



UNIVERSITY OF CALIFORNIA PRESS
JOURNALS + DIGITAL PUBLISHING

Society for Music Theory

The Rhythms of Reiteration: Formal Development in Stravinsky's Ostinati

Author(s): Gretchen Horlacher

Source: *Music Theory Spectrum*, Vol. 14, No. 2 (Autumn, 1992), pp. 171-187

Published by: [University of California Press](#) on behalf of the [Society for Music Theory](#)

Stable URL: <http://www.jstor.org/stable/746106>

Accessed: 14/06/2013 16:15

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at
<http://www.jstor.org/page/info/about/policies/terms.jsp>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.



University of California Press and Society for Music Theory are collaborating with JSTOR to digitize, preserve and extend access to *Music Theory Spectrum*.

<http://www.jstor.org>

The Rhythms of Reiteration: Formal Development in Stravinsky's Ostinati

Gretchen Horlacher

REPETITION AND FORM

Stravinsky's music is characterized above all by immediate and persistent motivic repetition. One need only recall the "Augurs of Spring" chord from the *Rite of Spring*, the soprano solo which opens *Les Noces*, or the piano and strings exchange in the first movement of *Symphony in Three Movements* to be convinced that this feature pervades the composer's output.

This distinctive trait has intrigued analysts because of its static quality: the unchanging nature of the repetition suggests an unusual approach to formal construction. The music in Example 1, taken from the end of the third movement of the *Symphony of Psalms*, illustrates just such a passage. A four-note ostinato appearing in the harp, timpani, and pianos continues for 42 bars; also beginning at this moment is a three-note ostinato in the soprano part. How does Stravinsky build a large structure from motivic material that is completely or nearly unchanging? How are formal divisions established? Do the repetitions begin and end arbitrarily? In sum, how do the repetitions fit into the larger framework of a piece?

The questions are as pressing from the listener's point of view. Much of the excitement of a Stravinskian phrase derives from the driving character of its repetitions, and from an

expectation for change which this character creates. This viewpoint emphasizes the stasis of the phrase. But beyond this experience, is there not also a kinetic experience, a sense of being within or between phrases, and of having reached the completion of a phrase? How is the listener's interest sustained over such spans?

Each of these questions addresses the presence and nature of phrasal continuity and development. As conceived in traditional tonal terms, development most often implies a continuity achieved through progression; the composer creates and orders musical materials so as to lead from one to another in an organic fashion. The portrayal of events as continuous and progressive has also been an important aim in the analysis of posttonal music. Here, more than in tonal music, the materials seem to be ordered only by their individual patterns of repetition.

Indeed, some analysts have criticized Stravinsky for the anti-developmental character of his repeated motives;¹ alternatively, Jonathan Kramer has chosen to characterize some of Stravinsky's music as at least partially independent of developmental processes. His analyses describe the ways

¹See, for example, Pieter van den Toorn's discussion of critiques by Gray, Lambert, and Adorno in *Stravinsky and "The Rite of Spring"* (Berkeley and Los Angeles: University of California Press, 1987), 57–64.

Example 1. *Symphony of Psalms*, iii, ostinati at R22

Timp. *p*
 S. *f* *22* *p subito e ben cantabile*
 cor - dis et or - ga - no, Lau - da - te E - um in cym - ba - lis, be - ne - so - nan - ti - bus,
 A. *f* *p subito*
 - da - te E - um; Lau - da - te E - um in cym - ba - lis, be - ne - so - nan - ti - bus,
 T. *f* *p subito*
 cor - dis et or - ga - no, Lau - da - te E - um in cym - ba - lis, be - ne - so - nan - ti - bus,
 B. *f* *p subito*
 Lau - da - te, lau - da - te; Lau - da - te E - um in cym - ba - lis, be - ne - so - nan - ti - bus,
 Arpa *mf*
 8 bassa -
 P-f 1 *p*
 2 8 bassa -
 V-C div. a3 *f* *crescendo* *cant. ma non f*
 C-B *f* *crescendo*

in which sections of music are internally static as well as disconnected from other sections; as such the sections constitute "moment forms," which are organized by proportional consistency rather than linear processes.² There have been, as well, demonstrations of continuity and development amidst repetition. For example, Edward Cone finds continuity in Stravinsky's music by identifying similarities among repeating blocks of music that are both separated in time and texturally and motivically distinct; Christopher Hasty has argued that although the types of connections to be made in a posttonal style may be new, temporal development is still viable and crucial to a sensitive hearing of new music.³ Most recently, too, Pieter van den Toorn has distinguished two types of repetition in Stravinsky's music and their respective means of development. In type one, two or more blocks of contrasting material alternate in rapid succession; each block is characterized by shifting time signatures, and its constituent strata remain in a fixed relationship. Development is a product of the extensions and contractions of the blocks, and of the changing order in which they occur. Type two features a steady time signature where the strata are *not* in a fixed alignment: the opposition of strata occurs through their superimposition, rather than through their successive alternation. Thus, development is a product of the changing vertical coincidences created by the strata.⁴

²In *The Time of Music* (New York: Schirmer Books, 1988); see chapter 2 (esp. 50–52), and chapters 8–9. A moment is a "self-contained (quasi-) independent section set off from other sections by discontinuities" (453), and moment form is a "mosaic of moments" (453). As moments are internally static, the form arises from the proportions and consistencies they create rather than developmental (or, in Kramer's words, linear) processes.

