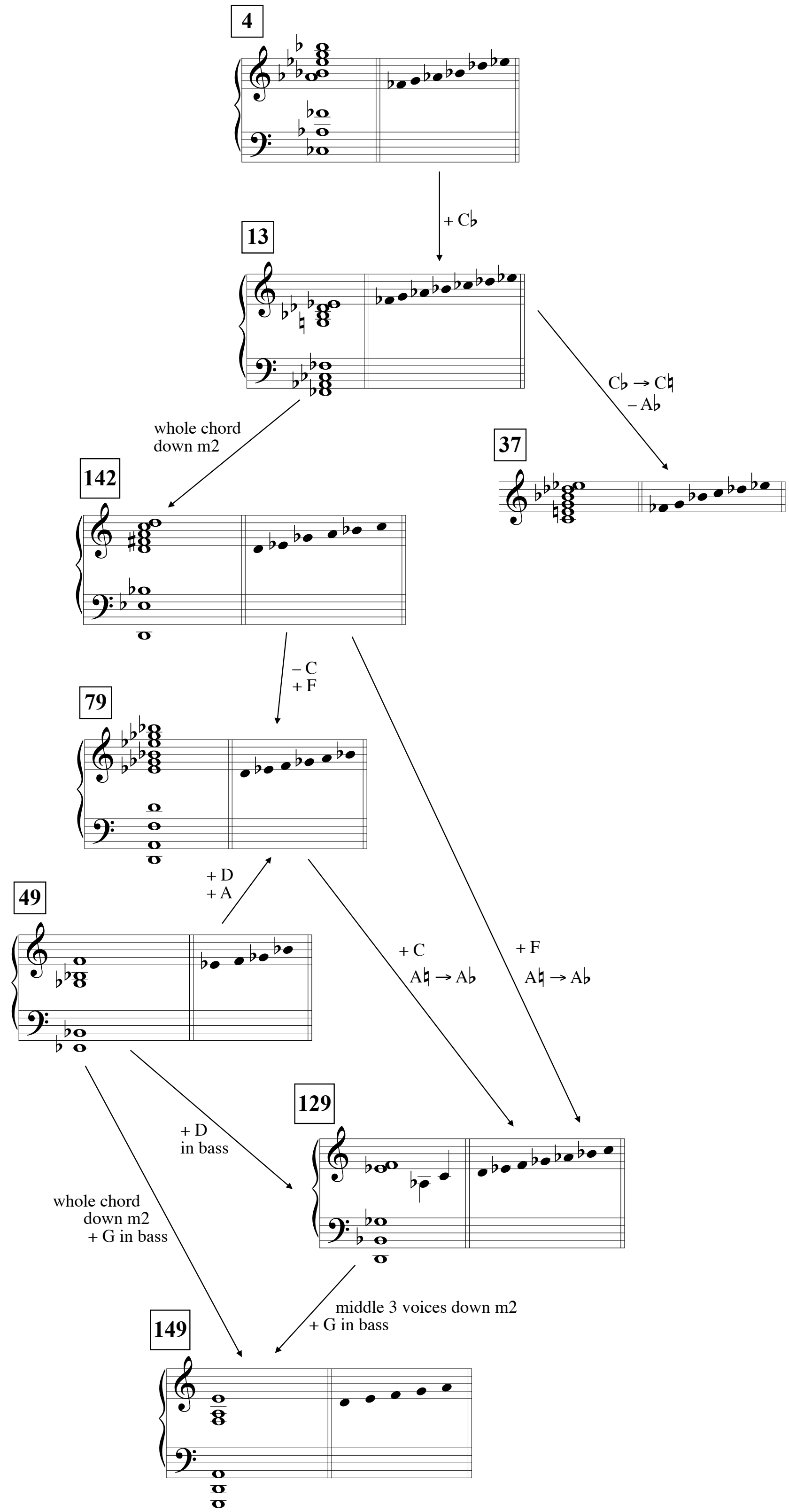
As alluded to above, there is a clear parallel with earlier eras of music history here. Dominant seventh chords, for example, initially appeared only as brief passing chords or as prepared dissonances that then had to be resolved. By Bach’s time, dominant sevenths had taken on a distinct harmonic identity of their own and could appear without preparation. By Debussy’s time, they no longer even had to resolve. Over the years, these dominant sevenths were also decorated with passing tones, appoggiaturas, and anticipations of their own, until by the late nineteenth century these originally decorative tones could now be considered part of the chord itself, extending the dominants out to 9ths, 11ths, and 13ths. In a sense, then, it is not too much of a stretch to see Stravinsky’s harmonies in *The Rite* as yet further development of this idea, absorbing ever more “decorative” tones into the identity of the chords themselves. Of course, the big difference in *The Rite* is that these chords also cease to be functional, acting as extended static harmonic blocks rather than steps in a progression. The iconic “Augurs” chord, for example, clearly functions as an immobile, granite-like block of sound; but it also contains the residue of its tonal origins, like a fossil preserved in amber.

4.6 UR-CHORD AND PITCH SET CONNECTIONS

Throughout our discussion, the idea of "ur-chords" has come up frequently. Many sections of the work have a distinctive, characteristic harmonic unit that acts as a powerful, central harmony or what I have been calling an "ur-chord." It often begins a section, is often repeated at length, and often becomes the seed for further harmonic developments within the section. This is the case, for example, with the iconic "Augurs of Spring" chord at R13; the "Ritual of Abduction" chord at R37; the "Spring Rounds" chord at R49; the opening harmony of Part 2 at R79; the "Ritual Action of the Ancestors" chord at R129; the opening harmonies of the "Sacrificial Dance" at R142; and the chord at R149. Throughout the analysis, we have referenced a range of connections between these and other harmonies in the work as they came up. We have also looked at the pitch sets of different sections and traced connections between them, especially in Part 1 – see in particular the chart of voice-leading between scales in "Augurs of Spring" (Figure 2.2.22). We will now bring these two related concepts together, drawing connections between many of the important harmonies and pitch sets throughout the work.

First we will consider voice-leading connections between the ur-chords themselves. While there is no clear linear progression to the connections, there is a very general pattern of the chords getting "lower" over the course of the work. For example, the R142 harmony is almost an exact minor second down transposition of the R13 harmony (with one pitch missing and a different bass note). The "Spring Rounds" chord at R49 is lowered to produce two of the Part 2 ur-chords: at R129, the bass note is lowered a minor second while the other pitches remain

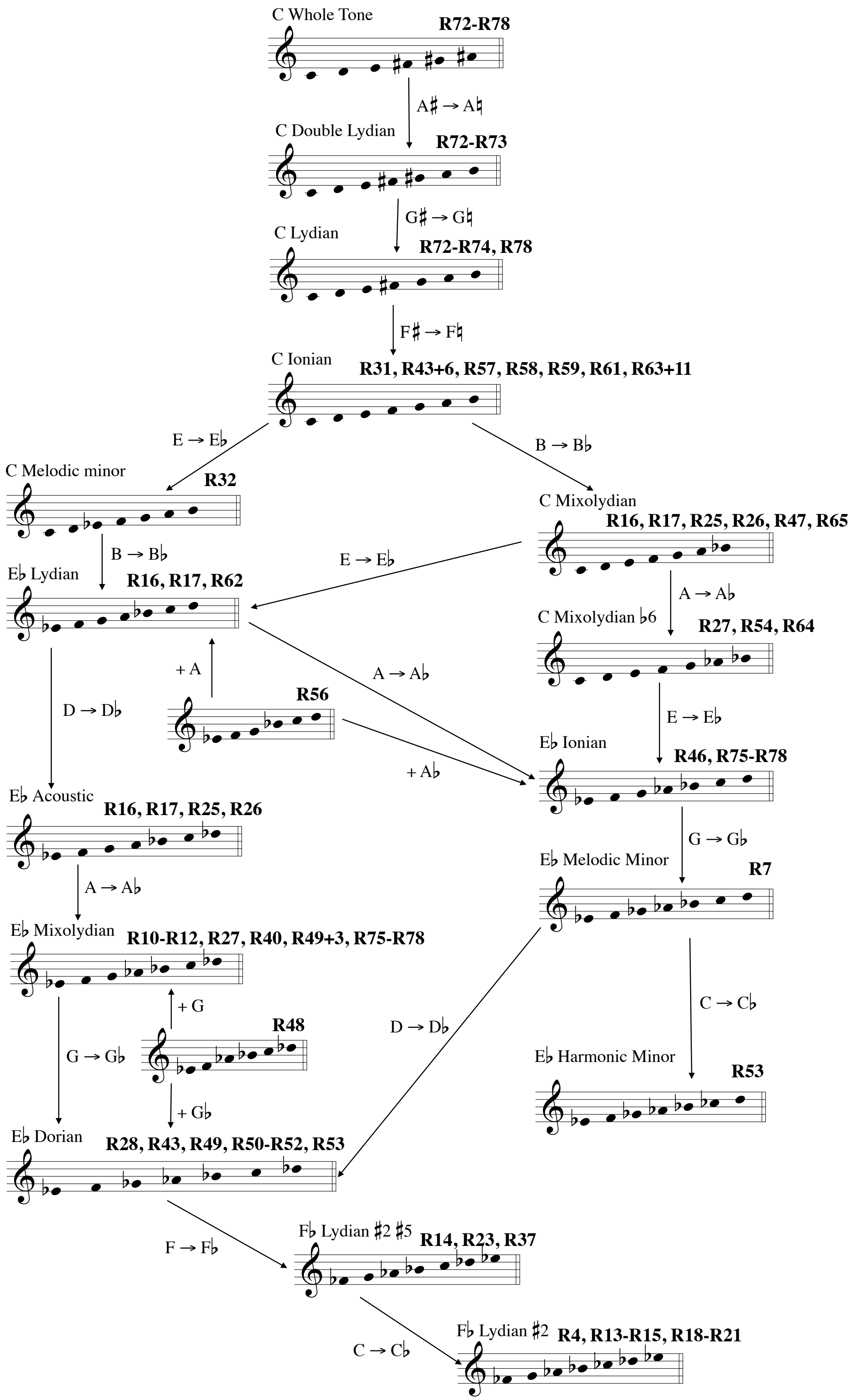
Figure 4.6.1: Voice-leading between ur-chords throughout the work.



