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9-2023

André Mocquereau's Theory of Rhythm

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Father André Mocquereau, OSB (1849–1930)

ANDRÉ MOCQUEREAU'S THEORY OF RHYTHM

by

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A dissertation submitted to the Graduate Faculty in Music in partial fulfillment of the requirements
for the degree of Doctor of Philosophy, The City University of New York

2023

APPROVAL

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This manuscript has been read and accepted by the Graduate Faculty in Music in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

Approved: June 2023

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ABSTRACT

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This dissertation examines the theory of rhythm developed by Dom André Mocquereau (1849–1930), a French Benedictine monk. Mocquereau's theory was originally conceived as a method for performing Gregorian chant and has been the source for numerous publications and recordings since the beginning of the twentieth century. This dissertation places Mocquereau's theory in the context of both the evolving performance practice of medieval monophony and the history of music theory in the nineteenth and twentieth centuries. Chapter 1 surveys the history of the notation of Gregorian chant, introducing the problem of constructing a rhythmic practice from historical sources. Chapter 2 examines the history of the rhythmic approach developed at the abbey of Solesmes from 1833 to the present in relation to competing historical approaches. Chapter 3 describes Mocquereau's theory of accent as it relates to monophonic chant and to Renaissance polyphony. Chapter 4 considers Mocquereau's relationship to other nineteenth- and twentieth-century theories of music developed by Jérôme-Joseph de Momigny, Rudolf Westphal, Mathis Lussy, Vincent d'Indy, and Hugo Riemann. Appended to the dissertation are several previously unpublished letters exchanged by Mocquereau and Riemann.

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1 THE NOTATION OF GREGORIAN RHYTHM

1.1 INTRODUCTION: PERFORMANCE PRACTICE IN PLAINCHANT

The subject of this dissertation is the theory of musical rhythm developed by Dom André Mocquereau (1849–1930), a French Benedictine monk of the abbey of Solesmes. Mocquereau's principal theoretical work is his two-volume *Le nombre musical grégorien* (Mocquereau 1908, 1927). While Mocquereau theorizes about the nature of rhythm as it pertains to all music, the work is chiefly devoted to the study of plainchant, the liturgical form of music to which Mocquereau devoted much of his life.[1] Any study of Mocquereau's theory must begin, then, with the study of plainchant and its particular theoretical problems.

Plainchant, or Gregorian chant, has been in continuous use as liturgical music for at least twelve centuries, during which time the musical habits and styles of those singing the chant have changed dramatically.[2] A present-day singer wishing to perform this music is forced to make decisions on several matters of performance: tuning, pitch, tempo, rhythm, accompaniment, vocal style, and pronunciation. Such considerations are common among performers of older music, and modern scholarship in the burgeoning field of historically informed performance uses written, iconographic,

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1. Etymologically, the term "plainchant" refers to liturgical song that lacks the rhythmic differentiation of measured music: it is plain rather than measured. In common parlance, the term is used for any monophonic liturgical song in the Latin Catholic tradition, without regard to its rhythmic characteristics; in this dissertation, I use the term in this loose sense.

2. Various forms of liturgical monophony developed in different places within Western Christendom during the first millennium of the Christian era. All these forms fall under the general term "plainchant." Of these local traditions, the repertoire with the longest continuous history is Gregorian chant, named for Pope Gregory I (reigned 590–604), who, according to legend, received the melodies of the chant directly by divine revelation. Any historical connection between the melodies and Gregory is impossible to establish. In reality, Gregorian chant developed as a combination of Roman and Frankish plainchant traditions during the Carolingian era, some two centuries after Gregory's death. The Gregorian melodies have been in continuous and widespread liturgical use ever since, eventually all but displacing the other traditions of plainchant, although the actual content of the melodies has varied considerably over the centuries. In common parlance, the terms "Gregorian chant" and "plainchant" are used interchangeably for this entire repertoire as well as for many melodies and genres of liturgical monophony created centuries later. I will use these terms interchangeably and in this loose sense.

and organological evidence to suggest reasonable ways to recreate a musical style from the past. In plainchant, these practical decisions are complicated by the music's long and varied history.

Since Gregorian chant is the official liturgical music of the Roman Catholic Church, questions of performance practice take on a special urgency when chant is sung in its original context as liturgical music. Chant is not merely one form of Catholic music among others, to be considered historically alongside the polyphonic motet and mass, the oratorio, and the organ verset. Historically, Gregorian chant was the very musical embodiment of the liturgy of the Roman Rite, which could hardly exist without it.[3] Every sensory aspect of the Roman liturgy is highly regulated: the color and shape of the vestments worn by the ministers; the material of the vessels used for the consecration; the particular composition of the bread and wine; and the text of the Rite. In this context, the performer is especially motivated to sing the chant in what he or she believes is the correct way, as a matter of religious observance. Indeed, a notion of correctness in performance practice has been present in the history of Gregorian chant since its very beginning, as Roman singers were brought into the Carolingian empire to teach the proper way to sing the chant in the ninth century. During the subsequent centuries of chant performance within the evolving Roman Rite, numerous popes and cardinals have opined on matters of performance practice in an official capacity; the proper performance of plainchant in its liturgical context has, until very recently, been governed by rules that carry the weight of law.

Of the interpretive decisions listed above, one that greatly impacts the experience of the chant for both the singer and the listener is how to approach the rhythm. Are all the notes of equal length? If not, what determines the relationship between the time values? How does this relate to language and to metrical music? These questions have long been the subject of controversy. Within the Roman Catholic Church, this controversy peaked in the decades around 1900, as much ecclesiastical legislation at the time set out to regulate the proper performance of plainchant. Mocquereau's approach to chant rhythm—also known as the Solesmes method, after the name of the abbey

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3. Even after the extensive liturgical changes brought about by the Second Vatican Council (1962–1965), allowing more stylistic flexibility in liturgical music, Gregorian chant remains normative: "The Church acknowledges Gregorian chant as specially suited to the Roman liturgy: therefore, other things being equal, it should be given pride of place in liturgical services" (Second Vatican Council 1963, sec. 116).

community to which he belonged—was developed in the context of this ongoing controversy.[4] The question of rhythm is intimately linked to the way in which chant is notated. In order to fully grasp the context of the debates about rhythm, it is necessary to sketch the history of the notation of plainchant from the beginning. This history has been written before, but usually from a polemical or tendentious perspective, which I will avoid. The bias of previous writers comes in two forms. First, authors interested in reconstructing the rhythmic practice of the ninth century are disdainful of the rhythmic evidence from the fifteenth to the eighteenth centuries; they view plainchant and associated theories from this period as the Dark Ages, situated between the pristine medieval past and the restoration of the nineteenth century. Second, most authors writing about chant rhythm quote theoretical sources and arrange musical examples selectively in order to promote their own interpretive theories. In the two chapters that follow, I am aiming for a more balanced stance—I will neither promote nor refute the ideas of the monks of Solesmes but describe the development of their theories in the context of the choices singers make when confronting the written record of plainchant.

Chapter 1 provides this historical survey of the notation of rhythm in chant, asking "How does a particular book show that a note is either longer or shorter than the notes around it?" This is a history full of ambiguity, contradiction, and recursive misreading. While certainty about the way to interpret musical signs will increase as this history proceeds, I show that even the modern editions are ambiguous and open to varying interpretations. Chapter 2 describes the development of the Solesmes tradition of free Gregorian rhythm, which, over the course of time, has given rise to several different approaches to the performance of free rhythm in plainchant. These approaches within the Solesmes tradition are contrasted with the mensuralist approach, which has served as the main alternative to the Solesmes style since the nineteenth century. Chapter 3 examines Mocquereau's theory more particularly as a theory of accent in language and melody. This leads to a discussion of the nature of musical meter, especially as it arises in sixteenth-century polyphony. Chapter 4 situates

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4. As discussed in chapter 2, Mocquereau's theory was only one of several rhythmic theories developed at Solesmes. The terms "Solesmes method" or "Solesmes theory" are sometimes used to refer specifically to Mocquereau's theory. I prefer the term "classic Solesmes method," which distinguishes it from other Solesmes-associated theories of rhythm.

Mocquereau's ideas within the broader field of nineteenth-century theories of rhythm, addressing Mocquereau's exchanges with his contemporaries on the abstract study of musical rhythm.

Notation—the only direct evidence of rhythmic values in plainchant between the ninth and early twentieth centuries—can offer us only an incomplete and partial view of a performance tradition that has been in continual flux. The present survey gathers what historical evidence there is in the notation itself. For this reason, I make no sharp distinction between original notations and modern editions; these are considered on equal footing for the rhythmic information conveyed. There are particular ideas about the rhythm of plainchant encoded in even the most neutral modern scholarly editions, as we shall see.

1.2   CHANT TRANSMISSION AND EARLY NOTATIONS

1.2.1   Orality

The earliest surviving written records of the proper chants of the Roman Rite are sources where only the text is written down, without other signs giving any melodic information.[5] This implies that the transmission of chant melodies was once entirely oral. Even after the innovation of music notation, for several centuries the transmission of chant remained by necessity primarily oral, since the nature of the first musical notations did not allow reconstruction of a melody by reading alone. This aspect of plainchant in the early centuries has been the subject of a great deal of scholarship.[6] Some plainchant is still learned orally today, although this phenomenon falls outside the usual purview of scholarly inquiry. In churches where plainchant is sung regularly, the congregation learns much of the repertoire orally, just as with other forms of music. I have seen among my own acquaintances and family that modern children often learn several chants through repeated hearing, even before learning to read. This is especially true of chants sung on a weekly or daily basis: the Mass responses; settings of the Mass ordinary; *Pater noster*; the chants for the Sunday rite of

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5. The term "proper" refers to chants whose texts vary according to the liturgical celebration or season, as opposed to "ordinary" chants, which are settings of a text sung regularly. The Mass propers are among the oldest substantial repertories of chant.

6. This vast topic is well outside of the scope of this study. Representative studies are in Karp (1998), Rankin (2018), and Treitler (2007).

sprinkling; or the seasonal Marian antiphons. Chants learned in this way have a clear and definite rhythmic character, as must any piece of music that one sings on such a frequent basis. Indeed, this rhythmic character may be more indelible than in melodies learned by reading.

In visiting different local churches while traveling over the past several years (in California, Virginia, Kentucky, New York, Venice, Paris, and Solesmes), I have heard a great deal of rhythmic variation in the singing of frequently recurring chants, even as these choirs sing from the same editions and profess to follow the same rhythmic systems. It is easy to see how the same process spread over centuries could lead to the great variety in approaches to plainchant rhythm we will see below.

In addition to singing chant learned without notation, modern singers still sometimes sing chant from the text alone. The readings, prayers, versicles, and responses printed in the *Liber Usualis*, the best-known modern edition of plainchant, are notated in this way, with the occasional use of a sign such as an asterisk to represent a melodic formula. This is a reminder that chant is intimately tied to the pronunciation of the Latin text, which always is at the center of any chant notation. There is a principle common to most schools of chant interpretation, that the first and most important guide to the rhythm of the chant is the Latin text. The difficulty lies in considering the way Latin pronunciation has varied over the last two millennia and over the wide geographical area where plainchant has been sung.

1.2.2   Neumes as Aids to Memory

Singers' books in the ninth century began to represent the melody using musical signs that accompany the text, and we call those signs "neumes."[7] These are drawn above the Latin text, and represent a pitch dimension where high and low in the space provided corresponds to high and low pitches in the sung melody. Most of the early neumes are called adiastematic because the vertical dimension on the page does not communicate precise pitch information. Some early neumes are quite precise in this regard, but this did not become normative in plainchant notation until the

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7. For some medieval writers, the term "neume" is reserved for long melismas composed of several smaller figures. I will use the term in its loose modern sense to describe any small figure of one or several notes.

invention of the staff in the eleventh century. Most neumes can represent a note or group of notes that is higher or lower (contour), but without showing how much higher or lower (pitch). The limitations created by the lack of specific pitch information were already known by contemporary writers. Hucbald (ca. 840–930) contrasts the precise pitch notation (a letter notation based on pitches assigned on a monochord) of his treatise with the neumes used to notate plainchant: "But this [being able to sing a melody at sight] can scarcely happen using the signs which custom has handed down to us and which in various regions are given no less various shapes, although they are of some help as an aid to one's memory, for the markings by which they guide the reader are always indefinite, as, for instance, if you consider the illustration" (Hucbald 1978, 36). A little later, Hucbald describes how the neumes can encode specific performance instructions that are not part of his theoretical letter notation: "Yet the customary notes are not considered wholly unnecessary, since they are deemed quite serviceable in showing the slowness or speed of the melody, and where the sound demands a tremulous voice, or how the sounds are grouped together or separated from each other, also where a cadence is made upon them, lower or higher, according to the sense of certain letters—things of which these more scientific signs can show nothing whatsoever" (36). For Hucbald, some rhythmic information is evidently conveyed by the neumes.

There are varying regional styles of writing neumes. I will proceed from some general observations to specific characteristics of a few particular scripts. Every early style of neume is intimately connected to the Latin text above which it is written. These neumes resemble diacritical marks and punctuation signs, to which they are probably related. Actually reading the neumes is, in general, quite intuitive, as they convey melodic contour, with various degrees of exactitude. The neumes are read from left to right, the direction already established by the Latin text. In some early scripts, the notes are drawn as an array of points, so that each pitch is represented as a dot among several others, while in others, a melodic gesture of some length can be shown by combining several strokes and turns of the pen.

One rule of Gregorian rhythm arises straightaway from the relationship between neume and text: a change of syllable is a basic and inviolable point of articulation in a plainchant melody, as no

connected series of strokes can extend over more than one syllable. Moreover, the different types of articulation in crossing the border from one syllable to another are an object of particular attention in the manuscripts. Syllables that are closed, especially those ending with a liquid consonant (such as l, m, n, or r) or a diphthong, are often shown with a slightly different form of notation (called liquescence) in the neumes. It is easy to overlook the importance of this conscious choice to set boundaries between the syllables, as it remains a basic principle of all subsequent Western music notation.

A second, almost as fundamental, form of grouping is the neume itself. The early notation suggests strongly that Gregorian melody is not made of individual notes in the way we might think of a melody now, by looking at a transcription into modern notes. Rather than the note, the basic unit is the neume, which in many regional styles can constitute a melodic gesture of two or more notes. The way the neumes are drawn gives the gesture a sense of indivisibility that is difficult to capture in modern notation. The division between neumes, a point when the scribe consciously lifted the pen from the parchment, constitutes another point of articulation that has potential significance for the rhythmic structure of a chant. This is especially true when several neumatic figures occur within a melisma. In this case, there are often multiple ways of writing the same melody using the limited vocabulary of neume shapes, which raises the question of why a particular disposition of figures was chosen over another.

The wide variety of neume types has been well known and discussed according to various categorization schemes by every survey of chant notation. Rankin (2018) usefully divides ninth-century neumes into six broad styles, showing a great amount of regional differentiation. When examining these early sources, most modern schools of chant interpretation focus their attention almost exclusively on two of these regional styles, which offer particularly copious expressive indications. These are the St. Gall neumes (named for the large abbey in modern Switzerland that was an important center of this style, which Rankin calls "East Frankish" neumes) and Messine neumes from the area around Reims and especially Laon (what Rankin calls "Lotharingian" neumes). Some other sources differentiate between long and short notes in various ways, but these tend to be

used only for confirmation of theories based on the notation of St. Gall and Laon.

The most widely read neumes today are surely those of St. Gall. The basics of this notation are simple, although the finer points are quite complex.[8] An upward stroke (*virga*) ╱ represents a relatively high note, while a sideways or downward stroke (*tractulus*) ‿ or a dot (*punctum*) . represents a relatively low note. These strokes can be combined into figures of several notes, representing the melodic contour of each syllable. One immediate point of rhythmic ambiguity even among these simple shapes is that the *virga* developed over the following centuries into the stemmed square note (resembling the longa of mensural notation) while the *punctum* developed into the unstemmed square note (resembling the breve of mensural notation). This has led various commentators of the last few centuries to suggest that the *virga*/*punctum* distinction has a rhythmic as well as a pitch significance. What is more certain is that the St. Gall neumes show rhythmic information in three ways: alterations to the shape of the neume itself; the addition of a small stroke (known by the Greek term *episema*) to part of the neume; or the appending of one of the *litterae significativae*, also known as the Romanian letters.[9] The Laon neumes work slightly differently, since the *episema* is not used. Instead, these neumes rely more heavily on different ways of drawing the same melodic gesture. The single low note comes in the form of a dot (*punctum*) as at St. Gall, but also and more frequently takes a unique, bent form known as the *uncinus* �╮. Drawing these figures differently or with different sizes seems to encode some rhythmic information.[10]

We can illustrate this with an example, the melody *Alleluia Ostende*, a melody sung at Mass on the first Sunday of Advent.[11] The melody is shown in figure 1.1, which gives the pitches in as rhythmically neutral a fashion as possible. Apel (1958, 391) considered this melody to be part of the very first layer of the repertoire, dating back to at least the eighth century. As with several

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8. Cardine (1982, 12–13) presents an invaluable table of the St. Gall signs.

9. Mocquereau is responsible for the use of the term *episema* for the short stroke (Rankin 2018, 177). The term had previously been used by Pothier (1880, 26) for certain pitch signs mixed among the letter notation in the bilingual manuscript (F-MO H.159) described below in section 1.4.2. A list of the letters contained in a letter from Notker, a monk of St. Gall, is widely reproduced in books on chant notation. The text of the letter may be found in Froger (1962). The most important letters for rhythmic interpretation are c for *cito* or *celeriter*, "quickly," t for *tenere*, "hold," and x for *expectare*, "wait."

10. Cardine (1982, 14–15) gives a complete table of the Laon signs.

11. In the Church calendar, the first Sunday of Advent marks the beginning of the liturgical year, so this melody conveniently appears near the beginning of most books of chant.

Figure 1.1: *Alleluia Ostende*: melodic version from the *Graduale novum*, 2011

Alleluia melodies of the early style, this one belongs to a type, a structural melody which is varied slightly to fit a number of different texts. Hiley (1993, 131) refers to this formulaic melody as the *Dominus dixit* type, since it also occurs paired with that verse at the midnight Mass of Christmas. The melody remains well known to chant practitioners, and it has served as the basis of lengthy studies by some twentieth-century theorists of chant rhythm (Mocquereau 1911; Murray 1963). Figure 1.2 shows the version of the melody from Einsiedeln Codex 121, one of the most legible and detailed complete books of St. Gall neumes. Figure 1.3 shows the version of the same melody from the Laon *Bibliothèque municipale* manuscript 239. Each figure is followed by a detailed investigation of the individual neume shapes in the first word. The lists below correspond to the labels above the first staff in figure 1.1.
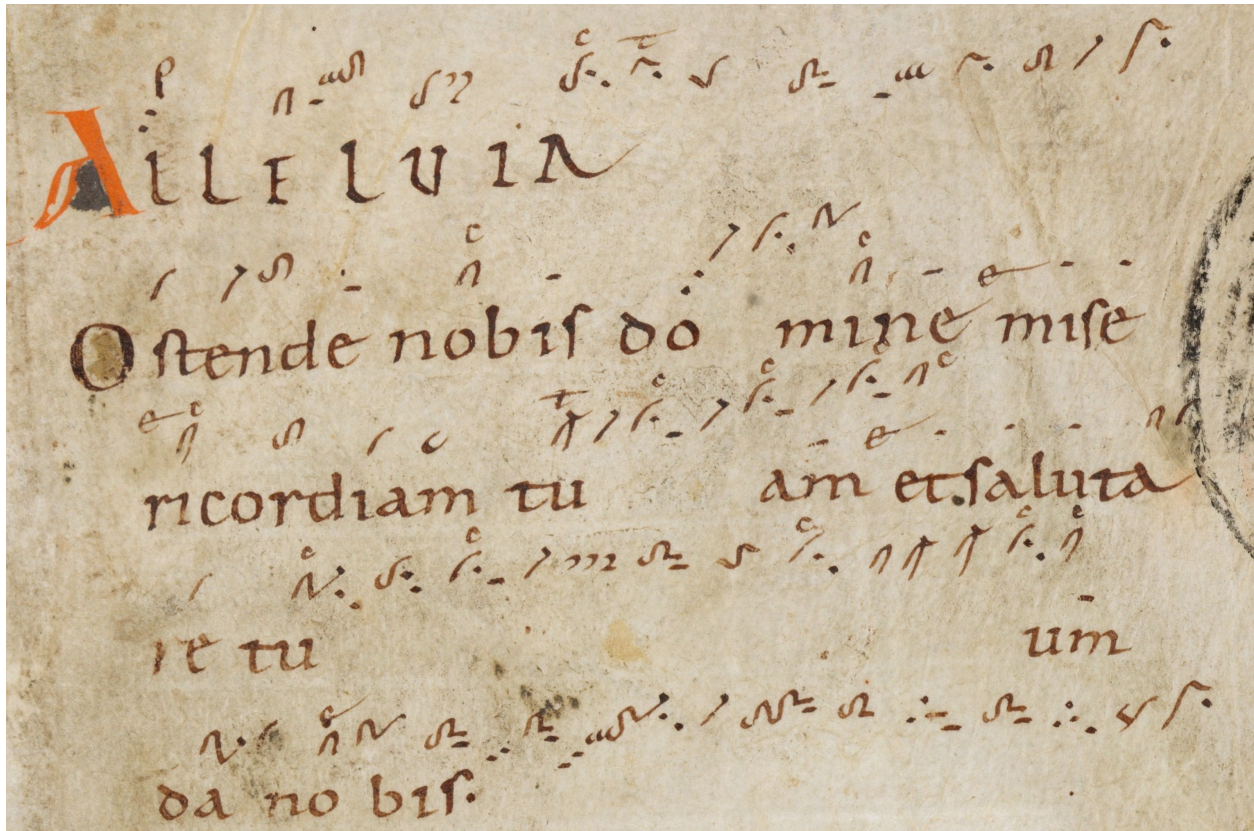
Figure 1.2: *Alleluia Ostende*: Einsiedeln 121

1. ✒ The first syllable has a three-note ascending neume, in the form *punctum–punctum–virga*. In this case, the *virga* has an extra curl on top. This represents a liquescent pronunciation, in which the singer devotes some final portion of the neume to singing the "l."

