

# ANCIENT GREEK RHYTHMS IN MESSIAEN'S *LE SACRE*: NIETZSCHE'S LEGACY?\*

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## ABSTRACT

It is little known that Nietzsche – appointed professor of classical philology at Basel University in his twenties – had postulated on the basis of rigorous textual studies that the leading classical philologists active in Central Europe in the nineteenth century, predominantly German-speaking, had gone seriously off-track by fitting Greek rhythms into measures of equal length. Unlike the philologists, influential musicologists who wrote about ancient Greek rhythms were mostly French. The Paris Conservatoire was a powerhouse of rhythmic theory, with an impressive lineage from Fétis and Gevaert through Laloy and Emmanuel to Messiaen and beyond. Fétis and Gevaert referenced their contemporary German philologists without really critiquing them. With Laloy, Emmanuel, and Messiaen, however, there was a notable change of orientation. These authors all read as if they had somehow become aware of Nietzsche's discovery. Yet none of them make any mention of him whatsoever. In this study, a comparative analysis of their musical rendition of Greek rhythms is undertaken before focusing on Messiaen's analytical proposal that there is an impressively long series of Greek rhythms in Stravinsky's *Le sacre du printemps*. I seek to throw light on the resurgence of interest in ancient Greek rhythms in modernist musical works, and question how the convoluted reception of Nietzsche's discovery in Parisian music circles might have sparked rhythmic innovation to new heights.

KEYWORDS: ancient Greek rhythm, *Le sacre du printemps*, Nietzsche, Fétis, Gevaert, Laloy, Emmanuel, Messiaen

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## I. INTRODUCTION

Olivier Messiaen's analytical proposal that there is an impressively long series of ancient Greek rhythms in Igor Stravinsky's *Le sacre du printemps* opens a window onto a major field of study. Despite the importance of this source – Messiaen's analysis of *Le sacre* in *Traité de rythme, de couleur, et d'ornithologie*, volume II (1995) – it is virtually unknown (Messiaen 1995: 134–136). The resurgence of interest in Greek rhythms is not nearly as visible in modernist musical works as in scholarly writings about music. Composers' use of modern notation to convey ancient Greek rhythms, with which we are unfamiliar in the first place, is a major obfuscatory factor. Both our unfamiliarity with Greek rhythms and the problematic transcriptions of a whole generation of leading philologists – Gottfried Hermann, August Boeckh, Rudolph Westphal, to name but a few – pose considerable challenges to the investigation of the resurgence of interest in Greek rhythms in modernist music.

The late nineteenth-century paradigm shift summed up how classical philologists rethought and ultimately discarded the establishment of isochronism (equal measure length) as an axiom. James Porter, in "Being on Time," traced the origin of this remarkable paradigm shift to Nietzsche's quantitative theory, essentially his philological research from around the 1870s. Nietzsche, then a classical philologist and fervent Wagnerian, postulated on the basis of rigorous textual studies that his predecessors, eminent classical philologists active in Central Europe in the nineteenth century, had erroneously fitted Greek rhythms into measures of equal lengths (Porter 2000: 127–166). Christophe Corbier, in "*Alogia* et eurhythmie chez Nietzsche," zoomed in to focus on how Nietzsche theorized the correlation between Wagnerian dramas and Greek tragedy where musical rhythm is concerned (Corbier 2004: 1–38). Despite this ground-breaking research, Nietzsche's contribution to the paradigm shift remains slow in gaining recognition in the existing philological literature.

In November 1870, during his professorship at Basel University, Nietzsche wrote to Erwin Rohde, a good friend and fellow classicist, about his discovery:

If you will believe me, I can tell you that there is a new metric that I have discovered, which is an aberration to the whole recent development of metrics from G. Hermann to Westphal or Schmidt. Laugh or ridicule as you wish – to me, the case is very astonishing. There is a lot to work on, but I swallow dust with pleasure, because this time I have the fullest confidence that I am able to give an ever-greater depth to the basic idea.<sup>2</sup>

2 All translations are mine unless otherwise stated. "Wenn du mir glauben willst, so kann ich dir erzählen, dass es eine neue Metrik gibt, die ich entdeckt habe, der gegenüber die ganze neuere Entwicklung der Metrik von G. Hermann bis Westphal oder Schmidt eine Verirrung ist. Lache oder hohne, wie du willst—mir selber ist die Sache sehr erstaunlich. Es gibt sehr viel zu arbeiten, aber ich schlucke Staub mit Lust, weil ich diesmal die schönste Zuversicht habe und dem Grundgedanken eine immer größere Tiefe geben kann." Nietzsche, *Briefwechsel: Kritische Gesamtausgabe* (abbreviated KGB) 3 (1975: 159).

Shortly afterwards, Nietzsche wrote to his teacher Friedrich Wilhelm Ritschl expressing his reservations about his predecessors' reconstructions of ancient rhythm in relation to modern music: "the more we gained understanding of metrics through modern music, the farther we distanced ourselves from the true metrics of antiquity." Nietzsche then singled out Westphal for criticism: "I disagree with Westphal on almost all essential points."<sup>3</sup>

The crux of the matter is that ancient Greek rhythm draws on a distinction between short (S) and long (L) syllables, rather than between stressed and unstressed syllables. Nevertheless, German philologists in the nineteenth century adopted the cognitive modalities of modern languages and rendered Greek rhythm in accentual terms. As Martin West put it:

The investigation of IE [Indo-European] metre was first attempted in the last [nineteenth] century by German scholars who falsely projected the features of early Germanic accentual verse back on to IE verse (West 1982: 4).<sup>4</sup>

Where musical rhythm is concerned, Westphal was foremost among nineteenth-century German philologists in working on the problematic assumption that Greek rhythm shares with European art music the attributes of metrical accent and equal measure lengths.<sup>5</sup> At risk of initiating something of an excursus, it is worth quoting West's comments on this problem.

German scholarship in the last [nineteenth] century devoted much effort to the rhythmical interpretation of asymmetrical cola on the *erroneous premise* [my emphasis] that they must be divided into equal bars. Such feats of arithmetic have fortunately disappeared from metrical treatises. ... It is precisely the asymmetrical distribution of the longs and shorts that gives many metres their characteristic quality (West 1982: 24).

West showed us how some of the most esteemed German scholars transcribed a Pindaric sequence by drawing on "the *erroneous premise* that they [the longs and shorts] must be divided into equal bars." And since this calls for the treatment of

3 "mehr wir von der modernen Musik zum Verständniß der Metrik hinzugewonnen haben, wir um so weiter uns auch von der wirklichen Metrik des Alterthums entfernt haben ... Mit Westphal bin ich fast in allen wesentlichen Punkten nicht mehr einverstanden." (KGB 3, 1975: 173)

4 In the nineteenth century much of this scholarship is indebted to German-speaking philologists. In the last quarter of the twentieth century, however, Anglo-American scholarship has come to take lead. *Greek Metre* (1982) and *Ancient Greek Music* (1992) by M. L. West, an eminent classical philologist of our times, are adopted as major secondary sources in this study.

5 These two interrelated concepts are pivotal to our understanding of how nineteenth-century philologists and musicologists transcribed ancient Greek rhythm. I shall come back to them.

selected longs and shorts in the sequence as irrational values,<sup>6</sup> what West called “feats of arithmetic” inevitably came into the picture (Example 1).

**Example 1.** Two different transcriptions of a Pindaric sequence – U – – – U U – U U – – by (a) Boeckh and (b) Rossbach-Westphal (extracted from West 1982: 24)<sup>7</sup>

(a) – U – – | – U U | – U U | – –

$$2 \text{ I } \frac{12}{7} \frac{9}{7} \left| 3 \frac{3}{2} \frac{3}{2} \right| 3 \frac{3}{2} \frac{3}{2} \left| 3 \ 3 \right.$$

(b) – U – – | – U U – U U | – –

$$\frac{8}{3} \frac{4}{3} \ 2 \ 2 \left| 2 \text{ I } \text{ I } \ 2 \text{ I } \text{ I } \right| 4 \ 4$$

By the time West published his *Greek Metre* in 1982, the “feats of arithmetic” had long disappeared, along with “the *erroneous premise*.” Knowing that West had used “[Paul] Maas’s well-known *Greek Metre*” (West 1982: preface)<sup>8</sup> as a key source, however, it remains open to question whether West was aware of Nietzsche’s philological insight, especially as there is some evidence that Maas may himself have drawn directly from Nietzsche.

According to Porter, “Nietzsche treated the topic of rhythm in lectures between 1869 and 1874, twice devoting a whole course to it (1869 and 1870/71)” (Porter 2000: 128). Central to any enquiry into Nietzsche’s understanding of Greek rhythm are the teaching and research notes (henceforth, the “four notebooks”) composed during his short-lived professorship at Basel University. The publication of Nietzsche’s complete set of “four notebooks” was, however, seriously delayed until 1993 (Table 1).<sup>9</sup>

6 These include 12/7, 9/7, and 3/2 in Boeckh’s transcription, and 8/3 and 4/3 in Rossach-Westphal’s transcription.

7 West did not specify the two sources, but since Westphal co-authored with Rossbach only one book, there can be no doubt that *Theorie der musischen Künste der Hellenen* (1885–1889) is referred to.

8 Maas’s *Griechische Metrik* was first published in 1923. Following the publication of Hugh Lloyd-Jones’s English translation in 1962, the impact of this monograph was even more widespread.

9 Werke: *Kritische Gesamtausgabe* (KGW) Abt. II Bd. 3, 99–338 (Berlin: Gruyter, 1993).

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ANCIENT GREEK RHYTHMS IN MESSIAEN'S *LE SACRE*: NIETZSCHE'S LEGACY?**Table 1.** Nietzsche's "four notebooks"

1. *Griechische Rhythmik* (pp. 99–201)
2. *Aufzeichnungen zur Metrik und Rhythmik* (pp. 203–261)
3. *Zur Theorie der quantitatrenden Rhythmik* (pp. 263–280)
4. *Rhythmische Untersuchungen* (pp. 281–338)

It was Fritz Bornmann who made the pioneering move to give the "four notebooks" long overdue scholarly attention (Bornmann 1989). While editing that particular volume of Nietzsche's *Werke: Kritische Gesamtausgabe* (abbr. *KGW*), Bornmann published an article on Nietzsche's research into Greek rhythms, though he focused rather exclusively on the so-called ictus theory, a theory that died hard despite its inherent problems. Ulrich von Wilamowitz-Moellendorff, Nietzsche's peer and a fierce critic of *The Birth of Tragedy* who came to be established as a towering figure in classical philology, was understandably reluctant to give recognition to Nietzsche's discovery. What is worse, *Griechische Rhythmik*, the highly influential monograph published by Paul Maas, Wilamowitz's pupil, "buries Nietzsche's contribution in three brief mentions and in a series of unacknowledged, often nearly verbatim, borrowings" (Porter 2000: 136). It is hardly surprising, then, that many scholars today still credit Maas with having initiated a paradigm shift.