constant, and at R149, the entire chord drops a minor second (plus an additional fifth below). Figure 4.6.1 shows these patterns as well as voice-leading paths between the chords' pitch sets. The first bar of each node shows the chord as voiced in the piece, and the second bar shows the chord's total pitch set represented as a scale (or scalar subset). This enables us to consider voice-leading both between the chords as they are voiced in the piece and between their unordered pitch sets. Note that no meaning should be attributed to the relative length of the voice-leading lines; they are merely a byproduct of the graphical layout.

Taking this a step further, we will now connect these chords' pitch sets to other important pitch sets throughout the work. Figure 2.2.22 showed a series of scales all connected by half-step motions that made up the field harmonies in play throughout "Augurs of Spring." Figure 2.4.18 presented a similar depiction of the central E♭ scales in "Spring Rounds," and Figure 2.8.10 similarly showed the relationships between the various scales employed in "The Dancing Out of the Earth." In fact, large swaths of Part 1, encompassing much of "Augurs of Spring," "Ritual of Abduction," "Spring Rounds," "Ritual of the Two Rival Tribes," and "The Dancing Out of the Earth" can be folded into this web of related scales, as Figure 4.6.2 shows. The Introduction includes a few scales that overlap with this, which are also included, but most of it is concerned with a different, more E-centered web of harmonies, as we saw in Chapter 2.1. The dense harmonic texture of "Procession of the Oldest and Wisest One" also falls outside the scope of this framework. Additionally, octatonic sets are not included here, as their addition of an eighth pitch makes depicting voice-leading routes too complicated to show in a two dimensional chart. Thus, while this map of scales is not completely comprehensive, it does tie together a significant amount of material in Part 1. As with Figure 2.2.22, some simplification proved necessary in order to clarify the relationships, with "color" pitches outside of the primary scales excluded.

Figure 4.6.2: Voice-leading between scales in Part 1.



That said, passages that legitimately employ multiple scales simultaneously are assigned to all of the scales that are present in those passages. Also as in Figure 2.2.22, the scales are arranged in the order of increasing "flatness" as we go down the page. This is for ease of reading only; the sets at the top of the page should not be considered somehow more primary or at the top of any sort of hierarchy. Finally, the scales here are depicted and labeled with the tonic that is most frequently associated with them. The scales should really be regarded more as unordered pitch sets, however; in some instances, a passage assigned to a given scale will center on a different pitch from the indicated tonic. For example, the passage at R61 is assigned to the C Ionian scale, since C is the most common root for this collection, even though in this particular instance it functions more as G Mixolydian.

We can make a somewhat similar map of related scales in Part 2. This one is far less comprehensive than the one of Part 1, however, largely because there is far less field harmony in Part 2. There are in fact two different sets of connected scales that grow out of the on-beat and off-beat harmonies, respectively, that open the Part 2 Introduction. Figure 4.6.3(a) shows the set of scales connected to the downbeat harmony, and 4.6.3(b) shows the set that connect to the offbeat harmony. Because it is a much more limited set of scales in play, it becomes feasible to bring octatonic sets in to the charts as well. In both examples, a background Harmonic Major pitch set (D Phrygian ♭4 in example (a) and D Melodic Minor ♯4 in example (b)) is never actually articulated in its entirety, but is a sort of "parent" scale for several different subsets that do appear.

Figure 4.6.3(a): Voice-leading between Part 2 scales related to R79 downbeat harmony.

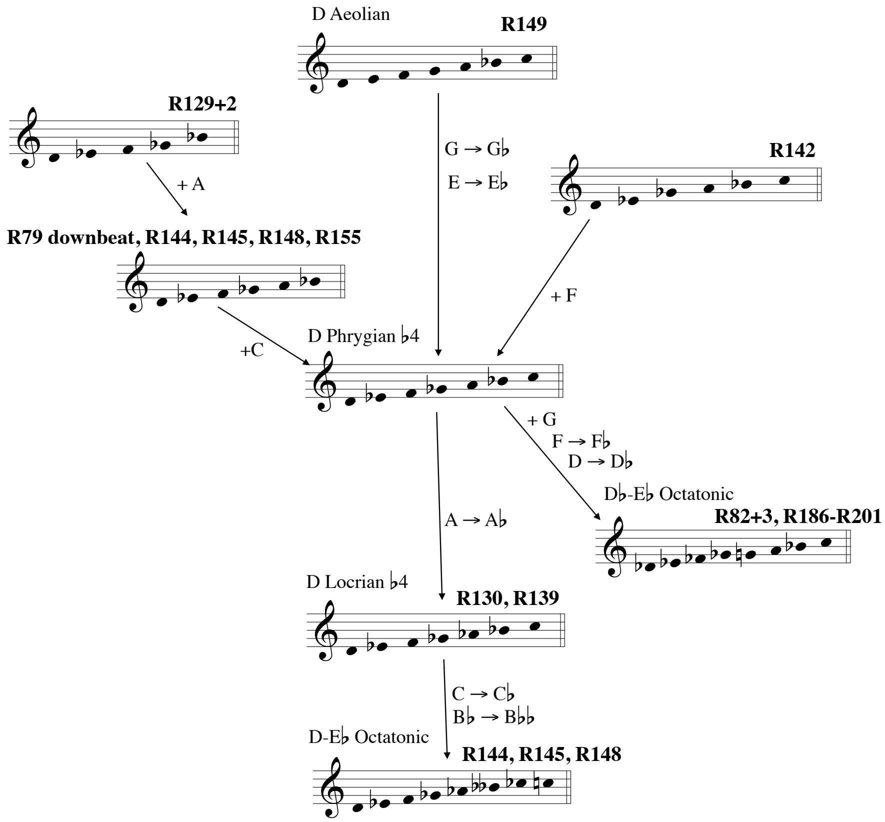
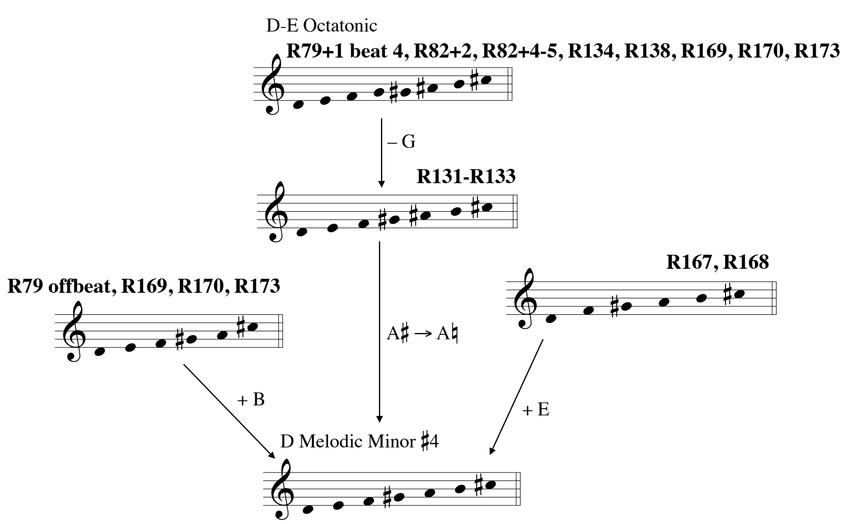


Figure 4.6.3(b): Voice-leading between Part 2 scales related to R79 offbeat harmony.



The preceding charts indicate a degree of similarity and logical connection between many of the primary pitch collections in *The Rite*. However, they also highlight how in fact *non-systematically* the piece often navigates through them. Not only does much significant material in the piece fall outside the scope of these sets, but even the material they do account for does not flow along predictable, systematic paths. What we find is not a linear route progressing from start to finish, but a web of interconnected possibilities to be explored at liberty.

4.7 HARMONY AS A WEB OF ASSOCIATIONS

A key to making sense of the vast array of harmonic resources Stravinsky deploys in *The Rite* is to view the harmonic relationships in the work as a complex web of connections and associations, emanating out in all directions, with no center or top.[119] This image is in marked contrast to the hierarchical framework that characterizes both common practice tonality (with everything in a hierarchical relationship to the tonic triad) and twelve-tone atonality (with everything in a hierarchical relationship to the fundamental tone row).