2. ✒ The second syllable comprises some six notes, drawn with three motions of the pen. The first shows two notes descending. The second represents a relatively low note, which is drawn in this case as a *tractulus* rather than a *punctum*, possibly suggesting greater length. The third is a three-note combination low-high-low, with the first note drawn with a special, wavering shape (known in later times as a *quilisma*). The evidence for how to execute the *quilisma* is scant; different interpreters take it to have wildly different meanings.

3. ✒ The third syllable comprises a two-note rising neume, followed by a two-note neume that shows repeated notes on the same pitch (this neume almost always occurs on C or F). This latter group is graphically suggestive of separation or rearticulation between the notes. The extra curve on the last stroke represents liquescence, in which the semivowel "i" will be pronounced on part or all of this last note.[12]

4. ✒ In nearly all Mass chants for the Alleluia, the final syllable of the word contains a long melisma, known as the *jubilus*. Here, the melisma of 24 notes

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12. The letter i in Latin sometimes acts as a vowel and sometimes as a consonant. In the latter case, as here, it is called a semivowel, since it still retains something of its vocal quality by virtue of its pronunciation.

contains several discrete figures.

(a) The first figure has four notes with an up-down-down contour, with an added letter c for *celeriter* or "quickly." There is nothing in the shape of the neume itself that sets any of the notes apart for particular length or weight.

(b) The second figure has two notes with a descending contour, and the first of these notes is drawn in a special manner that usually indicates that the first note is identical in pitch to the preceding note. The curve of the first note also suggests some possible rhythmic significance or weight. The letter t, for "tenere" or "hold," also suggests length.

(c) The third figure is another two-note rising neume. The shape of the curve is more pointed than the version of the same neume group 1. This suggests weight or length on the first note here. Additionally, the gap before this neume is somewhat wider than the other gaps.

(d) This fourth figure has an identical contour to group 4a: up-down-down, but here it is drawn as a a three-note neume followed by a single note. The third note is drawn with a sharp angle, which suggests length or weight, and the note that follows is a *tractulus* rather than a *punctum*, which also suggests length or weight.

(e) The *tractulus* at the beginning signifies a relatively low note with extra length or weight, and this is followed by a *quilisma*, showing two rising notes with a possible rhythmic meaning, as discussed above at group 2.

(f) This is the same two-note descending neume as group 4b, with the special first note that signifies unison with the previous note. Here, there is no letter "t."

(g) This three-note neume low-high-low resembles the first three notes of group 4d. The way it is drawn suggests some length on the third note.

(h) This is a *virga*, which indicates a relatively high note. This *virga* carries an additional mark (*episema*), which signals either weight or length.

(i) This is a larger version of the two-pitch descending figure seen in groups 4b and 4f. In this case, the neume is drawn larger and with an initial stroke. This indicates three notes rather than two, with the first two notes sung at a unison.

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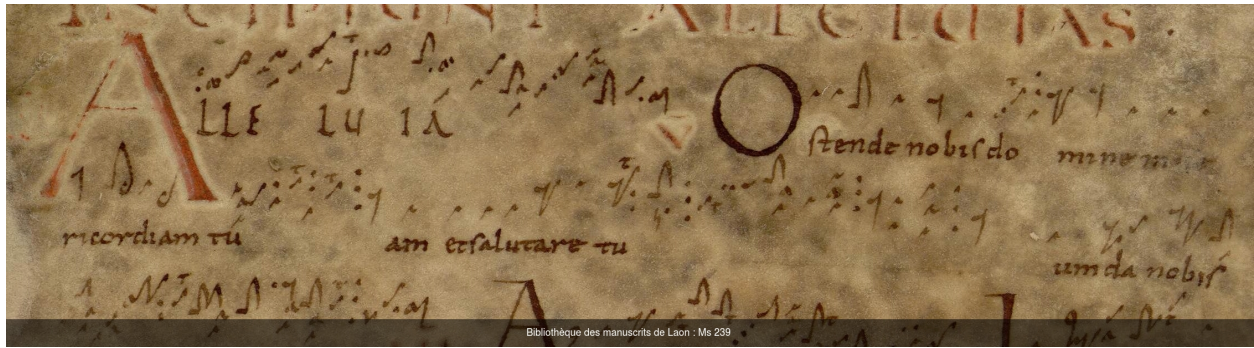
Figure 1.3: *Alleluia Ostende*: Laon 239, f. 83v

1. ✑ This is the same three-note ascent as in Einsiedeln 121 but with a few differences. The first note has the letter "c" for *celeriter*. The second note is drawn in a wavy fashion similar to both the *quilisma* of Einsiedeln as well as the characteristic notes in Einsiedeln groups 4b, 4f, and 4i. As in the other manuscript, the top note of the ascent has an extra curve to show liquescence.

2. ✑ The second syllable requires many more pen strokes in the Laon script. The first two notes, drawn on top of each other to indicate descent, are *uncini* (the characteristic "barb" of the Laon script). Drawing a two-note descent with separate figures for each note suggests more rhythmic weight or length. The added letter "a" strengthens this reading, as its use in Laon seems to stand for *augete* or "increase." This is followed by the same *quilisma* as in Einsiedeln group 2.

3. ✑ The first stroke shows two ascending notes, here drawn in cursive fashion. The letter t (*tenete*) indicates a hold on the second note. The two strokes that follow show the repeated notes on C. While St. Gall notation uses a special sign for repeated notes on C or F, as seen above in Einsiedeln group 2, Laon uses only the *punctum* or the *tractulus* as on the last note. In this case, the last note is also liquescent.

4. ✑ In the Laon script, the *jubilus* is somewhat more compact. As with the other example, I will consider each portion of this separately. For comparison's sake, I will follow the groups suggested by the St. Gall manuscript rather than those of the Laon manuscript.

   (a) ✑ Four notes, low-high-low-low, here drawn as a three-note neume followed by a *punctum*. There is no special rhythmic significance to these notes.

   (b) ✑ The Laon notation has no special sign for the two-note figure beginning on a unison as in St. Gall, but this sign similarly shows a two-note descent, where the first note is drawn in a special, curved fashion, perhaps suggesting length or weight as in the corresponding place in Einsiedeln 121.

   (c) ✑ Here the two-note ascent is drawn not in its cursive form, as above at group 3, but in the form *uncinus* plus *virga*, which suggests some rhythmic weight or length.

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(d) ♪ This figure, low-high-low-low, has the same melodic contour as group 4a, but with the final note as an *uncinus* rather than a *punctum*. The rhythmically significant letter "a" for *augete* is added as well.

(e) ↗ A three-note rising figure including a *quilisma*.

(f) ↗ A two note descent in the same rhythmically augmented form as at the beginning of group 2.

(g) ∧⌄. Five notes, drawn as a three-note low-high-low neume, a *virga* (relatively high note), and a *punctum* (relatively low note). The final two notes could have been drawn in a more usual form as at group 2. In Laon notation, this form with the *virga* and *punctum* exists only when combined with other neumes. The relative height of the neumes here depicts the contour quite accurately.

(h) ⌐ This is another example of the two-note descending figure with the first note drawn in curved fashion. Unlike the similar neume at the beginning of group 2, this version is drawn cursively, which suggests less rhythmic length or weight.

As this investigation shows, these two sources are dense in rhythmic and grouping information, even if we have only an imperfect understanding of what that information is. For many modern interpreters, the information is suggestive but not prescriptive; a different neume form implies a lengthening (agogic or durational accent) or emphasis (dynamic accent) but the details are left indeterminate—if a note is marked as long, should the long note be twice as long as a short note or merely somewhat longer? The testimony of medieval writers, which we shall examine in chapter 2 when describing current methods of interpretation, does not definitively answer this question, as different interpreters have reached opposite conclusions from the same handful of passages. Whatever the meaning of the rhythmic indications, it is remarkable that these geographically disparate manuscripts (compiled in modern-day Switzerland and France), using separate dialects of music notation, nevertheless generally agree on the grouping of the notes and which notes are specially marked for length. For many interpreters of chant, the agreement between these different sources offers a tantalizing suggestion of the existence of a unified medieval tradition of plainchant rhythm. Because of the paucity of sources, a statement of what this tradition is will always be an endeavor of creative reconstruction rather than one of pure history. We will see three such reconstructions in the next chapter.

1.2.3 Full Literacy: Diastematic Neumes

If a unified rhythmic tradition existed in the ninth century, it disappeared completely over the succeeding centuries, in the wake of the invention of staff notation. It would be difficult to overstate the radical change in the purpose of chant notation brought about by the introduction of the staff, for with the staff it is possible to sing a chant without having heard it before. Notation changes from serving as an aid to memory—a reminder of how a particular melody is sung—to encoding all the pitch content of a melody. The new notation can transmit music from one singer to another at a great distance.

Since the earliest forms of this notation use neume forms similar to those used in the adiastematic sources discussed above, it would seem that the rhythmic information contained in the adiastematic neumes could be simply translated to the newer notation, with the added benefit of more precise pitch information. This seems to have been the intention of Guido of Arezzo (ca. 991–after 1033) when he first described the use of the staff in the early eleventh century. In his *Prologus in antiphonarium* he writes, "But as for how the notes are liquescent, and whether they are sung smoothly or separately, and which are sad or tremulous or quick, or how the song is divided into distinctions, and whether the note following is lower or higher or equal to the preceding, this is shown with an easy discussion, by the shape of the figures themselves" (Guido 1993).[13] Unless we count the legendary acts of Pope Gregory I, Guido is the first of several inventive Benedictine monks whose notational reforms we will encounter in this study.[14] In practice, the diastematic sources are markedly less rich in rhythmic differentiation than the notations of St. Gall and Laon.

In some places, the adoption of the staff did little to affect the shapes and varied forms of the earlier neumes. Especially in Germany, some sources retained basically Messine forms even after the switch to staff notation (Blachly 1988, 94). Figure 1.4 shows the version of *Alleluia Ostende* in the mid-twelfth-century manuscript Graz 807. While this version of the melody manages to convey

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13. "Quomodo autem liquescant voces, et an adhaerentes vel discretae sonent, quaeve sint morosae vel tremulae, vel subitaneae, vel quomodo cantilena distinctionibus dividatur, et an vox sequens ad praecedentem gravior, vel acutior, vel aequisona sit, facili colloquio in ipsa neumarum figura monstratur, si ut debent, ex industria componantur."

14. For the mechanics of Guido's staff notation in its earliest form, together with a catalog of sources, see Smits van Waesberghe (1951).

the pitches exactly while retaining many of the features of the Messine neumes seen in the version

from Laon 239, there is still some loss of rhythmic detail.[15]
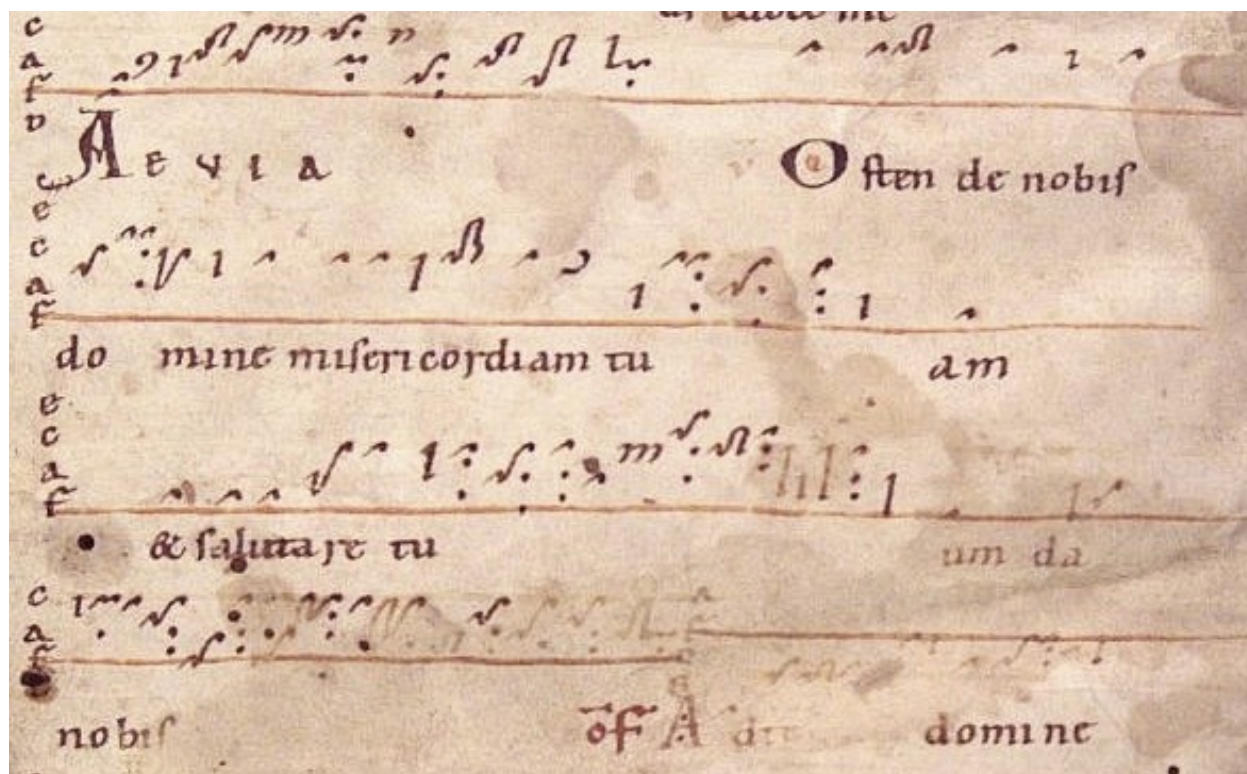
Figure 1.4: *Alleluia Ostende*: Graz University Library MS 807, f. 2

The elements retained include the liquescence at the end of the first syllable and the two special

curved notes in the *jubilus*, which take a form here that visually suggests some rhythmic weight

or importance. The form of the repeated notes on C is also very similar to the suggestive shape of

Einsiedeln 121. The rhythmic differentiation that is lost includes the significative letters and the

episemata. The two examples of the *quilisma* are also somewhat indistinct, so that the middle note,

if it is discernible at all, is merely a bulge within the larger shape of the neume.

If the Messine-style neumes on the staff lose some detail, the square notation prevalent further

to the west (especially in France) loses much more. The number of manuscripts is so vast that the

variety of different notational styles is well beyond my present scope. Instead, we will consider only

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15. By comparing the melody of this version with the one shown in figure 1.1, we can see the "Germanic" dialect of
plainchant melody, in which the melodies have a tendency to leap up to C rather than to B, and to treat C as the upper
neighbor of A in many cases.

a very legible and representative example: the version of the melody in Heinrich Heine Universität Düsseldorf MS D-10A (figure 1.5).

Figure 1.5: *Alleluia Ostende*, Heinrich Heine Universität Düsseldorf 61 MS D-10A, f. 2r

The melody is recognizably the same as in the previous sources, but the *quilisma* and liquescence are gone, and the repeated notes on C, which formerly had a distinct, apostrophe-like shape, are indistinguishable from the other notes. There is no definitive indication that any note is longer than any other. Indeed the only notational practice with a possible rhythmic significance lies in the groupings suggested by the neumes themselves, reinforced with the frequent use of vertical lines resembling rests or half-length bar lines. The performance instructions of medieval writers are very difficult to interpret, but it seems likely that the notes connected visually by ligatures had an audible connection as well, and that the separation or articulation between different neumes was made by the use of silence. The importance of aural distinction is already clear in Guido's *Micrologus*: "A

hold [*tenor*]—that is, a pause on the last note—which is very small for a 'syllable,' larger for a 'part,' and longest for a phrase [*distinctio*], is in these cases a sign of division" (Guido 1978, 70). At the level of the individual figure or neume, this idea is echoed in the late thirteenth century by Jerome of Moravia: "Second, that notes in bound figures are bound in song, but separate notes are separated. Indeed, separate does not indicate a rest, but rather a breath, and it is nothing other than the appearance of a pause or the existence of one *instantia*" (Weber 2009, 391).[16]

Guido mentions a change in tempo at the end of the phrase, corresponding presumably to our modern idea of the rallentando. In the course of this description, he also suggests that horizontal spacing can be used to represent the same idea when writing a melody down: "Towards the ends of phrases the notes should always be more widely spaced as they approach the breathing place, like a galloping horse, so that they arrive at the pause, as it were, weary and heavily. Spacing notes close together or widely apart, as befits, is a good way to indicate the effect [in writing]" (Guido 1978, 72). Guido's instructions result in a variety of groupings and rhythmic changes that organize the melody hierarchically in time. But what about the relationships of the individual notes? None of the notations in figure 1.5 suggests anything about relative length, unless we were to interpret the notation according to the rules of either modal rhythm or mensural notation.

Jerome seems to suggest such an approach to plainchant, but his instructions are ambiguous and confusing and only lend more of an air of obscurity and uncertainty to the problem. The section in question is chapter 25 of his *Tractatus de musica*.[17] It is difficult to say with certainty that Jerome is discussing what we call plainchant rather than mensural notation, as these two notations still overlapped considerably in the thirteenth century. The rules given below refer to "ecclesiastical chant" set "without descant," which seems to suggest plainchant (Weber 2009, 387). For Jerome, every note of a plainchant is a breve, equated with the perfect breve of mensural music, which contains three semibreves (389). There are five exceptional kinds of notes that should be sung as longs, i.e., notes that are twice as long as the breves (389–390).

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16. For Jerome, an *instantia* is the value of one semibreve, or one third of the value of a perfect breve.
17. The text is at Weber (2009, 387–390), with a commentary at Weber (2009, 167–170).

1. The first note of a chant, when the final note is long.[18]

2. The second note of a syllable when a syllable has multiple notes on it, unless this is followed immediately by another long note. This suggests that the ligatures were indeed read as though in mensural or modal notation, so that the last note of a two-note ligature should be sung long.

3. Notes within longer ligatures that have a tail on the right.[19]

4. The penultimate note of the chant.

5. The final note before a pause, which varies in length according to context and may be long.

If this does refer to plainchant sung monophonically, it suggests that chant should be read in a fashion similar to contemporary mensural notation, although the details remain sketchy.

1.2.4 Equalism, Mensuralism, and Varying Indeterminate Lengths

Interpretation of plainchant by assigning the notes mensural value became a minority position over the succeeding centuries, as the notations of plainchant and polyphony increasingly diverged. By the sixteenth century, with polyphony usually set in void notation, there is a very clear distinction between the notation of the two types of music, even as they retain some of the same note shapes. With this distinction, many singers interpreted the signs of plainchant as lacking the rhythmic differentiation and meaning of measured music. Indeed the very name plainchant, or *cantus planus*, arose at this time to distinguish the chant rhythmically from measured music, where the individual notes exist in some kind of measured temporal proportion to one another.[20] Elias Salamonis, writing in 1274, is very clear about the equal duration of every note:

> Mark well: we ought not wield our sickle in another's harvest by aping the style of organum and hastening the notes, for whoever inclines to both [styles indiscriminately] by distorting both performs neither well. This is an unimpeachable rule: no plainchant in any of its parts allows a faster tempo than any other part, All of this stems from its nature. Therefore it is called "plain chant," because it wants to be sung most plainly throughout. (Dyer 1980, 92–3)

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18. This is the reading suggested by Weber. The original text is ambiguous; another plausible reading is that the first note should be long when it is the final of the mode.

19. This rule holds in reading ligatures in mensural notation, as well.

20. An exception must be made for the genre known as *cantus fractus*, in which newly composed chants were set in mensural fashion (as in the Credo Cardinalis, which survives in the modern books as Credo IV). Such an approach similarly applied to certain metrical hymns. In these cases, the written music appears different from the other chants in the same book. See the discussion of Credo IV and metrical hymns in Sherr (1992).

But even if the notes do not vary perceptibly in tempo, other writers disagree about whether the plainness means a strict equality between the notes. Tinctoris provides the classic definition that is open to varying interpretations: "Plainchant is that which is simply constituted of simple notes of an uncertain value" (quoted in Lovato 1998, 99).[21] Elsewhere, Tinctoris elaborates on the nature of the uncertainty of value: "And such notes are sung sometimes with measure, sometimes without, sometimes according to a perfect quantity, sometimes according to an imperfect, according to the rite of the church or the wish of the singers" (Tinctoris 1992).[22]

As with much of Tinctoris's writing, this definition is echoed throughout the theoretical treatises of the succeeding centuries. While the original context suggests variability in note length, the most striking part of Tinctoris's description is that signs for notes with definite different values may sometimes be equivalent in plainchant, according to the wishes of the singers. This gave rise to a theoretical tradition in which the equality of the notes, in spite of their different graphic forms, is the most salient feature of Gregorian rhythm. Martin Agricola is representative of this tradition: "Plainchant is that music that has an equal meaning or an equal measure between all the notes, that is, one sings each note as long as the others, and neither shorter nor longer than the others. Namely, this ◆ will not be shorter than this ♦" (Agricola 1533, A3v).[23] Any interpretation of plainchant in which every note is of equal time value with every other is known as "equalism."

Some writers promote equalism while condemning the practice of singing with varying note lengths, which provides indirect evidence for such a practice. For instance, Andreas Ornithoparchus wrote critically of such inequality of note lengths in 1519: "For this reason let the eastern Franks, my countrymen, come to their senses, so as not to now lengthen and now shorten the notes of plainchant as before, but to follow the example of the singing of the noble church of Würzburg, their capital, where it is best sung" (Ornithoparchus 1519, 104).[24] This suggests that equalism was

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21. "Cantus planus est qui simplicibus notis incerti valoris simpliciter est constitutus."
22. "Et huiusmodi notae nunc cum mensura, nunc sine mensura, nunc sub una quantitate perfecta, nunc sub alia imperfecta canuntur secundum ritum ecclesiarum aut voluntatem canentium."
23. "Musica Choralis / und ist / welche helt ein gleich bedeutnis / odder ein gleiche mas inn allen ihren Noten / das ist / sie singt eine noten so lang als die andern / keine lenger odder kürtzer denn die andern / Nemlich diese ◆ wird nicht kürzer gesungen denn diese ♦."
24. "Quare resipiscant orientales Fransci: gentiles mei, Nec ut antea in chorali cantu, notulas iam producant, iam corripiant, sed ab Herbipolensi nobili ecclesia, capite suo, in qua optime canitur, canendi exemplum sumant"

often a prescriptive principle rather than a descriptive one.