³Edward Cone, "Stravinsky: The Progress of a Method," *Perspectives of New Music* 1 (1962): 18–26; Christopher Hasty, "On the Problem of Succession and Continuity in Twentieth-Century Music," *Music Theory Spectrum* 8 (1986): 58–74.

⁴For a full discussion of these prototypes, see van den Toorn, "The Rite of Spring," chapter 4, esp. 99–100.

Along the same lines, Pierre Boulez has remarked that Stravinsky's repetitions exist in order "to obtain a varied disposition," a notion that will be central in the following analyses. Two of his remarks on the subject are pertinent here:

Stravinsky also utilized the system of superimposed rhythmic pedals—that is to say, his polyphonic apparatus being made up to some degree of clearly characterized stages, he gives each of them an independent rhythmic period. The linkings of these several superimpositions will not be reproduced at the same intervals, but so as to obtain a varied disposition.⁵

Where there are superimpositions of motifs, they are carried out in an extremely rigid fashion, each motif unrolling obstinately on the same intervals. In sum, there is no development, properly speaking, but only varied repetition, no chemical reaction, but only a physical mixing; we can allow ourselves to see in that difference a great lowering of level.⁶

Contrary to Boulez, this study is based on the premise that "varied disposition" creates not only continuity—a sense of motion—but also development—a sense of progression—among events. Furthermore, it will be demonstrated that the developmental process, which arises from the subtle differences between contiguous presentations of superimposed strata, produces a formal framework through the joint completion among strata of a contrapuntal pattern. At the heart of the analyses presented here is the idea that the progress of each stratum is controlled not only by its own pattern of repetition, but also by the patterns of repetition in other simultaneously occurring strata. The superimposed repetitions, then, are part of a strictly controlled contrapuntal texture. This model of development draws upon but moves away from traditional models. In its consideration of the "varied

⁵See Boulez, *Notes of an Apprenticeship*, trans. Herbert Weinstock (New York: Alfred A. Knopf, 1968), 62.

⁶*Ibid.*, 139.

disposition" superimposition produces, it borrows centuries-old ideas of contrast and change; the resultant phrases, however, do not rely upon a tonally conceived movement toward a goal.

This discussion will focus upon two aspects of formal development. First, the larger pattern created by the simultaneous repetitions of the strata will be considered; this pattern, to be called a cycle, defines a section of music. Second, pitch motions taking place within and between cycles will be identified. The contrapuntal workings of these strata will be shown to emphasize key pitches and/or sonorities. The pitches and sonorities gain emphasis both by their simultaneous arrivals in two or more strata, and by their appearances at strategic locations in the cyclic process; in this way Stravinsky's superimposition produces a posttonal pitch centricity.

THE CYCLE

As is true for Example 1, Stravinsky's superimposed strata are highly differentiated: they have discrete instrumentation and registers, and most often differ in pitch content and rhythmic and metric structure. Thus, initial descriptions of the repeating structures identify each stratum individually. In Example 1 brackets enclose two ostinati in the outer parts. The repetitions of the soprano part, which support the $\frac{3}{2}$ meter, are determined by the reappearance of $E\flat$ every three half notes. Superimposed below it in the harp and piano parts is an ostinato that repeats a configuration of fourths every four half notes; as mentioned before, this pattern, which is also established by the reappearance of the pitch $E\flat$, continues uninterrupted for 42 bars, nearly to the end of the movement.

While each stratum defines a single level of repetition, together the strata determine a second, higher level of repetition. Example 2 demonstrates that, when repeated exactly, the two ostinati define a two-voice structure lasting 12 half

Example 2. *Symphony of Psalms*, iii, cycle at R22



notes, their lowest common denominator. This module, defined when out-of-phase strata come into phase, will be called a cycle. Note that the sounding $\frac{3}{2}$ meter supports this cycle: it groups the piano/harp ostinato into four-bar units.

Observe, however, that unlike the piano/harp ostinato, the soprano ostinato does not continue uninterrupted over many bars. In fact, its repetitions are interrupted just at the moment when it would begin a second cycle with the lower ostinato.⁷ Stravinsky chose to avoid the exact repetition that would have resulted at the fifth bar of this phrase by replacing the soprano's $E\flat$ with $D\flat$. (The point of deviation from the original pattern is marked in Ex. 2 by an asterisk.)

Thus, the continuation of the soprano ostinato is dependent upon the continuation of the ostinato below it: when all

⁷Van den Toorn also comments on the superimposition of these ostinati in *The Music of Igor Stravinsky* (New Haven and London: Yale University Press, 1983), 139, 142, and 195–96. However, he argues that “local inconstancy or irregularity in vertical coincidence leads, in the long run, to constancy, self-enclosure, deadlock, stasis . . .” (196). The aim in this study is to identify instead continuity and development within and between phrases.

possibilities of vertical alignment have been exhausted, the superimposition stops.⁸ The cycle measures this superimposition: it provides a framework in which the interaction of the lines can be described. This cycle completes itself before the phrase is over, a circumstance which shall be discussed shortly, after a comparison of Stravinsky's cycle with other similar constructions.