We have caught glimpses of this approach throughout the analysis, and especially in the preceding section, where we connected iconic chords in the work to other iconic chords and also

[119] Chua 2007 hints at this attitude toward harmony in the work: "Hearing the ["Augurs of Spring"] sonority in this way would mean hovering between possibilities where octatonicism, tonality and all kinds of modes and scales are in perpetual play, creating the 'undecidability' that Whittall regards as a necessary stance in Stravinsky analysis. Such a Derridian reading would subvert the notion of a single origin in favour of an endless and indeterminate productivity. The 'Augurs' chord becomes an entrance to many systems, as if Stravinsky were beginning in transition, creating a plurality of possibilities. Thus the stereotypical view of Stravinsky's music as static would give way to a dynamic approach to his harmony" (85). However, he ultimately interprets the entire "Augurs of Spring" as converging on B♭ – a conclusion which is both quite foreign to my hearing of it, and also negates the sense of open-endedness he hints at, and that I perceive as central to how Stravinsky's harmonies relate to one another.

to the pitch sets that underlie them. Now we will go one step further, explicitly considering all of the potential interpretations of a given harmony and seeing all of the different directions they can lead us in. Consider the iconic “Augurs of Spring” chord at R13. We have thought about this chord in a number of different ways, and there are several different harmonic categories we can put it in, each of which will lead us in different directions.

First, we can consider it as a complete, self-contained harmonic object in itself, and connect it to other chords that are similar in structure or pitch content. In this way, we can connect it very explicitly to the chord at R4, which is built from the same pitch set (see Figure 2.1.20). We can also connect it to the R37 chord and its precursor at R14+1, whose pitch set is only one half-step away in pitch space, (see Figure 2.3.4). Similarly, we can connect it to the final chord in “Spring Rounds” at R53+10, which has a similar voicing and is two half steps away in pitch space (see Figure 2.4.12). Finally, we can also connect it to the first “Sacrificial Dance” harmony, which is a near-exact minor second down transposition of the R13 chord (see Figure 3.6.1(b)).

Next, we can consider the composite pitch set of the chord, which, as we have seen, adds up to an F♭ Lydian ♯2 scale, a mode of harmonic minor. We can thus connect this chord to other examples of harmonic minor harmony in the work. In addition to the R4 harmony already mentioned, this also connects it to R6 (see Figure 2.1.12), R7+3 (see Figure 2.1.4) and R53 (see Figure 2.4.9), all examples of harmonic minor harmony. We can also connect it to the other scalar pitch sets that it is close to in pitch space. This connects the R13 harmony in to the whole network of closely related “Augurs of Spring” scales we saw in Figure 2.2.22, as well as to the network of Part 1 scales more broadly in Figure 4.6.2.

Next, we can consider it as a juxtaposition of E♭7 on top and E major on the bottom. This leads us in several different directions: (1) other harmonic juxtapositions of E♭ and E♮; (2) other minor second juxtapositions more generally; (3) other juxtapositions of major triads and dominant sevenths. Specific E♭ and E♮ juxtapositions occur a number of times, for example at R4, R10-R12, R13, R18, R53+10 (final chord), R58+6 and +8, R62, R174, and R181 (bass ostinato). Minor second juxtapositions more generally are incredibly frequent. Even limiting our examples to the most explicit and unambiguous, we generate quite a list: R4 (E-E♭), R9 (D-E♭), R10-R12 (E-F/E♭), R13 and R18 (E-E♭), R37+2 (D-D♭/E♭), R40 (D-E♭), R53+10 (A-A♭), R58+6 and +8 (E-E♭), R62 (E-E♭), R79 (D-E♭/C♯), R94 (melody in parallel major sevenths), R95 (countermelody in parallel major sevenths), R97+2 (D-E♭/C♯), R111+1 and +3 (E-F-G♭), R142+2 (D-E♭/C♯), R167+2 (C♯-D/C♮), R186 (A-B♭/G♯), and R201+2 (G-G♯-A).

Finally, there are also quite a few examples of juxtapositions of major triads and dominant sevenths chords. "Ritual of Abduction" begins with a juxtaposed E♭7-C-major sonority at R37, and the entire movement is dominated by similar minor third or tritone juxtaposed dominant sevenths and major triads. The final chord before R54 juxtaposes A7 on the bottom with A♭ major on top (see Figure 2.4.11). And the section at R87 combines a C major triad above with B♭7 (+♯9) below.

We have now considered the R13 harmony from multiple angles, looking both at its very specific qualities (its specific pitch set, the specific juxtaposed harmonies) and the more general categories it belongs to (the general type of scale it represents, the general types of harmonies that it juxtaposes). We need not decide which of these interpretations is "correct" or what the proper level of abstraction should be; instead, we can follow the implications of each way of considering it and draw connections through all of them.

From here, of course, the same thing can be done with the harmonies we have connected R13 to. The first harmony we connected it to was R4, which is very close to R13. Like R13, it is an example of an F♭ Lydian ♯2 scale, of E♮–E♭ juxtaposition, and of half-step juxtaposition more generally, and can thus be connected to the same network of scales and juxtapositions outlined above. Unlike R13, it is also a juxtaposition of a major triad and stacked fifth material; and it also supports a B♭-E spanning tritone melody.

The specific juxtaposition of stacked fifths and a major triad connects it to R16, which combines an E♭-based fifths stack with a C major triad. The stacked fifths in the upper parts at R4 also connect it more generally into the whole network of stacked fifths we have considered throughout the work (see Figures 4.1.2 and 4.1.3). Similarly, the B♭-E spanning tritone melody at R4 can be connected in to the many other examples of B♭-E spanning tritone melodies throughout the work, shown in Figure 4.8.1. Considering in their turn the other harmonies that support stacked fifths or B♭-E spanning tritone melodies would of course lead us off in countless other directions.

If we instead pick up the thread from the R37 chord, we move along a different path. We arrived at the R37 harmony from R13 both because it is nearby in pitch space, and because it similarly juxtaposes a major triad and dominant seventh. Along those parameters, it will thus connect in to the same networks as R13 did. But unlike R13, R37 features a juxtaposition of E♭ and C material; a juxtaposition more generally of minor third-related material; and a pitch set that is potentially octatonic.

The E♭-C juxtaposition connects it to R16 (E♭-based fifths stack plus C major triad); R25 (overlaying of C Mixolydian and E♭ Acoustic scales), and R75 (E♭-based horn motive over C whole tone bass line). Note that R4 *also* connected to R16, but through stacked fifth-major triad juxtaposition, rather than E♭-C juxtaposition.

Minor third juxtapositions more generally connect R37 to the "octatonic minor third games" we have noted throughout the piece, at R41, R42, R82+1-R83, and throughout much of the "Sacrificial Dance" (see Figures 3.6.7 and 3.6.22 through 3.6.26).

Finally, considering the R37 chord as an octatonic harmony similarly connects it to the "octatonic minor third game" passages above, and also to the "Model B" octatonic passages that don't feature minor third juxtapositions, for example at R30, R132, R134, and R138.

And on and on. As you can see, this approach expands exponentially out in all directions, as each harmony can be connected to multiple other harmonies via different interpretations, which can in turn be connected to other harmonies along different categories, etc. etc. It is difficult to productively take this approach further solely in the form of a paper. The linear nature of prose and of two-dimensional graphical representations make it difficult to convey the multitude of ever-expanding ways that harmonies can simultaneously connect to other harmonies. A more effective representation would use a computer program. Every harmonic entity in the piece would be labeled with all of the different harmonic categories it belonged to. The user could hover over a harmony (displayed in music notation, with rehearsal numbers and associated sound recording) and see all of these categories, then click on any one of them and instantly see lines connecting it to the other harmonies in the work that share that category. The user could then see the categories for each of *these* harmonies and follow the links to other harmonies in *those* categories, and on and on in an ever-expanding web of connections. Or, the user could go to a menu of all the different categories, click on one, and see all the different harmonies in the work that belong to that category and how they connect. This approach would much more effectively convey the sense of a vast web of connections linking together the harmonies in the work, and allow the user to follow along on any of the countless paths through this web. It is well beyond my current level of programming expertise to design this program, but it is something I am hopeful to work toward in the future. In the meantime, I hope the examples in this section have given the reader at least a taste of the possibilities inherent in this approach to analysis.

4.8 STRUCTURAL INTERVALLIC RELATIONSHIPS

One final element to consider is the most basic harmonic category possible: the single interval. Are certain intervals central to *The Rite of Spring*'s structure or sound? For van den Toorn and the octatonicists, minor thirds and tritones ought to be especially important, as these are the nodes that partition the octatonic scale into symmetrical units. And indeed, these two intervals do prove to be important in many places. Van den Toorn also identifies the major seventh as an important interval span in the work, and many others have noted the importance of minor second relationships. We saw earlier in this chapter the importance of cycles of fifths, at least in the Part 1 fifth-based material. We also identified some noteworthy major second and major third relationships in chapters 2 and 3. In short, *all* intervals are utilized in structural relationships in *The Rite* to some degree, but have different levels of significance and different characteristic uses, which we will now consider.