Similarly, Franchinus Gaffurius writes disapprovingly of the practice of reading the lozenge-shaped notes of plainchant as half the length of the square notes: "These however are equal in pronunciation and rhythmic value, although some sing them twice as fast as the others, which we believe to be done not according to reason, but according to the whim of the singer" (Veltman 2004, 128). This passage refers specifically to the shape for a descending figure, where a tailed note is followed by two or more descending lozenge-shaped notes, which is usually the only context within chant books where lozenge-shaped notes occur. Interestingly, the variation in note lengths here is not merely indeterminate but is governed by a proportion of 2:1 between the note lengths. This is the same proportion as between a breve and a semibreve in mensural notation, suggesting that in this specific case at least, some singers would interpret the different shape of an individual note as if they were reading mensural notation. I will refer to a strict proportionality between varying note lengths as "mensuralism," even when it does not necessarily imply that the entire melody is read as though the singer is interpreting the notation mensurally.

Indirect and limited evidence for both equalism and mensuralism is also found in polyphonic sources, although the evidence suggests that equalism was a more common approach to plainchant within the context of polyphony. It is impossible to conclude anything definitive about the monophonic performance of plainchant from such sources, but they confirm that singers sometimes read plainchant notation in equalist fashion in the context of polyphony, while at other times and places they read the notation mensurally. When plainchant melodies appear as a cantus firmus within a polyphonic composition, they are often set explicitly in equal notes, as in figure 1.6, which shows Heinrich Isaac's setting of *Alleluia Ostende* as a cantus firmus, as printed in the first volume of his collection *Choralis Constantinus*. Every note of the cantus firmus except the last is notated as a breve and sung (as indicated by the diminution sign) as a semibreve.

In other sources, the notation may retain all the varied note shapes and ligature shapes of the original chant, while the singer is expected to perform the chant in equal notes in spite of the apparent notational variation. Similarly, equalist readings of melodies directly from plainchant

Figure 1.6: Heinrich Isaac, *Alleluia Ostende*, tenor, Nuremburg, 1550

books were also the basis of improvised counterpoint (*cantare super librum*). Mary Berry has gone

further along these lines and argued that the practice of organ *alternatim* performance, in which

short verses of plainchant melodies set as equalist cantus firmus parts alternate with verses sung by

a choir, support the idea of a basic equalism (influenced by the steady rhythm of the organ versets)

in monophonic performance (More 1965, 125). On the other hand, Sherr (1992, 207–8) documents

a parallel tradition in cantus firmus settings, where chants are set to rhythms that closely follow the

rhythm the chant would have if its notation were read as mensural notation. Sherr expresses some

skepticism over whether a sixteenth-century singer would really maintain a commitment to equalism

in chant if the notation were the same as that used for mensural music: "A modern example of the

problem might be to imagine performing a piece written in quarter notes, half notes, and eighth

notes after having been instructed to treat them as if they were equal. It can be done quite easily, of

course, yet there might be times when the very shape of the notes might cause subtle changes in

rhythm, and the singer might even slip up on occasion and read the notes as written" (182). Such

speculation is, of course, unprovable, although it suggests that the notation of chant books at this

time may have carried different meanings for a singer steeped in the notational practice of mensural

music and a singer unacquainted with it. When we come to look at modern scholarly editions

of chant in section 1.5.2 (page 54), we will revisit this idea. The writings of the theorists cited

above confirm that the theoretical norm of equalism was not always followed in practice during the

fifteenth and sixteenth centuries. Instead, equalism and some variation in note lengths (mensuralist

or otherwise) probably coexisted throughout this period.

1.3   THE REFORMATION OF CHANT: TRENT AND ITS AFTERMATH

1.3.1   Melodic Reforms

Later in the sixteenth century, the singing of plainchant was one of many details of liturgical practice that came to be reexamined in the wake of the Protestant Reformation. The Catholic reaction to the Protestant movement led to a clarification and codification of the theology and liturgy of the Catholic Church, which occurred at the Council of Trent (1545–1563) and in the succeeding decades. The liturgical books of the Roman Rite were revised at this time, with a view to purging the books of local variations and additions that were not viewed as part of the authentic Rite. The Tridentine breviary (containing texts for the Divine Office and named for its origin at Trent) was published in 1568, with the missal (containing texts for the Mass) following in 1570. Canon 8 of the council emphasized the intelligibility of the text in all musical settings: "The whole plan of singing in musical modes should be constituted not to give empty pleasure to the ear, but in such a way that the words may be clearly understood by all, and thus the hearts of the listeners be drawn to the desire for heavenly harmonies, in the contemplation of the joys of the blessed" (Hayburn 1979, 27).

The insistence on the new and standardized books meant that many gems of the later chant repertoire—sequences, proses, and tropes—dropped out of the chant books at this time. After Trent, only four sequences remained in the Roman Rite.[25] The purge did not affect only late additions to the repertoire. Even more consequentially, the melodies of the Mass propers themselves, which had been in continuous use since at least the ninth century, were reconsidered in the light of the liturgical reforms.

In October 1577, Pope Gregory XIII (reigned 1572–1585) commissioned Giovanni Pierluigi da Palestrina (ca. 1525–1598) and Annibale Zoilo (ca. 1537–1592) to arrange new chant books to accompany the revised texts of the Roman Mass and Office. The commission began with the following observation:

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25. A fifth sequence was added in the eighteenth century.

Inasmuch as it has come to Our attention that the Antiphonaries, Graduals and Psalters that have been provided with music for the celebration of the divine praises and Offices in plainsong (as it is called) since the publication of the Breviary and Missal ordered by the Council of Trent have been filled to overflowing with barbarisms, obscurities, contrarieties, and superfluities as a result of the clumsiness or negligence or even wickedness of the composers, scribes and printers: in order that these books may agree with the aforementioned Breviary and Missal, as is appropriate and fitting, and may at the same time be so ordered, their superfluities having been shorn away and their barbarisms and obscurities removed, that through their agency God's name may be reverently, distinctly, and devoutly praised; desiring to provide for this insofar as with God's help We may, We have decided to turn to you, whose skill in the art of music and in singing, whose faithfulness and diligence, and whose piety toward God have been fully tested, and to assign to you this all-important task, trusting confidently that you will amply satisfy this desire of Ours. (37)

How should we understand the idea of barbarism in plainchant, and what is the correction required? Gioseffo Zarlino (1517–1590) had already laid this out in his *Istitutioni harmoniche* of 1558. For Zarlino, nearly the entire repertoire of plainchant is tainted by a misapplication of the rules of Latin prosody:

We should also take care to accommodate the words of the text to the written notes in such a manner and with such rhythm that no barbarism is heard, such as when in a vocal piece a syllable that should be short is made long, or vice versa, a syllable that should be long is made short, something heard every day in innumerable compositions and really a shameful thing. This vice is found not only in mensural music but in plainsong as well, as is obvious to all who have judgment. Indeed there are few chants not full of similar barbarisms and in which repeatedly a length of time is given to the penultimate syllable of the words *Dominus, Angelus, Filius, Miraculum, Gloria,* and to many other syllables that pass quickly. It would be very commendable to correct this, and it would be very easy, for by a very small change the composition would be adjusted. Nor would its original form change by this, for the difficulty lies only in a ligature of many notes, placed over short syllables, which makes them inappropriately long, when a single note would have sufficed. (Zarlino 1983, 96)

Prosody was a chief concern not only for Zarlino and his contemporaries but for later plainchant theorists as well. In classical antiquity, Latin was a quantitative language, in which every syllable was either long or short. This practical distinction between long and short syllables in pronunciation grew gradually weaker over the centuries of the Christian era. Instead, Latin pronunciation came to be governed only by its stress accent. All Latin words that have an accent—most words of two

syllables or longer—fall into two broad categories. Even though distinctions of quantity were no longer observed in pronunciation, the quantity still affected the placement of the stress accent. If the penultimate syllable of a word is long according to the old rules of quantity, then the word takes the accent on that syllable, and we call the word a paroxytone and describe its accent pattern as paroxytonic. The Latin word *orígo* is a paroxytone, but its English cognate "origin" is not. If the penultimate syllable is short according to the old rules of quantity, the antepenultimate syllable takes the accent by default, and the word is a proparoxytone. One frequently occurring word of this type is *Dóminus*.

Zarlino argues that all short syllables, but especially the penultimate syllable of a proparoxytone, whose shortness affects the accentuation of the whole word, should be set with a single note rather than a lengthy melisma. Since the contrary situation occurs frequently in the received corpus of plainchant, Zarlino suggests that the music itself is faulty. He encourages the taking of an active editorial hand in correcting such errors. He suggests that the actual shape of the melody will remain largely unchanged, since it is merely a matter of adjusting the text underlay while leaving the succession of pitches the same. But this marks a great change in attitude, as now it is the job of the chant editor not merely to transmit the chant but to improve it, even when this requires taking rather drastic editorial measures. Correction has remained a central concern of chant editors right up to the twentieth century, and almost all the developments in chant notation for the last half millennium have been motivated by either reform or the reaction to reform.

Gregory XIII's proposed reform of the chant books was intended to result in new editions immediately after the council, but the project suffered a series of setbacks, reaching completion only after the original editors had died. The resulting Gradual, known as the Medicean Edition after the name of the printing house that published it, appeared only in 1614, with the editorial work done by the composers Francesco Soriano (ca. 1548–1621) and Adriano Banchieri (1568–1634). This edition of the chant was designed to replace previous versions of the melodies and to provide the new, streamlined versions with a stamp of official ecclesial approval. But in the meantime, the four decades' delay meant that the Medicean Edition was only one among many chant books in use,

and it never took on the official status suggested by the original papal brief. Karp (2005, i:15–69) gives a list of the printed Graduals in use during these centuries, which suggests the vast scale of the repertoire, with widely varying editorial practices. In the late nineteenth century, when the reform of plainchant again became the subject of papal legislation, the Medicean Gradual took on renewed importance as a favored source, now with its own weight of historical tradition.

Figure 1.7: *Alleluia Ostende*, Medicean Gradual, 1614

In practice, the melodies were not only rearranged with regard to the arrangement of the syllables; the reform also touched the length of the chant in terms of number of notes and melodic shape. This process was most extreme in highly melismatic chants like *Alleluia Ostende*.[26] Figure 1.7

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26. Karp (2005, ii:49–54) gives a comparative melodic transcription of several printed sources of *Alleluia Ostende*, from the sixteenth to the twentieth centuries. Since the focus of Karp's book is melodic rather than rhythmic, he ignores

shows the *Alleluia Ostende* melody from the Medicean Gradual. The abbreviation of the melody is immediately striking. In general, melismata on final syllables are curtailed or moved onto accented syllables. Certain other melodic changes seem to happen for theoretical reasons: the older version of the melody began on F, but since the chant is in the eighth mode, G, the modal final, is a more logical starting pitch from a theoretical point of view.[27] The same change is made at the beginning of the verse, so that what was previously a C becomes a melodic ascent G–C.

In spite of its purpose of simplification and standardization, the Medicean Gradual comes with no instructions for the interpretation of rhythm. While an equalist reading may have been the original intention of the editors, a mensuralist reading is also plausible. By the time of the Medicean edition, a systematic and fully mensuralist way of reading plainchant had been developed by Giovanni Guidetti (1532–1592), an associate of Palestrina.

1.3.2 Rhythmic Reforms

In his 1582 plainchant manual *Directorium Chori*, Guidetti introduces four note values to be used in plainchant. The motivation for the use of these values is similar to that described by Zarlino above—improved sensitivity to the rules of Latin prosody and accentuation. The various rhythms are always used to lengthen relatively strong syllables and shorten relatively weak ones. Guidetti's remarks on rhythm and tempo are given pride of place in the volume, at the beginning of the book, together with the rubrics describing the ceremonial actions of the office. In other words, the proper rhythmic reading (including the selection of tempo) of the chant becomes a matter of a religious observance, precisely when the Church was making a renewed push for obedience and standardization in liturgical matters. Here are Guidetti's original rhythmic instructions in full:

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the question of rhythm entirely in almost all of his transcriptions.

27. In the eight-mode system, chants are categorized by their final note, with modes 1 and 2 sharing a final of D, 3 and 4 sharing a final of E, 5 and 6 sharing a final of F, and 7 and 8 sharing a final of G. Which mode of each pair a chant belongs to depends primarily on the range of the chant. Odd-numbered modes have a range that is mostly above the final, while even-numbered modes have a range that goes not as far above but also below. Chants that end on A, B, and C are almost always categorized as belonging to modes 2, 4, and 5 respectively, since the patterns of whole tones and semitones around those notes is quite similar to that around the notes a fifth lower. Classification is sometimes more difficult. In *Alleluia Ostende*, the range goes from F to E with a final of G. In this case, the classification of mode 8 is reinforced by the way the chant reiterates C as a structural pitch. C is the reciting tone of the psalm tone associated with mode 8.

But in order that the singing of all the above ceremonies may be solemnly observed, one must know the differences belonging to the notes which are found marked in different ways throughout the *Directorium*.

The notes are the following: ◼ ◆ ◌̑ ◌̑ ◼‿◆

This note ◼ is called a breve, whose underlaid syllable is extended so that in singing it lasts for one beat.

This ◆ is called a semibreve, and the syllable which falls under it must be run through more quickly, so that it lasts half of one beat.

This other ◌̑ , which is the breve under the semicircle, must be extended a little more slowly, so much so that in singing it takes up one and a half beats.

This ◌̑ , which is likewise a breve, but which has a dot below the semicircle, must be drawn out more greatly, so that it makes a delay of two beats.

Finally, when a breve and a semibreve are found joined together under the same semicircle, in this way ◼‿◆ , then the underlying syllable will be pronounced with a certain light impulse of breath, as though it were written with the vowel doubled, as in doominus for dominus, but with dignity and grace, which cannot be taught.

Lastly, it must be observed that although the chant is found printed in the *Directorium* with the same notes, whether the day is festive, solemn, or ferial, when the day is more solemn, it must be sung with more weight and dignity, the voice upright and moderate. And this must be observed as much by the hebdomadary [the principal singer for the week] and the singers as by the celebrant and the other ministers, in all the sung parts which fall to them.[28]

For Guidetti, the breve is the basic counting unit of the chant, and it is conceived in a way that makes its pulse subject to either division or multiplication in response to the rhythmic design.

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28. "Ut autem omnium supradictorum cantus rite observetur, cognoscenda est differentia, quam habent notae Musicae quae diversimode designatae per totem Directorium reperiantur. Notae autem sunt huiusmodi ◼ ◆ ◌̑ ◌̑ ◼‿◆ .

"Haec nota ◼ vocatur Brevis, cui subiecta syllaba ita profertur, ut in canendo tempus unum insumatur.

"Haec ◆ dicitur Semibrevis, et syllaba quae sub illam cadit, celerius est percurrenda, ita ut dimidium unius temporis impeta datur.

"Haec altera ◌̑ quae est Brevis sub semicirculo, paulo tardius proferenda est, adeo ut in cantu tempus unum, et dimidium insumatur.

"Haec ◌̑ quae similiter est Brevis, et intra semicirculum habet *punctum*, magis est protrahenda, ita ut fiat mora duorum temporum.

"Denique quando reperientur Brevis, et semibrevis simul coniunctae sub eodem semicirculo, hoc modo ◼‿◆ tunc syllaba subiacens leni quodam spiritus impulsu pronunciabitur, perinde ac si duplici scriberetur vocali, ut Doominus, pro Dominus, sed cum decore et gratia, quod hic doceri non potest.

"Illud postremo advertendum est, quod licet cantus, tam diei festivi, et solemnis, quam ferialis, iisdem notis designatus in Directorio reperiretur, tamen quo dies erit solemnior, eo maiori cum gravitate, et dignitate in canendo vox sustentanda et moderanda est. Et hoc servandum est, tam ab Hebdomadario et cantoribus, quam a celebrantibus et aliis adsistentibus, in omnibus quae eis canenda occurrunt" (Guidetti 1589, vii).

27

The breve is also the most common note value by far in Guidetti's book. The length of the breve corresponds roughly to the time of one spoken syllable, but in absolute terms it is flexible based on the liturgical occasion. Greater solemnity of the season or the feast calls for a slower tempo. All the other values are reckoned from this one. For instance, the semibreve is half a beat. In Guidetti's book, the semibreve occurs in two places: isolated on short syllables, especially the penultimate syllables of proparoxytones; or in pairs within a descending neume . In this first edition, Guidetti distinguishes between two longer values. One designates a beat and a half and always occurs in conjunction with a following semibreve. The other designates a two-beat note. In all later editions of Guidetti's book, both these values are subsumed into the same symbol of the *virga* or longa ▐ , since it is easy to determine from context which of the two is intended. If the longa is followed by a semibreve, the *virga* counts for one and a half breves, so that the two notes make up a two-breve unit. If the longa is followed only by breves, then it is itself a two-breve note.

Guidetti's mensural approach goes beyond the editorial stance suggested by Zarlino. This is not merely rearranging the received melody to conform to proper Latinity; instead, the groups of notes are recast as having strict proportionality between individual notes. Veltman (2004) identifies two situations in which Guidetti consistently employs the semibreve. The first is what he dubs the "proparoxytone formula," which sets the final three syllables of proparoxytones with the notes ▐ ◆ ▐ (77) (as in a word like *adjutorium*). The second situation is where a secondary accented syllable in a longer word (of four or more syllables) is lengthened, as in *-se-* of *misericordia* (80). The result of this style of setting is a much greater feeling of snap and accent in syllabic chants. The various psalm-tone-based melodies in Claudio Monteverdi's 1610 *Vespers* correspond closely to Guidetti's rhythmic practice. Guidetti remained influential, and his book stayed long in print, ensuring that equalism and mensuralism survived in parallel for several centuries. As a result, many performing scores published with the official sanction of local Church officials in the post-Tridentine centuries are divided on the question of how the rhythm of the chant should be read.

The Medicean Gradual uses the same three note shapes as Guidetti's later books, but it is not explicitly written in Guidetti's proportional note values, so both equalist and mensuralist readings are

plausible. Veltman (2004) argues persuasively that the rhythm of the Medicean Gradual should be approached with Guidetti's principles in mind. Veltman suggests an approach he calls "declamatory rhythmic interpretation," which lies between strictly equalist and mensuralist approaches and which is based on Guidetti's approach to prosody (136). Veltman believes that there are different note values in the melodies, but he departs from a purely mensuralist reading of the rhythm in three ways. First, he suggests that certain notated breves should actually be interpreted as semibreves, when the textual situation corresponds to the "proparoxytone formula" of Guidetti.[29] In a typical setting of a proparoxytone in the Medicean Gradual, the strong syllable is indeed shown with a tailed note, but the weak penultimate syllable is shown merely with a breve. Where Guidetti would set such a word (e.g., "Dominus") as ▉ ◆ ▉ , the Medicean Gradual tends to give ▉ ▉ ▉ . In Veltman's view, we should read the latter as though it were notated as the former, arguing that the context of the Latin word makes this clear (124). Second, Veltman does not believe that the diamond-shaped notes within a climacus group should be performed as semibreves. He points out that there is no other way to show three or more descending notes, so that all descending neumes of three or more notes contain the diamond notes merely as a typographical necessity. In this case, we should not lend them any rhythmic significance, since they seem to be merely features of the type design (129–130). Third, Veltman does not read the neumes as ligatures according to mensural notation but merely as a string of breves.[30] As a matter of typography, the Medicean Gradual always prints descending two-note neumes as ▉, which a singer of mensural notation would read as breve–long. A singer conversant with the old (and by the seventeenth century quite antiquated) rules for ligatures would

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29. The notation of an isolated semibreve occurs only in a couple of chants in the Medicean Gradual—the sequence *Lauda Sion* and the Credo setting known in the modern books as Credo III—which were clearly designed to be read in full mensuralist fashion.

30. There are rather complicated rules governing the rhythmic values of ligatures, depending on the position of a note within the ligature and and the direction of the melody (up or down) at the ligature's beginning and end. Behind this theory are two basic shapes (▉ and ▉), which serve as the models for all other ligatures. If a two-note ligature conforms to these shapes, it is said to have both propriety (matching the model at the beginning) and perfection (matching the model at the end). Such neumes are interpreted according to principles stretching back to the old system of modal rhythm (predating the rest of the apparatus of mensural notation) as breve–long. Any of these notes can be graphically altered in some way— adding or removing the tail, or replacing a square note with an oblique form—which would then cause the ligature to lack propriety, perfection, or both. Additionally, each ligature can have several notes added in the middle, which are always breves unless given a tail. An open question in reading chant sources from this period is whether the ligatures should be interpreted according to these rules or not.

surely at least consider this possibility, in much the same way as the singer trying to sing with equalism might be tempted to attach mensuralist meaning to the note shapes.

Figure 1.8: *Alleluia Ostende*, Mensural Transcription of Medicean Gradual, 1614

Figure 1.8 shows a fully mensuralist transcription of the Medicean version of *Alleluia Ostende*, with the note values reduced by the ratio 8:1 (a breve becomes a quarter note). I have transcribed the neumes of more than one note as if they were being read within a piece of mensural notation (all ligatures are marked with the horizontal brackets), which occasionally results in the interpolation of long values (the half notes of the transcription). In most cases, these longs occur either before barlines (as in the ending of the words *Alleluia* or *tuam*) or just before the short syllable of a proparoxytone (the dotted quarters on *Domine* and *misericordiam*). In other cases the long endings appear mid-phrase (the word *tuum*, the word *da*, and both instances of the word *nobis*). In the case of the ascending ending on *da*, it seems that the ligature is intentionally drawn differently from that on *tuam*. In the cases of the descending endings, they are all plausible, but it is true that the Medicean Gradual never uses the oblique form of a two-note descending ligature in isolation, so it is likely that these ligatures are merely a typographical accident. The mensural reading seems plausible, especially including Veltman's innovation of the short note on the short syllable of proparoxytones (accounting for both of the isolated eighth notes in the transcription). In order to arrive at Veltman's

more cautious approach (his "declamatory rhythmic interpretation"), one would need only remove all the half notes and pairs of eighth notes from my transcription. This is also a plausible reading, but it is almost entirely equalist, with two small (and not explicitly notated) exceptions for the proparoxytones. We do not have sufficient evidence to say whether the Medicean Gradual was originally conceived as equalist or mensuralist; possibly, different singers interpreted it differently. The nineteenth-century reprints of the Medicean Gradual described below (section 1.4.1) were read as fully mensuralist, although the interpretation of ligatures was greatly simplified.