Maury Yeston and Harald Krebs have developed models of rhythmic (or in Krebs's terms, metrical) consonance and dissonance that describe the relationships between rhythmic levels in a composition. They also identify rhythmic strata by pattern recurrence, although, because a Stravinskian ostinato holds pitch class, durational pattern, register, and instrumentation constant, pattern recurrence is more narrowly drawn in the present study.⁹

While the constituent elements described here and by Yeston and Krebs are the same, the resultant types of interrelationships identified are not, however. Yeston's analyses serve two mutually related purposes: to demonstrate "the aesthetic coherence of the rhythmic designs" of a com-

position,¹⁰ in large part by finding rhythmic patterns that are replicated at various levels, and to identify the sources of meter and syncopation in a composition. Krebs's analyses, despite his use of the word meter, focus more upon the first aim. Accordingly, the coincidence of starting/ending points between strata as in Example 2 is not a primary feature of their relationship. Yeston mentions this property only in passing, stating that "the three against four pattern . . . analytically describes a pattern that will cyclically recur if [the levels defined by three and four] are extended indefinitely, but [those motions] need not stop in an individual composition simply because one cycle of the structure . . . has been completed"; Krebs describes this coincidence as "incidental."¹¹

It is, of course this very coincidence that marks the boundary of a cycle; this is the property that Stravinsky exploits.¹² A cycle describes a *formal process* taking place between two or more strata. It does *not* form the basis of meter in a passage, although this does not imply that there is not a relationship between cycle and meter.¹³ What is unique about Stravinsky's superimposition is its capacity to engage the structure of a work: beyond lending an aesthetic coherence to the music, a cycle provides a formal framework in which to describe phrasal events.¹⁴

⁸Also note that the bass and cello parts support this change: in the first four bars of this phrase all lines contained pitches of the diatonic scale on E♭. In the fifth and sixth bars, "non-diatonic" D♭s appear for the first time.

⁹Maury Yeston, *The Stratification of Musical Rhythm* (New Haven and London: Yale University Press, 1976), and Harald Krebs, "Some Extensions of the Concepts of Metrical Consonance and Dissonance," *Journal of Music Theory* 31 (1987): 99–120. Yeston's rhythmic consonance occurs when "any level of motion can be expressed as a simple multiplication or division . . . of the rate of any other level of motion . . .," while a rhythmic dissonance occurs where ". . . there are found to be two levels in a piece that cannot be expressed as a simple multiplication or division of each other" (77–78). Krebs further divides rhythmic dissonance into two categories; type-A dissonance results when the two levels of motion are "not related by an integral common factor" (such as two against three), while type-B dissonance occurs when two levels of motion appear in a nonaligned way (103). Thus, the cycle in Example 1 shows an instance of Krebs's type-A dissonance.

¹⁰Yeston, *Stratification*, 103.

¹¹Yeston, 140; Krebs, 114.

¹²In the final section of this paper a similar process in the music of Steve Reich will be described.

¹³In fact, that relationship may be very complex; for instance, the meter may or may not support a single stratum, or a barline may or may not coincide with the beginning or end of a cycle.

¹⁴In a hemiola, where strata with patterns of two and three are superimposed, the coincidence of patterns is a form-defining event, for a hemiola often occurs as a phrase is closing. A hemiola does not usually encompass an entire phrase, however; also note that the most striking feature of a hemiola is its metric manipulation, such that a beat may be interpreted as both strong and weak.

We now return to the cycle of Example 1, in which, from a contrapuntal standpoint, the two ostinati function as outer voices in a chorale-like texture. As in a chorale, intervallic variety following the species counterpoint model is a major component of this invention. Despite the limited motion of each ostinato, which almost necessarily entails repeated verticalities in their counterpoint, Stravinsky's alignment allows for a great deal of intervallic variety between the outer voices. Example 3 shows the succession of intervals.¹⁵

Brackets identify repeated successions of diatonic intervals within the phrase. The corresponding semitone measurements show that with many recurrences, the quality of the diatonic interval has been altered. Stravinsky's alteration of the soprano ostinato not only prevents the return of m. 1, but also prevents a repetition of intervallic succession: the major third becomes a minor third. Notice also that each diatonic interval appears once before any is repeated.

The superimposition also creates a pattern of similar, contrary, and oblique (S, C, and O) motion, also marked in Example 3: while oblique motion necessarily results at the end of each measure, measures of only similar or contrary motion (mm. 1 and 3 of the phrase) alternate with combinations of similar and contrary motion (mm. 2 and 4 of the phrase). Most significant to the phrase as a whole, however, is the avoidance of a coincidence in both parts on the pitch E $\flat$; the ostinati double this pitch only on the first beat of the phrase, where it serves as a point of departure. Because this phrase is built almost exclusively from members of the diatonic major scale on E $\flat$, a second simultaneous arrival on this pitch, which would necessarily take place on a downbeat, would effect both harmonic and metric closure on the phrase.

¹⁵Intervals are shown both in diatonic and chromatic space; the first emphasizes the adjustment made to the soprano ostinato and its changing alignment with the lower ostinato, while the latter emphasizes the lack of repetition of exact intervallic size.

Example 3. *Symphony of Psalms*, iii, R22, intervallic variety

diatonic intervals	8	3	5	6	4	7	2	3	7	3	6	7	4	6	2	3	7	3	5
no. of semitones	0	4	7	9	5	11	2	4	10	4	9	11	5	9	2	3	11	3	7

pianos, harp

S S O S C S O C C C O C S C O S S S

The avoidance of E $\flat$, however, does not negate its value as a goal pitch; instead, the expectation for a joint reappearance of this pitch carries the listener forward to subsequent phrases. (As shall be seen, this expectation is fulfilled in various degrees as the ostinati continue.)