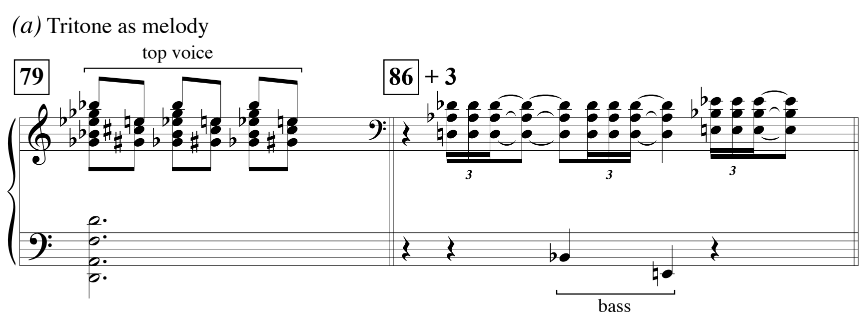
There are several places in the work where background fifth motion plays a role, though far less frequently than we would expect to find in a functionally tonal work. We saw this already in the statements of the main "Ritual of Abduction" melody, which ascend a ladder of fifths, appearing in E♭ after R40, B♭ at R46, F at R47, and C at R54 (see Figure 2.3.23). This is the only case of an extended cycle of fifths, but several other sections do feature a single harmonic motion by fifth. For example, at R90, the "trumpet duet" theme comes back one last time a fifth higher than it had been, appearing on F rather than B♭. Similarly, the "chorale" theme, which appeared on a B starting pitch at R89, comes back on F♯ at R91. It is on B again at R99, moving again to F♯ at R100.

Finally, there are two cases of potentially more structurally significant fifths. As we saw in Chapter 2, the Part 1 Introduction begins in A, and ends up sitting on a big E pedal, for a prominent fifth relationship at the very beginning of the work. As we also saw, however, once arrived at, this E does not lead back to A but rather on to E♭, and the A-E relationship is never explored to any significant extent in the rest of the work. There is a similar fifth relationship in the final dance. The "A" material of the "Sacrificial Dance" is presented initially in D, and then its final appearance at R186 is a fifth up, in A. A good deal of material and harmonic travel happens in between these appearances, making it less palpable than the A-E relationship in the Part 1 Introduction, but it is there nonetheless, nicely balancing the fifth motion *away* from A in the Part 1 Introduction.

Zooming out further, there is a case to be made for A and D as important poles in the entire work. The whole piece begins centered on A, and we return to A at two key moments in the work: "The Naming and Honoring of the Chosen One" (R104) and the final section of the "Sacrificial Dance" (R186) both sit atop extended A pedals. D, meanwhile, can plausibly be considered the "tonic" pitch of Part 2, as it undergirds the opening section, "Ritual Action of the Ancestors," and much of the "Sacrificial Dance," including the final chord of the piece after the long A pedal.[120] These are not the only poles, of course: E♭ is clearly of central importance in Part 1 and some of Part 2, and other pitches also act as important centers more locally. I imagine a very committed Schenkerian might manage to condense the whole work to a dominant A moving to a tonic D, and there would be an element of truth to this. But given how rarely this work partakes in fifth-based harmonic relationships more locally, it is difficult to view the fifth as a truly significant harmonic interval with anything close to the importance it holds in common practice music.

Tritones clearly have a very important function in this work, in three main ways. First, many of the melodies highlight the tritone interval. In particular, as has come up repeatedly, the specific tritone from B♭ to E (or E to B♭) recurs over and over again in different melodic contexts. In some cases, the tritone interval itself is the melody, sometimes it is filled in chromatically, sometimes with whole tones, and other times it is filled octatonically. Figure 4.8.1 shows all of these melodies, categorized by type of filling.

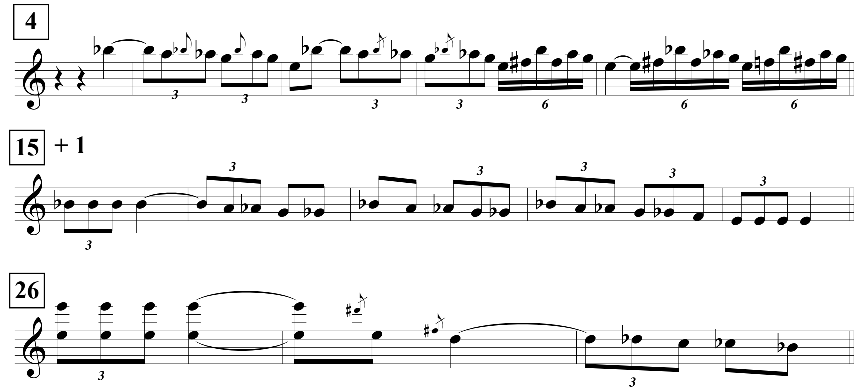
Figure 4.8.1: B♭ to E spanning tritone melodies categorized by type of filling.



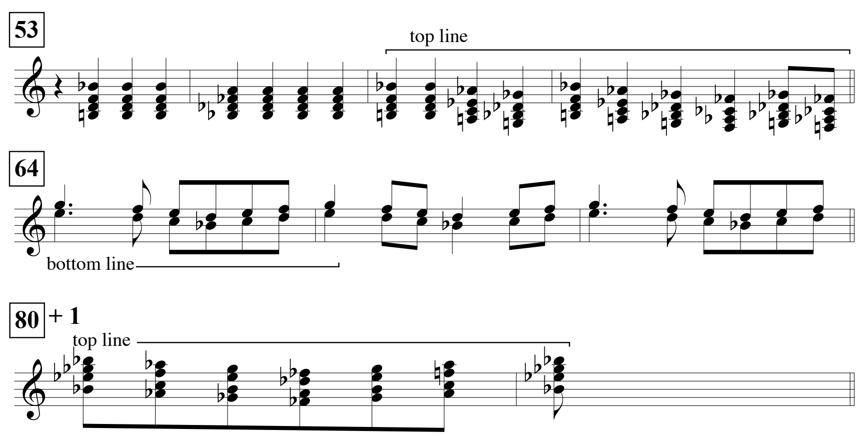
[120] As discussed previously, however, I question the extent to which this final chord can be considered to actually have harmonic content, rather than being an essentially percussive "thump."

(Figure 4.8.1 continued)

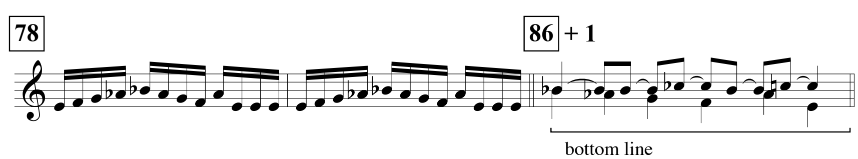
(b) Chromatic filling



(c) Whole tone filling



(d) Octatonic filling



Secondly, there are a number cases where a single tritone interval undergirds the harmony of a passage. This is the case, for example, throughout much of "Ritual of the Two Rival Tribes" (and its foreshadowing at R43), where a bass tritone pedal underlies the statements of the theme. This carries over into "Procession of the Oldest and Wisest One" where, as we saw in Figure 2.6.9, the D-G♯ tritone is the unifying interval holding the highly disparate strands of music together. "The Dancing Out of the Earth" is similarly undergirded by the F♯-C tritone in the timpani and basses. Then in Part 2, "Evocation of the Ancestors" sets A-rooted treble material over an E♭ bass, and "Ritual Action of the Ancestors" highlights a D-A♭ tritone between the bass note and the main melody note.

Finally, there is an important large scale structural relationship between the specific tritone of A and E♭. This is the relationship between the beginning of the Part 1 Introduction and the "tonic" of much of the rest of Part 1. A and E♭ are then directly juxtaposed in both "The Naming and Honoring of the Chosen One" and "Evocation of the Ancestors." Finally, the bass/percussion ostinato at R174 and R181 in the "Sacrificial Dance" highlights E♭ and A as the beginning and ending pitches of the pattern. This all suggests that A and E♭ form an important structural relationship in the work. But it is hardly conclusive. If this relationship were really fundamental, one would expect the ending of the "Sacrificial Dance" to tie it all together somehow. It doesn't. While it does settle on an extended A pedal right before the end, E♭ is of minimal importance in the final minutes of the piece. As with so much else in the work, the pattern is suggestive, but not conclusive. Another quasi-tonal interpretation would be to see the E♭ as a sort of "tritone substitution" for A, or a "♭2." Thus, both A and E♭ would have a "dominant" function, pushing toward the tonic D.[121]

What is striking about tritones in *The Rite* is the distinctive function of the specific diads. E-B♭ is very important melodically, but not harmonically or structurally. C-F♯ and D-G♯ both undergird several sections harmonically but are not melodically or structurally salient. A-E♭ is

[121] For an alternate view of the large-scale harmonic structure, focusing on neighboring motion around D, see Krebs 1987.

an important interval structurally, and also appears harmonically, but it is not melodically significant at all.

