

## **Stravinsky and the End of Musical Time: Messiaen's Analysis of *The Rite* and Its Impact on Twentieth-Century Music**

*Vincent P. Benitez*

The Pennsylvania State University

### ***Abstract***

*Through The Rite of Spring, Stravinsky ushered in the end of musical time, as we know it. The work's expansion and contraction of rhythmic cells, irregular accents, rhythmic ostinatos, layering of rhythmic patterns, and asymmetrical groupings contributed to rhythm being an equal partner with harmony in the structuring of music. Struck by the originality of its rhythmic practices, Messiaen analyzed The Rite in 1930. This interest in The Rite was to have a profound impact on the history of music. Through his work as both a composer and teacher, Messiaen became an important disseminator of Stravinsky's rhythmic ideas in the twentieth century. Messiaen's analysis of The Rite of Spring was his most brilliant work as a teacher, as attested to by numerous former students. Volume II of the Treatise on Rhythm, Color, and Ornithology (1949–92) contains an outline of this detailed oral analysis. Although he often analyzed The Rite measure-by-measure in class, in the Treatise on Rhythm Messiaen provided only the highlights of one interpretation. In this essay, I will examine Messiaen's analysis of The Rite of Spring as laid out in the Treatise on Rhythm, outlining its contents before delving into the "Introduction" to Part I, the "Augurs of Spring," and the "Sacrificial Dance." To conclude my paper, I will consider the analysis's influence on Pierre Boulez and Karlheinz Stockhausen, two of Messiaen's most illustrious pupils.*

### **Introduction**

When comparing *The Rite of Spring* (1913) with *The Firebird* (1910) and *Petrushka* (1911), Robert P. Morgan commented on how Stravinsky set a new tone in the later ballet by infusing it with an "aggressive, propulsive quality" not characteristic of its predecessors.<sup>1</sup> Indeed, for Morgan, in *The Rite*, Stravinsky not only "extended, and intensified, techniques already nurtured in the earlier ballets" but also made his "points with brutal force." Although the dissonant and chromatic nature of *The Rite's* pitch language certainly played a role in contributing to the work's harsh aesthetic, as Morgan maintains, its innovative rhythmic practices must take even more credit for the brutal, mechanistic sound world associated with the ballet.

Although it is uncertain when Olivier Messiaen first heard *The Rite of Spring*, according to him, he saw Roger Désormière (1898–1963) conduct the work at the Salle Gaveau in Paris, when he was seventeen years old (probably in 1926).<sup>2</sup> Messiaen admired the performance for its rhythmic precision. In 1930, he analyzed *The Rite*, taking stock of its rhythmic techniques. Nine years later, Messiaen wrote an article entitled "Le rythme chez Igor Strawinsky" about the Russian composer's rhythmic practices in an issue of *La Revue musicale*.<sup>3</sup> Important parts of his later teaching about *The Rite* are present in this

article, including a reference to *rhythmic characters*, although not mentioned by name. After World War II, Messiaen taught *The Rite* to his students both at the Paris Conservatory and at an unofficial analysis class conducted at Guy Bernard-Delapierre's home from 1943–47. Ultimately, what Messiaen conveyed to his pupils about *The Rite* was Stravinsky's manipulation of rhythmic cells, particularly their progressive augmentation and diminution, and superimposition of different rhythmic layers.

Messiaen's analysis of *The Rite of Spring*, especially his interpretation of the "Glorification of the Chosen One" and the "Sacrificial Dance" from which he developed his ideas about rhythmic characters, was his most brilliant work as a teacher, as attested to by his numerous former students. Volume II of the composer's posthumous *Treatise on Rhythm, Color, and Ornithology (1949–92)* contains one outline of a detailed oral analysis done in class.<sup>4</sup> In an interview with Peter Hill, Yvonne Loriod-Messiaen admitted that she had three different versions of her husband's analysis of *The Rite* at her disposal when preparing the *Treatise on Rhythm* for publication.<sup>5</sup> What she apparently chose was the same analysis that Brian Schober experienced at the Paris Conservatory when he studied with Messiaen there from 1973–76.<sup>6</sup>

In this essay, I will examine Messiaen's interpretation of *The Rite* as found in the second volume of the *Treatise on Rhythm*. I will show how his analyses of Stravinsky's music not only shaped his approach to rhythm but also furthered the Russian composer's legacy through their influence on composers who reached maturity after 1945, particularly Pierre Boulez and Karlheinz Stockhausen.