In April 1886, over a decade after Nietzsche had completed the "four notebooks" and had largely abandoned philology for philosophy, he wrote to Carl Fuchs, a musicologist and close friend, referring once again to the discovery of his Basel years:

Admittedly, I am hardly entitled to talk about these matters [classical metrics] anymore—but I would have been entitled to do so back in 1871, a dreadful year that I spent reading the Greek and Latin metricians, but with a most peculiar result. At that time, I felt myself to be the most marginally placed metrician among all classical philologists: for I demonstrated to my students how the whole development of metrical theory from Bentley to Westphal was the history of a fundamental error [*Grundirrthum*].<sup>10</sup>

Although Nietzsche's discovery of "a fundamental error" was not properly credited to him until Bornmann's article of 1989, discussion of the "error" had surfaced in Parisian sources from the late 1880s, some three decades before the publication of Maas's *Griechische Rhythmik*.

<sup>10</sup> "Freilich: ich darf heute kaum mehr über diese Dinge mitreden, — aber 1871 hätte ich's gedurft, welches Jahr ich in der erschrecklichen Lektüre der griechischen und lateinischen Metriker verbracht habe, mit einem sehr wunderlichen Resultate. Damals fühlte ich mich als den abseits gestellten Metriker unter allen Philologen: denn ich demonstrierte meinen Schülern die ganze Entwicklung der Metrik von Bentley bis Westphal als Geschichte eines Grundirrthums." This English translation is from Porter 2000: 129.

Leading classical philologists in the nineteenth century were predominantly German-speaking. Influential musicologists who wrote about ancient Greek rhythms, on the other hand, were mostly French. The Paris Conservatoire in particular was a powerhouse of rhythmic theory, with an impressive lineage from François-Joseph Fétis and François-Auguste Gevaert through Louis Laloy and Maurice Emmanuel<sup>11</sup> to Olivier Messiaen and beyond.<sup>12</sup> Fétis and Gevaert referenced their contemporary German philologists without really critiquing them. With Laloy, Emmanuel, and Messiaen, however, there was a notable change of orientation. All of them discussed what Nietzsche had already described as an “error.” This change is noteworthy, for it is remarkably close in timing to the paradigm shift initiated by Nietzsche. These authors all read as if they had somehow become aware of Nietzsche’s discovery. Yet none of them make any mention of him whatsoever.

## II. OUTLINE AND TERMINOLOGY

The present study is in two parts. Part I focuses on textual criticism. I offer a critical review of writings on ancient Greek rhythm by Fétis, Gevaert, Laloy, Emmanuel, and Messiaen, in chronological sequence. This is preceded by a brief discussion of Maximilien Kawczyński’s *Essai comparatif sur l’origine des rythmes* (1889). This essay is one of the earliest French sources to have mentioned the “error,” and is therefore of special historical importance.

The textual criticism undertaken in Part I paves the way for a case study in Part II. The latter focuses on Igor Stravinsky’s alleged use of an extended series of Greek metrical feet in the “Sacrificial Dance” as noted by Messiaen in his analysis of *Le sacre* in *Traité de rythme, de couleur, et d’ornithologie*, volume II (1995). Messiaen did

11 Louis Bourgault-Ducoudray’s pioneering research into Greek folk music was mainly about mode. Greek rhythm research was advanced by his protégé Emmanuel.

12 An overview of the development of rhythmic theories in the eighteenth and nineteenth centuries may be gleaned from William Caplin’s “Theories of Musical Rhythm in the Eighteenth and Nineteenth Centuries” in Thomas Christensen (ed.), *The Cambridge History of Western Music Theory*. Greek rhythms constitute only a side issue in Caplin’s chapter, and are discussed with reference to the writings of Wolfgang Caspar Printz (1641-1717) and Johann Mattheson (1681-1764), the “most important eighteenth-century exponents of *rhythmopoeia*.” In Caplin’s view, interest in *rhythmopoeia*, which “defines various patterns of long and short durations using the traditional Greek metrical terms,” had subsided since the time of Printz and Mattheson, and was not really renewed until Westphal and Wiehmayer came on stage late in the nineteenth century (Westphal’s *Allgemeine Theorie* and Wiehmayer’s *Musikalische Rhythmik und Metrik* were mentioned in this regard). Contemporaneous publications by Fétis and Gevaert on Greek rhythm are absent from Caplin’s chapter. In a closing remark Caplin refers to Grosvenor Cooper and Leonard Meyer’s co-authored book *The Rhythmic Structure of Music* (1960) as “a twentieth-century reincarnation of metrical poetics in music theory” even though Greek rhythm is treated (reincarnated?) as accentual rather than as durational patterns in *The Rhythmic Structure of Music*.

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not probe into the series, nor did he attach any importance to it. In what follows, I investigate this case by way of a summary review of Messiaen's textbook-like introduction to Greek metrical feet, alongside two short analyses—Messiaen's reading of dochmius, the Greek rhythm that connotes tragedy, in Ravel's *Gaspard de la nuit* ("Le gibet") and Debussy's *Chansons de Bilitis* ("La flûte de Pan").<sup>13</sup> This exposition helps us to make sense of Messiaen's analysis of Greek rhythms in the "Sacrificial Dance." I take the 1913 autograph as a point of reference and compare it to the sketch and to the 1943 revision of the "Sacrificial Dance." This leads to a critique of Pieter van den Toorn's analysis of the same three sources and his postulation of "rhythmic Types I and II" in Stravinsky's music more generally.

Before presenting any of this, it is necessary to discuss the disparity in technical terms used by philologists and musicologists from different language zones. I limit the discussion to a handful of concepts pivotal to the enquiry in hand: meter, measure, metrical accent, meter change, and equal measure length. These are interrelated, in that meters, and by extension meter changes, are defined by the placement of metrical accents and hence measures, whereas equal measure length results when meter change is suppressed (Table 2).

**Table 2.** Important technical terms in English, German, and French

| English              | German         | French                             |
|----------------------|----------------|------------------------------------|
| meter; measure       | Takt           | mesure = mètre                     |
| metrical accent      | Ictus/Iktus    | temps fort                         |
| meter change         | Taktwechsel    | modulation rythmique; métabole     |
| equal measure length | Taktgleichheit | mesure isochrones; unité de mesure |

The musical terms "meter" and "measure" are distinct in English. In German and French sources "Takt" and "mesure" can mean either meter or measure, while "Ictus or Iktus" and "temps fort" mean "metrical accent."<sup>14</sup> The latter also appears in German

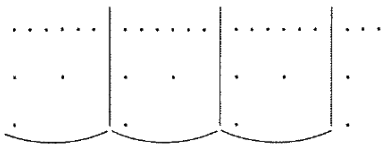
13 They appear in volumes I and VI of his *Traité de rythme, de couleur, et d'ornithologie* (1994 and 2001). Both Gevaert and West noted that dochmius are characteristic of Greek tragedy. See: Gevaert 1881: 65 and 79; West 1982: 108.

14 This falls in line with Robert Donington's definition of "ictus" in *Grove Music Online*: "A term which in prosody indicates the stress or accent schematically implied on a certain syllable of a foot or verse; hence, in music, it is a comparable stress or accent schematically implied on a certain beat of a bar, in a certain metre, whether or not this implication coincides with the stress or accent *actually made* [my emphasis]." <http://www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000013699?rskey=tMR79v&result=1> (accessed February 11, 2018)

sources as “metrischen Akzent,” but is much less common.<sup>15</sup> The following excerpt from Nietzsche’s *Griechische Rhythmik* shows his use of the term “ictus” to mean “metrical accent” (Plate 1).

**Plate 1.** Nietzsche’s *Griechische Rhythmik*, p. 163 (excerpt only)

Der Ictus (die Thesis eines Tactes) ist das Zusammenfallen sämtlicher Perpendikelneubewegungen, aller schnellsten Bewegungen im Klange aller stärksten Töne.



Nietzsche’s distinguished predecessors were apparently unaware that the concept of metrical accent postdates Greek rhythm and that it was not theorized until Johann Philipp Kirnberger proposed the so-called *Akzenttheorie*, truly a watershed moment:

Unlike theorists in the first half of the eighteenth century, who regarded the entire measure as the starting point of a metrical theory, Kirnberger begins with an unlimited succession of undifferentiated and aesthetically insignificant stimuli, what we now typically call pulses or beats. These beats then become differentiated through [metrical] accent ... In Kirnberger’s theory, which Hugo Riemann later characterized as the *Akzenttheorie*, the individual measure no longer delimits fundamental rhythmic activity as did the earlier tactus-derived measure. ... And rather than being linked to the traditional Greek meters, durational values are free to assume a wide variety of patterns, always retaining, however, their metrical interpretation as defined by the hierarchy of accents and unaccents (Caplin 2002: 668).

As detailed below, *Akzenttheorie* seems to be lurking behind Fétis’s and Gevaert’s problematic transcription of Greek verses into measures of the same length. Like their contemporaries in philology, they assumed the existence of metrical accents in Greek rhythm, and endeavored to reconstruct ancient metrics by way of modern music. This problem is precisely what Nietzsche reported in his letter to Ritschl.

### III. TEXTUAL CRITICISM

Accordingly to Bornmann, Kawczyński was the first to follow in Nietzsche’s footsteps, consciously or not, by challenging the reading of ictus in Greek rhythm.

<sup>15</sup> See, for example, Bornmann 1989: 487.



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For a long time Nietzsche stands alone with his insights into ancient metrics. The first hesitant attempts to question the ictus came only later, and it was certainly no accident that they were not initially from Germany. In 1889 K. Kwacziński [Kawczyński] turned against Westphal's *Rhythmik* and also G. Hermann's *Elementa [doctrinae metricae]*, and made the very correct remark that Bentley did not treat the concept of ictus systematically, but in actual fact only deductively.<sup>16</sup>

In 1889 Kawczyński's *Essai comparatif sur l'origine des rythmes* was published in Paris. Just how impactful this criticism of Westphal and Hermann was at the time still awaits investigation. But, in any case, it was not until the early 1900s that Paris-based musicologists began to write about the ictus-induced "error" made by leading German philologists. Prior to that, Fétis and Gevaert had simply subscribed to their fellow German philologists' views.

In volume III of *Histoire générale de la musique depuis les temps les plus anciens jusqu'à nos jours* (1872), Fétis transcribed classical Greek verses by prioritizing "the unity of meter (unité de mesure)," which in his terminology meant the same as equal measure length or Taktgleichheit:

[W]hen iambic or trochaic rhythms are mixed irregularly with the dactylic genre, it is essential to maintain the unity of meter [unité de mesure], be it binary or ternary, depending on the preponderance of either iambic or dactylic genre in the poetry. The rhythm occupying the most important place in the verses determines the meter, and the time values of the other rhythm undergo modification that augments or diminishes the duration of the syllables.<sup>17</sup>

According to Fétis, music that alternates between binary and ternary in an irregular manner may only be heard among "barbaric" people (Fétis, vol. III, 1872: 179).<sup>18</sup> This may explain why he transcribed Greek verses in ways that make them conform to the "unity of meter," which he upheld as an absolute and overriding rule. The following example is a case in point (Example 2).