Minor thirds are another important interval that intersect in some ways with the tritones. The specific cycle of minor thirds on A – A-C-E♭-F♯ – is especially salient in Part 1. On the local level, it governs the octatonic minor third games in "Ritual of Abduction" at R41 and R42, and also shows up melodically at R1 and R45 (see Figure 2.3.14). Several other harmonic relationships in Part 1 also correspond to the four nodes of this minor thirds cycle. As we saw in Chapter 2, juxtapositions of E♭ and C material are frequent in "Augurs of Spring," for example at R16 and from R22 up to R28. Continuing on, one way of considering the R37 ur-chord is as a juxtaposition of E♭7 and C major. The low F♯ timpani hits in the second bar add in another minor third from the cycle. "Ritual of the Two Rival Tribes" then features the C-F♯ tritone, which can also be thought of as two of the nodes from the A-C-E♭-F♯ minor thirds cycle. Indeed, at R59, the bass pedal moves up a minor third to the other two pitches in the cycle, E♭ and A. Finally, "The Dancing Out of the Earth" not only features the C-F♯ tritone, but also brings in E♭, as the central pitch of the horn triplet theme.

If we zoom out further on Part 1, we can see this minor thirds cycle in the deeper background as well. The Introduction begins in A. By the end, it has moved to an E pedal, but we can think of this as a big "♭2" that resolves to E♭ at R16. Before this, in the transition from R12 to R13, we also find juxtaposed in close temporal proximity C (in the clarinet trill), E♭ (in the string pizz.'s at R12+3 and the E♭7 chord at R12+7), and F♯ (in the bass clarinet pedal and string chord at R12+6). "Augurs of Spring" can then be considered largely in E♭ with interaction from C material, moving on to C at R31. It is plausible to consider "Ritual of Abduction" to be "on C" at the beginning, though with F♯ interruptions and a strong E♭ component that comes to predominate at R40, as well as A and F♯ in the octatonic minor third games at R41 and R42. "Spring Rounds" is then clearly and unequivocally in E♭. "Ritual of the Two Rival Tribes" moves around a good deal, but does seem to be anchored to a C diatonic set penetrated by F♯'s. Beginning over a C-F♯ pedal with C diatonic thirds above, it is "on C" again from R60+4 to R62, where it moves to E♭ Lydian, then back to C again at R63+10, and then sits on C Mixolydian parallel thirds at R64. "Procession of the Oldest and Wisest One" unequivocally departs from the minor thirds cycle, but then we are back on C/E♭/F♯ again in "The Dancing Out of the Earth."[122] I am well aware that this sketch of Part 1 pitch centers glosses over many local events and modulations within movements (especially in "Ritual of Abduction" and "Ritual of the Two Rival Tribes"), and also oversimplifies richly complex harmonies with somewhat debatable assignments of pitch centers (again, especially in "Ritual of Abduction" and "Ritual of the Two Rival Tribes"). But I also think that the patterns are compelling enough to imagine this minor thirds string at least lurking in the background of Part 1, even if many local harmonic events escape its gravitational pull. Within this cycle, E♭ clearly forms the center, with C as the main secondary area. F♯ mostly appears as an element of juxtaposition with C, while A, though beginning the whole piece, is subsequently the least emphasized node, only appearing at moments of full minor third game juxtaposition.

This minor thirds background scheme is only a Part 1 phenomenon. While Part 2 does include a few A-E♭ tritone juxtapositions, and does touch on the A-C-E♭-F♯ minor thirds cycle as part of octatonic minor third games at R82+3 and after R192, the cycle does not have the structural importance it did in Part 1. And while there are additional octatonic minor third games

[122] Hill 2000 has a similar take on the role of this minor thirds cycle in Part 1, and my analysis here draws heavily on his observations.

on different pitches at R82+1 and in the “Sacrificial Dance,” there is no alternate minor third cycle that rises to similar structural significance in Part 2. In short, while the A-C-E♭-F♯ minor thirds cycle is important structurally in Part 1, in Part 2 minor third cycles are essentially local phenomena only.

Instead, *major* thirds play a bit more of a role in Part 2. As we saw in Chapter 3, the Part 2 Introduction features a highly disguised repetition of its material a major third higher at R83, on F♯ instead of D. Then at R84, we rise another major third to B♭ for the beginning of the next section. There is also a major third relationship between the “A” and “B” material in “The Naming and Honoring of the Chosen One.” At R104, the music is “on A,” shifting to F at R111, and back to A at R117+1. Finally, in the “Sacrificial Dance,” as we saw in Figure 3.6.17, there is another major third up transposition of the harmonies from R154 at R165, rising from D to F♯, as in the Part 2 Introduction.

We also find a few major third relationships in Part 1. The “Ritual of Abduction” ur-chord is transposed down a major third at R38, from C to A♭, and then back up another major third at R39. Then in “Ritual of the Two Rival Tribes” we find a major third up transposition at R59+1(second half of the bar) from D to F♯ and a major third down transposition at the pick-up to R60+3, from F♯ back down to D.

On a more local level, the same D-F♯-B♭ major thirds that structure the Part 2 Introduction appeared as one component of “strand one” at R70 (Figure 2.6.2). And the E-G♯-C major thirds cycle also makes two local appearances in Part 2, as the end of the “trumpet duet” theme first heard at R84+3, and in the combination of the English horn and alto flute melodies at R129 in the “Ritual Action of the Ancestors” (see Figure 3.5.4). While these major third relationships are certainly audible, they are not deployed nearly as thoroughly or systematically as the minor thirds cycle in Part 1. It would be difficult to argue that they are all that significant to the work as a whole.

Major seconds are even less important from a structural perspective. The only significant major second structural relationship is the repetition of the "Sacrificial Dance's" "B" material at R162, which appears a major second below its initial statement at R149. A few other isolated major second transpositions can also be found: the R44 harmony is a major second up from R40; the second half of the R56 melody is a major second up from the R48 melody; and the R93+4 melody ends up shifting down a major second by R95. But none of these transpositions strike me as being particularly significant structurally.

Major seconds also appear locally as oscillating patterns in several sections of the work. They appear in the "Augurs of Spring" ostinato, moving back and forth over and over from D♭ to E♭, and additionally at R25 in the strings moving from G to A, and then at R26+6 in F-B♭ to G-C parallel fourths. They appear again on the pitches F♯-E in the bass ostinato at R62, and again in the chords that begin at R86+3 (D-A♭-D♭ to E-B♭-E♭). They also appear a bit more abstractly in the upper chords at R79 and R121+3. In both cases, there is oscillation between triads that are a major second apart, but the texture and voice-leading obscure this underlying pattern (see Figure 3.4.6). Finally, at R93, rather than oscillations, major seconds move in parallel chromatic motion, creating a basic color of "major second-ness" that the melody wafts over. Major seconds thus have more of a motivic than harmonic function in the work. And they specifically tend to be involved in patterns of repetitive oscillation that are unique to them.

Last but not at all least, we come to minor seconds, arguably the most important interval in the entire piece. Juxtapositions of minor second related harmonic units abound throughout the work, as we saw repeatedly throughout our Part 1 and Part 2 analyses, and as we saw again in the list of minor second juxtapositions above in Section 4.7. Another type of minor second appearance was described in the section on chromatic clusters above (Section 4.3). Many of the cluster examples in Figure 4.3.1 show that even when the juxtaposed materials are related by intervals other than minor seconds, the resulting sonorities nonetheless often strongly feature minor seconds. This is hardly inevitably the case and indicates a keen awareness on Stravinsky's part, whether calculating or intuitive, of the importance of minor seconds to *The Rite's* sound.

Minor seconds also operate more structurally, creating "sinking half step" patterns on multiple different levels. There are several relatively local instances of this pattern that we have already considered: the descending chromatic triplets after R3 (see Figure 2.1.3); the return of the opening bassoon melody a half-step lower at R12; the half-step down shift in the "Augurs of Spring" ostinato at R31; the half-step "too low" first statement of the "Ritual of Abduction" melody at R37+2; the repetition of the R43 material down a half-step at R43+6; and the return of the "Sacrificial Dance" "A" material a half-step down at R167.