### **Overview of *The Rite of Spring***

Figure 1 lays out the contents of Messiaen's analysis of *The Rite* in the *Treatise on Rhythm*. Before beginning his discussion of the work, Messiaen lays out its essential points, which describe the nature of rhythmic characters and from whence they derive. Next, Messiaen provides an extract from an interview Stravinsky granted to Ricciotto Canudo of the Parisian arts journal *Montjoie!* during the composition of *The Rite*. It was published on the morning of the premiere on 29 May 1913 under the title, "Ce que j'ai voulu exprimer dans *Le Sacre du Printemps*." Angry at an interview that stressed aesthetics with which he took issue, which for him might prevent a listener from understanding the music, Stravinsky insisted that his ideas had been distorted. I will not go into the details of the "Montjoie affair" here; rather, I will point out that Stravinsky, according to Pieter C. van den Toorn, either "forgot or sought deliberately to revise the circumstances of *The Rite's* conception," given his formalist attitudes.<sup>7</sup>

But much of *The Rite* was composed with images of particular rituals in mind, which spurred Messiaen's imagination as he developed his analysis. Accordingly, Messiaen brought forth a twofold vision of the work as one centering on the music's construction, but within an aesthetic backdrop of conflicting primeval forces that involve the emergence of life within a hostile environment. It was spurred by Stravinsky's well-known dream of a ritual sacrifice in which a young, vibrant girl dances herself to death in front of a group of motionless, old men. This dream became the famous "Sacrificial Dance," which for Messiaen, centered on the conflict between dynamic and static principles, which is the essence of *The Rite* and from which rhythmic characters derive.

1. “The Analysis of *The Rite of Spring* by Stravinsky and Rhythmic Characters” (pp. 93–94)
2. Interview of Stravinsky about *The Rite of Spring* in *Montjoie!*, May 29, 1913 (pp. 95–96)
3. Analysis of Part 1: Adoration of the Earth (pp. 97–106)
  - Introduction (pp. 97–99)
  - Augurs of Spring (pp. 99–104)
  - Dance of the Earth (pp. 104–6)
4. Analysis of Part 2: The Sacrifice (106–47))
  - Introduction (pp. 106–11)
  - Glorification of the Chosen One (pp. 111–12)
  - What is a Rhythmic Character? (pp. 112–13)
  - Glorification of the Chosen One (pp. 113–17)
  - Evocation of the Ancestors (pp. 117–24)
  - Sacrificial Dance (pp. 124–47)

Figure 1: The Contents of Messiaen’s Analysis of *The Rite of Spring*  
(from Chapter 3 of the *Treatise on Rhythm*, 2:91–147)

Following the *Montjoie* interview of Stravinsky is Messiaen’s analysis of *The Rite*. He proceeds through the work chronologically, viewing the music as evoking ancient times before the dawn of humankind, citing various French authors to reinforce his arguments. Indeed, during his discussion of the “Evocation of the Ancestors,” he likens the gestures of the music to the movement of lumbering giants in the Book of Genesis or in other ancient traditions, or, for that matter, to prehistoric dinosaurs. In this context he even comments on Walt Disney’s maligned depiction of dinosaurs and the battle between the tyrannosaurus rex and stegosaurus in the film *Fantasia* in relation to the “Glorification of the Chosen One” and “Evocation of the Ancestors.” Citing Raymond Cogniat’s book *Danses d’Indochine*, which argues that dance is motivated by combat and love, as exemplified through dances of war and seduction, Messiaen believed that the basic instincts of self-preservation and procreation common to dance are expressed not only in *The Rite* but throughout the world.<sup>8</sup> Thus, Messiaen believed that the battle between the two dinosaurs accompanied by Stravinsky’s music in *Fantasia* was not as far-fetched as one would believe.