16 "Hier steht nun Nietzsche mit seinen Einblicken in die antike Metrik lange Zeit allein. Erst später kamen die ersten zögernden Versuche, den Iktus in Frage zu stellen, und—gewiß kein Zufall—zunächst nicht aus Deutschland. K. Kwacziński wandte sich 1889 gegen Westphals *Rhythmik*, aber auch gegen G. Hermanns *Elementa*, und machte die sehr richtige Bemerkung, daß dieser den Iktus, den Bentley nicht systematisch behandelt, eigentlich nur deduktiv erschlossen habe" (Bornmann 1989: 486–487).

17 "quand le rythme iambique ou trochaïque se mêle, sans ordre régulier; avec le genre dactylique, il est indispensable de maintenir l'unité de mesure, soit binaire, soit ternaire, suivant la prépondérance du genre dactylique ou iambique dans la poésie. Le rythme qui occupe la place la plus importante dans les vers détermine la mesure, et les valeurs de temps de l'autre rythme subissent une modification qui augmente ou diminue la durée des syllabes" (Fétis, vol. III, 1872: 194).

18 "Les alternatives de temps binaires et ternaires qu'on y voit n'existent dans aucune musique, sauf de très-rares exceptions. Il n'est pas de peuple, si barbare qu'on le suppose, qui chante de cette manière" (Fétis, vol. III, 1872: 179).



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(c)

Valeur mathématique:

Transcription usuelle:

Gevaert began by describing how Westphal had transcribed the ‘isolated’ trochee as a quarter-note triplet (Example 3b). The long and the short of the trochee are thus in 2:1 ratio and the trochee as a whole occupies the same length as the flanking binary feet. Gevaert then debated how Westphal’s transcription of the trochee is at variance with that of the “new metricians” of his time.

This kind of rhythm, called dactylo-trochaic, épitrites or doric, much embarrassed philologists since Boeckh, and gave rise to the most diverse interpretations. Obviously the trochee occupies the same duration as the dactyl, that is, a measure of four units. ... Yet, things being as they are, how could the two elements [notes] constitutive of the trochee share the 2/4 measure? Westphal, applying the common rule – “a long doubles [the length of] a short” – attributed to the first syllable of the trochee two-thirds of the total measure, and to the last short the remaining third [...] ... But most ‘new metricians’ transcribe the trochee mixed with dactyls as a much simpler rhythmic figure[.]<sup>21</sup>

As shown in Example 3c, Gevaert aligned Westphal’s and the new metricians’ differently transcribed trochee and added between them two sextuplets to serve as a common denominator. He then noted that although only Westphal’s rendition of the trochee observes the 2:1 ratio, the new metricians’ alternative transcription, which is “much simpler,” comes close to it. In either case, however, the problematic acceptance of equal measure length as an axiom remains unchallenged. The “fundamental error” remains in play. It was not until Laloy’s doctoral dissertation *Aristoxène de Tarente et la musique de l’antiquité* (1904) that there was a change of perspective.

<sup>21</sup> “Ce genre de rythmes, dits dactylo-trochaïques, épitrites ou doriens, a beaucoup embarrassé les philologues depuis Boekh, et donné lieu aux interprétations les plus diverses. Évidemment, le trochée y occupe une durée égale à celle du dactyle, à savoir une mesure de quatre unités. ... Or les choses étant ainsi, de quelle manière les deux éléments constitutifs du trochée se partageaient-ils la mesure de 2/4? Westphal, appliquant la règle commune, – « une longue vaut le double d’une brève » – attribue à la première syllabe du trochée les deux tiers de la mesure totale, à la dernière brève le tiers restant[...] ... Mais la plupart des nouveaux métriciens transcrivent le trochée mêlé aux dactyles par une figure rythmique plus simple[.]” (Gevaert 1881: 112–113).

In the concluding chapter (“Le rythme”) of Laloy’s dissertation, under the heading of “Rhythmic modulation: critique of the principle of equidistance between downbeats,”<sup>22</sup> he explains how the “principle,” which is characteristic of modern rather than ancient Greek music, had “consumed almost all the effort” of the metricians in the long nineteenth century:

Our rhythm has as an absolute rule the equidistance between strong beats. ... It is the establishment of such equivalences that consumed almost all the effort of the modern [nineteenth-century] metricians. They believe that they should reestablish the equidistance between [strong] beats to ancient [Greek] poetry, without which the rhythm would seem inconceivable to them.<sup>23</sup>

The publication of Laloy’s dissertation in Paris in 1904 was soon followed by Emmanuel’s writings on Greek rhythm in *Histoire de la langue musicale* (1911), his extensive entry on Grèce (*art gréco-romain*) for the *Encyclopédie de la musique et dictionnaire du Conservatoire* (1913), and his “Le rythme, d’Euripide à Debussy” in *Compte rendu du Premier Congrès du Rythme* (1926). The importance of Antoine Meillet’s *Les Origines indo-européennes des mètres grecs* (1923) is duly acknowledged. Emmanuel praised Meillet’s “literal reading” of a Euripidean strophe as “more effective,” and expressed regret that he had treated the same strophe with measures of equal length in an earlier analysis published in *Encyclopédie de la musique*. “[The analysis] now seems to me useless!” Emmanuel confessed (1926: 119–121).

Emmanuel’s pairing of Debussy and Euripides in “Le rythme, d’Euripide à Debussy” seems to echo Nietzsche’s pairing of Wagner and Aeschylus, but Nietzsche is not mentioned. In Emmanuel’s view, the renditions of Greek rhythm by Schmidt and Westphal, Weil, and Masqueray are problematic at best, since these authors were enslaved by “the isochronous rhythm of modern music” in their effort to “rediscover in Greek lyricism the evenly spaced milestones [bar lines].”<sup>24</sup> Emmanuel welcomes “a new and fruitful interpretation” that no longer “rests on an *error*,” though without disclosing how he came to learn about this error.

In Messiaen’s chapter-long discussion of Greek rhythm in *Traité de rythme, de couleur, et d’ornithologie*, volume I (1994), the “fundamental error” is illustrated in

22 “La modulation rythmique. Critique du principe d’équidistance des temps forts.”

23 “Notre rythmique a pour règle absolue l’équidistance des temps forts. ... C’est à l’établissement de pareilles équivalences que s’est consumé presque tout l’effort des métriciens modernes. Ils croient devoir aux poètes anciens le rétablissement de cette équidistance des temps, sans lesquels le rythme leur paraît inconcevable” (Laloy 1904: 326–327). West expressed basically the same view in his Greek Metre; see West 1982: 24.

24 “une interprétation nouvelle et féconde. Elle s’oppose, en bien des cas, à celle de Schmidt, de Westphal, de Weil, de Masqueray, à celle que j’ai pratiquée moi-même et qui, pour toute une catégorie d’œuvres, repose sur une erreur. Tous nous avons cherché, tant la rythmique isochrone de la musique moderne nous avait enchaînés à ses barres de mesure, à retrouver dans le lyrisme grec, ces jalons régulièrement espacés que réclament nos habitudes” (Emmanuel 1926: 105; my emphasis).





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is characteristic of ancient Greek music, while the equidistance between metrical accents is not.<sup>31</sup> This is in keeping with the critical stance of Laloy, who is nonetheless more cautious about referencing Aristoxenus:

we do not know how Aristoxenus understood a logaedic or a dochmiac verse. But I believe at least I have established that he did not exhaust himself by equalizing the measures, eliminating here, adding there, finishing up altogether denatured.<sup>32</sup>

**Example 5.** Arensky's 'Logaedics': dactyl and trochee fitted into one measure of 6/8

The image displays musical notation for Example 5. At the top, two rhythmic patterns are shown in 6/8 time. The first pattern consists of a dotted quarter note followed by two eighth notes, bracketed and labeled 'dactyl'. The second pattern consists of a quarter note followed by an eighth note, bracketed and labeled 'trochee'. Below these patterns, the tempo 'Moderato' is indicated. The main part of the image is a piano score in 6/8 time, marked 'p' (piano). The score consists of two systems of music, each with a treble and bass clef. The melody in the treble clef features a series of eighth-note runs with slurs, while the bass clef provides a simple accompaniment of quarter and eighth notes.

31 "Aristoxène ne déclare nullement l'égalité des frappés comme principe nécessaire du rythme. Il établit expressément qu'on rencontre dans l'art musical de l'antiquité la forme du changement de mesure" (Messiaen 1994: 82).

32 "Quoi qu'il en soit, on voit que les modulations rythmiques devaient tenir une grande place dans toute théorie complète. Et il est fort regrettable que cette partie de l'œuvre d'Aristoxène ait disparu ... je ne prétends pas avoir reconstitué, même approximativement, ce chapitre perdu; nous ne savons pas comment Aristoxène comprenait un vers logaédique ou dochmiac. Mais je crois au moins avoir établi qu'il ne se fatiguait pas à égaliser ses mesures, ôtant ici, ajoutant là, pour finir par tout dénaturer" (Laloy 1904: 335).

During Messiaen's formative years (1919–1930) at the Paris Conservatoire, Emmanuel had already assumed a leadership role in ancient Greek music research. Messiaen's indebtedness to Emmanuel for his inspiring teaching of Greek rhythms is well documented. This is not to say that Messiaen's awareness of the 'error' cannot be traced back to Laloy's exceptional dissertation, notwithstanding the strained relationship between Laloy and Emmanuel.<sup>33</sup>

#### IV. CASE STUDY: MESSIAEN AND "THE SURVIVAL OF GREEK RHYTHM"

Messiaen's most elaborate discourse on Greek rhythms appears in "Greek metrics [Métrique grecque]," chapter three of his *Traité* I.<sup>34</sup> His comparative study of two different transcriptions of a logaedic verse from Sophocles's *Antigone* is preceded by a textbook-like introduction to Greek metrical feet:

This [Greek] rhythm was based on an extremely simple notion: the long is worth two shorts. The rhythms or feet grouped a very small number of longs and shorts [denoted as – and U respectively].<sup>35</sup>

Messiaen listed "all the known feet [tous les pieds connus]" in his "Table of Greek rhythms [Tableau des rythmes grecs]," and classified them by taking into consideration the total number of shorts contained in each foot, regardless of whether any of the shorts are grouped into longs (Table 3). Beginning with pyrrhic, the only foot that contains two shorts ("à 2 temps"), Messiaen lists metrical feet that contain three, four, five, six, and seven shorts before ending with compound feet ("pieds composés").<sup>36</sup> He likens selected Greek rhythms to Hindu rhythms (deçi-tâlas) and points out how permutation, retrograde, and non-retrograde, some of his favored techniques, may be seen to be at work in individual Greek rhythms.

33 Laloy was not appointed professor of music history at Paris Conservatoire until 1936, the year Emmanuel retired. When Laloy competed with Emmanuel for the same position back in 1909, Emmanuel received twenty-nine votes while Laloy received only one vote, which was allegedly cast by Debussy (see Corbier 2007: 98).