Thus, Stravinsky's superimposition provides phrasal continuity of several sorts: his alteration of the soprano ostinato at R22 + 4 not only prevents an exact repetition of any measure of the phrase, but also assures intervallic variety and prevents the closure that would result with the simultaneous arrival of both ostinati on E $\flat$. However, as noted before, although the cycle is completed after four bars, the phrase itself continues for two more bars.¹⁶ At this point the piano/harp ostinato has completed only half of a second four-bar cycle: E $\flat$ will not arrive on the downbeat in this part for two

¹⁶This phrase ending has been determined by the end of a line of text (from Psalm 150, verse 5)—“Praise him with sounding cymbals.” (The second half of the verse—“Praise him with loud clashing cymbals!”—is set in the next phrase.) Stravinsky sets the last syllable with the longest duration in the phrase, and also marks the end of the line with a breath mark.

more bars. In this sense, the activity of the phrase is left unfinished; it is incumbent upon the next phrase to continue this motion.

Indeed, the next six-bar phrase (see bottom line of Ex. 4), beginning at R23, is *not* an exact repetition of the previous phrase but, rather, is a continuation of it. As this phrase begins, the ever-present piano ostinato is already halfway through a second four-bar cycle (for although the soprano line has momentarily ceased its pattern, the cycle continues between the piano ostinato and the $\frac{3}{2}$ meter); thus its alignment with the soprano ostinato is altered. Each repetition of the soprano ostinato is counterpointed by a different segment of the piano (as before), but in a new ordering.

The lack of closure between R22 and R23, as the second cycle has only reached its midpoint, joins the phrases into one larger structure: at the level of the phrase, there has been no repetition between the two ostinati, but rather a continuously varied counterpoint. The interaction of the piano ostinato with the $\frac{3}{2}$ meter creates a relationship of antecedent-consequent between the two phrases. Stravinsky strengthens this phrasal relationship in his placement of the psalm text. Each phrase presents half of verse five from Psalm 150. Note that in Example 4, the common words and rhyming syllables between the two lines are given the same metric treatments within the same measures of each phrase. Example 4 also shows that, as a result of the second superimposition, the soprano and piano ostinati both arrive on $E\flat$ at the downbeat of $R23 + 2$. However, because the pitch correspondence comes clearly in the middle of the phrase, and of a line of text, it does not disrupt the continuity of that phrase. The conditioning effect of the previous six-bar phrase overrides the coincidence of ostinati upon $E\flat$.

At the end of this second phrase, the piano ostinato has completed a third cycle. On the very next beat, a downbeat, it will arrive on $E\flat$, and in this way it will effect upon this second phrase the separation and closure that was missing in

Example 4. *Symphony of Psalms*, iii, overlay of R22 and R23

the first. Even here, however, where the completion of cycle and phrase occur at the same moment, there is not complete closure: at the next downbeat, the soprano ostinato does not join the piano ostinato in sounding $E\flat$, but rather is absent. It returns, however, three four-bar phrases later, at R26, with a repetition of the music found at R22.¹⁷ With this long-delayed reappearance of $E\flat$ in *both* ostinati, large-scale pitch continuity is established over five phrases.

Thus far it has been demonstrated that the cycle controls the initial four-bar length of the superimposition of ostinati, and joins phrases into a larger twelve-bar period. Smaller details of these phrases may also be described in relation to the variety inherent in the cycle. While the inner parts of this texture (alto, tenor, and bass) are not ostinati, they each are based on a minimal number of pitches: the alto and tenor lines each alternate just two pitches, while the bass intones only one (however, in two registers). A key component of the cyclic process is the variety of simultaneities produced by

¹⁷In a longer (unpublished) discussion of this passage this author has described the role of the ostinato in these four-bar phrases. Essentially, without the presence of the soprano ostinato the four-bar cycle is defined by the interaction of the piano/harp repetitions and the sounding $\frac{3}{2}$ meter; the varied intonations of the tenor/bass differentiate each of the three phrases.

the interaction of the strata; here this variation is manifested in the continually changing metric disposition of the elements of the inner parts vis-à-vis the soprano ostinato. Although some simultaneities created by the four vocal parts occur more than once, these repetitions are mitigated by the metric arrangement of each part. The clearest example of this practice occurs in the alto line (see Ex. 1): as it oscillates from A♭ to B♭, it produces in four bars four distinct rhythmic versions of that alternation.

In this way the relationship of choral parts to the ostinati mirrors the relationship between the ostinati themselves: each line heard in the metric framework of the soprano ostinato rotates through the possible contrapuntal combinations as the cycle of the ostinati progresses. The shifting quality that this method gives to the music precludes harmonic stasis, despite the limited motion of the vocal parts; rather, this subtle motion sustains the listener's interest through the passage.

To summarize: this analysis has focused on the simultaneous pairing of strata distinguished by their repeating properties in order to demonstrate the richness of the relationships between these lines. While each ostinato is defined by its individual repetitions, its continuation is also dependent on its pairing with other strata. The resulting interaction is a means of motivic and formal development.