In his analysis, Messiaen focuses on “The Augurs of Spring” because of its purely rhythmic theme, and, due to his overall emphasis on rhythmic characters, the “Glorification of the Chosen One” and “Sacrificial Dance” (see Figure 1). In fact, as I have mentioned, for Messiaen, the “Sacrificial Dance” is the essence of *The Rite*. Therefore, it should come as no surprise that he devotes numerous pages to this dance in his analysis, with many centering on his interpretation of the music’s rhythmic structure.

## Introduction to Part I

I would like to turn now to the Introduction to Part 1 of *The Rite of Spring* (see Example 1). Messiaen regards the opening as depicting a prehistoric earth right after the cooling of the sea and its shores. For him, it is uninhabited, reflecting the solemnity that precedes the appearance of life. As the music proceeds, we move through various prehistoric eras, finally settling on the mammalian one at the second measure after Rehearsal 3, which Messiaen likens to a “reveil des oiseaux.” There are no rhythmic themes, superposed rhythmic pedals, or rhythmic characters; instead, the music is characterized by a supple global rhythm, generated by what Messiaen calls *irrational values*. Technically, irrational values are triplets, quintuplets, or septuplets that cannot be evenly divided. What Messiaen is actually referring to are *irrational rhythms*, where binary-divided durations are transformed through the use of irrational values, resulting in an overall sense of temporal fluidity. Although the bassoon melody contains irrational rhythms that produce a sense of acceleration, Messiaen draws attention to the second eighth of the triplet found in the horn part in measure 2, along with the triplet rhythm of the bassoon part at Rehearsal 1. According to him, such rhythms, introduced by Debussy, were exploited by Varèse, Jolivet, Boulez, and a whole host of post-War composers in their music.

Lento ♩ = 50  
tempo rubato

Piano

*pp ad lib.*

Pno.

*legato*

*poco accelerando*

Example 1: Introduction to Part 1, *The Rite of Spring*, R0–R1:3  
(Selected irrational rhythms denoted by brackets and the box)

## The Augurs of Spring

Let us turn now to the celebrated opening of the *Augurs of Spring* (see Example 2). According to Messiaen, this music contains a *purely rhythmic theme*, a carving out of space possessing thematic force. In this passage, three rhythmic orders are present, which are concepts derived from the rhythmic theories of plainchant theorist Dom André Mocquereau (1848–1930). They are: (1) a *quantitative order* (dealing with long and short

Tempo giusto  $\text{♩} = 50$

13

Piano

14

Pno.

Example 2: The Augurs of Spring, *The Rite of Spring*, R13–R14:2

durations), (2) a *dynamic order* (dealing with intensities and densities), and (3) a *phonetic order* (dealing with timbres and attacks).

Messiaen regards the famous polytonal motto chord in this music as derived from the polytonal “Golaud” chord found in the Prelude to Debussy’s opera, *Pelléas et Mélisande*.<sup>9</sup> For Messiaen, while Debussy’s “Golaud” chord is expressive and warm, Stravinsky’s motto chord is ugly, heavy, and dirty, and repeated with the utmost indifference.

Using the concept of a quantitative order, Messiaen explains the structure of the rhythmic theme by relating its durational components to the *deçi-tâla Simhavikrîdita* (translated as the “Bond of the Lion,” No. 27 from Çarngadeva’s list of 120 *deçi-tâlas* [see Example 3]). This *deçi-tâla* is divided into two rhythmic cells, one that progressively augments and diminishes by a basic value while the other stays the same. Consequently, Messiaen interprets the rhythmic theme at Rehearsal 13 as consisting of two alternating cells A and B that increase and decrease, respectively (see Example 4). In short, what we have here is a rudimentary example of rhythmic characters. We will encounter this procedure again, although greatly augmented, when I discuss the “Sacrificial Dance.”