34 In contrast to *Traité*, *Technique de mon langage musical* contains only one brief remark on Greek meters, in which Messiaen acknowledges his debt to Maurice Emmanuel for introducing him to the world of Greek rhythm.

35 "Cette rythmique [la rythmique grecque] s'appuyait sur une notion extrêmement simple: la longue vaut deux brèves. Les rythmes ou pieds groupaient un très petit nombre de longues et de brèves" (Messiaen 1994: 73).

36 Cf. West's listing of six rhythmic genera: (1) dactylic, anapaestic, (2) iambic, choriambic, trochaic, (3) paeonic, (4) dochmiac, (5) ionic, and (6) aeolic (see West 1992: 135–150).



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ANCIENT GREEK RHYTHMS IN MESSIAEN'S *LE SACRE*: NIETZSCHE'S LEGACY?**Table 3.** A summary of Messiaen's "Table of Greek Rhythms" (*Traité* I, 74–81)

|                                    |                          |               |
|------------------------------------|--------------------------|---------------|
| à 2 temps                          | Pyrrhique (ou Pariamba)  | ⊘ ⊘           |
| à 3 temps                          | Trochée (ou Chorée)      | — ⊘           |
|                                    | Iambe                    | ⊘ —           |
|                                    | Tribraque                | ⊘ ⊘ ⊘         |
| à 4 temps                          | Spondée                  | — —           |
|                                    | Dactyle                  | — ⊘ ⊘         |
|                                    | Anapeste                 | ⊘ ⊘ —         |
|                                    | Procéleusmatique         | ⊘ ⊘ ⊘ ⊘       |
|                                    | Amphibraque              | ⊘ — ⊘         |
| à 5 temps (1 <sup>er</sup> espèce) | Bacchius (ou Bacchée)    | ⊘ — —         |
|                                    | Amphimacre (ou Crétiqne) | — ⊘ —         |
|                                    | Antibacchius             | — — ⊘         |
| à 5 temps (2 <sup>e</sup> espèce)  | Péon I                   | — ⊘ ⊘ ⊘       |
|                                    | Péon II                  | ⊘ — ⊘ ⊘       |
|                                    | Péon III                 | ⊘ ⊘ — ⊘       |
|                                    | Péon IV                  | ⊘ ⊘ ⊘ —       |
| à 6 temps                          | Ionique majeur           | — — ⊘ ⊘       |
|                                    | Ionique mineur           | ⊘ ⊘ — —       |
|                                    | Molosse                  | — — —         |
| à 7 temps                          | Épitrite I               | ⊘ — — —       |
|                                    | Épitrite II              | — ⊘ — —       |
|                                    | Épitrite III             | — — ⊘ —       |
|                                    | Épitrite IV              | — — — ⊘       |
| Pieds composés                     | Ditrochée (ou Dichorée)  | — ⊘ — ⊘       |
|                                    | Diiambe                  | ⊘ — ⊘ —       |
|                                    | Choriambe                | — ⊘ ⊘ —       |
|                                    | Antipaste                | ⊘ — — ⊘       |
|                                    | Dochmius                 | ⊘ — — ⊘ —     |
|                                    | Dispondée                | — — — —       |
|                                    | Dactylo-Épitrite         | — ⊘ ⊘ ⊘ — — — |

For example, peon I and peon IV are retrogrades of one another, as are peon II and peon III. They have in common one long and three shorts, but the long occupies a different position in relation to the three shorts in each case. The long is in this sense permuted. Similarly, epitrite I and epitrite IV are retrogrades of one another, as are epitrite II and epitrite III. They have in common one short and three longs, but the short occupies a different position in relation to the three longs in each case, and hence the short is in this sense permuted.

|          |             |              |             |
|----------|-------------|--------------|-------------|
| peon I   | ( – U U U ) | epitrite I   | ( U – – – ) |
| peon II  | ( U – U U ) | epitrite II  | ( – U – – ) |
| peon III | ( U U – U ) | epitrite III | ( – – U – ) |
| peon IV  | ( U U U – ) | epitrite IV  | ( – – – U ) |

That Messiaen's understanding of Greek rhythms is unique becomes even more evident in the ensuing discussion, which comes under the heading of "Survival of Greek rhythms [Survivance des rythmes grecs]." Messiaen cited examples that range from the slow movement of Beethoven's Seventh Symphony, Hölderlin's poetic works, Constantin Brăiloiu's study of traditional Romanian music, to Stravinsky's *Petrushka*, *Le sacre du printemps* ("Glorification de l'élue"), *Histoire du soldat* ("Danse du diable"), *Les noces*, Falla's *L'amour sorcier* ("El amor brujo"), Ravel's *Daphnis et Chloé* ("Dance générale") and *Gaspard de la nuit* ("Le gibet" and "Scarbo"). Although the examples vary widely, the majority of them are musical works from the early twentieth century premiered in Paris, suggesting that Messiaen was concerned with "the survival of Greek rhythms" at a specific time and in a specific place.

#### *Dochmius in Ravel's "Le gibet" and Debussy's "La flûte de Pan"*

Of all the music examples Messiaen groups under "Survivance des rythmes grecs" in chapter three of *Traité I*, "Le gibet" stands out in that Greek rhythms are engaged consistently throughout the piece (Example 6). A rhythmic pedal is in play, one that juxtaposes iamb ( U – ) and bacchius ( U – – ), forming a type of dochmius that is "the retrograde of the second form of the dochmiac verse: bacchius + iamb:"

This pedal reunites 2 Greek rhythms, iamb ( U – ) and bacchius ( U – – ) ... the bacchius being an extension of the iamb through a repetition of the long. (iamb + bacchius: this is the retrograde of the second form of the dochmiac verse: bacchius + iamb).<sup>37</sup>

37 "Cette pedale reunit 2 rythmes grecs, iambe ( U – ) et Bacchius ( U – – ) ... le Bacchius etant l'accroissement du iambe, par repetition de la longueur. (iambe + Bacchius: c'est le renversement de la 2e forme du vers Dochmiaque: Bacchius + iambe)" (Messiaen 1994: 127). See also: *Ibid.*: 75.

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The musical score for "Le gibet" by Maurice Ravel, as presented in Example 6, is a piano part in 4/4 time. It features a complex rhythmic pedal consisting of eighth notes. The tempo is marked "Très lent" and the performance instruction is "Sans presser ni ralentir jusqu'à la fin". The dynamic is "pp". The score includes annotations for "iamb" and "bacchius" rhythms. A "Sourdine" instruction is present. The piece concludes with a "p expressif" marking.

Ravel's dynamic accents ensure the grouping of 3+5 eighth notes typical of dochmius rather than the conventional grouping of 4+4 eighth notes. Depending on where Ravel positions dochmius in relation to the underlying 4/4 schema, the notation varies. If the onset of the rhythmic pedal in m. 1 had been advanced by an eighth note, the tie in the pedal would have been spared.<sup>38</sup> Ravel's placement of dochmius in "Le gibet" complicated the notated rhythm. On this occasion, Messiaen makes no mention of the fact that the visual complexity of the rhythmic pedal stems from the use of modern notation and, more specifically, the mapping of dochmius to an underlying metrical grid prescribed by the 4/4 meter. But elsewhere he distinguishes between what he calls notated rhythm and true rhythm, which applies well to dochmius in "Le gibet."<sup>39</sup>

Messiaen's comments on Debussy's use of Greek rhythms appear belatedly in *Traité VI*, the volume Messiaen sets apart for Debussy's music.<sup>40</sup> In the opening and closing measures of "La flûte de Pan" (*Trois Chansons de Bilitis*), dochmius takes shape through a series of block chords (Example 7).<sup>41</sup> As in Ravel's "Le gibet," the notation visually blurs the identity of the Greek rhythms. The dochmius is exactly four quarter-notes long, and yet it appears at the point where the meter changes from 4/4 to 3/4. Just as the dochmius ends, the meter then reverts from 3/4 back to 4/4.

38 If all the rests in m. 1 (R.H.) had been removed, the pedal would have fitted neatly into one measure.

39 See Messiaen's *The Technique of My Musical Language*, chapter VII ("Rhythmic Notations").

40 Greek rhythms are seldom mentioned in *Traité VI*. We note Messiaen's reference to iamb and trochee in association with just a few works, and bacchius is touched on in his analysis of "La flûte de Pan" exclusively.

41 Messiaen's reading of m. 2 as "2 iambes U -, Bacchius" is perplexing. His reading of m. 29, which literally repeats m. 2, as two iambs is just as problematic. They might have been a slip of the pen.

The dochmius featured in both “Le gibet” and “La flûte de Pan” is suggestive of how Ravel and Debussy might have appropriated Greek rhythms and played with some of the complications that derive from the use of modern notation, which prescribes an underlying metrical grid and the metrical accent.

**Example 7.** Dochmius (iamb + bacchius) in Debussy’s “La flûte de Pan”

The image shows a musical score for Debussy's "La flûte de Pan". It consists of two systems of music. The first system is for the Chant (voice) and Piano. The Chant part is in a treble clef with a key signature of three sharps (F#, C#, G#) and a common time signature (C). It begins with the instruction "Lent et sans rigueur de rythme". The Piano part is in a grand staff (treble and bass clefs) with the same key signature and time signature. It starts with a piano (*pp*) dynamic. Above the Chant staff, there are rhythmic markings: "iamb" (represented by two eighth notes) and "bacchius" (represented by a quarter note followed by two eighth notes). The second system continues the Chant and Piano parts. The Chant part has a dynamic marking of *p* and the instruction "Doux et sotentu". The lyrics are: "Pour le jour des Hy - a - cin - thies, il m'a don - né u - ne sy -". The Piano part continues with a *pp* dynamic. The score includes various musical notations such as beams, slurs, and accents.

*Greek rhythms in Stravinsky’s “Sacrificial Dance”*

Debussy’s “La flûte de Pan” is by no means the only example omitted from Messiaen’s discussion of the survival of Greek rhythms in *Traité I*. An even more important omission is the “Sacrificial Dance” from *Le sacre*. It is not until *Traité II* and in chapter three (titled “Personnages rythmiques”) that we read Messiaen’s account of Stravinsky’s copious use of Greek rhythms in the rondo-like “Sacrificial Dance:”

Another analysis of the first couplet [figures 149–166], taking into account the beams Stravinsky used for the grouping of sixteenth or thirty-second notes with reference to the Boosey & Hawkes edition [1913 autograph]. To facilitate reading, I transcribe the score notation into sustained notes [eighth and quarter notes]. Numerous Greek rhythms are to be found here.<sup>42</sup>

42 “Autre analyse du 1er Couplet, en tenant compte des ligatures en enjambement utilisées par Stravinsky pour ses groupes de doubles croches ou triples croches, et d’après l’Édition Boosey and Hawkes. Pour la facilité de la lecture, je transcris le texte en sons tenus. Nous allons y trouver de nombreux rythmes grecs” (Messiaen 1995: 134).