VARIATIONS OF THE CYCLIC MODEL

The cycle at R22 is a simple one, but Stravinsky experiments with this type of construction in many ways. Following are two brief examples whose cycles are variations of the model presented above.

In Example 5, taken from the 1934 melodrama *Perséphone*, a cycle delineates a lullaby sung to Perséphone by the Shades, the people of the Underworld. The cycle is a perfect

analogue for *Perséphone*, for the melodrama is about the cycle of the seasons. The mythical story, adapted by André Gide, relates Perséphone's perpetual travels between the earth and the Underworld to bring solace to the Shades. When Perséphone is transported to the Underworld, winter appears on the earth, and when she returns, she brings the spring back with her. Thus the cycle of the seasons is attributed to her movements.

In the scene to be discussed, Perséphone has just completed her first journey to the Underworld, but she is still asleep; because she has not awakened yet to her new surroundings, she is between worlds, still in the midst of her cyclic travels. This passage consists of four repeating strata (which may, perhaps, allude to the four seasons); only the upper two are ostinati, as the lower lines contain deviations in their repetitive patterns.¹⁸ The predominant ostinato is the melody sung by the Shades; it repeats at an interval of twelve quarter notes. (The reader will see that it has determined the format of Ex. 5.)

Above the Shades' ostinato is one with an additive construction; that is, with each repetition of the high F♯ that begins this line, the pattern is increased or decreased with a new pitch whose value is a quarter note. The reader may follow this pattern in the top line of Example 5. Thus, the first three quarters, F♯-F♯-G (voices cross here), are repeated with the addition of a fourth, yielding F♯-F♯-G-B, and finally, with the addition of a fifth note, yielding F♯-F♯-G-F♯-B. At this point the ostinato contracts in the same way it expanded—five pitches to four, and then back to the original three. Overall, this creates a pattern of 3 + 4 + 5 + 4, for a single statement of 16 quarters.

¹⁸The scope of this article precludes a commentary on these lower lines as well as the harmonic motion and the unusual barring in the passage. In a more detailed format it can be shown that these parameters reinforce and enrich the cycle.

Example 5. *Perséphone*, R74

R74

Sur ce lit el - le re - po - se Et je n'o - se la trou - blier.

R75

En - core as - sou - pie, en - core as - sou - pie, as - sou - pie à moi - tié

R76

El - le pres - se, pres - se sur son cœur La nar - cis - se dont l'o - deur

R77

L'a - con - qui - se l'a con - quise à la pi - tié.

R78

R79

Sur ce lit el - le re - po - se Et je n'o - se la trou - blier.

Taken together, the two ostinati of 12 and 16 quarter notes yield a cycle of 48 quarters, or four phrases in this context. (Again note the allusion to the four seasons!) This chorus has *five*, rather than four phrases, however; indeed, another cycle does begin at R79, as indicated by the exact duplication of the ostinati in the phrase beginning there and at R74. Of course, the entire phrase beginning at R79 is not an exact replication of the first phrase, for the lowest part now consists of a pedal on B. The exact pairing of the two ostinati mirrors a textual event, however—namely, the exact repetition by the chorus of the first line of text.

Two special features of this cycle have been identified. First, it is constructed from an ostinato whose pattern is additive. Second, the cycle itself mirrors dramatic and textual events: the use of cyclic materials not only symbolizes the subject of the melodrama—namely, the cycle of the seasons—but also vividly draws attention to Perséphone's first journey taking place at this very moment.¹⁹

In each of the previous examples, the constituent strata have been ostinati: that is, they have repeated exactly a pattern of pitches and durations. However, not all of Stravinsky's repeating melodic fragments are as rigidly constructed. These more freely structured strata will be called reiterating fragments. A larger group to which ostinati belong as a special subset, reiterating fragments deviate from exact repetitions in many ways; their lengths may be variable, for example, or they may reappear at variable intervals of time. Although their constructions are irregular, they may still take part in a cyclic process; the next example, taken from the second tableau of *Les Noces*, features such a cycle.

¹⁹The author addressed the issue of dramatic correspondence and cyclic materials in a paper entitled "The Ostinato in Stravinsky as a Dramatic Device," delivered at the annual meeting of the Society for Music Theory in Oakland in 1990.

This passage (shown in Ex. 6)²⁰ is distinguished by its use of only one true ostinato: pianos II and IV and percussion (shown in the right hand of the piano-vocal score in the example) repeat a punctuating chord which appears every three quarter notes. The superimposed melody first found in the mezzo-soprano part is a reiterating fragment because its length varies: its third presentation, at R37, is shorter than its first two occurrences.

This passage (and the music following it) is a ritualistic lament by the parents of the bride and groom, mourning the loss of their children; the variations (here and following) made to the lament tune are typical of the Russian folk music it mimics.²¹ Each reiteration of the lament consists of a related question: each asks to whom the care of the groom will be passed, now that he is leaving his mother's house. We will focus on Stravinsky's alterations to the fragment, for these adjustments change the fragment's vertical alignment with the piano ostinato accompanying it.

The passage begins with both strata proceeding in their most typical lengths: the soloist's repetitions are each ten quarters long, and the piano chord appears every three quarters.²² Thus, together they start a cycle whose total length would consist of thirty quarters, or three phrases. However, Stravinsky's first alteration to the solo lament occurs before

²⁰The music in parentheses has been added by the author, and will be discussed below.