Example 3: *Simhavikrîdita* (“Bond of the Lion”)

Tempo giusto  $\text{♩} = 50$

13

Piano

14

Pno.

Example 4: The Augurs of Spring. Bipartite rhythmic theme, with two alternating cells in which one increases while the other decreases

Although Messiaen acknowledges that eight measures of 2/4 enclose the rhythmic theme, the first two measures are not included in his analysis; instead, the theme begins with the second eighth note of the third measure of Rehearsal 13, a beginning reinforced by chords sounded by eight horns along with string accents. For its part, the 2/4 time signature represents a fictitious meter that is designed for ease of performance. What is more, the silences that follow attacks should be included when determining the theme’s durational profile. Accordingly, as seen in Example 4, A increases from 2 to 3 to 5 eighth notes, whereas B decreases from 6 to 4 to 3 eighth notes. If you superpose the two lines, B is the retrograde of A, with both B and A skipping a duration in their sequences (see Figure 2).

Duration A:	2	3	5	Duration A:	2	3	(4)	5
Duration B:	6	4	3	Duration B:	6	(5)	4	3

Figure 2: Superposition of Cells A and B, with B being the retrograde of A (skipped durations are in parentheses)

In his analysis, Messiaen then turns his attention to the dynamic and phonetic orders linked with the theme. The dynamic order describes the theme’s density—the thick massive attacks of the eight horns—and intensity—the *ffs* of the horns and accented notes of the strings. For its part, the phonetic order describes the theme’s timbral and articulative aspects. The timbre of the horns is large, scraped, and torn. In addition, there are dry attacks followed by silences.

Although the shaping of the rhythmic theme in terms of rhythmic characters is the main point of Messiaen’s interpretative foray, the invocation of rhythmic orders is more consequential when it comes to the impact of his analysis. These orders exemplify Messiaen’s compositional penchant for treating musical parameters separately, which will spur younger composers to do the same, especially in relation to integral serialism.

### Sacrificial Dance

I shall conclude my examination of Messiaen’s analysis of *The Rite of Spring* by looking at the refrain of the “Sacrificial Dance.”<sup>10</sup> In the second chapter of the *Technique of My Musical Language*, Messiaen stated that Stravinsky, consciously or unconsciously, made use of the Hindu rhythm *Simhavikrīdita* in his music (see Example 3).<sup>11</sup> According to Messiaen, Stravinsky transformed the first cell into separate variable cells in the “Sacrificial Dance,” while the other cell remained fixed. Furthermore, he considered Stravinsky’s manipulation of both the variable and stationary cells in the dance as comparable to that of living entities and hence referred to them as *rhythmic characters*.

From the “Sacrificial Dance,” Messiaen developed his own compositional device of rhythmic characters that he used in his music. In its pristine form, three different rhythmic types create motion through repetition and juxtaposition: one rhythm expands by a fixed note value with each repetition, another contracts with each repetition, and the third remains constant.

Let us look now at Example 5. Three characters are used in the opening refrain of the “Sacrificial Dance.” Character A is associated with the polytonal Golaud chord. Both it and Character C are mobile and varied irregularly, while Character B is stationary. Messiaen associated Characters A and C with the Chosen One, and Character B with the Old Men. In his view, the characters are locked in a perpetual struggle with one another by means of their changing durations.

The image displays two systems of musical notation for piano. The first system is labeled 'Piano' and contains two staves. Above the first staff are the labels 'Character A' and 'Character B'. Character A is represented by a single eighth note with a sharp sign. Character B is represented by a half note with a sharp sign. The second system is labeled 'Pno.' and contains two staves. Above the first staff is the label 'Character C'. Character C is represented by a quarter note with a flat sign. The notation shows how these characters are combined and varied in the opening refrain of the 'Sacrificial Dance'.

Example 5: Sacrificial Dance, R142:1, 4–5; R144:1–2

As illustrated in Figure 3, Messiaen came up with a rhythmic scheme for the entire refrain (R142:1-R148:3). Each letter indicates a different character while each number their total duration based on a sixteenth note. The barlines have nothing to do with Stravinsky's barlines; their function is simply to enclose each rhythmic character.