1.3.3 Later Sources: Editions and Recompositions

The seventeenth and eighteenth centuries saw both mensuralist and equalist approaches to chant, as shown by Lovato (1998), who provides a useful survey of the evidence marshaled from two centuries of Italian plainchant treatises. At the same time, the rhythmic notation of other music changed gradually into the system in use at present, with regular barlines and a new conception of beat, measure, and meter. In this context, the notation of plainchant came to be set apart more firmly from measured music. Unlike the situation in the earliest centuries of music notation, the rhythmic problems of plainchant and other music were no longer similar.

Guillaume-Gabriel Nivers (ca. 1632–1714), organist at St.-Sulpice in Paris and one of the royal organists of Louis XIV, offers an interesting case study. Nivers, as a theorist and composer, worked within both rhythmic styles. His rhythmic approach to plainchant reflects the French practice in the seventeenth century of eliminating the *virga*, simplifying Guidetti's mensuralism (Hiley 1993, 397). Nivers (1683, 89–103) provides a long and thorough defense of this moderate mensuralism. Nivers answers several objections, beginning with the equalist implications of the name plainchant. The question takes on serious theological weight over the course of the argument, as the proper pronunciation of the Latin text is integral to right and proper worship. Mensuralism is a matter of correct doctrine: "It is therefore evident from the [Ecumenical] Councils, from the [Church] Fathers, and from reason that one must have regard to the quantity of long and short syllables in plainchant;

and one must be fully convinced of this by all the preceding reasons and authorities" (103).[31]

Nivers published complete liturgical books for a wide variety of situations; the variations between his different books exemplify the period's flexibility in the approach to chant rhythm. The *Graduale Romanum* of 1697, designed for parish use, represents the conservative end of Nivers's output. The book begins with a list of observations on singing, the first of which is the following, distilling some of Nivers's arguments from his *Dissertation sur le chant grégorien* of 1683: "Gregorian chant, or the full [*plenus*] chant of the Church, must be sung indeed fully and heavily, giving each note an equal measure, with a natural and unforced voice; but the breves are sung more quickly, namely, as half a measure. Therefore, there are two types of notes in every full chant, as will be easily discerned from the figures."[32] As part of his arguments in favor of moderate mensuralism, Nivers disputes the etymology of *cantus planus* or "plainchant," preferring the term *cantus plenus*, or "full chant." It is characteristic of the divorce between plainchant and modern notation in these centuries that Nivers refers to this note shape as a "breve" rather than the expected "semibreve." This book also uses full and half barlines with distinct rhythmic meanings, and a rhythmic dot in certain fully measured chants (some Credo settings and hymns).

Figure 1.9 shows Nivers's version of *Alleluia Ostende*. The melody is truncated, but only the longest melismata of the old form are shortened. On balance, much more of the shape of the melody is retained than in the Medicean version. The use of the short notes is quite sparse, coming (as might be expected) only on the short penultimates of the two proparoxytones in the text, "Domine" and "misericordiam."

By contrast, while parts of the *Alleluia Ostende* melody in Nivers's Benedictine *Graduale* (figure 1.10) are recognizably drawn from the traditional melody, most of the melody has been composed anew. Nivers adapts his editorial practice to the musical needs of his public; in the standard version of the *Graduale Romanum*, he adheres to the traditional shapes of the melodies, but

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31. "Il est donc evident par les Conciles, les Peres, & la raison, que l'on doit avoir égard à la quantité des longues & des brèves dans le Pleinchant; & l'on en doit estre pleinement convaincu par toutes les raisons & les authoritez precedentes."

32. "Cantus Gregorianus, seu Plenus Ecclesiae Cantus, plenè quidem & graviter canendus est, omnes aequali mensurâ trahendo Notas, voce naturali non violentâ; breves autem citiùs utpotè medià mensurà. Itaque duo sunt tantummodo Notarum genera in omni Pleno-cantu, ex ipsarum figuris facilè dignoscenda" (Nivers 1697, 7).

Figure 1.9: *Alleluia Ostende*: *Graduale Romanum*, 1697, 5–6.

when adapting the Mass chants to particular religious congregations, he updates the melodies to suit modern tastes. Not only are the melismata shortened, but the entire melody is set anew in a more modern tonality. While the Medicean gradual had solved the apparent problem of a mode-8 melody beginning on F by eliminating the first note, Nivers takes the opposite tack, keeping the beginning of the melody but rewriting the rest of the chant to fit comfortably in an F tonality, complete with a key signature of B♭. The cadences are arranged hierarchically, with the only cadence on the final F coming at the end of the truncated *jubilus*. The verse has three other cadences, not on the final, before each full barline. The arrangement of these cadences suggest a simple and rational tonal plan.[33] There are several other non-traditional details to Nivers's new melody, including the use of F♯ and the cross symbol denoting an ornament (possibly a *port-de-voix* or *tremblement*). Such ornamentation and use of accidentals came to be associated in France with neo-Gallicanism, a

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33. It is easy to imagine a harmonized performance where these cadences are an authentic cadence in the key of C, a half cadence in the key of G minor, and a half cadence in the key of F.

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Figure 1.10: *Alleluia Ostende*: *Graduale . . . Sancti Benedicti*, 1696, 4.

movement aimed at an independent French Catholic Church, free of Roman control in liturgical matters, with its own traditions of liturgical text, music, and pronunciation of Latin.[34] Nivers's use of the shorter semibreve is consistent with that in figure 1.9. In addition to the same two short syllables of the proparoxytones, there are short notes on the pre-accent syllables in *misericordiam* and *salutare*. In a clear departure from Guidetti's example of Latin accentuation, there is also a short note on the first syllable of *tuum*. For Nivers, the careful transmission of a venerable melody is only one option among many open to the publisher of chant books; the editor is free to rearrange the notes or even to compose new melodies, depending on the liturgical context for which the book is intended.

Nivers is only one representative voice among many. Zon (1999, 28–30) lists ninety-eight European treatises on plainchant published in the seventeenth and eighteenth centuries. Of these, the majority are French and Italian. Zon suggests that the various categories of plainchant were fluid, so that the distinction between accentual and metrical chants was blurred. He documents a neo-Gallican rhythmic practice (along the lines of Nivers's second version of *Alleluia Ostende*) with a rather extreme mensuralism, even to the point of being in a regular musical meter (37–38). But all the examples discussed are from newly composed chants, and not melodies belonging to the Roman

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34. Hiley (1993, 618–621) summarizes the musical dimensions of neo-Gallicanism as it intersected with Church politics.

Mass proper. Zon also provides a table of six different mensural schemes associated with this type of chant (39); all of these schemes are more complex and hierarchical than those of Guidetti or Nivers. The only Roman melody discussed is sung in equal notes, and forms the basis for the improvised polyphonic practice of *chant sur le livre* (46).[35] These editorial practices represent a non-historical approach foreign to modern sensibilities; the editors do not treat the received melodies as having a rhythmic design to be preserved and transmitted. Instead, the melodies are open to rhythmic alteration depending on the particular needs and accentuation habits of the community for which the new books are intended.

1.4   The Nineteenth Century: Restoration and Uniformity

In the nineteenth century, a new trend appeared in chant editions—a desire to restore the importance of plainchant within the broader realm of Catholic liturgical music. Christensen (2019, 29–66) recounts much of this history, beginning with the work of Alexandre Choron (1772–1834). The burgeoning field of historical musicology in the early nineteenth century sparked a renewed interest in using historical sources in editions of plainchant. Christensen's chapter deals primarily with the question of the appropriateness of applying leading tones in either the singing or the accompanying of chant. But the performance style of plainchant was also seen as in need of reform, as Louis Lambillotte noted: "Go into the churches of Paris; hear those big voices performing the antiphons and the hymns: what could be more insipid? What more heavy or more monotonous? One would think one was was hearing some heavy machinery struggling to lift a block of stone. But whence does this heaviness come? It comes from the fact that the rhythm has disappeared, and all the notes are produced with equal effort and movement, without mingling short notes and rhythmic marks.

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35. This raises the question (tangential to my purposes here) of whether one ought to try to fit some heavily mensural chants into a fixed metrical scheme. Some scholars have tried to do so, with mixed results. Holman (2017, 661–662) offers a metricized version of the hymn *Pange lingua* that is forced to ignore some of the written rhythmic differention between note values. Baragwanath (2020, 49) offers a better example, in which the hymn *Audi benigne conditor* is read using the rules of perfect mensural time, including imperfection and alteration. Baragwanath's version is plausible, but it would also be possible to argue for a more straightforward application of Guidetti's system, which would result in a perception of duple meter. Such metrical considerations were never widespread in discussions of plainchant during this period.

This inevitably becomes sad and tiring" (Lambillotte 1855, 72).[36]

The nineteenth century saw changes in the distribution of authority within the Catholic hierarchy as well.[37] The Catholic Church used the cultural upheavals of the nineteenth century as an opportunity to consolidate and centralize its authority in spiritual matters, even as its temporal political authority waned. A certain faction among Catholics in northern Europe fostered an increase in subservience and devotion to the pope; this trend is known as ultramontanism (as opposed to neo-Gallicanism), because it vests the ultimate authority in ecclesial matters to the pope "across the Alps" (*ultra montes*). As the political sovereignty of the papacy within Italy declined, the papacy's governance in internal matters became more absolute. This trend culminated in the First Vatican Council, 1869–1870, which codified the primacy of the papacy in religious affairs, even to the point of the infallibility of the pope when pronouncing on matters of faith and morals.

In the realm of sacred music, ultramontanist attitudes and the reformist mindset often coincided. While the texts to be sung in the Tridentine Mass are more or less fixed, the style in which the words are to be set is not, so a wide variety of musical styles pervaded the actual performance of liturgical music by the nineteenth century. Many of these styles drew heavily on contemporary trends in operatic music, and proponents of the burgeoning liturgical reform movement saw these as an undue secular influence.[38] A renewed emphasis on plainchant and sixteenth-century polyphony was seen as the way forward among the ultramontanist faction, purging the Roman liturgy of what it saw as unwholesome secular elements.

1.4.1 An Official Text: The Regensburg Edition

The publisher Friedrich Pustet (1798–1882) was the first to capitalize on the musical dimension of the centralizing trend in the Church. Pustet's publishing house, based in Regensburg, became the

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36. "Allez dans les églises de Paris ; écoutez ces grosses voix exécutant les antiennes et les hymnes : quoi de plus insipide ? Quoi de plus lourd, de plus monotone ? On croit entendre ces pesantes machines qui soulèvent avec peine un quartier de roc. Mais d'où vient cette lourdeur ? Elle vient de ce que le rhythme a disparu et que toutes les notes produites avec un effort et un mouvement égal, sans mélange de brèves et de traits rhythmiques, deviennent infailliblement tristes et fatigantes."

37. Duffy (2014, 291–305) provides a succinct account of Church politics in this period.

38. Two representantive examples of settings of this kind are Rossini's *Petite messe solennelle* and Gounod's *Messe solennelle de Sainte-Cécile*.

official publisher of the Holy See in 1862 and was granted a thirty-year monopoly on the printing of official books of liturgical music in 1868. Pustet's editions of the Mass chants, edited by the musicologist and priest Franz Xaver Haberl (1840–1910), were a republication of the Medicean edition, which had also served as the basis for the Mechlin Gradual (a Belgian edition) in 1848. These books were the first editions of the chant to be cast as official versions for use by the universal Church, although their use was never mandatory. Since these editions reproduce the note values of the Medicean edition with explicitly mensuralist meaning, in effect the newly empowered papacy of Pius IX (reigned 1846–1878) put its authority behind Guidetti's mensuralist approach.

Pustet and Haberl chose the Medicean edition for its association with Palestrina, who was held up as the preeminent model for restorationist church musicians. In the popular imagination, Palestrina was counted as the savior of church music, based not only on his pristine *stile antico* counterpoint but on the story first told by Agostino Agazzari in 1607: "And it is for no less than this reason that Holy Church very nearly abandoned music by act of a Sovereign Pontiff, had not Giovanni Palestrina shown that the vice and error lay with composers and not with music itself, and as confirmation of this he composed his mass entitled *Missa papae Marcelli*" (Agazzari 1607, 11).[39] The Medicean edition now took on an authority and importance in the late nineteenth century that it never enjoyed in the seventeenth.

In matters of rhythm, the Pustet books were fully mensuralist. Pustet published a lavish new edition of Guidetti's *Directorium chori* in 1874, as well as a treatise on plainchant by Haberl himself. Haberl's title, *Magister chori*, suggests his self-identification with his counter-reformation model. In his treatise, Haberl reproduces Guidetti's note shapes together with their basic values. The breve is the basic unit of time, and it is equivalent to the modern whole note, while the other note values are multiples or divisions of the basic value (Haberl 1864, 9). The question of ligatures is addressed, and the rules are simplified, with every note of a long ligature except the first and the last being interpreted as a semibreve (a modern half note). Haberl fully endorses the reforms of prosody

39. "…e poco mancò, che per questa cagione non fosse sbandita la Musica da S. Chiesa, da un Sommo Pontifice, se da Giovan Palestrino non fosse stato preso riparo, mostrando d'esser vitio, ed errore de' componitori, e non della Musica; ed à confermatione di questo fece la Messa intitolata *Missa Papæ Marcelli*."

accomplished both by Guidetti and the editors of the Medicean edition: "Now everybody feels that in terms of prosody, the old chant books leave much to be desired" (Haberl 1864, 16).[40]

1.4.2 Melodic Restoration: Mensuralism

At the same time, a more careful and critical approach to medieval sources was creating a consensus among other chant scholars for a restoration of the pre-Tridentine forms of the melodies. In 1847, the organist Félix Danjou discovered an eleventh-century manuscript of plainchant (F-MO H.159), which contained both adiastematic neumes and a pitch-specific notation using letters. This manuscript served as a Rosetta stone for the deciphering of the early neumes.[41] Lambillotte (1851) published a hand-drawn reproduction of a complete St. Gall Gradual (CH-SGs 359). Beginning in the 1850s, several chant editions appeared that partially restored the melodies based on the readings of these earlier sources; most notable among these were the Reims-Cambrai Gradual of 1851 and Lambillotte's dual-notation version (with volumes in square notes and in modern transcription), published posthumously in 1857.

Both editions interpreted the notes mensurally. While they adapted the mensural practice of Guidetti, the motivation was different. Lambillotte drew on several medieval theorists, including Jerome of Moravia, discussed above, as proof that the earliest sources should be read with proportional note values. Unlike Nivers, Lambillotte allows for dotted figures at two different levels, as shown in figure 1.11. In effect, many more note values are available than in previous examples, ranging in value from the single eighth note (occurring only after a dotted quarter) up to the whole note.

Figure 1.12 shows Lambillotte's square-note edition of *Alleluia Ostende*. While the notational means are similar to both the versions by Nivers and Haberl, there is considerably more rhythmic differentiation in this version. Although the edition claims to be a restored one, the melody is still truncated to a degree similar to the edition of Nivers. According to the table shown in figure 1.11,

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40. "Übrigens fühlt Jeder, dass in Bezug auf Prosodie an den alten Choralbüchern viel zu wünschen übrig bleibt."

41. Previous musicologists had remarked on the neumes and printed the neumes without being able to decipher them, since at least Praetorius (1615, 12–13), who accurately reproduced the St. Gall neumes for three chants from D-W Cod. Guelf Helmst. 1008.

Figure 1.11: Table of note values (Lambillotte and Dufour 1857, xii)

all of the apparent longa–semibreve pairs (as in the second syllable of the chant) are to be read as a dotted figure that fills the time of only a single breve. The smaller semibreves are to be interpreted as grace notes. They occur, among other instances, wherever the sources have a *quilisma*. Lambillotte believed the *quilisma* should be interpreted as a trill, but that it was advisable to sing this simpler version with a larger choir (Lambillotte 1855, 308).
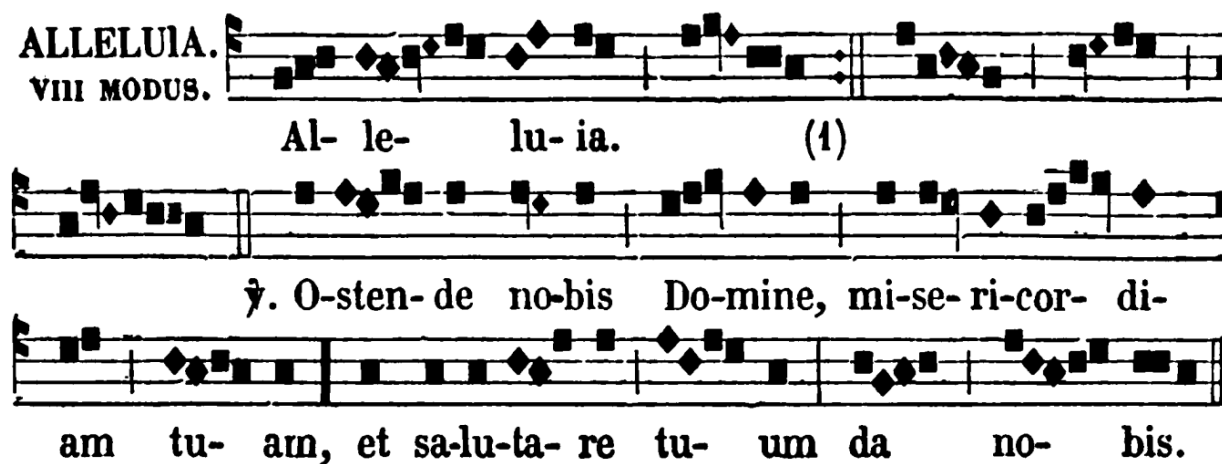
Figure 1.12: *Alleluia Ostende* (Lambillotte and Dufour 1857, 4)

Lambillotte's rhythmic approach is a full-fledged mensuralism and is among the first rhythmic systems to be applied to plainchant as an endeavor of historical musicology. While Guidetti's mensuralism was an attempt to modernize or correct the chant, Lambillotte's was based on theoretical documentation and on internal evidence in plainchant manuscripts, especially the significative letters. Mensuralism of this kind has remained a viable method of chant interpretation to the present day, although it has been less popular among performers than the more recent idea of free rhythm.

1.4.3 Melodic Restoration: Free Rhythm

The modern history of the idea of free rhetorical rhythm begins with the reforming liturgical vision of Dom Prosper Guéranger (1805–1875), the founder of the abbey of Solesmes. Much has been written on the history of the work of Solesmes in the chant restoration. The three most complete accounts tell the story of the Solesmes chants, with its accompanying controversy, from different points of view: Combe (1969) gives the Solesmes perspective, in which the monks eventually succeed in promulgating the Solesmes editions to the wider world; Ellis (2013) gives the perspective of international politics in the wake of the Franco-Prussian war; Bergeron (1998) relates the Solesmes project to nineteenth-century aesthetic trends such as antiquarianism, the Gothic revival, and pre-Raphaelitism.

Guéranger, encountering the same performance style criticized by Lambillotte, envisioned a flexible chant performance that matches the rhetorical flow of the text. Guéranger was also motivated to go further in the direction of melodic restoration than any of the other reformers, with a systematic consultation of multiple medieval sources in order to recapture a supposed original version: "Clearly we can be quite sure sometimes that—in a particular composition—we have discovered the pure Gregorian phrase when manuscripts from several remotely separated churches agree on the same reading" (Combe 2003, 12). This vision of Dom Guéranger led to the monumental paleographic and musicological work of many younger monks of Solesmes, especially Dom Joseph Pothier (1835–1923) and Dom Mocquereau.

Pothier was responsible for the edition of the *Liber Gradualis* printed in 1883 (and again in 1895), which are formed from melodic readings drawn from the large collection of sources copied at the abbey. Pothier abandoned the typical blocky plainchant notation of nineteenth-century prints in favor of a typeface designed to mimic the handwriting of square notation as drawn by a Gothic pen.[42] Pothier also modified the traditional square notation by adding new signs for liquescence and the *quilisma*. Since the Pustet edition of the *Graduale* remained the officially sanctioned version, the Solesmes editions were published with the understanding that they were for study purposes only

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42. Bergeron (1998, 46–58) gives a thorough and astute analysis of the aesthetic implications of Pothier's typography.

and not meant to displace the official book.

The other publication from Solesmes, beginning in the 1890s, was the series of photographic facsimiles of important manuscript sources. This project, under the title *Paléographie musicale*, was the work of Mocquereau, who was the director of the schola at Solesmes and Pothier's assistant in his work on chant. The photographs were instrumental in making the case for the Solesmes side in the melodic controversy, as they definitively established that the forms of the melodies previously rejected as obscurities and barbarisms actually belonged to the earliest historical layer of the repertoire. In light of this research, the official sanction given by the Church to the Pustet editions became more and more untenable. The series came with lengthy essays (sometimes occupying an entire volume) on questions of chant interpretation, unsigned but clearly by Mocquereau.

Although there are differences between Pothier and Mocquereau's rhythmic systems (to be discussed in chapter 2), they share the common conviction that the notes and neumes are to be delivered according to a principle of number, a term adopted from Cicero and used to describe the free rhetorical rhythm of prose (Pothier 1880, 179). Figure 1.13 shows the Solesmes (1883) version of *Alleluia Ostende*. The melody is now fully restored to the pitches shown in the earliest diastematic sources. The note values are meant to be indeterminate rather than proportionally related. In syllabic passages, the rhythm of the text determines the length of the individual notes. Within melismas, internal divisions are shown with white space. We will examine other details of this notation in describing the Vatican edition.

In some ways, the most radical restorationist edition of the nineteenth century was that produced for the diocese of Trier by Michael Hermesdorff (1833–1885). Hermesdorff was allied with several other German and Belgian scholars working in parallel with the monks of Solesmes to restore the older melodies. Hermesdorff (1876) uses an innovative notational system that has surprising connections to the more modern method of semiology (discussed in chapter 2). Figure 1.14 shows Hermesdorff's version of *Alleluia Ostende*. Comparing this version to Pothier's, we see that the entire melody as it existed in the earlier sources has been restored.[43] Hermesdorff's edition includes

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43. In the frequent editorial question of whether to choose B or C for individual notes when the sources conflict, Hermesdorff shows a marked preference for the latter, which Peter Wagner calls the "Germanic dialect" of plainchant

Figure 1.13: *Alleluia Ostende*, *Liber gradualis*, Solesmes, 1883

a new typeface that allows the printing of adiastematic neumes (drawn from the manuscripts of St. Gall) above the staff. The notes on the staff appear to be mensuralist, employing the familiar three note values, but they are not meant to be read in this way. Hermesdorff's preface describes a system that uses the familiar note values to show rhythmic nuances rather than proportional values: "In plainchant there are thus no longs and shorts as would be required by meter and mensuration, but only the stretching and shortening, which the rhythm, that is, the alternation of stress and unstress, conveys naturally, as, for example, the natural pronunciation of words in speech" (Hermesdorff 1876, viii).[44] In his musical examples, Hermesdorff transcribes a breve as a half note, but a semibreve

(Blachly 1988, 86). For an example, compare the end of the *jubilus* in figure 1.13 and figure 1.14.