Messiaen briefly remarks that there is a myriad of Greek rhythms in the first contrasting section (henceforth, the “first couplet,” using Messiaen’s words) of the “Sacrificial Dance,” and that Stravinsky’s beaming of the many repeating block chords, which are heard throughout the first couplet, signifies the composer’s grouping of them into Greek rhythms.<sup>43</sup> Messiaen then names the Greek rhythms one by one in a music example without explaining further. Given that Messiaen’s brief mention of Greek rhythms is buried in his extended analysis of *Le sacre*, it is hardly surprising that this case, despite its importance, has failed to attract critical attention.

To my knowledge, this case is truly unique and no doubt deserves close examination. It is also opportune that we have at our disposal not just the 1913 autograph, but also the sketch and the 1943 revision of the first couplet. The music is notated differently in these three sources, and in ways that visually signify or cloud Stravinsky’s alleged appropriation of Greek rhythms.

*Messiaen’s reference to Greek rhythms in the first couplet (1913 autograph)*

The first couplet features a continuous use of repeating block chords (Example 8a). It also features frequent changes of meter and hence measures of different lengths.<sup>44</sup> The notated meters are exclusively  $2/8$  and  $3/8$ , with  $2/8$  the prevailing one. The only exception is the use of  $4/8$  in the two measures of figure 161.

The repeating block chords bear rhythmic rather than melodic interest. (Unlike the “accentual” theme in “The Augurs of Spring,” however, stress accents are not used.) They fill all eighty-two measures of the first couplet (figures 149–166) and set up a hypnotic backdrop to the irregular interjections from wind and brass. It is striking that all these repeating block chords constitute an extended series of exclusively longs and shorts. Each block chord is heard as a quarter note (long) or an eighth note (short), but they are not notated as such. Instead, each block chord is notated as either a sixteenth note or a quick succession of two thirty-second notes, and therefore the ensuing rest, which occupies either one or three sixteenth notes, is a decisive factor. When a block chord is followed by a short rest (one sixteenth note), they add to give an eighth note (S). When a block chord is followed by a long rest (three sixteenth notes), however, they add to give a quarter note (L) instead.<sup>45</sup> In other

43 Messiaen skips mentioning the first couplet when tracing the survival of Greek rhythms in *Traité I*, even though it gives an example par excellence of Stravinsky’s appropriation of Greek rhythms. Messiaen might have found it more advantageous to discuss the first couplet in the context of his analysis of *Le sacre* in *Traité II*.

44 Pieter van den Toorn refers to this kind of setting as Stravinsky’s type-I rhythm.

45 There are only two exceptions to the addition of the duration of a rest to that of the preceding block chord. At figure 153 the opening eighth-note rest is read as part of an iamb, the first of a series of Greek rhythms heard previously at figure 150 (iamb–anapest–amphimacer–spondee). At figure 162 the opening eighth-note rest is not added to the time-span of the preceding block chord, nor is it treated as

words, the longs and shorts are the durations between the attacks of successive block chords, including not just the lengths of the block chords, but also those of the intervening rests. In today's research into rhythm perception by cognitive psychologists, this is termed "inter-onset interval (IOI)," and is defined as the time-span between the onset of one event and that of an immediately succeeding event.<sup>46</sup>

**Example 8a.** Opening measures of first couplet, 'Sacrificial Dance' (1913 autograph)

The image displays two systems of musical notation for the opening measures of the first couplet in 'Sacrificial Dance'. The first system, starting at measure 149, features three measures of music. Above the first measure is the label 'Bacchius' with a rhythmic diagram of a long note followed by two short notes. Above the second measure is 'Anapeste' with a diagram of two short notes followed by a long note. Above the third measure is 'Spondée' with a diagram of two long notes. The notation includes parts for Flute 1 and 2 (Fag.), Clarinet in F (C. Fag.), and Cor in Fa (trumpets 1, 2, 4). The music is marked *pp sempre*. The second system, starting at measure 150, features three measures of music. Above the first measure is the label 'Iambe' with a diagram of a short note followed by a long note. Above the second measure is 'Anapeste' with a diagram of two short notes followed by a long note. Above the third measure is 'Amphimacre' with a diagram of a long note followed by two short notes. The notation includes parts for Flute 1 and 2 (Fag.), Clarinet in F (C. Fag.), and Cor in Fa (trumpets 1, 2, 4). The music is marked *pp sempre*.

part of the following Greek rhythm. Messiaen denotes the eighth-note rest singularly as "respiration," which directly precedes the reprise proper, in which we hear a compressed restatement of the Greek rhythms featured in figures 149–152.

46 Hence an inter-onset interval may or may not be the same as the physical time-span of an event.



**Table 4.** Repeating block chords in the first couplet

(a) An extended series of shorts (S) and longs (L)

149 150 151 152 153  
 S-L-L-S-S-L-L-L-S-L-S-S-L-L-S-L-L-L-L-S-L-L-L-L-L-S-S-L-L-S-L-S-S-S-L- etc.

(b) The same series, but with all the longs and shorts grouped through beaming into Greek rhythms (e.g. bacchius and anapest at the outset)

149 150 151 152 153 154  
 SLL-SSL-LL-SL-SSL-LSL-LL-LSL-LL-LS-SL-LS-LSS-SL-SSL-LSL-LL-LL-SLL-LL-LS-  
 156 157 158 159 160 161 162 163  
 SLL-LSS-SLS-LSS-LLS-LS-LLS-SSLS-SSSLL-SLLS-SSSSSS-rest-SLL-SSL-SL-LL-LSL-  
 164 165 166  
 LL-LS-SL-LS-SLL-SSL-LL-SL-LSSS

(c) The same series, but with the thirteen different Greek rhythms classified into four categories and denoted as “3,” “4,” “5,” or “7” (The only consecutive use of “5” and “7” appears together as “5-5-7-7-7” (bolded) at a climactic point that directly precedes the reprise proper.)

149 150 151 152 153 154 155 156 157 158 159 161  
 5-4-4-3-4-5-4-5-4-3-3-4-3-4-5-4-4-5-4-3-5-4-4-4-5-3-5-5-7-7-7-  
 162 163 164 165 166  
 rest-5-4-3-4-5-4-3-3-3-5-4-4-3-5

(d) Symmetrical and near-symmetrical patterns that engage three different categories of Greek rhythm

|         |                 |                  |
|---------|-----------------|------------------|
| 150–151 | 3-4-5-4-5-4-3   | symmetrical      |
| 153–155 | 3-4-5-4-4-5-4-3 | symmetrical      |
| 155–158 | 3-5-4-4-4-5-3   | symmetrical      |
| 162–164 | 5-4-3-4-5-4-3   | near-symmetrical |
| 164–166 | 3-5-4-4-3-5     | near-symmetrical |

The rhythmic reduction Messiaen used in his analysis falls perfectly in line with the measurement of IOI and reveals an extended series of longs and shorts in strictly 2:1 ratio (Table 4a). The stringent use of longs and shorts in 2:1 ratio boosts rhythmic uniformity, but the permutation of the longs and the shorts is highly unpredictable, suggesting that the rhythm is worked out, for the most part, additively.



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Messiaen takes Stravinsky's beaming of the repeating block chords as a key factor in his reading of Greek rhythms in the first couplet. The longs and shorts heard through the chords are, according to Messiaen, grouped through beaming into Greek rhythms (Table 4b).<sup>47</sup> In the opening two measures, for instance, three repeating block chords are beamed and interleaved with one short rest and two long rests respectively. Messiaen's rhythmic reduction reveals a short-long-long (S-L-L) pattern or bacchius in the terminology of Greek rhythm. With recourse to rhythmic reduction as such, Messiaen identifies anapest (S-S-L) and spondee (L-L) in the following measures (Example 9; Appendix 1).

**Example 9.** Messiaen's reading of ancient Greek metrical feet in the first couplet (*Traité II*, pp. 134–136)

total de 13 croches  
Bacchius

Anapeste

Spondée

Total de 16 croches  
Iambe Anapeste

Amphimacre

Spondée

thème : anacrouse

accent trillé

désinence

thème : 5 eighth notes

thème : 7 eighth notes

Total de 22 croches

Amphimacre

Spondée

Trochée

Iambe

Trochée

Dactyle

Total de 16 croches  
Iambe


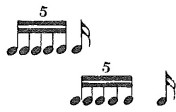
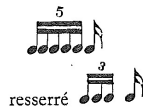
<sup>47</sup> The only exception to the reading of Greek rhythms in the repeating block chords is the pair of measures that constitute the retransition (figure 161), in which seven eighth notes are played in a row.

thème : 



Total de 21 croches

Anapeste Amphimacre Spondée Spondée Bacchius Spondée Trochée Bacchius

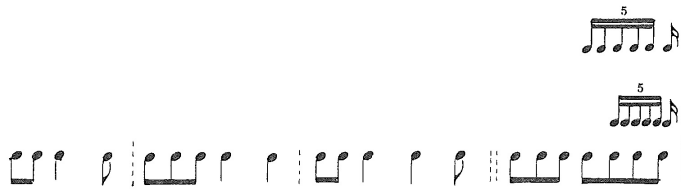

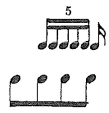






total de 8 croches

total de 17 croches

Dactyle Amphibraque Dactyle Antibacchius Trochée Antibacchius

Total de 19 croches

Total de 7 croches


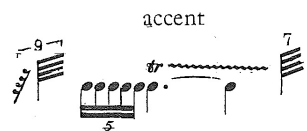
respiration Total de

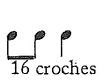
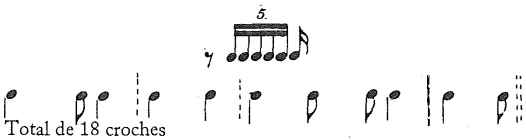
Péon III

Épitríte II

Épitríte IV

Bacchius

thème :  anacrouse 

16 croches

Total de 18 croches

Anapeste Iambe Spondée Amphimacre Spondée Trochée Iambe Trochée



Total de 21 croches

Bacchius Anapeste Spondée Iambe Péon I

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The beaming of these block chords suggests some eighty measures of Greek metrical feet.<sup>48</sup> Altogether forty-five Greek rhythms – among them thirteen distinct ones – are identified (Table 5). The Greek rhythms include not only well-known ones like iamb and trochee, but also lesser-known ones such as epitrite II and epitrite IV. Since the total number of eighth notes (regardless of whether they take shape as long or short) contained in each Greek rhythm is invariably three, four, five, or seven, they can be classified into four categories accordingly.