²¹For information regarding Stravinsky's connection to Russian folk music, see Eugenie Lineva (or Lineff); *The Peasant Songs of Great Russia as They Are in the Folk's Harmonization* (St. Petersburg: Imperial Academy of Science, 1905); Victor Beliaev, *Igor Stravinsky's "Les Noces,"* trans. S. W. Pring (London: Oxford University Press, 1928), esp. 6; Richard Taruskin, "Russian Folk Melodies in *The Rite of Spring*," *Journal of the American Musicological Society* 33 (1980): esp. 507–8; and Margarita Mazo, "Stravinsky's *Les Noces* and Russian Village Wedding Ritual," *Journal of the American Musicological Society* 43 (1990): esp. 109–10.

²²The reiterating fragment has already appeared in this version at R35.

Example 6. *Les Noces*, Second Tableau

36 (*Les parents tour à tour*)

Вы ко-му то куд-ри дос-та-не-тесь? Ой, Вы ко-
 (To whom will these curls pass?) (To whom will these

До-ста-не-тесь, ку-дри
 (Will they belong to a

sempre legato

sempre sf

3 ♩'s

37

- му то ру-сы дос-та-не-тесь? Вы ко-му то ру-сы до-ста-не-тесь?
 locks be passed?) (To whom will these locks be passed?)

красной дъ-вицъ Что нас-
 beautiful young woman?) To Na-

etc.

this cycle can be completed; as we have noted above, the composer shortens the third phrase, which begins at R37, by three quarters.

At first glance it would appear that the cycle has been broken; however, since the duration of the lament has been decreased by three quarters, which is the length of the piano ostinato, the two lines in fact continue as if no alteration had been made. In other words, Stravinsky's alignment of the lament with the piano ostinato permits the cycle to continue to its conclusion; in Example 6 the music in parentheses puts back the eliminated three quarters to show that the pattern of the cycle is intact.

The continuation and completion of the cycle has a formal function: it links the first three phrases into a larger unit. This musical link reflects the textual and dramatic link of the three parental questions; in the next phrase (not shown in Ex. 6) a second cycle begins as the answer to the questions is given.²³

Thus, reiterating fragments and ostinati may operate together to produce cycles. What remains is to describe how a cycle may interact with noncyclic material in a phrase. We return to the third movement of the *Symphony of Psalms*, where a cycle describes the repetitions of three superimposed ostinati in the horn, tenor/bass, and pianos/harp/lower strings (see Ex. 7).²⁴

Two of the ostinati are defined by their repetition of three-note units: the ostinato in the piano group, which begins at R2, repeats every three quarters, while the tenor/bass ostinato, which begins one bar before R2, repeats every three

half notes.²⁵ The horn ostinato, unlike the other two, consists of only two pitches in a pattern lasting four half notes.

The two lower ostinati, which dominate the texture, have a cycle of six quarter notes; because the tenor/bass ostinato begins one bar before the piano ostinato, exact pitch repetition does not begin until the middle of the third bar of the passage.²⁶ With the addition of the horn ostinato, however, the seven-bar passage is shaped by the completion of only one cycle. (The lowest common denominator of three, six, and eight quarters is twenty-four quarters, or six bars; the passage contains seven bars due to the early start of the tenor/bass ostinato.)

Example 8 identifies this cycle in brackets, and shows the exact repetition that would result if the passage continued one bar further. As in Example 1, the number of repetitions of each ostinato pattern is determined by the lengths of all three ostinati. In the earlier example control of the pitch E♭ was observed; in this three-voice context the resulting verticalities promote the preeminence of C.

That C is a focal pitch is without doubt: the continuous presence of the C-G fifth in the bass, along with the distribution of members of the C-minor triad in the other two ostinati, ensures its priority. The total pitch content of the ostinati, 6–Z26, is a subset of the minor scale on C (the missing F is found in the alto line, to be discussed with the accompanying soprano line below).

²⁵The author has chosen D as the initial pitch (and therefore B♭ as the closing pitch) of the tenor/bass ostinato for several reasons. First, the pitch sequence D–E♭–B♭ is an important motivic gesture featured early in the movement. Second, the completion of a cycle is marked by the completion of an ostinato repetition; the tenor/bass ostinato ceases its repetitions with the pitch B♭.

²⁶Furthermore, if the metric identities of the strata are taken into account, exact repetition does not occur for another six quarters, or at the start of the fifth bar.

²³These strata continue until R40; in an (unpublished) longer discussion of this passage, the author has described how the cycle continues, and what role other fragments in other voice parts play.

²⁴The use of the number 3 is most probably a reference to the Trinity, an indication of Stravinsky's Christian interpretation of Psalm 150. Other references to the number 3, not discussed in this analysis, pervade the movement; for example, the soprano ostinato at R22, discussed earlier, reiterates three pitches over three beats.

Example 7. *Symphony of Psalms*, iii, harmonies at R2

Example 7 shows three staves: Hn. as sounds, T/B (also octave higher), and pianos. The pianos staff includes numerical annotations for trichords and dyads across the measures.