44. "Im Chorale gibt es also nicht Länge und Kürze, wie Takt und Mensur sie erfordern, sondern nur Dehnung und Kürzung, wie der Rhythmus d.h. der Wechsel von Betonung und Nicht-Betonung in ungezwungener Weise sie mit sich

Figure 1.14: *Alleluia Ostende* (Hermesdorff 1876, 4)

should be sung as a half note during an *accelerando* rather than as a quarter note. In short, this source is neither equalist nor mensuralist but a free rhythm based on neume forms and on accent, very much like the modern semiological school.

Hermesdorff notates only the first and last notes of the *quilisma*, but he expects the performance to involve a trill (Hermesdorff 1876, xii). Almost all of the individual neumes and neume groups have one note marked with a wedge, which Hermesdorff calls an *Iktus*. This symbol denotes a particular stress, involving both agogic and dynamic accents, which is meant to give structure to the melody (xiii).

Free rhythm like that practiced at Solesmes and Trier was widely influential even among those who had previously been strict mensuralists. In later editions of his *Magister chori*, Haberl revises his description of the note values in favor of a more free, declamatory approach to rhythm, even while retaining the notes and basic mensural structure of the Medicean edition. In the later system, the *virga* is reserved only for the accented syllable in the word in syllabic chants, while all unaccented syllables are notated with breves (Haberl 1900, 27). The rhythm of the plainchant is subordinate to the rhythm of the text: "The fundamental rule for the understanding and performance of Gregorian chant is therefore, 'sing the words with notes just as you would speak them without notes'" (33).[45] This is essentially an abandonment of mensuralism in favor of the Hermesdorff system of rhythm, where the values are merely indications of relative stress. Guidetti's semibreve is also now rejected: "The danger is apparent that the syllable before the semibreve would be sung too strongly and the syllable provided with the semibreve would performed in a hopping, prancing manner" (27).[46]

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bringt, so z.B. beim Wortfall der gewöhnlichen Rede."

45. "Der Fundamentalsatz für Verständnis und Vortrag des gregor. Chorals lautet demnach: 'Singe die Worte mit den Noten so, wie du sie ohne Noten sprichst.'"

46. "Die Gefahr nahe liegt, dass die der ◆ vorhergehende Silbe zu stark betont und die mit versehene in hüpfender, tänzelnder Weise vorgetragen werde."

1.4.4 The Vatican Edition

The efforts at melodic restoration eventually led to the displacement of the Pustet editions as the official version. In 1903, Pius X (reigned 1903–1914), a new pope sympathetic to the Solesmes cause, commissioned a new edition of the plainchant of the Church, to be promulgated officially by the Vatican and to be held as binding on all local churches. This edition was to be based on the restored melodies of the Solesmes school, as agreed upon by a commission of chant scholars. The pope appointed Pothier to be the president of the commission. The commission became immediately consumed with bitter controversy among its participants, but it managed to release the new official chant books, with the most important appearing in 1908 (the *Graduale*) and 1912 (the *Antiphonale*). The Vatican edition, together with updated but entirely derivative editions issued after the Second Vatican Council, remains the most widely used version of the chant for liturgical purposes.

The typeface of the Vatican edition is itself modeled on the type designed by Dom Pothier while at Solesmes and has become the prototypical square notation against which all more recent notations are measured. The typeface employs six different symbols to indicate individual notes—*punctum*, *virga*, rhombus, liquescent, and *quilisma*—but all are meant to be read as roughly equal in time value. That is, none of the symbols has any especial rhythmic significance, even though the first three shapes are the same as those used by Guidetti.

The rhythm of the Vatican edition is based on the free rhetorical approach of Pothier; this approach is outlined in the preface.[47] The preface gives several rules for the interpretation of particular neumes, some of which are peculiar to the Solesmes typeface. Rules 4–6 have rhythmic significance and may be paraphrased thus:

4. With single notes that are repeated (*strophicus*), or situations where the last note of one neume and the first note of the next are at a unison (*pressus*), all the unison notes are fused together and sung as one long note. The *pressus* is sung with intensity or vibrato (Benedictines of Solesmes 1961, xii).

5. The *quilisma* is sung with a certain trill. Failing this, the note before may be sung with a dynamic accent—literally, a "more biting attack" ("ictu quasi mordaciori") (xii).

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47. The preface is reproduced at the front of every edition of the *Liber usualis*, including an English translation for the English-language editions of the book (Benedictines of Solesmes 1961, ix–xiv).

6. In any neume that starts by descending, the first note, which always has a tail in the Vatican edition, is often sung with a dynamic accent—"a stronger attack" ("vehementiori impulsu") (Benedictines of Solesmes 1961, xii).

The use of accents as described in rules 5 and 6 has an effect on grouping, as it distinguishes the notes from each other in a marked way. The concern for grouping is addressed more generally: "The neumes should be marked off from one another alike for the eye and for the ear" (xiii). This is accomplished by division at the syllable in syllabic chants. In melismas, the groups may be either very lightly separated, or they may be set off by the *mora vocis*, or "delay of the voice," describing a slight holding back in the tempo. The term comes from Guido (1978, 70). In the Vatican edition, the *mora vocis* within a melisma is shown with a white space of the width of exactly one *punctum*, which means that the note (or two notes in the case of a two-note neume) just before the space should be lengthened. Higher level divisions, requiring longer pauses, are indicated with barlines of various lengths. A quarter barline marks off a smaller unit than a half barline, which marks off a smaller unit than a full barline. Other aspects of the rhythm are left to the judgment of the individual singer or conductor.

Figure 1.15 shows the Vatican edition version of *Alleluia Ostende*, and figure 1.16 shows a transcription based on the rules described above. I have shown the notes requiring a *mora vocis* with white noteheads, which do not necessarily mean double the length of the time of the black noteheads. Instead, the level of length should be proportional to the unit being set off. At the level of the individual neumes, dynamic accents provide the sense of grouping. There are seldom more than six notes in a row without either a long note or an accented note. One aspect of this notation is particularly difficult to interpret; the white space having only the width of a single *punctum* means that it is often ambiguous whether a *mora vocis* is intended or not. This is a difference from the earlier Solesmes books, as can be seen by comparing figure 1.13 and figure 1.15. One difficult case occurs in figure 1.15, in the fourth line, on the first G after the quarter bar line. This is followed by a flat sign that applies to the B four notes later. Should we reckon the G as requiring a *mora vocis*, or was this space merely to allow room for the flat sign? This seems uncertain, especially considering the flat sign in the third line, where the spacing seems more ample.

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Figure 1.15: *Alleluia Ostende*, Vatican Edition *Graduale* (Published by Schwann), 1908, 3.

Figure 1.16: *Alleluia Ostende*, Vatican Edition *Graduale*

Although the notation system seems simpler, we can see that, far from smoothing out the mensuralist version, the rhythm of the Vatican edition introduces more variety and complexity. We will revisit the interpretive method behind these rules in chapter 2.

1.5   THE TWENTIETH CENTURY: PLAINCHANT AFTER THE VATICAN EDITION

1.5.1   The Solesmes Rhythmic Signs

Even though the Vatican edition and its rhythm were declared to be binding on the whole Catholic Church, its publication did not end the scholarly debate over the interpretation of plainchant. While the Solesmes movement opposed mensuralism from the very first writings on chant by Dom Guéranger, many scholars continued to read the evidence of historical theorists as favoring mensuralism. Matters were not helped by the speed of the reversal. In less than two decades, the Vatican changed positions from an official endorsement of the Medicean edition (in its mensuralist reading by Pustet) to a proclamation that the free-rhythm approach developed at Solesmes was

binding on the whole Church.

At the same time, the Solesmes movement had split into two opposing camps by 1905. Pothier had left Solesmes to become prior of another abbey in 1893, and Mocquereau had become the choirmaster and prior at Solesmes.[48] Mocquereau's approach to rhythm was heavily influenced by Pothier's, but he also placed a great emphasis on the interpretation of the adiastematic neumes, which Pothier believed reflected only a local tradition. In the chant editions published by Solesmes in the decade between Pothier's departure and the announcement of the Vatican edition, Mocquereau added various rhythmic signs, in accordance with his theories and research. Solesmes included these signs in the very first publication of the *Paroissien romain*, better known today by its Latin title, *Liber usualis*. In 1901, all the Benedictines were expelled from France as a result of the new Association Laws, the latest in a string of anticlericalist government measures. The monks of Solesmes went to the Isle of Wight, and Pothier went to Belgium. While Pothier and Mocquereau maintained cordial relations, it was inevitable that differences would arise between them. These differences became public during the debates of the Vatican commission, of which Pothier was president and Mocquereau was a member.

The principal controversy at the meetings of the Vatican commission was over the method for making choices in melodic readings. In general, Mocquereau favored older sources, which used B as a structural tone in modes 3 and 8 rather than the C of later sources. The debates became so rancorous, involving Cardinals in the upper echelons of the hierarchy, that the monks of Solesmes withdrew their involvement in the project.

The Church allowed the Vatican edition to be published by any publishing house, sacred or secular, that agreed to conform to the commission's specifications. The commission's instructions dictated the exact shape and spacing of the notes, which would allow the interpretation outlined above. Even after the rupture of the Vatican commision, Solesmes was one among many publishers that produced versions of the Vatican edition, but Solesmes included three of Mocquereau's rhythmic signs in its prints of the Vatican edition: the dot (*punctum morae*) placed next to notes to show the

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48. Ellis (2013, 47–56) describes the circumstances behind Pothier's departure. While the reasons were not musical, the rift created by Pothier's departure was to have musical consequences.

mora vocis, where Pothier had used only white space; the vertical spike above or below the notes to indicate downbeats of two- or three-note groups; and the horizontal mark (*episema*), similar to the tenuto sign, to show a nuanced rhythmic lengthening.

The Vatican office in charge of regulating liturgical matters, the Sacred Congregation of Rites, initially condemned the Solesmes markings, which, in their early form, were drawn so that they touched the note they affected. This was an abuse of the clear instructions on printing issued by the Vatican. In order to conform with the letter of the decree, the ictus mark was moved away from the note itself. Solesmes was subsequently given grudging approval for the signs. Mocquereau always claimed that he had verbal permission from Pope Pius X himself, the highest legislative authority within the Church, to print the rhythmic signs in the Solesmes versions of the Vatican edition, in exchange for the work Solesmes had done toward the edition (Mocquereau 1906, 6). Ellis (2013, 80) points out that, according to canon law, even Pothier's work toward the melodic restoration, done in preparation for his *Graduale Romanum*, was the monastic property of the Abbey of Solesmes, so the donation of this work to the Holy See by Solesmes represented a major contribution of intellectual property. The printing of Mocquereau's rhythmic signs allowed Solesmes to have something distinctive about its editions. Figure 1.17 shows the version of *Alleluia Ostende* from the *Liber usualis*. The dots and horizontal *episemata* show length, while the vertical *episemata* show grouping, in a fashion to be discussed later. The rhythm is easier to read than in figure 1.15, since there is no question about which notes are to be lengthened.

A comparison between figure 1.16 and figure 1.17 shows that different notes are lengthened in the two sources. In other words, the rhythm of the *Liber usualis* is not the same as that of the Vatican edition according to its preface. If the Vatican edition was meant to create a universal rhythmic practice of plainchant for the worldwide Church, the Solesmes rhythmic signs undermined the sense of universality by showing that the prescribed rhythmic interpretation of the Vatican edition could be ignored. The highly readable Solesmes books became extremely popular, especially in Francophone and Anglophone countries.

The melodies as we have them in the *Liber usualis* do not necessarily represent the rhythmic

Figure 1.17: *Alleluia Ostende*, *Liber usualis*, 1979, 320–21

Figure 1.18: Mocquereau (1911, 26)

wishes of Mocquereau. Mocquereau was forced to make many compromises in his approach to conform to the strict printing requirements of the Vatican edition, as shown in figure 1.18, excerpted from Mocquereau's monograph on *Alleluia Ostende* (Mocquereau 1911). The top line shows the official text of the Vatican edition for the last word of the verse, *nobis*. The bottom line shows the edition Mocquereau would have liked to print. In this case, the neumes of St. Gall are placed above the staff to show the source of his rhythmic nuances.[49] The middle line shows the compromise version, which is what appears in the *Liber usualis*. At group 57—and again at 58, 61, 63, and 64—Mocquereau would have prefered to make both of the descending notes heavier, in order to conform with the use of the *tractulus* shape for these notes in the St. Gall neumes, as opposed to the simpler *punctum*. Mocquereau's preferred grouping would even have eliminated the first barline in this excerpt. Such groupings would have contradicted the regulations on the printing of the Vatican edition:

> Some friends, struck by the beauty of this verse so rhythmicized, have asked me, "Why did you not indicate this rhythm in your editions of Tournai?"
>
> Why not? Because the desire to closely follow the rhythm of the Vatican edition obliged us to neglect, in our reproduction with signs, several of the precious indications of

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49. This is similar to the practice of Hermesdorff and of the later semiologists.

the manuscripts. One must understand our reasons and to excuse this imperfection. Moreover, it is formally understood that all the divergences pointed out remain, for the moment, in the field of archaeology, and must be used practically only insofar as they can agree with the official notation. (27–8)[50]

Much of the written part of the Solesmes practice, as preserved in the printed books, is the result of similar compromises. Among some monastic communities, copies of the *Graduale Romanum* circulate with many extra *episemata* and expressive markings, drawn in by hand and coming by oral tradition from Mocquereau and his successor Dom Joseph Gajard.[51]

The Solesmes rhythmic signs continued to be the object of occasional ecclesial censure over the succeeding decades. In practice, the Solesmes books proved to be widely but not universally popular; they were in use even in the papal choir and throughout the diocese of Rome from 1912, as shown by a letter of Cardinal Pietro Respighi, Vicar for Rome under Pius X: "Every schola cantorum or choir should have its own special musical library for the ordinary performances in church, and they must possess first of all a sufficient number of Gregorian books in the Vatican edition. To ensure uniformity in the rendering of the chant in the different churches in Rome, these may be used with the addition of the Solesmes rhythmical signs" (Hayburn 1979, 245). Cardinal Fiorenzo Romita, in his dissertation on canon law, summarized the legal status of the Solesmes books: "In practice, the rhythmic editions have buried these violent controversies, and they are not only tolerated but altogether approved and used commonly by all, since they greatly facilitate the uniformity of the chant" (Romita 1947, 195).[52] The success of the Solesmes books guaranteed that they—above all, the *Liber usualis*—became synonymous for many people with the chant repertoire itself.

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50. "Des amis, frappés de la beauté de ce verset ainsi rythmé, m'ont dit : Pourquoi n'avez-vous pas indiqué ce rythme dans vos éditions de Tournai ?

"Pourquoi ? Parce que le désir de serrer de près le rythme de l'édition vaticane nous a obligé à négliger, dans notre reproduction avec signes, plusieurs des précieuses indications des manuscrits. On voudra bien comprendre nos raisons et excuser cette imperfection. D'ailleurs, il est formellement entendu que toutes les divergences signalées restent, pour le moment, dans le domaine de l'archéologie, et ne doivent servir prati quement que dans la mesure où elles peuvent s'accorder avec la notation officielle."

51. This version, known informally as the Argentan Gradual, dates from visits made by Gajard to the nuns of Argentan. The markings are used by the cantors at the Abbey of Fontgombault and all of Fontgombault's daughter houses.

52. "Practice editiones rhythmicae nunc vehementibus illis controversiis sepultis, non sunt solum toleratae, sed concorditer probantur ac vulgatissimae sunt apud omnes, cum cantus uniformitatem apprime curent."

After the publication of the Vatican edition then, three main interpretive schools were available to a singer wishing to undertake the performance of the Gregorian repertoire—mensuralism, Pothier's free rhythm, and the Solesmes method—each of which offers vastly different results.[53] A fourth approach, called semiology, was later developed by another monk of Solesmes, Dom Eugene Cardine (1905–1988).[54] Practitioners of semiology perform the rhythm of a chant by reading directly from a copy of the early adiastematic neumes. In order to accomplish this, the adiastematic neumes are drawn just above or below a version of the melody that gives the exact pitches.[55] The most representative semiological edition is the *Graduale Triplex*, printed by Solesmes in 1979. Figure 1.19 gives the version of *Alleluia Ostende* from this publication. The box near the beginning shows that the adiastematic neumes above the staff were taken from page 166 of Laon 239 (as reproduced above in figure 1.3), while those below the staff were taken from page 26 of St. Gall Stiftsbibliothek 359, a different source for St. Gall neumes than the Einsiedeln codex discussed above. In this case, the performer reads the melody from the Solesmes notes, while ignoring the rhythmic signs, instead taking the rhythmic direction instead from the neumes drawn below and above, according to certain principles developed by Dom Cardine.

1.5.2 Modern Transcription

Most scholarly editions of plainchant since the twentieth century have used transcription into modern notes. Editions of plainchant printed in modern notes have been common since the nineteenth century. The Solesmes school has also produced a version of the *Liber usualis* in modern notes, as well as various books for organ accompaniment, which must use individual notes for reasons of vertical alignment. In the Solesmes system, the basic pulse belonging to any note is an eighth

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53. Rayburn (1964) gives a history of these three schools and summarizes their principal written sources.

54. Semiology is not a method in the definitive sense of the other three approaches; rather, it is a loose collection of rhythmic principles, as described fully in chapter 2.

55. This notational innovation is almost precisely the same as that invented by Hermesdorff, discussed above. The only difference is that two types of notation are processed differently by the performers of these two versions. Hermesdorff meant the neumes above the staff only to augment the information supplied by the diastematic notes themselves, whereas the semiologist generally ignores any rhythmic information contained in the notes on the staff, reading them only for their pitch content. Cardine also acknowledges that Mocquereau wrote neumes of St. Gall into both his personal and his choir copy of the Graduale.

Figure 1.19: *Alleluia Ostende*, *Graduale Triplex*, 1979, 16–17.

note, and these are beamed together in groups of twos and threes according to Mocquereau's rhythmic system (to be described later). In recent scholarly publications, the trend has been to notate the melodies with round black noteheads without stems. Neume groups are often shown either with slurs or by the visual proximity of the noteheads. Sometimes this notation is paired with adiastematic neumes drawn above the staff, in the manner of the semiological editions.

The purpose of these scholarly versions is to bracket the rhythmic question. We have seen that there are several choices of how to conceive of the rhythm of medieval sources: equalism of all notes; unequal notes of varying indeterminate lengths; unequal notes of proportional lengths. Proponents of these various choices draw from the same musical sources and often quote the same passages from the same medieval theorists (especially Guido) in support of opposite conclusions. In light of this conflict, the scholarly approach avoids giving any rhythmic information that is not indisputably present in the source. In effect, the scholarly versions maintain the rhythmic ambiguity of the old sources. Hiley summarizes the situation well: "...church musicians have felt a special duty to sing the 'right' notes in the 'right' way. The musicologist has the luxury of not having to decide on what is 'right,' indeed cannot even see the problem in such terms" (Hiley 1993, 399).

Hiley's transcriptions uses stemless noteheads, while multiple notes of a single syllable or neume are grouped together both by proximity and by slurs. In singing from such editions, what is the effect in practice? Both the color of the noteheads (black) and the spacing of the notes (very close) gives the performer the subtle impression that one is singing eighth notes. Is this notation rhythmically neutral? Even though modern note values have no absolute meaning, most singers would probably approach the melody slightly differently if the notes were spaced more widely (like quarter notes) or if the noteheads chosen were whole notes (in the fashion of an unmeasured French keyboard prelude from the seventeenth century). Further, the lack of a stem on the notes suggests a certain freedom or indeterminacy of the note values. This is in conformity with Tinctoris's definition and with Pothier's accentualism, but it cannot be a neutral position in the debate over rhythm, since it begs the question against mensuralism.

The supposedly neutral transcription policy often applies even to sources that are not so ambigu-

ous in their rhythmic notation. Hiley (2009, 210) gives a comparative transcription of the offertory *Laetentur caeli* from the Medicean edition and the Vatican edition. I have argued above—following Veltman (2004)—that the Medicean edition encodes a specific rhythm, with the characteristic dotted rhythm for proparoxytones. The Vatican edition certainly encodes a definite rhythm, shown by the various barlines, the use of white space for grouping, and the shape of the neumes for the lowest level of grouping. Hiley's transcription reproduces none of this information. While the transcription, and the accompanying commentary, is an excellent study in the melodic choices made by the Medicean editors and unmade by the Vatican editors, a rhythmless transcription does not fully capture the character of these sources, since it implies an indeterminacy to the note values that is not present in the sources. To set aside the notation of rhythm is inescapably to make a choice about rhythm. This choice may be correct for the purposes of scholarly study of melodies, but it should be approached by singers with caution.[56]

The trend toward indeterminate rhythm in scholarly editions is a result of the divide between scholarly and liturgical editions. The avoidance of editorial intervention is a luxury of editions that are not destined for everyday use in liturgical practice. As shown by the efforts of Lambillotte, Hermesdorff, and Pothier, this divide between scholarly and liturgical versions did not exist before the Vatican edition but was an inevitable consequence of the Church establishing one fixed and universally binding musical text. After the Vatican edition, critical paleographic studies and editions by scholars (at least, scholars working outside of Solesmes) were not being published as liturgical books. This makes the editorial choice of a rhythmic system for a particular edition unnecessary.

As the study and performance of chant have moved outside of the realm of liturgical practice, the variety of rhythmic approaches has become much broader. While there are many different ways of singing chant, most performers continue to choose some version of the free rhythm developed at Solesmes or some form of mensuralism. Chapter 2 gives a more thorough account of each of these interpretive approaches.

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56. Peattie (2016) makes an excellent case for using a modified neumatic notation in place of modern transcriptions. This approach has the same policy of minimal intervention as the scholarly transcriptions described above, but it also minimizes the damage from loss in translation.