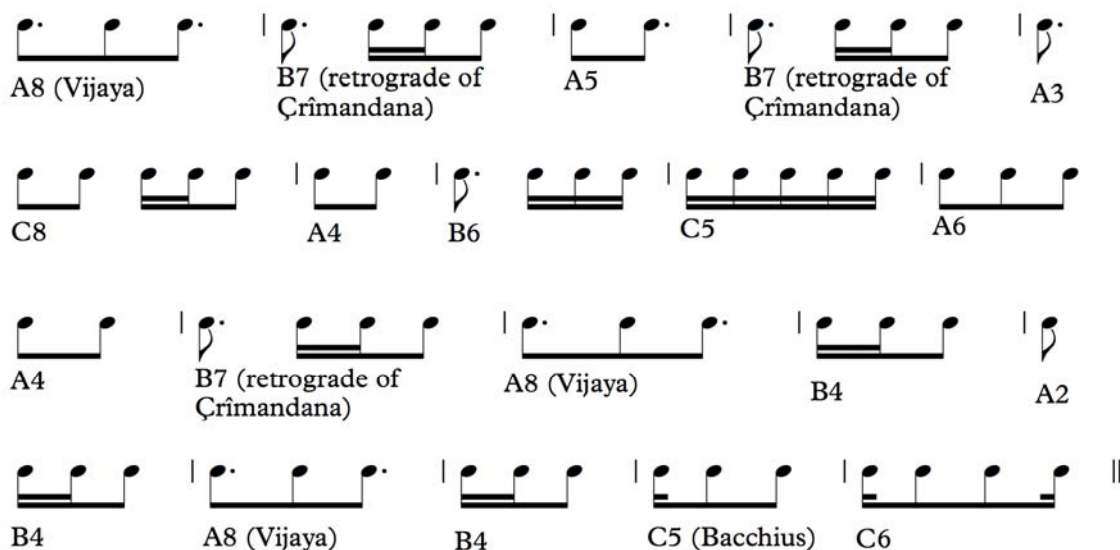


Figure 3: Rhythmic Scheme of the Refrain from the Sacrificial Dance (R142:1–R148:3), taken from the *Treatise on Rhythm*, 2:130

In his analysis of the entire “Sacrificial Dance,” Messiaen provided page-after-page of rhythmic schemes. He went to great lengths to convey the dynamic and static principles at work in this music via his ideas about rhythmic characters. Indeed, even for those students who questioned his interpretative choices, he provided alternative readings, although in a disparaging manner.

By drawing attention to Stravinsky's rhythmic practices through his teaching, Messiaen contributed to the dissemination of a rhythmic approach that departed radically from traditional Western practices. Stravinsky used rhythmic cells in an additive manner, combining them in various ways to produce larger, irregular rhythmic periods. As Stravinsky's work became better known, post-War composers increasingly employed rhythmic cellular organization in their works. Thus, through his analysis of *The Rite of Spring*, let alone his work as a composer, Messiaen was at the forefront of contemporary rhythmic thought.

### Pierre Boulez and Karlheinz Stockhausen

I shall now briefly consider Messiaen's influence on two composers who reached maturity after World War II—Boulez and Stockhausen, who were two of his most illustrious pupils. First, Boulez.



### *Pierre Boulez*

In his conversations with Claude Samuel, Messiaen claimed that in relation to the younger generation of composers, he influenced Boulez the most with respect to rhythm, claiming that his former student was his musical heir.<sup>12</sup> In various published sources, Boulez has acknowledged the importance of Messiaen's innovations in the field of rhythm, especially respecting the separation of rhythm from pitch. Although not interested in rhythmic characters, Boulez focused on cellular manipulation in more detail than Messiaen in his later analysis of the rhythmic organization of *The Rite of Spring* in "Stravinsky Remains."<sup>13</sup> Unfortunately, Boulez did not acknowledge the significant debt he owed to his teacher in that analysis.