**Table 5.** Classification of Greek rhythms into four categories<sup>49</sup>

| Greek rhythm   | total no. of eighth notes (appearances) |
|--|---|
| Iamb; trochee  | 3 (12)                                  |
| Anapest; dactyl; spondee; amphibraque                | 4 (18)                                  |
| Bacchius; antibacchius; amphimacer; peon I; peon III | 5 (13)                                  |
| Epitrite II; epitrite IV                             | 7 (2)                                   |

The classification of the thirteen different Greek rhythms into four categories (“3,” “4,” “5,” and “7”) enables us to analyze the overall rhythmic design as the permutation of four rather than thirteen entities (Table 4c). This is clearly preferable since the juxtaposition of Greek rhythms of the same lengths (for instance, iamb and trochee, or anapest and dactyl) does not create metrical irregularity.

As shown in Table 4d, three different categories (“3,” “4,” and “5”) of Greek rhythms are featured schematically at strategic points. They form series that are retrogrades of one another (e.g. 3–4–5 and 5–4–3 around the axial 4 at figures 150–151), and bring about frequent meter changes that go hand in hand with durational symmetry. Epitrite II and epitrite IV belong to the outstanding category (“7”) of Greek rhythm. They are the lengthiest among all the Greek rhythms identified in the first couplet, and they appear only once at a climactic point in the first couplet (three measures before and after figure 160). Evidence as such supports the argument that Greek rhythms and not just changing meters are featured in the first couplet.<sup>50</sup> It seems much less convincing to argue that Stravinsky beamed the

48 There are considerably less measures in the sketch since 4/8, 5/8, and 7/8 are used rather than depending on 2/8 and 3/8 almost exclusively.

49 The total number of measures set aside for each of the four categories of Greek rhythms is parenthesized.

50 It makes a difference to prove the use of Greek rhythms, for meter changes can be featured without engaging them.

repeating block chords arbitrarily, or that the perfect match between some forty rhythmic patterns and Greek metrical feet is a mere coincidence.

*Greek rhythms in the first couplet (sketchbook)*

Still, the 1913 autograph leaves us with some unanswered questions, since the rhythmic patterns suggested by the beaming of repeating block chords are more often than not notated in two measures and, exceptionally, even in three measures. It is questionable whether these rhythmic patterns are integral wholes. Perhaps they comprise two or three constituent parts? Fortunately an examination of the sketch helps clarify this (see Example 8b). Greek rhythms that are notated in two or three measures in the 1913 autograph are, without exception, notated in one measure in the sketchbook, and the repeating block chords are not yet beamed across bar lines. More specifically:

- Greek rhythms notated in one measure of  $4/8$  in the sketch are re-notated as two measures of  $2/8$  in the 1913 autograph.
- Bacchius, antibacchius, amphimacer, peon I, and peon III are the only Greek rhythms notated in  $5/8$  in the sketch. In the 1913 autograph they are re-notated to take up two rather than just one measure, with  $2/8$  followed by  $3/8$  or vice versa.
- Epitrite II and epitrite IV are the only Greek rhythms notated in  $7/8$  in the sketch (Example 10a). They are re-notated to take up three measures rather than just one in the 1913 autograph (Example 10b).  $7/8$  becomes replaced by  $2/8 - 3/8 - 2/8$  at figure 159, and by  $2/8 - 2/8 - 3/8$  at figure 160. The repeating block chords are, in each case, beamed across two bar lines.

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**Example 10a.** Climactic point of first couplet (sketchbook, p. 94; reproduced by permission of Boosey & Hawkes Music Publishers Ltd)

The image shows a handwritten musical score for a climactic point of the first couplet. The score is written on multiple staves, including:

- Cl. piece / Tr. piece** (top staff)
- Cor. F** (second staff)
- V I** (third staff)
- V II** (fourth staff)
- V. u.** (fifth staff)
- V C** (sixth staff)
- Cl. B** (seventh staff)
- V II** (eighth staff)
- V II** (ninth staff)
- V. u.** (tenth staff)
- V I** (eleventh staff)
- V II** (twelfth staff)
- V. u.** (thirteenth staff)
- V I** (fourteenth staff)
- V II** (fifteenth staff)
- V. u.** (sixteenth staff)

The score includes various musical notations such as notes, rests, and dynamic markings. There are also handwritten annotations and markings on the right side of the page, including:

- Fl. piece**
- Fl.**
- Fl. 23**
- Fl. 24**
- Cl. B**
- Cl. B 12**
- Cl. B 24**
- Cl. B 36**
- Cl. B 48**
- Cl. B 60**
- Cl. B 72**
- Cl. B 84**
- Cl. B 96**
- Cl. B 108**
- Cl. B 120**
- Cl. B 132**
- Cl. B 144**
- Cl. B 156**
- Cl. B 168**
- Cl. B 180**
- Cl. B 192**
- Cl. B 204**
- Cl. B 216**
- Cl. B 228**
- Cl. B 240**
- Cl. B 252**
- Cl. B 264**
- Cl. B 276**
- Cl. B 288**
- Cl. B 300**
- Cl. B 312**
- Cl. B 324**
- Cl. B 336**
- Cl. B 348**
- Cl. B 360**
- Cl. B 372**
- Cl. B 384**
- Cl. B 396**
- Cl. B 408**
- Cl. B 420**
- Cl. B 432**
- Cl. B 444**
- Cl. B 456**
- Cl. B 468**
- Cl. B 480**
- Cl. B 492**
- Cl. B 504**
- Cl. B 516**
- Cl. B 528**
- Cl. B 540**
- Cl. B 552**
- Cl. B 564**
- Cl. B 576**
- Cl. B 588**
- Cl. B 600**
- Cl. B 612**
- Cl. B 624**
- Cl. B 636**
- Cl. B 648**
- Cl. B 660**
- Cl. B 672**
- Cl. B 684**
- Cl. B 696**
- Cl. B 708**
- Cl. B 720**
- Cl. B 732**
- Cl. B 744**
- Cl. B 756**
- Cl. B 768**
- Cl. B 780**
- Cl. B 792**
- Cl. B 804**
- Cl. B 816**
- Cl. B 828**
- Cl. B 840**
- Cl. B 852**
- Cl. B 864**
- Cl. B 876**
- Cl. B 888**
- Cl. B 900**
- Cl. B 912**
- Cl. B 924**
- Cl. B 936**
- Cl. B 948**
- Cl. B 960**
- Cl. B 972**
- Cl. B 984**
- Cl. B 996**
- Cl. B 1008**
- Cl. B 1020**
- Cl. B 1032**
- Cl. B 1044**
- Cl. B 1056**
- Cl. B 1068**
- Cl. B 1080**
- Cl. B 1092**
- Cl. B 1104**
- Cl. B 1116**
- Cl. B 1128**
- Cl. B 1140**
- Cl. B 1152**
- Cl. B 1164**
- Cl. B 1176**
- Cl. B 1188**
- Cl. B 1200**

**Example 10b.** Climactic point of first couplet (1913 autograph)

A comparison of the time signatures Stravinsky jotted down in the sketch with their counterparts in the 1913 autograph is also revealing. Table 6 shows all the time signatures marked or unambiguously implied in the two sources together with the total numbers of measures set apart for different time signatures to trace how often each of them is used.

**Table 6.** Time signatures marked or implied in the sketch and the 1913 autograph

| Time signature | 1/8 | 2/8 | 3/8 | 4/8 | 5/8 | 6/8* | 7/8 |
|----------------|-----|-----|-----|-----|-----|------|-----|
| Sketchbook     | 1   | 3   | 7   | 14  | 11  | 1    | 2   |
| 1913 autograph | 0   | 52  | 29  | 1   | 0   | 0    | 0   |

(\*6/8 is probably a typo for 7/8, for the measure in question contains seven rather than just six eighth notes.)

A greater variety of meters appear in the sketch, including 1/8, 2/8, 3/8, 4/8, 5/8, and 7/8. That 4/8 outnumbers all other time signatures in the sketch also contrasts sharply with the 1913 autograph, in which 4/8 appears only once in the retransition, and all the other time signatures are restrictively 3/8 or 2/8.

### *Greek rhythms incognito?*

In the 1943 revision of the first couplet, all the note values are doubled, and the rather exclusive use of 2/8 and 3/8 in the 1913 autograph is replaced by 2/4 and 3/4 (Example 11). The repeating block chords are no longer grouped through beaming into different

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rhythmic patterns. Is it possible that Stravinsky actually tried to delete evidence of his use of Greek rhythms in the first couplet? At the very least, we can say that the evidence pointing to Stravinsky's use of Greek metrical feet in the first couplet was compromised when he re-notated the repeating block chords in the 1913 autograph and yet again in the 1943 revision.

The image displays two systems of musical notation, labeled 8 and 9, representing the opening measures of the first couplet in 'Sacrificial Dance' (1943 revision). Each system consists of two staves: a treble clef staff with piano accompaniment and a bass clef staff with a single note. System 8 shows six measures with the following metrical feet: Bacchius (two measures), Anapeste (two measures), and Spondée (two measures). System 9 shows four measures with the following metrical feet: Iambe (one measure), Anapeste (two measures), and Amphimacre (one measure). Beams above the notes in the treble staff indicate the grouping of notes and rests according to these metrical feet.

**Example 11.** Opening measures of first couplet, 'Sacrificial Dance' (1943 revision)  
 A comparison of Stravinsky's notations and re-notations of the first couplet over some thirty years is presented in van den Toorn's *Stravinsky and The Rite of Spring: The Beginnings of a Musical Language* (1987: 53). Having examined the notational discrepancies that set apart the different versions of the first couplet in the sketchbook, the 1913 autograph, and the 1943 revision, van den Toorn remarks that "the earlier, longer groupings are ignored [in the 1943 version]. Single beams over the bar lines ... are sacrificed, presumably in the interests of facility or simple legibility" (van den Toorn 1987: 53). But it is not obvious that the beams should be regarded as mere orthographic complexity. Are they not meant to show how Stravinsky groups the repeating block chords?

For van den Toorn, though, the music is "quite simple... a single chord is punctuated one, two, or three times in succession. These punctuations or successions of punctuations are always separated by a single unit of rest" (1987: 53). Van den Toorn does not attribute much significance to Stravinsky's "single beams over the bar lines," and he treats the quarter-note rest as a caesura regardless of whether it formerly appears within or outside a beamed group of attacks. This clearly goes against the sketchbook and the 1913 autograph, which suggest the presence of many more inte-

resting rhythmic patterns. It is thus worth asking what might have motivated Stravinsky to delete the beams in the 1943 revision. Did he seek to serve “the interests of facility or simple legibility,” as suggested by van den Toorn? Or did he perhaps try to conceal his use of Greek rhythms? A comparison of the three versions of the first couplet suggests that he may indeed have moved in incremental stages to cover up the original rhythmic design.<sup>51</sup>

Given the widespread recognition of van den Toorn’s “rhythmic Types I and II” as the theoretical models that encapsulate Stravinsky’s rhythmic innovations in *Le sacre*,<sup>52</sup> it is important to add that the first couplet can be mapped onto van den Toorn’s rhythmic Type I, which he defined as “foreground metric irregularity; an irregular or shifting meter.”<sup>53</sup> Taruskin also read into *Le sacre* two types of “rhythmic novelties,” and what he described as “the rhythm of irregularly spaced downbeats” is obviously the same as van den Toorn’s rhythmic Type I. But Taruskin had something vital to add, noting that “in Russian folklore it [this type of rhythm] had been a fixture from time immemorial,” though without touching on any specific archaic rhythm, Greek or otherwise (Taruskin 1996: 958–959).