Measure	Trichords	Dyads
1	(beats 1, 3)	(beats 2, 4)
2	3-2	3-6
3	2-5	2-5
4	3-11	2-4
5	3-2	3-6
6	3-5	3-5
7	3-11	2-4
8	2-3	3-7
9	3-5	3-5
10	3-11	3-4
11	2-3	3-7
12	2-5	2-4
13	3-11	2-3

Example 8. *Symphony of Psalms*, iii, cycle at R2

Example 8 shows three staves: Hn. as sounds, T/B (also octave higher), and pianos. The pianos staff includes numerical annotations for trichords and dyads across the measures.

Measure	Trichords	Dyads
1	(beats 1, 3)	(beats 2, 4)
2	3-2	3-6
3	2-5	2-5
4	3-11	2-4
5	3-2	3-6
6	3-5	3-5
7	3-11	2-4
8	2-3	3-7
9	3-5	3-5
10	3-11	3-4
11	2-3	3-7
12	2-5	2-4
13	3-11	2-3

The superimposed strata reinforce C in the vertical domain; beginning at the third bar of the passage, their counterpoint creates every six quarters a triadic trichord (3–11) that holds the pitch classes C and E $\flat$ invariant (see Ex. 7). The appearance of 3–11 is, however, far from guaranteed. Example 9 shows a hypothetical version of R2 in which the tenor/bass ostinato has been moved forward one bar, to begin concurrently with the other two strata. This superimposition, while also shaped by the completion of a single cycle, contains not a single instance of 3–11. While the actual and “revised” versions share twelve of the sixteen trichords, as well as occurrences of the three dyads, the revised version substitutes 3–8 and 3–9 for 3–11.

Example 9. *Symphony of Psalms*, iii, “revised” R2

Example 9 shows three staves: Hn., T/B, and pn. The pn. staff includes numerical annotations for trichords and dyads across the measures.

Measure	Trichords	Dyads
1	(beats 1, 3)	(beats 2, 4)
2	3-5	3-8
3	2-4	2-4
4	3-7	2-3
5	3-5	3-8
6	3-4	3-4
7	3-7	2-3
8	2-5	3-9
9	3-4	3-4
10	3-6	3-2
11	2-5	3-9
12	3-6	2-4
13	2-4	3-2
14	3-6	3-2

Example 10. *Symphony of Psalms*, iii, two-chord succession

The musical score for Example 10 consists of three staves. The top staff is for Horns (Hn. as sounds) in treble clef with a key signature of one flat. The middle staff is for Tenor/Bass (T/B) in bass clef with a key signature of one flat. The bottom staff is for Pianos in bass clef with a key signature of one flat. The Pianos part is an ostinato. The Horns and T/B parts play a two-chord succession (3-11) in measures 2, 3, 4, and 5. Asterisks are placed under the Pianos staff in measures 2, 3, 4, and 5, indicating the underlying half-note pulse.

Also noteworthy is the linear approach given each of the triads in the passage. In each instance C is approached by the two Gs surrounding it, while E $\flat$ arrives via half-step motion from D. The resulting pattern, marked with asterisks in Example 10, mimics a dominant-tonic succession with C as a goal. These patterns are metrically emphasized; the harmonic change always occurs with the underlying half-note pulse (that is, no 3–11 occurs on beats 2 or 4).

Nonetheless, the dominant-tonic succession is not repeated exactly; the superimposition produces three distinct versions of the two-chord pattern, yielding at the sixth bar a 3–11 whose top voice is A $\flat$ rather than G. Taken as an ordered occurrence of 3–11, this pattern begins with the most straightforward version of a dominant-tonic succession and moves to the least emphatic one as the end of the passage approaches. The superimposed strata extend C's priority in the vertical domain in a posttonal manner: the verticalities, rather than progressing toward an arrival on C, instead reiterate each possible C-related contrapuntal combination.

This procedure also takes place in the alto and soprano lines, which are superimposed with the cyclic strata. These lines, which are derived (as is the tenor ostinato) from a motivic gesture at the start of the piece, move in parallel

thirds drawn from the minor scale on C. While they do contain repetitive gestures, these strata are not reiterating fragments.²⁷ (These voices are shown with the other strata in Ex. 11.) Most important for our purposes is their repetition of a syncopated rhythm, which places them in relief vis-à-vis the other strata; the rhythmic counterpoint draws attention to this pair as another participant in the harmonic process. These strata add another layer of depth to the vertical succession of sonorities, for as outer voices they create, in conjunction with the piano ostinato, moments of closure upon C and G not associated with the cycle.²⁸

In Example 11 several outer-voice relationships have been highlighted. In the second bar of the passage the outer parts complete a quasi-dominant-tonic succession from beats 1 to 2, just before that event appears in the three ostinati. The alto's arrival on C strengthens this event. A similar event takes place in the fourth bar: here, the ostinati move first in the two-chord pattern, followed by an echo of the tenor line

²⁷Although they (often) repeat a durational pattern, these lines do not repeat a consistent pattern of pitches.

²⁸These lines also present a second accentuation of the text; for reasons of length this argument will not be presented here.

Example 11. *Symphony of Psalms*, iii, entire texture at R2

in the soprano line on beats 3 and 4. At the third location, from bars five to six, the soprano closes upon C congruently with the lower two ostinati, as the alto doubles (at least momentarily) the horn on A $\flat$.