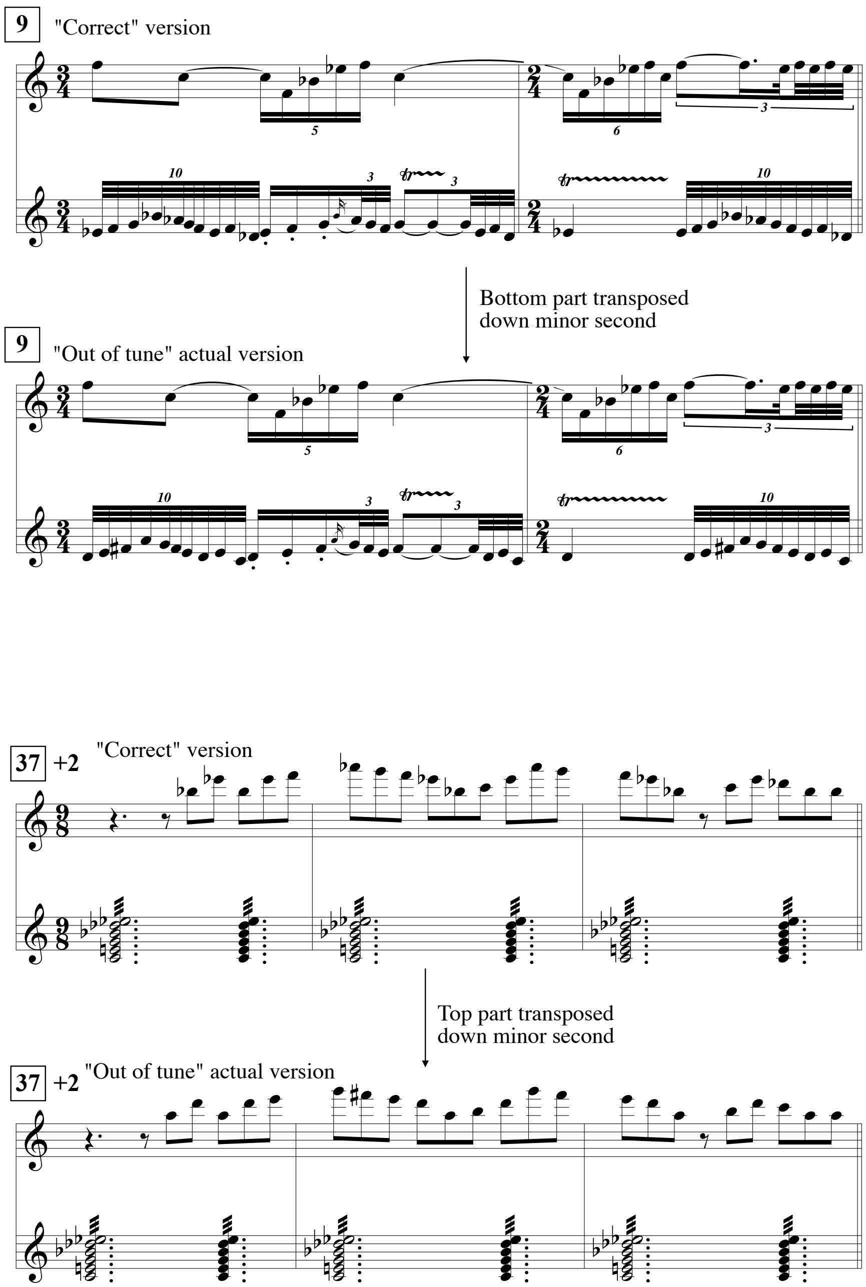
On a deeper level, there is a larger sense of sinking from Part 1, centered on E♭, to Part 2, centered on D. If we factor in the E♮ pedal at the end of the Introduction, and the ultimate arrival on C♯ in the repeat of the "Sacrificial Dance's" "A" material at R167, we have an even more pronounced descent of E → E♭ → D → C♯.[123] We can also see this pattern of descent in a different way by comparing some of Part 1 and Part 2's iconic sonorities, as we did in Section 4.6 (see Figure 4.6.1).

[123] Is it significant that the pitches of this descent are the same as those found in the chromatic cluster that appears so frequently in the piece? Perhaps, though I have doubts about the extent to which the ear can connect a vertical sonority to a drawn out, abstract, background voice-leading pattern.

These descent patterns obviously leave out much significant intervening material, and I hesitate to overstate their importance. But as with the Part 1 minor third cycles, I find it plausible to consider this pattern of half-step descent to be lurking behind the piece at a variety of different levels, casting its shadow even if it doesn't directly influence all harmonic events.

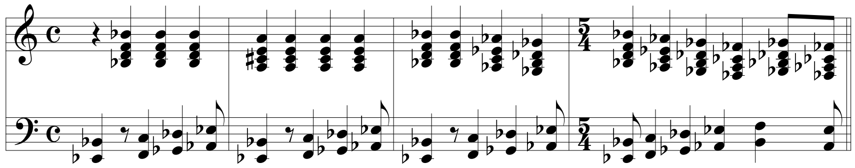
These minor second relationships are so central to the sound and character of *The Rite* that is worth taking some time to consider their meaning. Andriessen and Schonberger (1989, 223) posit that they are rooted in the folk sources of the music: "Playing out of tune is a parameter of folk music. The two clarinets in the *Sacre* that have parallel major sevenths (R94), not only execute a 'type of parallel intervals that breaks the rules of counterpoint', but also play like two peasants who are actually in octaves but awfully out of tune." I made a similar point earlier about the flute runs at R201+1 in "failed octaves," and we could consider several other passages similarly; the half step-off alto flute and oboe melodies at R9; the half-step off squealing woodwind melody at R37+2; the half-step off horn call at R40; the blaring brass diminished-plus-major-seventh chords at R53, which could be conceived of as parallel major triads with the bottom note a half step "too high;" the added minor seconds that disrupt the diatonic thirds throughout "Ritual of the Two Rival Tribes;" the blaring horn and tuba melodies in "Procession of the Oldest and Wisest One," like two clans coming together that use different tuning systems; and the flutes at R97+3 that suddenly veer from octaves into major sevenths that may sound more like mis-tuned octaves. Figure 4.8.2 shows each of these examples, first in a "corrected" form, then with the "out-of-tune folk intervals" Stravinsky actually writes. For the most part, I find it a compelling explanation. When I compare the "correct" and "out of tune" versions back to back, I can easily hear Stravinsky's versions as the folk-like distortions that Andriessen and Schonberger posit. However, I don't think it's the whole story, as this explanation does little to clarify how and why this “out-of-tune-ness” also coheres so well with the work’s underlying harmonies.

Figure 4.8.2: “Correct” and (actual) “out of tune” versions of melodies.



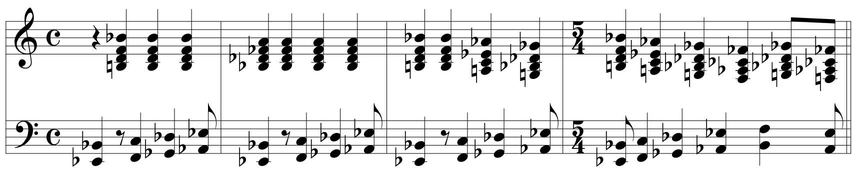
(Figure 4.8.2 continued)

53 "Correct" version

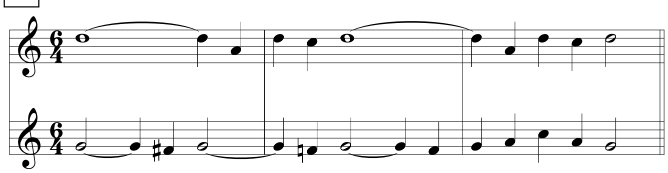


Bottom pitch of top line
transposed up minor second

53 "Out of tune" actual version



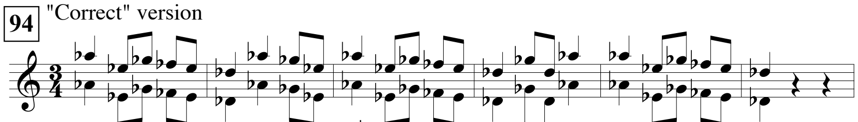
70 "Correct" version



Bottom part transposed
up minor second

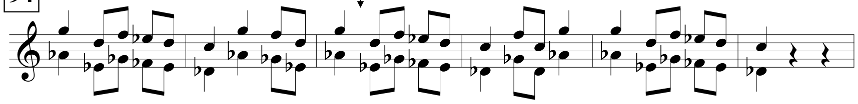
70 "Out of tune" actual version

94 "Correct" version

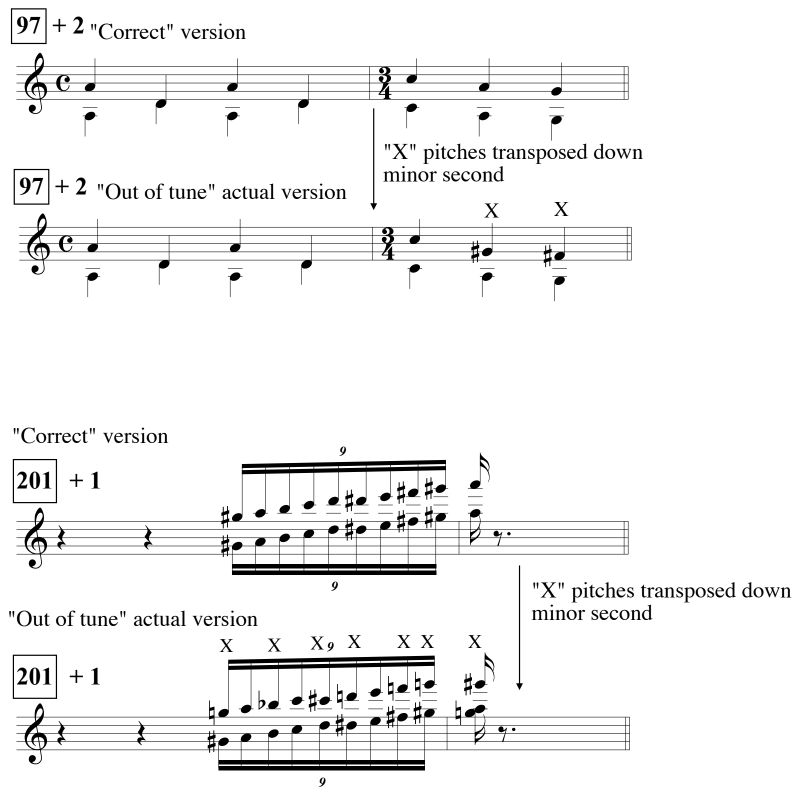


Top part transposed
down minor second

94 "Out of tune" actual version



(Figure 4.8.2 continued)