Let us now consider a youthful example of Boulez's use of rhythm in his own music. In a 1948 essay entitled "Proposals" published in *Polyphonie*, Boulez took issue with René Leibowitz's criticism of Messiaen that one could not separate rhythm from polyphony.<sup>14</sup> To refute Leibowitz's assertion, he took Messiaen's teachings on rhythm as the starting point for this article. Boulez concluded that rhythm must be integrated with polyphony in either a dependent or independent way. One could do that by using rhythmic canons, which could be either dependent or independent of contrapuntal ones. Here Boulez shows his debt to Messiaen, who introduced him to rhythmic canonic technique at the Paris Conservatory.

A fascinating illustration of Boulez's ideas comes from a lost *Symphony* cited in the article (see Example 6). As Boulez states, "the canon turns rational values into irrational [ones], . . . and even values into odd . . ." [And odd values into even, I might add.] Boulez continues, "The imitations are based on the following melodic sequence: two minor thirds a semitone apart, then two fifths a semitone apart, and then again two minor

The image shows a musical score for a rhythmic canon in 4/4 time. It consists of four staves. The top staff is labeled '2nd Tr.', the second '3rd Tr.', the third '1st Tr.', and the bottom 'antecedent'. The music features complex rhythmic patterns, including triplets and sixteenth notes, with various accidentals and dynamics.

Example 6: Rhythmic Canon in Boulez's Symphony (lost on a journey in 1954)

thirds a semitone apart . . . .” Temporal entrances are asymmetrical, with the first transformation entering six sixteenth notes after the antecedent, the second, two sixteenth notes later, and the third, three sixteenth notes later.

According to Messiaen, Boulez surpassed everyone in the field of rhythm. Indeed, rhythm is a consequential element of Boulez’s later compositions from the 1980s and 1990s, as witnessed by, yet again, rhythmic canons in *Mémoriale* (... *explosante-fixe* ... *Original* [1985]) and *Anthèmes* (1991–92).

### ***Karlheinz Stockhausen***

If there ever was a musical heir to Messiaen in the field of rhythm, surely it was Stockhausen. A pivotal turning point in Stockhausen’s musical career occurred when he heard a recording of Messiaen’s *Mode de valeurs et d’intensités* (1949–50) at Darmstadt in the summer of 1951. That encounter, along with a familiarity with Messiaen’s “Les Yeux dans les Roues” from the *Livre d’orgue* (1951–52), produced his *Kreuzspiel* of 1951, a tour de force of permutational serialism couched in a sound world less acerbic than Boulez’s *Structures Ia* (1952). In 1952, Stockhausen was a member of Messiaen’s class at the Paris Conservatory, at which time he studied various topics, including rhythmic aspects of Gregorian chant and classical Indian music, as well as the music of Debussy, Stravinsky, Webern, and Messiaen.

Although the scope of this essay does not permit me to discuss all of the musical innovations related to rhythm that Stockhausen devised, let us consider two brief examples. As shown in Example 7, in his *Klavierstücke I* (1952–53)—and in pieces II–IV, Stockhausen pushed irrational rhythms to extreme limits, further than anything encountered in Stravinsky or Messiaen. In an interview with organist Clyde Holloway, Boulez even criticized him for this due to the lack of sufficient reference points for performance.<sup>15</sup>

The image shows a musical score for piano, labeled 'Piano' on the left. It consists of two staves, treble and bass clef. The music is in 7/4 time. The score is divided into two measures. The first measure has a time signature of 7/4 and contains several notes with dynamic markings: *pp*, *fff*, *p*, *mf*, *mf*, and *p*. Above the first measure, there are two brackets with time signatures  $11:10$  and  $7:5$ . Below the first measure, there are two brackets with time signatures  $11:10$  and  $7:5$ . The second measure has a time signature of 7/4 and contains several notes with dynamic markings: *fff*, *f*, *mf*, and *fff*. Above the second measure, there are three brackets with time signatures  $5$ ,  $5$ , and  $5$ . Below the second measure, there is a bracket with time signature  $5:4$ . The score is marked with asterisks and a double asterisk at the bottom.