Thus these upper parts provide yet another counterpoint to this multilayered passage, one whose emphasis on C is not always congruent with that of the three ostinati. In fact, in some instances an upper voice may contradict the chord pattern taking place in lower parts; for example, at m. 3, the alto adds an A $\flat$ to the otherwise triadic sonority on that downbeat. In addition, there are strong gestures toward a triad built on G, for at times the D/B $\flat$ third in these top lines coincides with a G from the piano ostinato (note asterisks in Ex. 11 at mm. 3 and 6).

It is clear that the priority of C, as well as of the triad built on C, has not been established by tonally oriented means, or by any goal-oriented motion toward it, beyond the simple two-chord succession described above. Rather, the analysis has indicated that numerous C-related gestures are taking place simultaneously, and that these gestures may or may not support one another. The cycle of superimposed ostinati produces a saturation of vertical possibilities, which, taken together, permit C to be heard as the most stable member

of a diatonic collection, at the same time that they prohibit a complete closure upon it.

Nonetheless, Stravinsky's alteration to the horn ostinato in the final bar does allow the phrase to reach a closure of sorts. Had the horn continued its half-step alternation in the last bar of the phrase, the final 3–11 there would contain an A $\flat$ rather than the more conventional G; in fact, the return of the original 3–11 signals the end of the repetitions and of the phrase.

CONCLUSIONS AND REVERBERATIONS

The analyses presented here have served several purposes. A primary objective has been to identify a structure designated as the cycle, which depends upon interactions of strata for its formal definition. Thus, from a structural standpoint it certainly matters where repetitions begin and end. The component harmonic and contrapuntal events have been described in relation to the framework of the cycle. Unlike the harmonic progression associated with tonal music, these events are not hierarchically organized around a goal pitch/triad. Rather, as a result of their superimposition, the strata

“play out” the vertical possibilities; in the process certain key pitches and sonorities gain stability, both through their prominent placement within the cyclic process, and in their varied repetition.

It is clear that a compositional technique based upon the opposition of motivic fragments—here in the form of superimposition—articulates form as much through completion as through progression; nonetheless, there is still a sense of moving forward and of connectiveness in the resultant triadic combinations and in the pitch centrality that is at least partly a product of the counterpoint. Jonathan Kramer has suggested that listeners hear moments as “entities” rather than linear processes, in a mode of perception he calls “cumulative listening.”²⁹ It is not the intent of this study to deny the presence of this static side of repetition, but rather to emphasize its other evolving face, in which the listener recognizes that no two repetitions are exactly the same.

Let us reconsider, then, Boulez’s critique of Stravinsky’s practice. His objections to a composition based on superimposed strata were twofold; namely, that the “motifs” proceed in a rigid manner and that this, in turn, prevents development—“chemical reaction”—from taking place. Even in the limited remarks made here we have seen that such repetition in Stravinsky’s music is not rigid: not all strata are *ostinati*, and small alterations made to repeating strata may have far-reaching consequences. While Boulez did describe a “varied disposition,” he did not attribute to it any larger role. Here the many kinds of variation that result from superimposition have been observed to be agents of development and continuity: the variations prevent stasis.

²⁹Kramer describes cumulative listening as follows: “As we listen to a piece, we accumulate more and more information concerning its form. The more we hear, the more we understand the nonlinearity embodied in the consistency and balance (or lack of it) that generate the nonlinear form” (*The Time of Music*, 52).

In conclusion, some further applications of a cyclic analysis may be noted. As has been suggested by the discussion of the passage from *Les Noces*, reiterative fragments may also be described cyclically, and, while *ostinati* are numerous in Stravinsky’s output, reiterative fragments are even more prevalent. This essay has touched briefly upon textual matters. Stravinsky’s often unusual text-setting procedures may also be related to the notion of varied repetition; syllable accentuation may provide the composer with yet another parameter of variation.

Finally, Stravinsky’s superimpositions bear a striking resemblance to minimalist music, especially the phase pieces of Steve Reich. In both composers’ work listeners are challenged to follow the subtle differences between continuous, superimposed repetitions of motives; the repetitions cease when all possibilities of superimposition have been exhausted. Reich describes his *Piano Phase* (1967) as follows:

Two musicians begin in unison playing the same pattern over and over again and . . . , while one of them stays put, the other gradually increases his tempo so as to slowly move one beat ahead of the other. This process is repeated until both players are back in unison, at which point the pattern is changed, and the phasing process begins again.³⁰

Reich describes this process as having formal implications:

As I listened to this gradual phase shifting process I began to realize that it was an extraordinary form of musical structure. This process struck me as a way of going through a number of relationships between two identities without ever having any transitions. It was a seamless, continuous, uninterrupted musical process.³¹

The phasing process and the cycle are not equivalent; while in a cycle Stravinsky superimposes two different strata

³⁰Steve Reich, *Writings About Music* (New York: New York University Press, 1974), 52.

³¹*Ibid.*, 50.

of differing lengths, in a phase piece the material is superimposed against itself. Nonetheless, both share an aesthetic approach to repetition, one that this study has attempted to demonstrate in Stravinsky's music. Despite their inherently reiterative constructions, Stravinsky's repetitions in fact contain very little that is repetitious after all.

ABSTRACT

This article examines ways in which Stravinsky's superimposition of ostinati and other repeating fragments creates both continuity and form. It considers how the interaction of superimposed strata may control the lengths of phrases and contribute to the establishment of pitch priority. It introduces the *cycle* as a model for measuring the contrapuntal progress occurring between two or more strata.