Major sevenths and minor seconds may also be used simply for the quality of dissonance that they continue to embody and that is an intentional quality of this particular work. While *The Rite's* dissonance was an obvious feature to early listeners, subsequent analysts, in their eagerness to find unity and cohesion in the work, have often de-emphasized it. Whittall (1982) is especially thoughtful about the concept of dissonance in *The Rite*, critiquing both Schenkerian and pitch set approaches to the work for failing to acknowledge dissonance's continued importance. It is worth quoting him at some length (50-51):

> In our search for a single, comprehensive technical statement about *Le Sacre* we may even choose to fall back on the assertion that the most basic structural element in the work is ic1 (semitone), and its various projections, vertical and horizontal, immediate and longer-term. But the nature of the music would still depend on this structural feature being perceived as a dissonance… Dissonance may indeed be emancipated in

> that it is no longer subject to rules requiring preparation and resolution. But the effect of that emancipation within a work where consonances remain to be heard from time to time is an enhancement of dissonance as structural focus, and not an elimination, an emasculation of that focal role, with dissonances being transformed into 'polychords', or some such neutral construct. Of course, it follows that it will always be possible to segment Stravinsky's dissonances by separating out their consonant or diatonic components. But analysis should surely be more closely concerned with the ways in which the complete dissonances themselves function, as a means of establishing whether conflict is indeed contained by rules.

Whittall is essentially arguing that even if we can "justify" the dissonances in *The Rite* as byproducts of juxtapositions of consonant material ("'polychords', or some such neutral construct") this does not nullify their very real dissonant qualities, and any successful analysis of the work should be able to account for these dissonances *as dissonances*. In this view, the work is fundamentally different from Second Viennese compositions that no longer acknowledge any difference between consonance and dissonance, and it is *also* fundamentally different from common practice compositions where dissonances must, eventually, resolve. I agree with him in many ways. We should not minimize or paper over the dissonant and jarring qualities of the music in the name of imposing order upon it. And approaches like Forte's, which show connections but make no distinction between the *qualities* of different pitch sets, clearly miss something vital in the music. But I think the concept of dissonance can be far broader than it is in common practice tonality, and can encompass a wider range of expressive effects than Whittall may recognize. This is a concept we will consider in more depth in section 5.4.

In the end, I think both of the above explanations apply to the meaning of minor seconds in *The Rite*. It is this fortuitous overlap between mimicking "out-of-tune" folk styles of playing and using dissonance to depict a raw, brutal world, that enables minor seconds to be so powerful in this work.

CHAPTER 5: IMPLICATIONS FOR ANALYSIS AND COMPOSITION

If there is one thing this paper has shown it is that *The Rite* is not easily summed up with a few basic procedures, patterns, or structures. My aim throughout has been to show the full range of techniques and approaches in all their multifarious glory. The previous chapter did attempt to consolidate this material by identifying a number of central patterns and techniques. Below I will aim to tease out some more general principles, and consider their implications both for harmonic analysis and composition.

5.1 SMALL MELODIES, BIG POSSIBILITIES

Although this paper was focused on harmony, we inevitably spent a significant amount of time discussing melody. This is because melody is vital to the way that harmony behaves in *The Rite*. Melodies are the objects that the harmonies illuminate, the medium that they act upon. Melodies are what we latch onto and remember; they enable the various harmonic effects to mean something. Indeed, as much as I have thought about harmony in the work, when I picture the piece in my head, I imagine its melodies. I imagine melodies with a coloring and mood created by the harmony (and orchestration), which is vital to their effect; but when it comes down to it, it is the melodies that act as my ear's conduit into everything else.

This importance of melody probably comes as a surprise to no one except composers and music theorists. Melody can easily become the most neglected musical parameter in both disciplines because it resists systematization and reeks of subjectivity. But one of the lessons of this analysis of *The Rite* is how vital melody can be, and how music centered on even very simple melodies need not be retrogressive or romantic. For me personally as a composer, this has been one of the most important and unexpected lessons of this project.

More specifically, *The Rite* shows the particular power of simple melodies that are narrow in scope. As outlined in Chapter 1, many melodies in the work consist of only four or five pitches – some have as few as three – and the pitch material is often simple diatonic subsets. Far from leading to simple harmonies, these small melodic sets create space for a wide range of complex harmonies. The melodies are a sort of blank slate – the very narrowness of their scope means they have few harmonic implications, enabling them to be folded into an enormous range and variety of harmonic contexts. This provides another potent lesson for composers. Not only can melody be an important and useful musical parameter to consider, but simpler melodies can actually enable more varied and complex music.

5.2 FIELD HARMONY AND KALEIDOSCOPIC OSCILLATION AS FUNDAMENTAL MODES OF HARMONIC THINKING

The concept of Kaleidoscopic Oscillation and Field Harmony as two contrasting modes of harmonic practice has some compelling applications to analysis and composition. In a sense, common practice tonality actually employs both approaches simultaneously. First, there is the frequent alternation between similar but slightly different chords of Kaleidoscopic Oscillation (major and minor triads, with extra "kaleidoscopicity" coming from sevenths and dissonances like suspensions, appoggiaturas, etc.). Second, these oscillating chords are contained within the narrow field harmony of a single diatonic collection (sometimes with additional "color" notes from chromatic neighbors and applied chords). These are such fundamental qualities of common practice tonality that we may not even think of them as qualities at all. Post-common-practice, however, it becomes clear that these two approaches can in fact be separated out from one another. Indeed, some types of music focus almost exclusively on one approach or the other.

Most post-common-practice music makes use of both modes, of course, as we saw extensively in our analysis of *The Rite*, and it is also by no means a comprehensive scheme that can account for all twentieth and twenty-first century music. Nonetheless, I find it to be a helpful framework for considering possible sources of harmonic coherence. In analysis, it encourages us to think carefully about whether a passage of music is more fruitfully considered on a chord-by-chord basis or as a field of pitches that last for a more extended period of time. In most pieces, it will make sense to sometimes take one approach and sometimes the other.

In composition, it provides a valuable framework for different modes of harmonic thinking. Do we want to expand a given harmony out into a steady-state pitch field that we can float our material through, and then consider the different ways we can connect it to other pitch fields? Or do we want to consider it as a vertical chord and explore all the different ways we can manipulate it to create oscillations of similar but enchantingly different chords? Or do we want to try to do both at the same time, as in *The Rite's* minor third game octatonicism? Most composers probably already do all three of these intuitively, but being more conscious of it can allow us to be aware of more possibilities and to be more intentional in the choices we make.

5.3 COMPOSITE SETS AND JUXTAPOSITIONS

Much of the analysis in this paper has considered large pitch sets both as entities in their own right and as various juxtapositions of smaller sets. This general approach has broad applications to both analysis and composition. Analytically, the freedom to navigate between different interpretations of a given pitch set opens up many possibilities for identifying patterns and connections. We need not debate over whether the "correct" interpretation of a complex sonority is polychordal, scalar, functionally tonal, or something else. We can consider *all* of these approaches to be potentially valid and see where they lead us. As described earlier, jazz musicians have made use of this basic idea for decades, using both scales and chordal juxtapositions as methods of voicing and elaborating underlying harmonies. “Classical” composers could learn a lot from applying this approach to their work as well. As we saw in section 4.5, being able to interpret a pitch set as either a complete harmony, a verticalization of a scale, or a juxtaposition of smaller units gives us numerous options for how to play with and develop that set, dramatically opening up harmonic possibilities to explore.

In section 4.6, and throughout much of the paper, we looked in detail at the ways in which *The Rite* uses these multiple harmonic interpretations to create a web of interconnected harmonies without hierarchy or center. Rather than trying to find a single theoretical framework or harmonic system to explain what was going on, we sought to consider as many possible interpretations as we could, enabling us to draw numerous different types of connections between harmonies in the work. This approach to harmony can provide a valuable mindset for composers working today. With so many possible musical languages available to us and with little sense of rules or tradition binding us, the possibilities can seem overwhelming. We have a number of different ways we can handle this state. We can tie our fate to one system or another, which gives us some structure and constraints, but also tends to limit our imagination to the confines of that system. Or we can simply follow our ear where it leads us, with no external rules or boundaries, but are then limited by the constraints of what we are already able to hear and imagine. Viewing harmony as a web of possibilities enables us both to follow our ears and to expand our horizons. We can map out many different possible journeys a harmony could take us on, and then use our ears to choose the ones we like best. Or we can follow our ears to the limits of our imagination and then seek out connections like the ones discussed in this paper to push them further.

5.4 DISSONANCE AND HARMONIC WEIGHT

As we have seen, the concept of dissonance in *The Rite* is complex. It is not enough to simply count up all the pitches present and draw conclusions about the relative consonance or dissonance of a passage. Subset patterning, registration, motivic organization, and orchestration have a huge impact on the effect of a given pitch set. We saw an especially clear example of this by comparing R28 and R29+2. In both cases, almost all of the parts are clearly in E♭ Dorian, with one outlier on a G♮. At R29, clarinet 3 sustains a G♮ under the prevailing harmony, adding a touch of E♭ major warmth below. At R29+2, the G♮ is taken up by horn 3 and 7, where it actively clashes with the G♭ in oboe and English horn as part of a harsh, interrupting chord. It's the same composite pitch set in both instances, but the G♮ dissonance has a very different function and effect (see Figure 2.2.15).