2   GREGORIAN RHYTHM AT SOLESMES

In the nearly two centuries of the modern history of the Abbey of Solesmes, the term "Solesmes Method" has been used to refer to a variety of rhythmic approaches to plainchant. Some aspects of the monks' rhythmic approach have remained constant over time—the abbey has always been committed to the idea of free rhythm, in which the relative values of the notes of plainchant are not bound to a strict temporal proportion with one another. But there have also been major changes in the monks' approach, giving rise to quite different interpretive schools, each of which counts Solesmes as its place of origin. In this chapter, I look in detail at the first two of these systems of free rhythm, developed by Pothier and Mocquereau.[1] I then briefly consider the more recent developments of semiology and modern mensuralism, which are the two most important alternative rhythmic approaches developed after the classic Solesmes method. The discussion of the old Solesmes school culminates in an examination of an analysis published by Dom Pothier. In order to facilitate a comparison between the different approaches studied here, I analyze the same antiphon according to each of the other methods.

2.1   THE OLD SOLESMES METHOD

2.1.1   Gontier's *Méthode raisonnée*

As discussed in chapter 1, the practice of free rhythm in plainchant at Solesmes was an innovation of Dom Guéranger, who was reacting to what he saw as excessively heavy or plodding performances. Following the spirit, but not the practice, of Guidetti, the monks took the speech rhythm of the Latin

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1. Gastoué (1911, 114) distinguishes between the two systems by using the names "old Solesmes" and "new Solesmes." Since the latter method is no longer new and no longer practiced at Solesmes, it seems better to coin the term "the classic Solesmes method."

language as the basis for a reform of the rhythm of the chant. The resulting method was first put into writing by Augustin-Mathurin Gontier (1802–1881), who was not a monk of Solesmes but a cleric and close associate of Dom Guéranger from the nearby city of Le Mans. Gontier (1859) gives a detailed account of the approach followed by the monks during Guéranger's tenure as abbot. Guéranger believed that the free rhythmic approach constituted a restoration of a medieval performance style in precisely the same way that the newly emerging editions of the chant offered a restoration of a medieval melodic tradition. Indeed, for Guéranger, the reform of the rhythmic interpretation was more important than the restoration of the melodies. In the commendatory letter published with Gontier's book, Guéranger writes, "It would be a hundred times better to take the most faulty and incorrect of our editions and to perform the pieces that it contains, however distorted they might be, according to the rules that antiquity knew and practiced, and which you have been able to formulate in your booklet in such a pleasing and clear manner" (ix–x).[2]

Gontier begins by defining plainchant: "Plainchant is a modulated recitation whose notes have an indeterminate value and whose rhythm, essentially free, is that of speech" (1).[3] By modulated we should understand "melodic." Gontier defines rhythm entirely in terms of language as it interacts with time. For Gontier, rhythm is division within speech, which is accomplished by the succession of strong beats, weak beats, and empty beats (3). Speech comes in two forms, poetry and prose, and each of these forms has a proper rhythm. In poetic rhythm, strong and weak beats correspond to the long and short syllables of classical prosody, which leads to a regular succession of poetic feet and regular groupings. In prose rhythm, the strong and weak beats occur not with length but with accent, with strong syllables being uttered either with greater intensity or at a higher pitch. In other words, poetic rhythm is quantitative and prose rhythm is qualitative. Prose speech has a rhythm, but this rhythm is hidden within the natural accentuation of the words. Gontier quotes the seventeenth-century humanist scholar Gerardus Vossius in describing the rhythm of prose as of a

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2. "Mieux vaudrait cent fois prendre la plus fautive et la plus incorrecte de nos éditions, et exécuter les pièces qu'elle contient, si dénaturées qu'elles soient, d'après les règles que l'antiquité connaissait et pratiquait, et que vous avez su formuler dans votre opuscule d'une manière si heureuse et si claire."

3. "Le plain-chant est une récitation modulée dont les notes ont une valeur indéterminée et dont le rhythme, essentiellement libre, est celui du discours."

hidden sort: "numeri quodam modo latent" (Gontier 1859, 3).

Each of these types of speech rhythm corresponds to a way of singing. The long and short syllables of poetry correspond to the fixed note values of music. "Music" here refers to measured music and does not include plainchant.[4] The empty beats of poetic rhythm correspond to the rests, which also have a fixed value. The indeterminate rhythm of prose corresponds to the rhythm of plainchant, according to Tinctoris's definition discussed in chapter 1: "plainchant is composed of notes of an indeterminate value" (5).[5] The empty beats are gaps that punctuate different semantic groups, and these gaps are also of an indeterminate value driven by the sense. In equating plainchant and prose, Gontier argues that plainchant has a natural quality that distinguishes it from music; mensuralism is to be rejected because he sees it as artificial:

> Plainchant is a real language, and cannot be learned by a method, any more than a living language can be learned by a grammar book and a dictionary. A method of any kind can only lead to unintelligent spelling or defective pronunciation. We must live with those who speak this language in order to speak it correctly, to understand and express all its nuances and delicacies. There are two aspects of plainchant which are especially striking. First, it is the simplicity, the naturalness which ensures its perpetuity. Plainchant is the sung prayer of the people. Its text is prose. Its movement is speech. Its prosody is the accentuation of the people. Its tonality is the tonality of the people, the natural scale of sounds. But let us lift up our hearts, *sursum corda*, there is in plainchant a mysterious and untranslatable meaning, it is the accent of faith and the unction of charity. It is a humility full of confidence, which seems to want to penetrate the heavens, and to associate, in a unified concert, the songs of the earthly Jerusalem with the songs of the heavenly Jerusalem. This is why the rigid and inflexible stiffness of the musical note could never be the true expression of public prayer, because there is something worldly and artificial in the metrical value of the note and because the measured note erases as much as possible the meaning of the song. Instead, its nature is speech; in the prosaic declamation of plainchant the note and the measure are erased, *numeri latent*, to bring out the whole sense that is in the text and in the melodic progression. (xvi–xvii)[6]

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4. We will return to this consideration of plainchant as something other than music in the beginning of chapter 4.

5. "Cantus planus notis incerti valoris est constitutus."

6. "Le plain-chant est une véritable langue, il ne peut pas plus s'apprendre à l'aide d'une méthode, qu'une langue vivante ne peut s'apprendre à l'aide d'une grammaire et d'un dictionnaire. Une méthode quelconque ne conduit guère qu'a une épellation inintelligente ou à une prononciation défectueuese ; il faut vivre avec ceux qui parlent cette langue pour la parler correctement, pour en comprendre et en exprimer toutes les nuances et toutes les délicatesses. Il i a dans le plain-chant deux caractères dont le contraste frappe singulièrement. D'abord, c'est la simplicité, le naturel qui lui assure la perpétuité ; le plain-chant c'est la prière chantée du peuple ; son texte, c'est la prose ; son mouvement, c'est la récitation ; sa prosodie, c'est l'accentuation populaire ; sa tonalité, c'est la tonalité du peuple, l'échelle naturelle des sons.

Gontier's method is a rejection of both equalism and mensuralism made on the basis of spiritual and religious arguments. The spiritual terms in which Gontier describes plainchant in this quotation are typical of writing about the Gregorian repertoire from within the Catholic Church in general and the Benedictine Order in particular in the nineteenth and early twentieth centuries. The exalted position that the chant holds in Gontier's worldview demands that it have a rhythm all its own, free from every system and from every taint of measure. For Gontier, to fall into either equalism or mensuralism is to destroy the plainchant (6).

In this system, the notes stand in a relationship of inequality one to another, but the inequality is not measurable in the way that time is measured in music, since the notes follow the rhythm of speech. As with any form of speech, fluency in plainchant can be acquired only by hearing it pronounced by others, living with the language in one's daily life. Acquiring the rhythm of chant is a natural process, gained in the choir stall rather than with the study of rules. The idea of naturalness also extends to the tonality of plainchant, which uses the diatonic scale only. Chromatic alterations (most often involving the addition of a semitone below the final) and mensural proportions between notes are related in that they promote a worldly artifice, in opposition to the natural order of plainchant (77–78).[7]

Because the model for the rhythm of plainchant is that of spoken language, the method cannot be completely prescriptive in the way that a musical treatise dictates precise relationships between different note values. Instead, Gontier begins by classifying segments of plainchant, which correspond to different sense units of speech. From small to large, Gontier defines the following groups: formula, syllable, neume, distinction.[8] A formula is a small, inseparable group of notes

Mais élevons nos coeurs, *sursum corda*, il y a dans le plain-chant un sens mystérieux et intraduisible, c'est l'accent de la foi et l'onction de la charité ; c'est une humilité pleine de confiance, qui semble couloir pénétrer le ciel, et associer, dans un concert unanime, les chants de la Jérusalem terrestre aux chants de la Jérusalem céleste. Voilà pourquoi la raideur compassée et inflexible de la note musicale n'a jamais pu être l'expression vraie de la prière publique, parce qu'il y a dans la valeur métrique de la note quelque chose de mondain et d'artificiel, parce que la note mesurée efface autant que possible la signification du chant, au lieu que la récitation, c'est la nature , et que dans la déclamation prosaïque du plain-chant la note et la mesure s'effacent, *numeri latent*, pour faire ressortir le sens tout entier qui est dans le texte et dans la modulation."

7. This connection suggests one avenue of further research. In the wake of the plainchant revival, composers made conscious use of both neo-modal harmony and Solesmes-style unmeasured rhythm as a way to provide an archaic or otherworldly feeling to music. This connection has never been fully explored.

8. By using such terminology, Gontier is evoking a medieval tradition of applying terms borrowed from grammar to

which are drawn together graphically. Gontier's formula corresponds to the normal current usage of the term "neume." Formula is, then, a notational term, while the other terms are drawn from a medieval tradition, exemplified by Guido d'Arrezzo, of equating various units of musical time with grammatical terms. A syllable in Gontier's sense is a short melodic figure of only a few notes, which may either be a single formula (in a neumatic or melismatic chant) or an equivalent musical figure, a melodic gesture of a few notes, in a syllabic chant.[9] A neume is a larger group, composed of several syllables and sung in a single breath. Neumes are separated from other neumes by a pause for breath.[10] Distinctions are divisions of the text and melody into parts, and they come in two sizes. A lesser distinction is equivalent to a neume, but viewed from the perspective of grammatical division rather than practicalities of singing. The lesser distinction usually corresponds to part of a larger phrase, while a greater distinction is the whole phrase. Gontier advocates for a reform of plainchant notation that will restore the shapes of the thirteenth to fifteenth centuries.[11] The notes must be grouped according to the traditional neumatic shapes (the formulas), as these groups convey rhythmic meaning for Gontier.

Gontier divides the plainchant repertoire into syllabic chants (primarily one note per syllable, as in most office antiphons), melismatic chants (many notes per syllable, as in some propers of the Mass), and mixed chants, which feature passages in both syllabic and melismatic styles. Syllabic chants include the prayers and readings as well as settings of the *Gloria*, *Credo*, the litanies, and the psalms, and some antiphons. In these chants the rhythm is entirely in the text; this calls for a performance that gives each syllable only the value that it would have in ordinary discourse (Gontier 1859, 28). The only rule is that it must be sung in such a way that the text is intelligible (28). The tempo of the chant is hierarchical, with the more important parts of the liturgy being sung at a slower tempo.

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music. Desmond (1998) provides a useful and clear overview of this tradition.

9. A "syllable" in this musical sense can contain one or more syllables of text or can indeed be only part of a single syllable of text within the context of a melisma. In practice, in a syllabic chant, the musical syllable is usually coterminous with a single polysyllabic word.

10. It is possible that Gontier is equating *neuma* with *pneuma* or "breath."

11. Gontier is thinking in particular of the square notation common in western manuscripts. The period in question is chosen because it is after the development of the easy-to-read squares but before the development of mensuralism in the style of Guidetti and Nivers.

Proper recitation depends on correct accentuation (11). When considering the time values of the notes, Gontier distinguishes between quantity of time (notes that are sung with a longer duration) and quantity of accent (notes that are called "long" by position as the accented syllable but are sung without lengthening).[12] For Gontier, the accented syllable in Latin recitation is not lengthened in temporal duration. It is "long" only in the sense that its pronunciation with greater intensity lends it an intrinsic quality of importance (an intrinsic length) that is greater than that of the unaccented syllables.[13] Length is reserved for those syllables that are at the end of a semantic unit: the end of a word; the end of a phrase; or the end of a sentence. Each of these endings is marked with a holding out of the voice (*mora ultimae vocis*), as described by Guido. The *mora vocis* may be followed by a breath, but it need not be.

Figure 2.1 illustrates the use of the *mora*; it shows the first verse of the psalm *Dixit Dominus* as sung to the eighth psalm tone. Figure 2.1a gives a version where every accented syllable is shown with a *virga*. If these *virgae* are interpreted as long, the resulting performance would correspond to the style of recitation favored by Guidetti and Haberl, as described in chapter 1. In Guidetti's method, the proparoxytones *Dóminus* and *Dómino* would be sung with the characteristic dotted rhythm that shortens the penultimate syllable of the word. For Gontier, on the other hand, the accent is not marked with length but with dynamic intensity only, or (in the case of *méo* and *méis*) with melodic accent. Length is reserved for the final syllables of words or larger sense units (distinctions). Gontier's *virgae*, shown in Figure 2.1b, show the position of the *morae ultimae vocis*. They are not meant to be interpreted as having any fixed length, but only show the lengthening of a sensible and intelligible reading. The *mora vocis* after *dixit*, for example, would be shorter than that after *méo*. Gontier does not advocate using such a notation in published editions, as it is the responsibility of the singer to learn the proper rules of Latin declamation (34).

The rhythm of speech as applied to the text does not work with melismatic chant, which may contain a large number of notes on a single syllable. For Gontier, the text of a melismatic chant

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12. The decoupling of length and accent remains a constant feature of the later Solesmes approaches as well.

13. The explanation for this intrinsic length belongs to the seventeenth-century polymath Athanasius Kircher, whom Gontier cites to the effect that the greater strength of the accented syllable (as projected by its higher pitch), leaves an impression in the air, so that it is not longer in the mouth, but its image in the air is longer (Gontier 1859, 11–12).

Di-xit Dómi-nus Dómi-no mé-o : séde a déxtris mé-is.

Di-xit Dómi-nus Dómi-no mé-o : séde a déxtris mé-is.
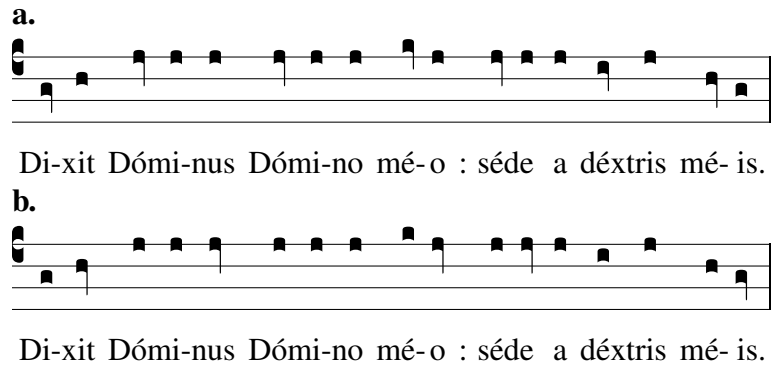
Figure 2.1: Length in psalm recitation, after Gontier (1859, 33)

is subordinate to the melody, so the rhythm of such a chant is to be found entirely in the melody (Gontier 1859, 38). Gontier divides melodic formulas into four categories. While the names of Gontier's formulas are familiar from other lists of neumes, his usage is idiosyncratic.[14] A *clivus* is any descending formula of two or more notes.[15] A *podatus* is any ascending formula of two or more notes. A *quilisma* is any formula that changes direction one or more times. All repeated notes are called *pressus*.

As with syllabic chant, the rhythm of melismatic chant depends on accentuation and length. Just as each Latin word has its accent, each formula has its melodic accent, as determined by the position of the high note, which is usually marked with a tail. The high note is "long" by accentuation, and should be sung with a dynamic accent and without any lengthening: "Plainchant notes are generally short, except the accented note shown by the tail, which is sung with an insistence of the voice without lengthening the note" (51).[16] Consequently, descending neumes start with a dynamic accent on the first note, and the following notes are sung more weakly (44). This rule is the source of the idea of the "sharper impulse" of the Vatican Edition preface, discussed in chapter 1.

The other element of melismatic rhythm is the addition of the *mora vocis*. In syllabic chant, the *mora* serves to separate semantic units (words, phrases, clauses). In melismatic chant, a similar

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14. For later scholars, the *clivis* and *podatus* are two-note neumes. The longer versions are called *climacus* and *scandicus* respectively. A *quilisma* in the modern usage refers to the ascending figure already discussed in chapter 1. Gontier's usage is the same as that of Johannes de Muris in his *Summa*.

15. Gontier's usage differs here from the more common modern spelling of *clivis*.

16. "Les notes du plain-chant sont généralement brèves, excepté la note accentuée indiquée dans la notation par une caudée ; cette caudée s'exécute par une insistance de la voix sans prolongement de la note."

process separates the formulas, syllables, neumes, and distinctions from each other. In the case of the formulas, these are still sung in one breath, so the *mora vocis* is a form of separation brought about with duration alone. While the separation involves the addition of some amount of time, this extra time may be all but imperceptible. In these cases the separation depends almost entirely on the application of the dynamic accent, which corresponds to the grammatical accent of syllabic chant (59). Since this manner of performance depends on the traditional forms of the neumes, the notation of plainchant must be reformed so that it more closely resembles the neumation of the fourteenth century. In this case, the notation can separate the figures from each other and also separate the syllables, neumes, and distinctions. This is the source for the use of white space to show rhythmic grouping that was adopted in the Vatican Edition. As the notes of the chant are organized into larger groups, proportions arise between the groups in terms of number of formulas or number of words.

Gontier likens the process of distinction and separation to three successively more intelligible forms of speech, each of which has a correspondence with the notation of plainchant (70):

1. *Paternosterquiesincoelissanctificeturnomentuum;*

2. *Pater noster qui es in coelis sanctificetur nomen tuum;*

3. *Páter nóster, qui és in coelis, sanctificétur nómen tùum;*

In the first form, a string of words is run together with no separation, accentuation, or distinction. Just as this produces a meaningless speech, the corresponding way of chanting has no rhythm, since it has neither accent nor distinction, which are the two elements of rhythm. In the second form, the words are pronounced distinctly and with separation. This corresponds to a way of singing plainchant that respects the distinction between formulas, but does not group them into larger proportional units (distinctions). Gontier calls this incomplete rhythm. The third version corresponds to a fully realized rhythmic performance, in which the words are distinguished through accentuation, and the larger units are distinguished through their proportionality. While Gontier does not spell out what he means by proportionality, we may observe that there is a symmetry in the

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syllabification of this example: there are eighteen syllables, which divide into two distinctions of nine syllables each. These subdivide into $4 + 5$ and $5 + 4$.

Near the end of the book, Gontier enters into a debate over the interpretation of the writings of medieval theorists. Gontier expresses skepticism of basing chant interpretation on these writings: "The collection of Gerbert [*Scriptories ecclesisatici de musica sacra*, an anthology of historical theoretic sources published by Martin Gerbert in 1784] is a common arsenal, from which each one can take up arms to fight his enemies; the often impenetrable obscurity of the text singularly favors the spirit of system, and each seeker generally finds what he wants to find" (Gontier 1859, 93–94).[17] Gontier's reading of the theorists is in reaction to that of Lambillotte, who cites many medieval sources, especially *Scolica enchiriadis*, which he believed to be by Hucbald, and Guido's *Micrologus*, which he reads as in favor of a proportional relationship between note values. Gontier disputed Lambillotte's translation of key terms; we will revisit some of this historical theoretical evidence later, in the discussion of mensuralism.[18]

Gontier closes with instructions for adapting his method to the Reims-Cambrai edition of the *Graduale Romanum*, first published in 1851. This edition is printed in a proportional or mensural system akin to that of Nivers or Lambillotte. In order to sing from this book, the singer should ignore the written instructions on rhythm and the written note values, and read the notes according to Gontier's method (136–7). A new edition designed to be sung according to Gontier's method

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17. "La collection de Gerbert est un arsenal commun, où chacun prend des armes pour combattre ses adversaires; l'obscurité souvent impénétrable du texte favorise singulièrement l'esprit de système, et l'on y trouve généralement ce qu'on y veut trouver."

18. To give an example of the difficulty involved in the interpretation of medieval texts, Babb (Guido 1978, 70) and Vollaerts (1960, 170) give two different English translations of the opening of the fifteenth chapter of Guido's *Micrologus*. Lambillotte and Gontier both cite the passage, and their opposite conclusions come from their different translations of the word *morula*. For Lambillotte, this refers to note values lengthened proportionally (this is Vollaerts's interpretation as well). For Gontier, this refers to the rests that separate rhythmic groups, which, in an earlier passage, Guido has suggested are somewhat larger or smaller in melodic units of different sizes:

"...sicque opus est ut quasi metricis pedibus cantilena plaudatur, et aliae voces ab aliis morulam duplo longiorem, vel duplò breviorem, aut tremulam habeant, id est varium tenorem, quem longum aliquotiens litterae virgula plana apposita significat" (Gontier 1859, 125).

"...et ainsi il est nécessaire que comme dans les vers lyrique, le chant puisse être frappé en mesure, *cantilena plaudatur*, et que les notes soient distinguées les unes des autres par une valeur deux fois plus longue ou deux fois plus petite" (Lambillotte 1855, 202).

"...et ainsi il faut que toutes ces divisions soient marquées comme on marque les pieds de la poésie; ces coupures doivent être séparées par des pauses ou moitié plus longues ou moitié plus brèves" (Gontier 1859, 128–9).

would await those published by Solesmes beginning around 1880.

2.1.2   Pothier's *Les mélodies grégoriennes*

In his *Les mélodies grégoriennes* (Pothier 1880), Pothier develops the Solesmes tradition's dual concern for melodic and rhythmic restoration, along the lines established by Guéranger and Gontier. Pothier echoes Guéranger on the relative importance of a good performance: "It is, however, better to have a mediocre chant well executed than the most perfect piece badly interpreted" (15).[19] Pothier defines two qualities as necessary for a performance: "Two things give to the succession of sounds the form we deem necessary to make a chant: modulation and rhythm. Modulation results from the order according to which are combined the diverse intervals, which the voice must successively traverse on the scale. Rhythm consists of a certain movement by which the proportion existing between the diverse parts of the melody are rendered sensible (18–19).[20]

Pothier's rhythmic system, based on accentuation and distinction, is a refinement and development of Gontier's. This accentualist approach continued to provide the basis for some chant performances after the adoption of the Vatican edition. David (1919) gives a succinct summation of Pothier's doctrine. The two most important features of rhythm for Pothier remain the accent, now called the tonic accent and associated generally with a relatively high note, and the *mora vocis*, interpreted hierarchically at the end of each word, phrase, clause, and sentence.