## V. CONCLUSION

The preceding case study attempts to clarify the issues surrounding Stravinsky’s putative appropriation of Greek rhythms.<sup>54</sup> Although there is strong evidence that Stravinsky had already been playing with ancient Greek rhythms in the 1910s as a means of injecting novel rhythmic effects into his music, existing Stravinsky scholarship is silent on this point. Even Messiaen, who spotted a rich use of Greek rhythms in the first couplet, played down this discovery and preferred an alternative reading, one that applies his theory of rhythmic characters (Messiaen 1995: 131–134)<sup>55</sup> without consi-

51 According to van den Toorn, Stravinsky showed a distinct preference for the 1943 revision, and that it “alone was intended by the composer to supersede all previous versions of this dance, and after its publication Stravinsky himself always conducted from this 1943 version” (van den Toorn 1987: 40). See also Stravinsky and Craft 1981: 147, for the justification provided by Stravinsky for the 1943 revision.

52 The near canonic status acquired by these models is comparable to that attained by his research on Stravinsky’s octatonicism, in which van den Toorn designates the three octatonic collections in a similar fashion as I, II, and III.

53 Van den Toorn’s rhythmic Type II is not relevant to the first couplet. It is characterized by the “superimposition of two or more motives that repeat according to periods, cycles, or spans that are not shared but vary independently of, or separately from, one another.” See van den Toorn 1987: 100, for both his rhythmic Types I and II.

54 This may lead to research questions such as whether Stravinsky modeled his use of Greek rhythms on some precedent cases or perhaps not. It is also worth investigating whether there is any time frame to Stravinsky’s appropriation of Greek rhythms, and whether they loom large or are avoided in *Apollo*, *Orpheus*, and his other overtly Greek-inspired works.

55 Messiaen’s most accessible explanation of rhythmic characters appears in *Music and Color: Convers-*



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dering Stravinsky's beaming of the repeating block chords as signifiers of scansion. A good grasp of Greek rhythms is a prerequisite for any understanding of Stravinsky's appropriation of them in the first couplet. Still, even for someone well versed in Greek rhythms, these archaic patterns may not be readily recognizable. This is so even when a good number of Greek rhythms are used literally and exclusively for a prolonged and well-defined time-span, as in the first couplet.

A comparative study of Stravinsky's notation and re-notation of the first couplet in the sketchbook, the 1913 autograph, and the 1943 revision suggests that Stravinsky might have tried to conceal his use of Greek rhythms through notation. Greek rhythms in five and seven times are notated in  $5/8$  and  $7/8$  respectively in the sketchbook. In the 1913 autograph, however, the same Greek rhythms are re-notated with recourse to a mixed use of  $2/8$  and  $3/8$ . What is more, Stravinsky changed the way he notates the first couplet again in the 1943 revision. As a result of this belated change, the repeating block chords and the longs and shorts are no longer grouped through beaming into rhythmic patterns that map well with the Greek rhythms.

Stravinsky was still in his twenties when he used restrictively longs and shorts, all in a 2:1 ratio, to build an extended series of Greek rhythms in the first couplet. From his early days as a "national" composer, drawing on elements of pre-modern traditional music, he soon developed in meteoric fashion into an international figure. With the cosmopolitan outlook that he was keen to present to the world, Stravinsky might have found it increasingly necessary to conceal his former use of Greek rhythms in the first couplet. Time and again he changed the notational form of what could be considered rather blatant presentations of Greek rhythms in the sketchbook.<sup>56</sup> Given that over the years Stravinskian rhythm has come to be celebrated for its frequent changes of meter, it is worth considering whether this feature might not have stemmed, at least in part, from notating unconventional quintuple and septuple meters by means of duple and triple meters. Just as the use of Greek rhythms were obfuscated, rapid changes of meter, then considered a progressive rhythmic technique, began to proliferate. In this way Stravinsky seems to have succeeded in killing two birds with just one stone.

On 2 June 1912, when Stravinsky and Debussy met up to sight-read *Le sacre* at the piano, it was chez Laloy, their mutual friend.<sup>57</sup> Laloy was no doubt impressed by the

*sations with Claude Samuel*, in which he alludes to the dramaturgical interaction between three different roles: "Let's imagine a scene in a play in which we place three characters: the first one acts, behaving in a brutal manner by striking the second; the second character is acted upon, his actions dominated by those of the first; finally, the third character is simply present at the conflict and remains inactive. If we transport this parable into the field of rhythm, we obtain three rhythmic groups: the first, whose note-values are ever increasing, is the character who attacks; the second, whose note-values decrease, is the character who is attacked; and the third, whose note-values never change, is the character who doesn't move" (Samuel 1994: 71).

56 Stravinsky re-notates the first couplet but not the other parts of *Le sacre du printemps* in the 1943 revision.

57 While many sources recount this meeting, the details differ (for example, as to whether Stravinsky

frequent meter changes in *Le sacre*, a feature also characteristic of Greek rhythms, whose expressive quality, according to Laloy, owed much to “the inequality of the elements they comprise:”

[I]n Greek rhythms one could juxtapose the measures of 3, 4, 5 or 6 times seamlessly ... These complex measures were modulating measures ... the composite rhythms are very expressive rhythms because of the inequality of the elements they comprise.<sup>58</sup>

While Laloy was working on his doctoral thesis, in which he refuted “the principle of equidistance between downbeats” regarding Greek rhythms, he could not have known that in a few years’ time Stravinsky would revolutionize the whole field of rhythm and meter. In order to illustrate the use of changing meters, Laloy cited examples from Vincent d’Indy’s Second String Quartet, adding that the juxtaposition of different meters, though rarely heard in classical music, was beginning to gain currency (Laloy 1904: 336–337). Importantly, Fétis had expressed a similar view in “Du développement futur de la musique: Dans le domaine de rythme” (1852), notwithstanding his derogatory note on the irregular alternation of duple and triple times as typical of “barbaric” peoples. Musical rhythm, according to Fétis, evolves over time, and will one day attain “the immense and new musical realm in which various rhythms and different metric systems can follow one another and be connected naturally to produce effects unknown at this [his] time.”<sup>59</sup> We may reasonably ask whether Fétis was alone in this prophetic insight, or if there were similar ideas in circulation in Paris at the time, ideas that would come to fruition in *Le sacre* (Arlin 2000: 261; 302).

Although it is not clear exactly when Nietzsche’s discovery of a philological “error” in the 1870s reached Paris, the earliest extant source that touches on the “error” – Kawczyński’s *Essai comparatif sur l’origine des rythmes* – was published there in 1889, albeit without mentioning Nietzsche. The “error,” but again not Nietzsche, also surfaced in music-theoretical writings by Laloy and Emmanuel in the 1910s. When Maas published *Griechische Metrik* in 1923 and plagiarized Nietzsche, as argued by Porter, it was he (Maas) who was credited with the paradigm shift. Nietzsche’s scholarly contribution was forgotten, intentionally or otherwise, until Bornmann edited

and Debussy met at Laloy’s home or Debussy’s, and whether they played through the whole of *Le sacre* or just a part of it).

58 “Ton pouvait juxtaposer sans encombre des mesures de 3, 4, 5 ou 6 temps, comme on juxtaposait dans l’intérieur d’une mesure simple des temps inégaux, en rapport double ou sesquialtère ... Ces mesures complexes étaient des mesures modulantes ... les rythmes composés sont très expressifs à cause de l’inégalité des éléments dont ils se composent” (Laloy 1904: 338). Again, West shared the same view in *Greek Metre* (see West 1982: 24). While the evolution of the philological and musicological studies of Greek rhythm certainly crossed paths, this has been under-investigated.

59 “l’immense et nouveau domaine de la musique dans lequel des rythmes divers et des systèmes différents de mesures peuvent se succéder et s’enchaîner d’une manière naturelle et produire des impressions inconnues jusqu’à ce jour” (Fétis 1852: 300). The translation is from Arlin 2000: 280.

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the manuscripts of the “four notebooks” for KGW in the 1980s. Nevertheless, music by composers such as Debussy, Ravel, and Stravinsky suggests that Nietzsche's insights might very well have percolated down into their compositional praxes. Perhaps there is nothing fortuitous about the première of *Le sacre* taking place in Paris, which had by then become established as a center of rhythmic research and innovation. It was in Paris that the philological and musicological studies of Greek rhythm intersected, in ways that have hitherto remained unexplored.

Fueled by important archeological findings, philological studies of Greek rhythm burgeoned in the nineteenth century. One major archeological discovery was the *Anonymous Treatise* published by Bellermann in 1841, discussed at some length by Fétis in his *Histoire générale de la musique*. In contrast, the focus in Laloy's doctoral dissertation was rather more on the *Oxyrhynchus Papyri*, which was discovered in 1897. There are, of course, endless debates about the true nature of ancient Greek rhythms. During the long nineteenth century, the ictus theory, and hence the axiom of equal measure lengths (Taktgleichheit), espoused by a line of distinguished German philologists waxed and waned. There was growing awareness that ancient Greek rhythms could never be known and experienced as they had been in the past, for the obvious reason that audiences had changed. The Greek rhythms identified by Messiaen in *Le sacre* often feature syncopation and metrical dissonance, which require the presence of a metrical grid in the first place. Greek rhythms, however, belong to a time when the metrical grid and the divisive approach to rhythm (as exemplified by Kirnberger's *Akzenttheorie*) were probably not yet in place. Just what truly constituted ancient Greek rhythms for Stravinsky matters less in the end than how he turned what he understood of them into a valuable compositional resource.<sup>60</sup> In *Le sacre* Stravinsky was no doubt happy to play with Greek rhythms, and even to distort them, in the interests of novel aesthetic effects, exploiting their asymmetries at multiple levels, and in ways that resonate well with Nietzsche's stance in the late 1870s:

it is only to the extent that I am a pupil of earlier times, especially the Hellenic, that though a child of the present time I was able to acquire such untimely experiences. That much, however, I must concede to myself on account of my profession as a classicist: for I do not know what meaning classical philology could have for our time if it was not untimely – that is to say, acting counter to our time and thereby acting on our time and, let us hope, for the benefit of a time to come (Nietzsche 1997: 60).























60 A parallel can be drawn between the use of Greek rhythms and the magic potion in *Tristan*. Both are inherited from the past, hardly known, and yet stunningly powerful.