This paper has been full of subjective interpretations like the one above, drawing attention to how organizing a given pitch set in different ways can create different harmonic effects. Going forward, a more objective measure of relative pitch strength would be valuable to develop – an algorithm to weigh the strength of the different pitches in a passage, allowing for more objective claims about the relative contribution of each pitch to the underlying harmonic effect. It would weight them not only according to the frequency with which they sound, but also factor in dynamics, register, instrumentation, etc., taking into account the full effects of voicing and orchestration. This would be profoundly useful in analyzing a work like *The Rite.* For example, we could use it to compare the orchestra version with the four-hand piano version, thereby seeing in a precise manner how the orchestration impacts the harmonic weight of a passage. It would also be useful for examples like the one above, comparing different passages with the same composite pitch set, but different effects. Finally, it could be useful for making comparisons across registers or instrumental families. For example, at R16, the algorithm could help to show that below C4 and above F4, E♭ Lydian predominates, while between C4 and F4, the C-C♯-D-E♭-E♮ cluster predominates. We could isolate and weigh these different registers, and then compare both to the total composite pitch weights for the entire ensemble. This would give us a nice graphical representation of the complex and ambiguous harmonic nature of this passage. We could also compare the relative strength of that cluster in this passage to its strength in the numerous other passages where it occurs.

To be useful, this algorithm would have to be as precise as possible, taking into account not only the frequency with which a given pitch appears, but also the dynamic, register, instrument, and part of the instrument's range. For example, a flute *forte* on a low C_4 would have to be weighted differently from a flute *forte* on a high C_7, since the C_7 is inherently a much louder pitch on the flute. Ideally, the acoustic effects of octave doublings and overtones generated by different instruments ought to be factored in as well. I had hoped to develop such an algorithm for use in this paper, but it proved to be beyond my current capabilities. It remains a tantalizing project that I hope will be taken up soon, by myself or others.

From a compositional perspective, the lesson is simply how much variety of effect is possible with a given pitch set, depending on all of the factors described above. A fascinating compositional exercise would be to attempt to create as wide a range of effects as possible with a single pitch set. This approach opens up the possibility of creating highly varied expressive effects within a unified harmonic framework.

5.5 OBSESSIVE TRANSFORMATION

Perhaps the most surprising discovery in this undertaking was the extent of variation and transformation on display in *The Rite*. Even passages that initially sound like repeats frequently contain slight shifts and transformations of the material. This constant, obsessive variation is especially noteworthy for composers today. With the influences of Minimalism and other forms of repetitive music so pervasive, and with the "copy and paste" function in music notation software so tempting, exact repetition can become an appealing compositional solution. There is nothing wrong with that per se; there is, of course, a great deal of highly repetitive music out there that is also highly effective. But it has been revelatory to discover how much of what I imagined to be a highly repetitive work is in fact constantly morphing and evolving. This is surely in part what gives *The Rite* its continued ability to surprise and intrigue, even after many listenings.

An apt metaphor, perhaps, is the natural world. While strict mathematical algorithms guide the way that plants grow and weather systems develop, in the real world these processes are constantly buffeted by highly unpredictable interactions with other systems. The evidence of the background patterns is there, but always imperfectly realized. It is also analogous to the tonal system itself. While rooted in the natural phenomenon of the overtone series, this background perfect harmony is invariably distorted in real music. Pure intervals are detuned to allow for consistent scalar structures and modulations. The diatonic scale and the major triad are not completely even, but only *nearly* even. Musical objects that *are* completely even or symmetrical – tritones, the whole tone scale, octatonic scale, augmented triads, diminished seventh chords – tend to have an artificial or other-worldly quality about them and a limited range of expressive possibilities. Another way to consider Stravinsky's use of harmonic similarity and variation, then, is as a way to graft some of the irregularity and non-evenness of diatonic tonality – and of the natural world – onto a fully chromatic, symmetrical pitch universe.

5.6 SYSTEMATIZATION AND FREEDOM, ORDER AND DISORDER, INTENTION AND INTUITION

The Rite of Spring is both more systematic and highly ordered than a casual listener would likely expect, and also less systematic and ordered than most music theorists would hope. Processes and systems are all over *The Rite*, but they are nearly always incomplete, partial, or distorted. They are a means to achieving a musical effect, not an end in themselves, and Stravinsky in fact seems to be actively uncomfortable with any process being too fully realized. This is related to the discussion of obsessive transformation above, as his warped processes are one more manifestation of this restless impulse to tweak and vary.

In *The Rite,* order and disorder, like consonance and dissonance, are aesthetic properties that exist on a spectrum and can be used to different degrees to create different effects. This challenges an implicit assumption undergirding much of music theory: that order is an essential quality of effective music. If order is not immediately apparent, then the theorist ought to dig deeper until they find it. Or, conversely, if a high degree of order *is* apparent, this can "prove" the high quality of a piece of music – potentially, regardless of how appealing it actually sounds. This analysis of *The Rite* does not negate this stance per se; in many cases, analytical digging does indeed reveal systems and order behind the seemingly chaotic surface, as music theory would predict. But in most cases, this order is only partial and incomplete. And in some cases, it isn't there at all. In these circumstances, while it is certainly possible that I have simply not dug hard or intelligently enough, it is also possible that the sought-after order simply does not exist; that sometimes chaotic pounding and haphazard layering really *is* just chaotic pounding and haphazard layering.

This realization has important implications for future analytical work. There is a marked tendency in music theory, whatever analytical stance it takes, to focus on music that can be effectively explained by music theory. This is an understandable approach to take; as music theorists, our goal is to try to explain how music works, so it is only natural to focus on music that does indeed seem to be explainable. But by neglecting compositions or sections of compositions that are *not* explainable, we do a disservice to the music and composers we are trying to explicate. The fact that some sections of a piece like *The Rite* are hard to explain in terms that go deeper than the surface gesture is itself an interesting and important fact about how the piece works. It is, indeed, *part of the explanation* of how it works. Navigating between and balancing different levels of order and systematicity is part of what the piece is about. If we can view the presence or lack of order not as an indicaor of intrinsic value, but as an aesthetic choice, it makes it possible to analytically consider wide swaths of 20^{th} and 21^{st} century music that would otherwise be elusive.

The lesson for composers is that processes and systems can be valuable tools, but need not be a prison. If a process generates useful musical material, great; but if intuitively tweaking it leads to something even better, we need not have any qualms about doing so. Indeed, if *The Rite* is to be our guide, we may want to actively seek out ways of messing with the results of our processes and systems, intentionally undermining whatever sense of regularity or predictability they create. A related lesson is that relative order and disorder can be another aesthetic parameter for composers to play with, like consonance and dissonance, tonality and atonality, or metric regularity and irregularity. It exists on a spectrum from highly ordered to highly non-ordered, with all sorts of shades in between, all of which can be used to create different aesthetic effects.

Finally, the question of how conscious Stravinsky was of all of this is not all that important from an analytical perspective – the patterns and structures are either there or not, whether he created them intentionally, intuitively, or through some combination of both**.** But from a compositional perspective, it is an intriguing question, with broad implications for compositional practice. Did Stravinsky intentionally plant all of these connections, or did they naturally arise out of his aural and tactile intuition? The patterns and connections are generally far less literal and methodical than we find in much of the music of the process-obsessed twentieth century, arguing for a more intuitive approach. On the other hand, some of the connections are such a striking combination of subtle and deep, that it seems unlikely they could have been arrived at purely intuitively. Ultimately it's a question that is impossible to answer definitively, except in the few instances where the sketchbooks show a clear, conscious connection (for example, between the harmonies at R82+1 and R161). Perhaps the best lesson for a composer to draw from this is simply how dynamic, rich, and mysterious the interplay between intention and intuition can be. Whenever we make logical, easily explained compositional choices we should be alive to the possibility of intuitively tweaking them to cover our tracks. And whenever our intuition is leading us in unexpected directions, we should remain alive to the possibility of stumbling into connections that we can then intentionally highlight or expand.

Everyone knows that musical composition is part head and part heart, part methodical craft and part poetic intuition. My analysis of harmony and voice-leading in *The Rite of Spring* confirms this in the deepest way, shedding light both on the dazzling range and versatility of

Stravinsky's craft, and also on the profound musical intuition that enlivens it. Too often, musical analysis seems to constrain possibility, to imply that the final form a work took was the inevitable, most perfect way it could have been. In this paper, I have sought to present a different attitude, one that sees analysis as a tool for unlocking possibility. Patterns and connections exist, but the resulting work is one of countless possible outcomes arising from its basic musical materials, the laws of acoustics, and the geometry of pitch space. It is an expansive and hopeful attitude, especially for composers. As great as *The Rite of Spring* is, the techniques it uses are available to all of us to exploit in our own unique way. The possibilities are nearly infinite, and can be adapted to our own personal interests, preferences, and obsessions.

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