Pothier gives a clear definition of the role of the tonic accent that would prove extremely influential, as we shall see in chapters 3 and 4: "The syllables belonging to the same word do not all have the same importance in pronunciation: there is one in each word which must rule all the others, by drawing them to it as around a common center. This main syllable is signaled to the ear by a stronger or more high-pitched intonation, while the other syllables are weaker, darker, lower. It is called by the ancients, the high syllable (*syllaba acuta*); we call it the accented syllable, the acute

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19. "…mieux vaut toutefois un chant médiocre convenablement exécuté, que le morceau le plus parfait mal interprété."
20. "Deux choses donnent à la succession des sons la forme que nous avons reconnue nécessaire pour produire un chant : la modulation et le rhythme. La modulation résulte de l'ordre suivant lequel sont combinés les divers intervalles que la voix doit successivement parcourir sur l'échelle des sons. Le rhythme consiste dans un certain mouvement par lequel est rendue sensible la proportion existante entre les diverses parties de la mélodie."

accent being the accent par excellence. This accent having for first effect, at least for the ancients, to raise the tone of the syllable which is affected by it, is given by them the name of tonic accent" (Pothier 1880, 101).[21] The second main principle holds that the last syllable of each word and each higher sense unit should be lenghtened in order to separate sense groups from each other in time.

While these principles refine and build on those of Gontier, Pothier also describes several new neume shapes (including a survey of many centuries' notation laid out in tables). Pothier hypothesizes that the neumes have their source in accent marks, each of which had an original meaning in terms of the pitch in pronunciation (38–39). Pothier discusses the rhythmic indications of the St. Gall neumes discussed in chapter 1—the Romanian letters and the *episema*, which he refers to merely as the "horizontal stroke" ("le trait horizontal")—which show shortening or lengthening (79). Pothier does not believe that these signs contradicted the manuscripts without the signs, but that all the manuscripts, with and without explicit expressive or rhythmic notations, point to the same conclusion of free rhetorical rhythm (80). In spite of his rejection of the St. Gall rhythm, Pothier does draw on the adiastematic neumes for two new notations with some rhythmic importance—the liquescent and the *quilisma*. The *quilisma* is a special form of the *podatus* where the first, lower note has a special shape related to that of the *oriscus*. Pothier interprets the special note, which usually fills in the interval of a rising minor third, as representing an ornament in which the note before the special note is struck forcefully, followed by a turn around the same note or a mordant, before rising to the high note. In the example shown in Figure 2.2, the first note, A, is embellished by the turn or mordant, and the second note disappears into the ornament. The whole formula would be sung either as ABAGAC or AGAC (93).

Pothier simplifies Gontier's organization of melodic groups by using only the terminology ascribed to Guido: the melody is composed of musical syllables, neumes, and distinctions (140).

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21. "Les syllabes qui appartiennent à un même mot n'ont donc pas toutes la même importance dans la prononciation : il en est une dans chaque mot qui doit dominer toutes les autres, en les attirant à elle comme autour d'un centre commun. Cett syllabe principale est signalée à l'oreille par une intonation plus forte ou plus aiguë, tandis que les autres syllabes sont plus faibles, plus obscures, plus déprimées. Elle est appelée par les anciens, syllabe aiguë (*syllaba acuta*) ; nous la nommons syllabe accentuée, l'accent aigu étant l'accent par excellence. Cet accent ayant pour effet premier, du moins chez les anciens, Accent aigu d'élever le ton de la syllabe qui en est affectée, est désigné par eux sous le nom d'accent tonique."
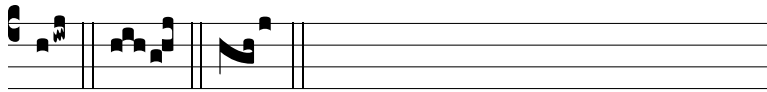
Figure 2.2: Pothier's Interpretation of the *Quilisma*

Pothier develops the idea of the *mora vocis* along the lines established by Gontier. Pothier clarifies that all durational lengthening of notes is reserved for divisions between sense units and thus applies only to the ends of self-contained groups. For this reason, the last note of a syllable within a word is never lengthened, since the sense of the melody and the word always moves forward into the next syllable. Pothier calls this the "golden rule" and attributes it to Elias Salomonis (127).[22] The lengthening of notes may apply to more than one note at the end of a group. This rule applies particularly to the end of the entire chant. Borrowing an image from Guido—a horse slowing down before arriving at its destination—Pothier suggests that *mora vocis* on the final note of a phrase or a chant is prepared by gradually slowing down and lengthening the preceding note or neume (147). If the final note is a *punctum*, the penultimate note or neume is lengthened. If the final note is part of a two-note neume, the penultimate neume is lengthened less. Figure 2.3 shows two versions of the same cadence. In Figure 2.3a, the last four notes are lengthened, with weight on the penultimate E. In Figure 2.3b, the descending neume is lengthened less, since most of the extra time is taken up by the final two-note neume.

a.

su-   mus

b.

su-   mus
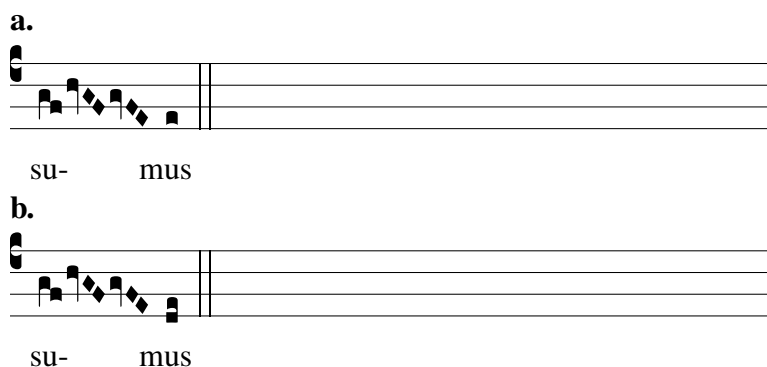
Figure 2.3: Lengthening at the cadence, after Pothier (1880, 148)

At the level of the formula, as well, Pothier suggests more flexibility and lengthening than

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22. Dyer (2018, 67) gives the original source for this rule.

Gontier. The most important rule is that notes drawn together on the page should be sung in as connected a manner as possible (87). Within that connected smoothness, there may be rhythmic nuance at either the beginning or end. In general, final notes of groups are long (as a way of separating them from following groups), but sometimes initial notes are also long, if they are high notes (Pothier 1880, 165). This lengthening of the first note seems related to Gontier's idea of a note that is "long" by position. For Gontier, these notes not sung with any extra duration, but Pothier does not distinguish between the two kinds of long notes; a slight agogic lengthening is probably intended on all these accented notes. Formulas of four or five notes are often subdivided and sung with a slight emphasis on one of the middle notes, so that they are divided $2+2$ or $2+3$ (165). This division is more marked if the note beginning the second half-formula falls on the pitches F or C. These two pitches are structurally important in every mode, since they fall in the scale above the two semitones.[23] In organizing all these divisions, the performer must be guided by the inner sense of proportion given to the ear. This proportion among the rhetorical divisions is what constitutes rhythm (179).

To tie all these ideas together, Pothier gives a complete set of instructions for singing an entire proper chant from a Mass. The chant is the communion antiphon *Justus Dominus*, from the Wednesday after the second Sunday of Lent. Pothier prints a modified version of the score, with numbers above each formula giving specific rhythmic instructions. Figure 2.4 shows Pothier's score, followed by a translation of his numerical key.

The text is from Psalm 10: "The Lord is just and hath loved justice; his countenance hath beheld righteousness." As is typical with psalmodic texts, there is a division into two parts (distinctions), each of which carries the same meaning expressed in different ways. The division at the semicolon aligns with the full barline, which indicates "a complete pause with a breath." The double barline at the end of the chant signals the "final repose." Each distinction divides further into neumes as indicated by the half barlines, which indicate "a half pause with or without a breath." Following the sense of the text, the first of these divisions (before *et*) would seem to be the longest. The third

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23. This emphasis on F and C is related to the choice of these two lines as the first lines to be notated on the musical staff. Later, these two lines receive the clef, which literally designates the "key" notes.

1. An accented syllable.

2. A weak syllable with an empty beat ("temps vide") or slowing: *mora ultimae vocis*.

3. A common syllable, having only as much value as is needed for it to be cleanly articulated.

4. A group pronounced with a single impulse of the voice with a final pause in the manner of a fermata.

5. A group of joined notes, without stopping either in the middle or at the end of the group.

6. A group of joined notes, with an empty time or a slowing of the voice without a silence.

7. Two groups of joined notes, with a *pressus* at the juncture between the groups.

8. A group beginning with two notes united in the manner of a syncope and closing with a barely-audible slowing of the voice.

9. A group joined to the preceding and pronounced for that reason in the manner of a *torculus*, i.e., lightly.

10. A group of notes joined and prolonged on account of the rest.

11. A group of joined notes with a light accent on the highest note.

12. A note emphasized to prepare the *quilisma*.

13. A group of three sounds, the first of which is a trill (which, if it is to be simplified, should be sung very lightly without sudden movements[i.e., without any noticeable shortening of the note]), the last receives some bite (*mordant*) to prepare the second *quilisma*.

14. A group beginning with a trill and finishing with a light slowing of the voice.

Figure 2.4: *Justus Dominus* (Pothier 1880, 168–9)

division, in the middle of the word *dilexit*, would be the shortest.

In the first word, *justus*, the notes are unequal in length because of the accent. The accented syllable falls on the high note, which is short, followed by the final syllable on a lower pitch, and with a *mora ultima vocis*. *Dominus*, a proparoxytone, has the short accented syllable followed by another short syllable "given only enough time to be cleanly pronounced," and a formula on the final syllable. This is to be sung with a single impulse of the voice and with a hold on the ending.

Et justitiam contains three two-note neumes; these are sung connected but without any rhythmic differentiation. Since the melodic culmination happens at the end of a formula, there is no special marking of the accented syllable.[24] The *punctum* at the end of *justitiam* is lengthened by a *mora vocis*. *Dilexit* contains a long melisma (sixteen notes) on the final syllable. Pothier divides this into five groups, each of which comes with a fresh impulse, as shown by the rewriting of the vowel under each group.

1. The *clivis* is sung "with a slowing of the voice" to distinguish it from the group that follows.

2. This five-note formula contains two groups joined by a *pressus*. The *pressus* should be emphasized (Pothier 1880, 93), and the group should conclude with a lengthening (with or without a breath) as dictated by the barline.

3. This three-note formula, a *torculus*, is sung with a fresh impulse and "with a slowing of the voice" to distinguish it from the group that follows. We might call it anapestic, since its notes are short-short-long.

4. This group has a fresh impulse, with an accent on the *pressus* "in the manner of a syncope" followed by a "barely sensible slowing of the voice." The slight slowing signals the greater point of division at the full barline.

5. The closing two-note neume, a *clivis*, gets a fresh impulse of the vowel, but this should be very light. Pothier suggests that this figure should be sung in the manner of a *torculus*; the high note should be sung lightly and in a way that joins it to the previous note. The ending of this distinction should have a full slowing and a rest to mark the division of the barline.

Aequitatem has three single notes followed by a five-note group on the final syllable. The rhythm of the first three notes is driven by the pronunciation of the text, without any special length on the accented syllable. The five note group is sung as two distinct groups, with a lengthening on the

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24. Pothier suggests that the accent, the primary means of rhythmic organization in syllabic chant, can disappear entirely in melismatic or neumatic chants (Pothier 1880, 169).

second and fifth notes. By contrast, the five-note group that begins *vidit* is sung with no lengthening. Pothier implies that both notes of the final *clivis* are lengthened because of the barline and the division of the words.

Vultus is set with seven notes on the first syllable and nine on the second. The group of seven divides as $4 + 3$, with a lengthening of the fourth note to distinguish the formulas. The second formula has no lengthening because of its position at the end of a syllable within a word (the "golden rule"). The second syllable divides into three groups $1 + 4 + 4$. The first note is emphasized to prepare the *quilisma*. Pothier describes the second group as three sounds, which suggests that he considers the B and the C of the *quilisma* to be one note containing an ornament. Following his practice for the execution of this ornament, the B is either subsumed in a turn A-B-A-G-A or disappears entirely, to be replaced by the mordant A-G-A. If the ornament is not performed, the B is sung lightly but without shortening. The last note of this group is emphasized because of the second *quilisma*.[25] The last group of *vultus* ends with a very slight slowing to separate the words. *Ejus* is set with a typical cadential figure. The third note, the culminating note of the formula, is sung with an accent, including a possible slight lengthening. The final cadence of the chant should be sung with the greatest amount of slowing of all.

This detailed example suggests two elements of the Old Solesmes method that are of primary rhythmic importance. Both of these pertain to arranging and organizing rhythmic divisions at various levels. First, the text is the primary source of the rhythmic interpretation, and this is accomplished mainly by setting words apart from each other with length: "These different ways of performing either the single note or the formulas themselves are almost always, we see, motivated by the text" (169).[26] Pothier identifies a *mora vocis* on every word of the chant except for *et*. The length of these separations is hierarchical and follows the sense of the words. Second, at the level of groups within syllables, small and variable amounts of lengthening (what other writers might call agogic accent)

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25. This final note receives "some bite" ("du mordant"). It is unclear whether Pothier is speaking of the ornament called the mordant or whether he means a particularly sharp attack. This latter interpretation was taken up in the Vatican Edition preface, as discussed in chapter 1.

26. "Ces manières différentes d'exécuter soit la note simple, soit les formules elles-mêmes, sont presque toujours, on le voit, motivées par le texte."

distinguish the individual formulas from each other by separating the formulas slightly in time. In longer melismas, each new group receives a fresh impulse of the vowel and ends with a slowing or lengthening of an amount proportional to the sense of the chant as a whole.

2.2   THE CLASSIC SOLESMES METHOD

The classic Solesmes method developed by Mocquereau is summarized in the *Liber usualis* in the introductory chapter on interpretation (Benedictines of Solesmes 1961, xvii–xxxix). *Le nombre musical grégorien* (Mocquereau 1908, 1927) offers a more thorough treatment and should be considered the definitive statement of Mocquereau's theoretical ideas. Much of the material in these books was first published in serial form between 1901 and 1905 in *Paléographie musicale* (Bénédictins de Solesmes 1901). More concise summaries of the Solesmes method may be found in books written by Mocquereau's students and associates (Gajard 1943, 1960; Suñol 1930). The Solesmes method became widespread in Catholic liturgical-music circles in the United States in the early twentieth century, with the most notable work being Justine Ward's adaptation of Solesmes rhythmic ideas into a complete curriculum for elementary school music education (Combe 1987; Ward 1949). A recent textbook series associated with the Abbey of Fontgombault and based on the classic Solesmes method has enjoyed some official approval by the Roman Catholic hierarchy, as evidenced by the introduction written by a member of the college of Cardinals (Schola Saint Grégoire 2016).

The present discussion is limited to the aspects of the theory discussed in the first volume of *Le nombre*, which discusses the nature of rhythm but is almost completely silent on the relationship of the text to the rhythmic performance. The second volume, published 29 years after the first, deals almost entirely with the relationship of text and music. This will be addressed fully in chapter 3, since it has very broad implications for Mocquereau's theory as a general theory of music. For now, following Mocquereau's own precedent, I will only consider the theory as it applies to the interpretation of Gregorian melodies.

Mocquereau's method shares some features of Pothier's earlier, free-rhetorical method, espe-

cially the use of the *mora vocis* as a point of division and the sense of the Latin tonic accent. But in other ways, it builds a system on a different foundation: the idea of an elementary unit of time more abstract than the indeterminate amount of time spent pronouncing an individual syllable. This abstraction is strongly reinforced by the absence of the consideration of text in Mocquereau's first book-length treatment of the subject.

2.2.1 Simple and Composite Beats

According to the classic Solesmes method, the basic unit of time is the simple beat (*temps simple*).[27] This beat is roughly equal in time to the average value of the individual syllables of a text, as they are chanted in the context of a psalm tone or other recitation formula. Every note printed in the Solesmes editions shares this basic value, even though the singing of chant in a measured or metronomic way is to be avoided as too mechanical. This amounts to a kind of rough equalism, tempered in performance by various practices of lengthening, expression, and nuance. The Solesmes books use the eighth note to depict the simple beat in the editions using modern notes. This time value can be stretched or compressed, but it is never divisible; there are no sixteenth notes in the Solesmes books (Mocquereau 1908, 37).[28] The note value can be multipled in certain neumes, such as the pressus and the strophicus, which are generally treated as single long notes, or by the *mora vocis* that occurs at the ends of groups. The *mora* is notated with a dot, which is interpreted as doubling the length of the note. This introduces, in addition to equalism, a mild form of mensuralism.

These double-length notes are no longer a simple beat, but are formed of the composition of multiple simple beats into a single note. This is the simplest instance of a longer unit of time called the composite beat (*temps composé*). Mocquereau limits the duration of the composite beat to either two or three simple beats, since any longer stretch of time can be divided into composite beats of

27. Previous English translations of Mocquereau's work and related theories have used the term "elementary pulse," in order to avoid the connotations of the word "beat."

28. The notation symbols of the published Solesmes books only show nuances of slowing, as marked by the horizontal *episema*. Nuances of quickening occur in performance (as can be heard on the recordings of the monks of Solesmes conducted by Dom Gajard), but these are either not notated or are only notated in unofficial and unpublished books such as the Argentan Gradual discussed in chapter 1. In addition to these symbols, the method assumes a certain amount of flexibility of tempo.

either two or three beats. Mocquereau believed that this perception of rhythm in groups of either two or three is a basic fact of human perception, and he cited research carried out at Harvard into the nature of musical cognition in support of this claim (Mocquereau 1908, 8–9, n. 1). In addition to the elementary case, where a single note is held out for the duration of an entire composite beat, composite beats can also be formed by a grouping of two or three individual notes. According to Mocquereau, if we hear a series of notes moving at the speed of simple beats, we will naturally group them into composite beats. This mental process of grouping may be influenced by some differentiation between the notes, in the dimensions or pitch, timbre, duration, or intensity, in a manner to be described presently, or the grouping may be supplied only by the mind of the listener in an undifferentiated series. This process of mental grouping is not yet *rhythm* in Mocquereau's sense, since it is an abstract mental phenomenon rather than a process of real motion or movement. Mocquereau calls this process "analysis by composite beats" (70). The structure of composite beats is an abstract framework over which the rhythm of a chant is laid. Analysis by composite beats is a central part of the classic Solesmes method.

2.2.2   Rhythm: Arsis and Thesis

Mocquereau defines rhythm as the principle that gives order to movement, drawing on a classical definition by Augustine of Hippo and Plato (41). As discussed above, grouping into composite beats may be associated with some kind of differention in intensity, duration, pitch, or timbre. Movement (and, consequently, rhythm) always arises from such a differentiation, usually in more than one dimension at a time. In the simplest case, rhythm arises from a pair of notes, which differ in some respect from each other. Rather than merely grouping these notes, we experience the succession of the two notes as a musical motion. The organized, unified, and indivisible movement that we experience is another kind of fundamental musical unit: a "simple" or "elementary" rhythm ("rythme simple").[29] Since the rhythm is a kind of motion, it has a beginning and an end, or

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29. As with many other French writers, Mocquereau uses the word rhythm to refer both to a specific unit of music, as here, as well as the abstract concept of temporal organization. I will adopt his usage rather than substituting a clearer English phrase like "rhythmic segment," since the context should clarify which meaning is intended. Earlier English translations prefer the term elementary rhythm. I will use the two versions interchangeably.

a launching of energy followed by a dissipation of that energy. These are the arsis (rise) and thesis (fall), or, to use Mocquereau's terms, impulse (*élan*) and repose (*repos*). As in the kinetic motions described by physics, a musical motion begins with an impulse and ends by coming to rest. Mocquereau illustrates this idea with a picture of a golf ball being hit by a club (108). The movement of the ball is a unified and indivisible event, with the ball being set in motion by the impact of the club. The ball traces an arc, rising into the air (arsis) and falling back to the ground (thesis), moving from the initial impulse to the final state of rest. The simple rhythm, rather than the simple beat, is the true fundamental unit that measures the experience of musical motion.

The rhythm formed between two notes may be either binary (if the notes are roughly equal in duration) or ternary (if one is twice as long as the other). Based on the similarity of these motions to the feet of classical metrics, such rhythms are classified as spondaic or iambic respectively; they serve as the schema for all other rhythms. The iambic example more clearly illustrates the process, since the difference in duration between notes makes the sense of motion and rest more apparent. In the ternary elementary rhythm, we imagine a succession of quarter notes alternating with eighth notes. Since the eighth note is shorter in duration, it serves as the impulse, while the long duration of the quarter note carries the quality of rest. Consequently, the ternary elementary rhythm is an eighth-note upbeat (arsis) followed by a quarter-note downbeat (thesis).[30] The binary elementary rhythm is, by analogy, a similar motion from upbeat to downbeat, even though there is no differentiation between the two notes with respect to duration.

In modern musical notation, the downbeat (thesis) is always drawn to the right of the barline as a matter of notational convention. In a succession of multiple musical rhythms, the space between the barlines contains a downbeat and the upbeat of the next rhythm motion. The rhythms, then, always sit astride (*à cheval*) the barline rather than falling between two barlines.[31] In Gregorian

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30. The greater the difference in duration between the arsis and the thesis, the greater will be the sense of *élan* and repos. If the arsis is a sixteenth note rather than an eighth, we will naturally hear this as containing a more active sense of motion (Mocquereau 1908, 45). One could extend this example to the characteristic double-dotted rhythm of the French overture of the seventeenth and eighteenth centuries, which would convey even more energy with its rhythmic motions.

31. This usage only refers to modern notation and differs from the usage of barlines in plainchant editions, where the barlines are used to show various levels of rhythmic division (50). The idea of a rhythm falling astride the barline is drawn from Lussy (1874), as we will explore in chapter 4.

chant, the unit of time between the barlines, consisting of a downbeat of one simple rhythm and the upbeat of the next, is interchangeable with Mocquereau's composite beat.