## APPENDIX I. GREEK RHYTHMS IN THE FIRST COUPLET

| Figure | Rhythmic pattern | Time unit (eighth note) | Greek rhythm |
|--------|------------------|-------------------------|--------------|
| 149    |                  | 5                       | Bacchius     |
|        |                  | 4                       | Anapeste     |
|        |                  | 4                       | Spondée      |
| 150    |                  | 3                       | Iambe        |
|        |                  | 4                       | Anapeste     |
|        |                  | 5                       | Amphimacre   |
|        |                  | 4                       | Spondée      |
| 151    |                  | 5                       | Amphimacre   |
|        |                  | 4                       | Spondée      |
|        |                  | 3                       | Trochée      |
| 152    |                  | 3                       | Iambe        |
|        |                  | 3                       | Trochée      |
|        |                  | 4                       | Dactyle      |
| 153    |                  | 3                       | Iambe        |
|        |                  | 4                       | Anapeste     |
|        |                  | 5                       | Amphimacre   |
|        |                  | 4                       | Spondée      |
| 154    |                  | 4                       | Spondée      |
|        |                  | 5                       | Bacchius     |
| 155    |                  | 4                       | Spondée      |
|        |                  | 3                       | Trochée      |
|        |                  | 5                       | Bacchius     |
| 156    |                  | 4                       | Dactyle      |
|        |                  | 4                       | Amphibraque  |

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|       |   |   |              |
|-------|---|---|--------------|
| 157   |    | 4 | Dactyle      |
|       |    | 5 | Antibacchius |
| 158   |    | 3 | Trochée      |
|       |    | 5 | Antibacchius |
| 159   |    | 5 | Péon III     |
|       |    | 7 | Épitrite II  |
| 160   |    | 7 | Épitrite IV  |
| 161   |    | 7 |              |
| 162   |    | 5 | Bacchius     |
|       |    | 4 | Anapeste     |
|       |    | 3 | Iambe        |
|       |    | 4 | Spondée      |
| 163   |    | 5 | Amphimacre   |
|       |   | 4 | Spondée      |
| (164) |  | 3 | Trochée      |
|       |  | 3 | Iambe        |
|       |  | 3 | Trochée      |
| 165   |  | 5 | Bacchius     |
|       |  | 4 | Anapeste     |
| 166   |  | 4 | Spondée      |
|       |  | 3 | Iambe        |
|       |  | 5 | Péon I       |

## LIST OF REFERENCES

- Arlin, Mary I. (2000) "Metric Mutation and Modulation: The Nineteenth-Century Speculations of F.-J. Fétis." *Journal of Music Theory*, 44/2: 261–322.
- Bornmann, Fritz (1989) "Nietzsches metrische Studien." *Nietzsche-Studien: Internationales Jahrbuch für die Nietzsche-Forschung* 18: 472–489.
- Caplin, William (2008) "Theories of Musical Rhythm in the Eighteenth and Nineteenth Centuries." In Thomas Christensen (ed.), *The Cambridge History of Western Music Theory*. Cambridge: Cambridge University Press, 657–694.
- Corbier, Christophe (2007) *Maurice Emmanuel*. Paris: bleu nuit éditeur.
- Corbier, Christophe (2009) "Alogia et eurhythmie chez Nietzsche." *Nietzsche-Studien: Internationales Jahrbuch für die Nietzsche-Forschung* 38: 1–38.
- Emmanuel, Maurice (1911) *Histoire de la langue musicale*. 2 vols. Paris: H. Laurens. Réédition 1981, avec préface de Messiaen et de Dutilleux.
- Emmanuel, Maurice (1913) "Grèce (art gréco-romain)." In Lavignac and La Laurencie (eds.), *Encyclopédie de la musique et dictionnaire du Conservatoire*, I/i. Paris: Delagrave, 377–537.
- Emmanuel, Maurice (1926) "Le rythme, d'Euripide à Debussy." In Albert Pfrimmer (ed.), *Compte rendu du Premier Congrès du Rythme*. Genève: Institut Jaques-Dalcroze, 103–146.
- Fétis, François-Joseph (1852) "Du développement futur de la musique: Dans le domaine de rythme." *Revue et Gazette musicale de Paris* 19: 281–476.
- Fétis, François-Joseph (1869–1876) *Histoire générale de la musique depuis les temps anciens à nos temps*. 5 vols. Paris: F. Didot frères,
- Gevaert, François-Auguste (1881) *Histoire et théorie de la musique de l'antiquité*, livre III ("Rythmique et métrique"). Gand: Annoot-Braeckman,
- Hasty, Christopher (1997) *Meter as Rhythm*. New York and Oxford: Oxford University Press.
- Hermann, Gottfried (1826) *Ueber Herrn Professor Böckhs Behandlung der griechischen Inschriften*. Leipzig: G. Fleischer.
- Kawczyński, Maximilien (1889) *Essai comparatif sur l'origine des rythmes*. Paris: Émile Bouillon.
- Krebs, Harald (1999) *Fantasy Pieces: Metrical Dissonance in the Music of Robert Schumann*. New York: Oxford University Press.
- Laloy, Louis (1904) "Aristoxène de Tarente et la musique de l'antiquité." Doctoral Dissertation. Paris: Ecole Normale Supérieure.
- Lerdahl, Fred, and Jackendoff, Ray (1983) *A Generative Theory of Tonal Music*. Cambridge (MA): MIT Press.
- Lloyd-Jones, Hugh (1982) *Blood for the Ghosts: Classical Influences in the Nineteenth and Twentieth Centuries*. London: Gerald Duckworth.
- London, Justin (2008) "Rhythm in Twentieth-Century Theory." In Thomas Christensen (ed.), *The Cambridge History of Western Music Theory*. Cambridge: Cambridge University Press, 695–725.
- Maas, Paul (1962) *Greek Metre (Griechische Metrik [1923])*, trans. Hugh Lloyd-Jones. Oxford: Clarendon Press.

## WAI-LING CHEONG

ANCIENT GREEK RHYTHMS IN MESSIAEN'S *LE SACRE*: NIETZSCHE'S LEGACY?

- Meillet, Antoine (1923) *Les origines indo-européennes des mètres grecs*. Paris: Les presses universitaires de France.
- Messiaen, Olivier (1944) *Technique de mon langage musical*, 2 volumes. Paris: Leduc, 1944. Volume I translated by John Satterfield as *The Technique of my Musical Language*, Paris, Leduc, 1956.
- Messiaen, Olivier (1994) *Traité de rythme, de couleur et d'ornithologie*, tome I. Paris: Leduc.
- Messiaen, Olivier (1995) *Traité de rythme, de couleur et d'ornithologie*, tome II. Paris: Leduc.
- Messiaen, Olivier (2001) *Traité de rythme, de couleur et d'ornithologie*, tome VI. Paris: Leduc.
- Nietzsche, Friedrich (1967–) *Werke: Kritische Gesamtausgabe*, ed. Giorgio Colli und Mazzino Montinari. Berlin: De Gruyter.
- Nietzsche, Friedrich (1969) *Selected Letters of Friedrich Nietzsche*. Edited and translated by Christopher Middleton. Chicago: Chicago University Press.
- Nietzsche, Friedrich (1975–) *Briefwechsel: Kritische Gesamtausgabe*, ed. Giorgio Colli and Mazzino Montinari. Berlin: De Gruyter.
- Nietzsche, Friedrich (1993) *Griechische Rhythmik, Aufzeichnungen zur Rhythmik und Metrik, Zur Theorie de Quantitirenden Rhythmik, Rhythmische Untersuchungen, Werke: Kritische Gesamtausgabe, Abt. II Bd. 3*. Berlin: Gruyter, 99–338.
- Nietzsche, Friedrich (1997) *Untimely Meditations*. Edited by Daniel Breazeale and translated by R. J. Hollingdale. Cambridge: Cambridge University Press.
- Porter, James J. (2000) "Being on Time." *Nietzsche and the Philology of the Future*. Stanford: Stanford University Press, 127–166.
- Riemann, Hugo (1903). *System der musikalischen Metrik und Rhythmik*. Leipzig: Breitkopf & Härtel.
- Samuel, Claude (1994) *Music and Color: Conversations with Claude Samuel*, trans. E. Thomas Glasow. Portland: Amadeus Press.
- Stravinsky, Igor (1969) *The Rite of Spring Sketches 1911–1913*. London: Boosey and Hawkes.
- Taruskin, Richard (1996) *Stravinsky and the Russian Traditions*, volume I. Oxford: Oxford University Press.
- van den Toorn, Pieter C. (1987) *Stravinsky and The Rite of Spring: the Beginnings of a Musical Language*. Oxford: Oxford University Press.
- West, Martin L. (1982) *Greek Metre*. Oxford: Clarendon.
- West, Martin L. (1992) *Ancient Greek Music*. Oxford: Clarendon Press.
- Westphal, Rudolf and Rossbach, August (1854–1865) *Metrik der griechischen Dramatiker und Lyriker nebst den begleitenden musischen Künsten*. Leipzig: Teubner.

ВАН-ЛИНГ ЧЕОНГ

АНТИЧКИ ГРЧКИ РИТМОВИ У МЕСИЈАНОВОЈ АНАЛИЗИ *ПОСВЕЋЕЊА ПРОЛЕЋА*:  
НИЧЕОВО НАСЛЕЂЕ?

(РЕЗИМЕ)

Мало је познато да је Фридрих Ниче – који је био изабран за професора класичне филологије на Универзитету у Базелу у својим двадесетим годинама – постулирао, на основу ригорозних текстуалних студија, да су еминентни класични филолози, активни у Централној Европи у деветнаестом веку, озбиљно омашили; наиме, они су на старогрчки ритам примењивали модеран акценатски систем, уместо да су водили рачуна о дужини слогова. Водећи класични филолози у деветнаестом веку били су, претежно, Немци; с друге стране, утицајни музиколози, који су писали о древним грчким ритмовима, углавном су били Французи. Париски конзерваторијум био је моћан центар за изучавање теорија ритма, са импресивном традицијом која је водила од Франсоа-Жозефа Фетиса и Франсоа-Огиста Геверта, преко Луја Лалоја и Мориса Еманиела, до Оливијеа Месијана и других. Фетис и Геверт су се позивали на немачке филологе, своје савременике, пропуштајући прилику да истински преиспитају њихове поставке. Међутим, код Лалоја, Еманиела и Месијана дошло је до значајне промене оријентације. Радови ових аутора остављају утисак као да су они били свесни Ничеових открића – иако нико од њих не спомиње Ничеа у својим текстовима.

У овој студији, спроведена је компаративна анализа њиховог музичког тумачења античких грчких ритмова; након тога, фокусирам се на Месијаново аналитичко откриће импресивно дугачког низа грчких ритмова у балету *Посвећење пролећа* Игора Стравинског. Циљ овог рада је да баци ново светло на оживљавање интересовања за старогрчке ритмове у модернистичким музичким делима, а затим и да преиспита како је „увијена,” другим речима, непризната рецепција Ничеовог открића од стране париских музичких кругова вероватно подстакла и усмерила ритмичку иновацију на нов, виши ниво.

Кључне речи: антички грчки ритам, *Посвећење пролећа*, Фридрих Ниче, Франсоа-Жозеф Фетис, Франсоа-Огист Геверт, Луј Лалој, Морис Еманиел, Оливије Месијан