Example 8: Irrational Rhythms, Stockhausen, *Klavierstücke I*, p. 1, mm. 1–2

In *Zeitmasse* (1956), Stockhausen incorporated a technique that resembles rhythmic characters. Five performers create polytemporality by one playing as fast as possible, one playing as slow as possible, one beginning fast but gradually ritarding, one beginning

slowly but gradually quickening, and one remaining constant in a rationally controlled length of time.<sup>16</sup>

## Conclusion

Despite its more positive aspects, we may still be disappointed with Messiaen's interpretation of *The Rite of Spring*. We can criticize him for a lack of a systematic methodology, along with a seeming indifference to Stravinsky's artistic intentions. In fact, Stravinsky admitted that he did not recognize himself in Messiaen's analysis of *The Rite*. But in this piece, Messiaen, and the countless musician inspired by his teaching and compositional practice, found sustenance in it. *The Rite* was a springboard for a new conception of rhythm in the twentieth century, in step with post-War music and the end of musical time, as we know it.

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## Notes

1. Robert P. Morgan, *Twentieth-Century Music: A History of Musical Style in Modern Europe and America* (New York: W. W. Norton & Company, 1991), 97.
2. Olivier Messiaen, ["Hommage à Roger Désormière."] *Les Lettres françaises* 1001 (8 October – 6 November 1963): 11.
3. Olivier Messiaen, "Le rythme chez Igor Strawinsky," *La Revue musicale* 191 (May 1939): 91–92.
4. Olivier Messiaen, *Traité de rythme, de couleur, et d'ornithologie (1949–1992)*, 7 vols. (Paris: Alphonse Leduc, 1994–2002), 2: 91–147.
5. Peter Hill, "Interview with Yvonne Loriod-Messiaen," in *The Messiaen Companion*, ed. Peter Hill (Portland, OR: Amadeus Press, 1995), 284.
6. E-mail communication (11 July 2013) from Brian Schober.
7. Pieter C. van den Toorn, *Stravinsky and The Rite of Spring: The Beginnings of a Musical Language* (Berkeley, CA: University of California Press, 1987), 17.
8. Raymond Cogniat, *Danses d'Indochine* (Paris: Éditions des Chroniques du jour, 1932).
9. The "Golaud" chord can be found on the second beat of measure 12 in the Prelude, and consists of two SLIDE-related triads, (Bb, –) and (A, +).
10. The following discussion is derived from Vincent Benitez, "A Creative Legacy: Messiaen as Teacher of Analysis," *College Music Symposium* 40 (2000): 129–33.
11. Olivier Messiaen, *Technique de mon langage musical: Texte avec exemples musicaux* (Paris: Alphonse Leduc, 2000), 7.
12. Claude Samuel, *Musique et couleur: Nouveaux entretiens avec Claude Samuel* (Paris: Belfond, 1986); trans. as *Music and Color: Conversations with Claude Samuel* by E. Thomas Glasow (Portland, OR: Amadeus Press, 1994), 182.
13. Pierre Boulez, *Stocktakings from an Apprenticeship*, collected and presented by Paule Thévenin, translated from the French by Stephen Walsh, with an introduction by Robert Piencikowski (Oxford: Clarendon Press, 1991), 55–110.
14. *Ibid.*, 47–54.

15. Clyde Holloway, "The Organ Works of Olivier Messiaen and Their Importance in His Total *Oeuvre*," DSM document, Union Theological Seminary, 1974, 220.
16. See Larry Wayne Peterson, "Messiaen and Rhythm: Theory and Practice," PhD diss., University of North Carolina at Chapel Hill, 1973, 199.

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Address for correspondence:

Vincent P. Benitez, Ph.D., D.M.A.  
School of Music  
225 Music Building I  
The Pennsylvania State University,  
University Park, PA, 16802  
vpb2@psu.edu