In his theoretical and analytical writings, Mocquereau represents the arsis and thesis with a curve drawn above the staff, mimicking the motion of the conductor's hand (the *chironomy*) in shaping the rhythm. Initially this is done as a grouping device; it shows the union between the arsis and the thesis within the sweep of a single movement (Mocquereau 1908, 46). Later these curves take on more analytical significance. The curve traced by the director's hand as it moves through the air and the curve drawn by the pen above the staff make a rise on the arsis and a fall on the thesis. Figure 2.5 shows a ternary elementary rhythm in both Solesmes plainchant notation and modern notation with the chironomic curve.
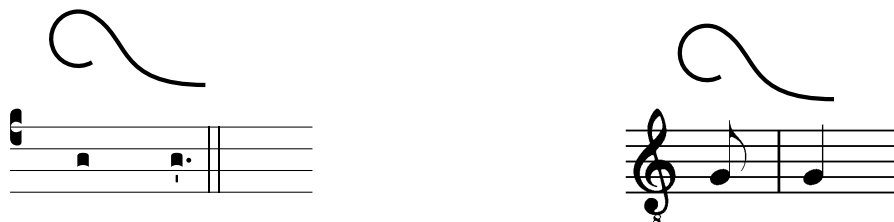
Figure 2.5: A Simple Rhythm

2.2.3 The Ictus

In the Solesmes plainchant notation, the thesis is shown by the vertical *episema* (also called the mark of ictus) drawn in vertical alignment with the note to which it applies rather than by the use of measures or barlines. The composite beats of the chant are groups of two or three simple beats that begin with a simple beat carrying the ictus. At the same time, the ictus is always the end point (thesis) of an elementary rhythm. For Mocquereau, there is no substantial difference in meaning between the notation of chant, where the beginnings of the composite beats are shown with the ictus mark, and the notation of modern music, where the composite beats are the measures, that is, the time span between two barlines. Because of the ictus's double function, a succession of rhythms and measures (or composite beats) overlap like a brick wall, as shown in Figure 2.6. The curves

above the staff show the rhythms, and the brackets below the staff show the composite beats.

Figure 2.6: Composite Beats and Simple Rhythms (after Mocquereau 1908, 71)

The placement of the ictus, and the reckoning of composite beats, is entirely editorial and does not depend on any information in any manuscripts of plainchant or medieval treatises. The Latin word *ictus* (pl. *ictus*) means "blow" or "stroke," and Mocquereau borrowed its usage from contemporary classicists, who use it to discuss poetic rhythm in Greek and Latin poetry.[32] In classical metrics it has a meaning of "pulse" or "beat." This rhythmic usage exists in some ancient sources, beginning with the playwright Terence and most famously in Horace's *Ars poetica*, where Horace describes the *senarius*, a type of line used in dramatic verse, as having six beats ("senos ictus").

The use of the ictus mark within a Gregorian score to show the downbeat resembles the edition published by Hermesdorff, as discussed in chapter 1. For Hermesdorff, the ictus was associated with an accent, and this was an important structural feature of the performance. For Mocquereau, the downbeat (thesis) has no intrinsic quality of stress or accent. The disagreement between these two authors corresponds exactly to a contemporary disagreement among classicists. This debate has not been settled since. In Mocquereau's time, there were two schools of thought, one favoring a heavy, weighted accent coinciding with the ictus, and one favoring an ictus carrying no weight or intensity but being only a regularly recurring beat or pulse. Mocquereau (along with many French classicists) preferred the latter view, while Hermesdorff preferred the former.

Within the classic Solesmes method, the ictus has only the organizational function described above. If one were counting a chant melody while tapping along, the ictus would mark the beats that one would tap (occuring every two or three simple beats) or count as "one." The ictus is an

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32. The use of the term ictus within nineteenth music theory is discussed below in chapter 4.

organizational tool for theorizing the rhythm of a chant, but its downbeat function does not imply stress, emphasis, or accent. In Mocquereau's system, the accentuation and stress that occur in the performance of plainchant are entirely a result of the words and melody, and the placement of the accent may fall freely on either part of the simple rhythm (Mocquereau 1908, 59–60). This is illustrated by the image of a painter tracing a curve; any part of the curve may receive more intensity by the painter's control of the brush, as shown in figure 2.7. The singer of chant has the same amount of control. Mocquereau provides a series of exercises to allow the singer every possible combination of dynamic shape within a rhythm (63–66).
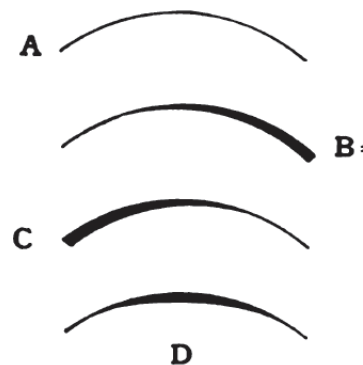
Figure 2.7: Variable intensity (Bénédictins de Solesmes 1901, 179)

2.2.4   Expansions of the Idea of Rhythm

The simple rhythm is, then, quite flexible with regard to dynamic and melodic shape, being only a single unified motion of arsis and thesis. Just as simple beats may be placed together into a rhythm by means of motion, composite beats can also be placed in a rhythmic relation with each other by differention and motion. In other words, the rhythm may be expanded so that either the arsis or the thesis may contain a composite beat rather than a simple beat. In each case, the notes are grouped by their position within the basic motion of rise and fall or *élan* and *repos*, depending on whether a note is felt to occur before or after the arrival point of the downbeat. The more notes there are in the arsis, the greater will be the sense of impulse. On the other hand, the more notes there are in the thesis, the less will be the sense of rest, since the finality of the quality of rest relies on the

longer duration of a single note (the *mora vocis*). Mocquereau calls the process of breaking music into such rhythms "elementary rhythmic analysis" (70). This form of analysis provides a very close view of the individual rhythmic motions within a very short passage of chant, comprising no more than six notes.

By combining the two forms of analysis—elementary rhythmic analysis and analysis by composite beats—we arrive at a more thorough way of thinking about longer melodic groups, since the successions of rhythms and beats overlap with each other. A phrase of music longer than six notes will necessarily contain multiple composite beats and multiple elementary rhythms, with each succession being organized by the recurrence of ictus. In addition to the simple successions, we can also imagine larger musical motions, where a musical gesture begins on a downbeat and moves into the next downbeat. Returning to the simile of the golf ball, the moment at which the ball is launched is an arsis with respect to the ball, but an arrival point or thesis with respect to the club, so that the motion of the club and the motion of the ball are joined together by the fusion of two elementary rhythms (110). This longer type of rhythm, in which the arsis or the thesis contains more than one composite beat, is called a compound rhythm ("rythme composé").[33] Every composite beat forms part of a compound rhythm and is categorized as either arsic or the thetic at this higher level. In "rhythmic analysis by arsis and thesis" (70), the analyst, relying on the groups defined by the previous forms of analysis, finds the larger rhythm motions that operate across timespans of multiple composite beats.

For instance, consider a melodic gesture consisting of three composite beats. If this gesture is a rhythmic unity, the analyst will identify it as one compound rhythm. The next step in the analysis is to describe the way each of these beats function within the rhythmic motion. The second composite beat will always have a double function, as an arrival point to the motion begun in the first beat and as a timespan that itself carries the motion forward to the third beat. The first beat will always be an arsis, since it initiates the rhythmic motion, and the third beat will always be a thesis, since it marks

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33. The English term "compound rhythm," which I have adopted here, is widespread in earlier translations of Mocquereau and related theorists. In French, the same word is used as the adjective in the terms "composite beat" and "compound rhythm."

the arrival of the rhythmic motion. Whether the second beat functions as an arsis or a thesis will be determined by the melodic shape; the analyst makes this judgment by ear. In general, if the melody is rising, this beat will be an arsis, but if the melody is falling, it will be a thesis. In either case, the other function—the thetic sense of arrival within a beat that is an arsis, or the arsic sense of departure within a beat that is a thesis—is elided and subsumed into the higher level of the compound rhythm. The analyst's decision has implications for performance. If the second beat is an arsis in this higher sense, it renews and strengthens the sense of impulse, propelling the melody towards the subsequent arrival at the thesis. In the performance of plainchant, this will often coincide with a crescendo or with a slight increase in tempo. On the other hand, if the second composite beat is a thesis, the rhythmic motion has already reached a point of arrival, which means that the beat will be sung with a diminuendo and slowing. Since the music continues, this thesis lacks a sense of closure, even as its function within the motion is one of coming to rest—dissipating energy rather than gathering it. A musical motion will tend to continue until it arrives at a single long note, which provides a full sense of rest or thesis. Mocquereau calls this strongest type of closure an ictic cadence (Mocquereau 1908, 78).[34] If the thesis of a rhythm contains a composite beat with more than one note, it is a post-ictic cadence (79).[35] Such a cadence lacks finality and must be followed by another composite beat, until the music reaches true closure on an ictic cadence.

Analysis by arsis and thesis is generally done by the director of a choir, who communicates all this information to the singers by means of Mocquereau's special form of conducting known as chironomy (103).[36] Chironomy is meant to be a physical representation of the rhythmic motion being sung. Mocquereau envisions several levels of complexity at which chironomy is performed, corresponding to the levels of analysis described above.[37] In the chironomic level corresponding to analysis by arsis and thesis, a composite beat of arsis is shown with a gesture moving to the center

34. Cadence in this sense refers to the ending of any rhythm. Mocquereau's ictic cadence is equivalent to Lussy's masculine cadence. Mocquereau discusses this terminology and prefers the more technical idea of ictic cadence.

35. I.e., a feminine cadence in Lussy's terms.

36. The word comes from the ancient Greek χειρ (hand) and νόμος (law). The inspiration for this idea comes from the adiastematic neumes, which Mocquereau and many of his contemporaries believed mimicked the gestures a conductor makes in leading a choir in plainchant.

37. All the levels have their place. For instance, when teaching a plainchant melody to children or to inexperienced singers, it may be beneficial to show merely the composite beats or even the elementary beats.

of the body (clockwise if done with the right hand) and a composite beat of thesis is shown with a gesture moving away (counterclockwise if done with the right hand).[38] The two possible three-beat compound rhythms are shown in Figure 2.8. This method is not just a way to conduct plainchant but is a method of graphic analysis, in which the function of each composite beat within the larger melody is shown by means of the curve. The first curve shows two beats of arsis and one of thesis, while the second curve shows one beat of arsis and two beats of thesis.

a. Arsis–arsis–thesis
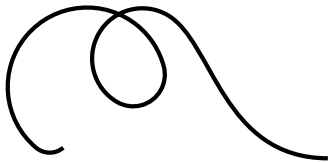
b. Arsis–thesis–thesis

Figure 2.8: Two Different Three-beat compound rhythms

The system of rhythms and beats, derived from Mocquereau's abstract theory of rhythm, is superimposed on the neumes given in a Gregorian melody. In a neumatic or melismatic passage, the neumes are either joined together by aligning with the rhythms (i.e., a neume that is also an elementary rhythm ending on an ictic beat) or by aligning with the beats (i.e., a neume that is also a composite beat, by ending on an off-ictic beat). Mocquereau refers to these as rhythm groups ("groupe-rythme") and beat groups ("groupe-temps") respectively (238).

The process of grouping small melodic motions into a higher-level rhythm (begun by grouping simple rhythms into compound rhythms) continues recursively until the entire melody is gathered into the greater rhythm (*grand rythme*). Each level of this process deals with musical segments of different lengths, as indicated by the lengths of barlines. A quarter barline marks off an *incise*.[39] A

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38. The preparatory gesture with which the conductor commences provides an explanation for the possibility of a melody beginning with an ictic note. This would seem to be a contradiction in terms, since an ictus always has an ending function within an elementary rhythm. In this case, the preparatory gesture before the singing begins provides the arsis to which the initial ictus acts as a thesis (Mocquereau 1908, 111).

39. An English term like section could be substituted for *incise*, but the original word is retained in most English publications about the Solesmes method.

half barline marks off a member (*membre*). A full barline marks off a phrase (*phrase*). In longer chants, phrases may be grouped together into periods (*périodes*). Mocquereau's terminology for the various levels of division owes something both to the Pothier method and to music-theoretic traditions outside of plainchant. Mocquereau's reliance on these sources will be discussed in chapter 4.

A single unit may play different roles at different levels, just as the ictus marks a note that is thetic at the lowest level but may mark the beginning of an arsis at a higher level. Additionally, each member and each phrase has a main accent marked by the note of the greatest dynamic intensity, the climax of the crescendo or diminuendo, to which all the other accents in the group are subordinate. These are called the "principal accent" of the member and the "general accent" of the phrase (Mocquereau 1908, 87). The principal and general accents are determined by finding the accented syllable that is highest in pitch at a given level. The melodic apex of a chant is then an important structural point. This emphasis on pitch height derives from Mocquereau's theory of the nature of the Latin tonic accent and will be discussed in more detail in chapter 3. These accents determine the higher rhythmic structure by analogy with the arrangement, in language, of phrases and clauses into sentences. The portion of a chant before the general accent is the protasis, while the portion after is the apodosis.

2.2.5   Application to Chant Melodies

In the Pothier method, the main tool for grouping was the neume or formula. In the Mocquereau method, the corresponding level of grouping is the composite beat, which may or may not coincide with the neumes. Establishing which notes make up each composite beat is a matter of placing the ictus. Mocquereau gives several rules for finding the ictus in a chant. We may reformulate Mocquereau's ideas in a more modern fashion as a series of preference rules, shown below.[40]

1. Some ictus are marked explicitly with the vertical *episema*.[41]

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40. The ordering of the rules is my own and draws on several different sources by Mocquereau from various stages of his career. Different adherents of the Solesmes method may vary slightly in their placement of ictus, especially in syllabic passages.

41. This rule is not like the others, since it relies entirely on Mocquereau's editorial preference. The ictus marked in

2. Strongly prefer an ictus on long notes: notes with the *mora vocis*, the *pressus*, the note before a *quilisma*, and the beginnings of *strophicus* groups.

3. Strongly prefer an ictus on a culminating *virga* within a group.

4. Prefer an ictus on the beginning of a neume.

5. Count backwards from previously determined ictus forming composite beats of 2 or 3 simple beats, weakly preferring binary grouping.[42]

6. Prefer the ictus not to fall on penultimate syllables of proparoxytones, and weakly prefer the ictus to fall on final syllables of words in syllabic chants.[43]

7. Prefer an ictus on modally significant notes (i.e., the reciting tone of the mode exemplified by a particular passage).
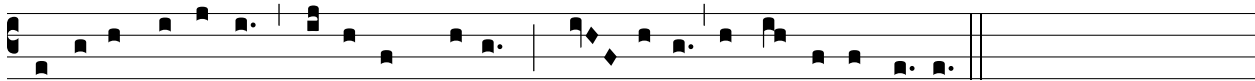
Cantá-te Dómi-no * cánti-cum novum ; laus   e-jus ab extrémis terræ.

Figure 2.9: Antiphon *Cantate Domino*

After establishing the placement and makeup of the composite beats, the next step is to determine the rhythmic structure by identifying arses and theses. In most cases, these follow the melodic contour of the melody; a rising gesture is an arsis while a descending gesture is a thesis. In order to describe the higher levels of a chant, the analyst identifies the principal accents of each member. One of these will also serve as the general accent of the phrase or of the entire chant.

Figure 2.9 shows an office antiphon, *Cantate Domino*.[44] The text is in the usual psalmodic parallel construction: "Sing to the Lord a new song: his praise from the ends of the earth." The half barline divides the phrase into two members, and each of these is divided in turn into two *incises*. Figure 2.10 shows the same antiphon with ictus added according to the preference rules described above. The numbers above the staff indicate which preference rule is evoked in each case.

the editions usually clear up ambiguous cases or are placed for other undefined reasons, occasionally including rhythmic signs in certain early manuscripts. This rule presumes that the analyst is working with an edition prepared by Solesmes.

42. This rule suggests that the placement of ictus is done before performing rather than occuring in the moment while singing, since the analyst must often look fairly far ahead in the melody to use this rule.

43. This is the only rule listed here having to do with language. The reasons for this rule will be explained fully by the discussion of Mocquereau's theory of accent in chapter 3.

44. The asterisk under the first barline marks where the choir enters. The music before the asterisk is sung by either a single cantor or by a small group of cantors.

Determining which beats are arsic and which are thetic is a matter of tracing the melodic curve, which mostly ascends in the first *incise* and mostly descends in the other three. Figure 2.11 shows Mocquereau's complete analysis of this antiphon. Since this example dates from 1901, before the full establishment of the Solesmes rhythmic conventions, each ictus is marked with a red dot above the staff. Each member of the phrase (here used to describe portions of the melody that Mocquereau would later call *incises*) contains a single compound rhythm as described below the illustration and traced by the chironomic curve. The final analysis establishes the principal accent of each member. While this is not shown in the example, this accent falls on the second beat of the first *incise* and the first beat of each of the other three, according to the melodic shape. The first beat of the second *incise* is the general accent, since the accented syllable falls on E, the high note of the chant. The crescendo and diminuendo marks above the staff indicate the greater rhythm, which moves toward and away from this culminating accent. This analysis is the quintessential example of Mocquereau's method.[45] I will return to it in chapter 4 to discuss its relationship to Mocquereau's contemporary music theorists.
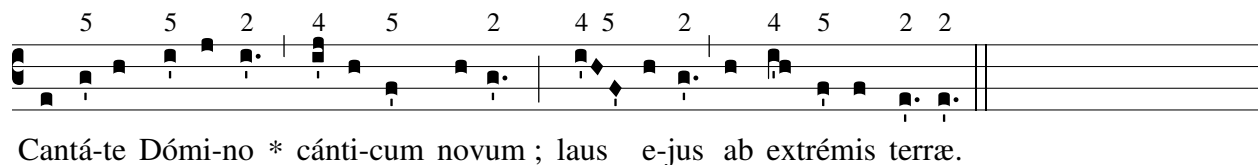
Figure 2.10: Antiphon *Cantate Domino* with ictus added

In order to make a comparison of the two interpretive methods discussed so far, we can apply the same analytical process to the communion antiphon analyzed by Pothier in Figure 2.4. Figure 2.12 shows the melody as printed by Pothier with the addition of ictus marks according to the preference rules laid out above.[46] I have labeled each ictus with the number of the preference rule I used in placing it.

Figure 2.13 sorts the composite beats into rhythms and analyzes the melody in terms of arsis and thesis, following the melodic direction and the accentuation of the text. In the chironomic notation,

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45. Bergeron (1998, 116–17) gives a remarkable meta-analysis of this illustration.
46. I have added the *mora vocis* dots, rhythmic signs, and barlines as printed in the Solesmes Editions of this chant while retaining Pothier's 1880 melodic reading, which differs slightly from the Vatican Edition.

Figure 2.11: Analysis of *Cantate Domino* (Mocquereau 1908, 116)

a curve to the left indicates an arsis, while an undulation down and to the right indicates a thesis. An arsis following another arsis is shown with a loop, while an arsis following a thesis will have a sharp corner. In both halves of the melody, I have added ictic eighth rests, since the melody begins with a non-ictic note. The general accent is shown with the accent mark over *-tí-* of *justítiam*, since this is the composite beat containing the melodic climax of the chant on an accented syllable. The performer will mark this as structural turning point, with the melody divided into the music before (the protasis) and the music after (the apodosis) the general accent.

In this chant, three accented syllables fall on off-ictic notes within the context of syllabic music; these are shown by the marks above the text in Figure 2.13. This preference for the accented syllable falling off the beat rather than on it is a distinguishing feature of Mocquereau's rhythmic system, and we will explore it further in chapter 3. Briefly, since Mocquereau's ictus marks neither stress nor dynamic accent but rather repose and arrival, the most natural placement of the ictus within a Latin word is on the final syllable. In a paroxytone, the accented syllable will fall off the ictus, within the *élan* portion of the simple rhythm (the light part of the measure). The Solesmes method

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Figure 2.12: Analysis by composite beats of *Justus Dominus*

suggests that singing the accented syllable in this metric position results in a delivery that is short and light. In all three cases, the accented syllable is also followed by a melodic descent in the final syllable.[47]

Figure 2.13: Analysis by Arsis and Thesis of *Justus Dominus*

Pothier's analysis of the chant placed great emphasis on gradations of the *mora vocis* within and between words. The Solesmes version marks fewer of these with its dots. The classic Solesmes conception of the rhythmic structure depends instead on melodic shapes and on the occurrence of the downbeat (ictus) every two or three pulses. The tempo is meant to be flexible and to follow the shape of the rhythmic motion in arsis and thesis. In fact, the slackening of the tempo on the thetic portion of the rhythms means that the final syllables of most words will fill a slightly longer time;

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47. In *Dominus* and *aequitatem* the final syllable rises above the pitch of the accented syllable, but this happens only after an initial downward contour.

the differences in performance between Pothier's version and my classic Solesmes version may not be so great. Special attention is given to the accented syllables that do not fall on downbeats; this adds a particular, quantifiable aspect to Pothier's doctrine of the high and brief Latin tonic accent.

2.2.6 Expressive Neumes in the Solesmes Method

In addition to the unnotated rhythmic expressivity of the arsis and thesis, certain neumes and signs also have an expressive and rhythmic meaning within the Solesmes theory; generally these lengthen individual notes. While this expressive lengthening is not central to Mocquereau's Gregorian rhythmics and does not affect the counting or the arrangement of the composite beats, it has been the subject of controversy among chant interpreters, beginning with the polemics over the inclusion of rhythmic signs in the Solesmes prints of the Vatican Edition, discussed in chapter 1. Within the Solesmes style as it has been practiced in liturgical settings, the expressive neumes and signs are often heavily spiritualized.

The horizontal *episema* lengthens the note over which it is placed. It is usually based on an indication of length (*episema*, non-cursive neumation, or significative letter) from an adiastematic source. In the Solesmes method, the amount of lengthening is quite flexible; it may be anything from a near-imperceptible nuance to an actual doubling in value (Gajard 1960, 71). It will have a greater lengthening effect in a thetic composite beat (71). It may also slightly impact the other notes within a neume, in a hierarchical and unmeasurable fashion (71). When several *episemata* appear in succession, they should be interpreted as a broadening of the whole passage (72). Gajard's discussion of these nuances of length expressed by the horizontal *episema* exemplifies the heavily spiritual aspect of the expressive signs to adherents of the classic Solesmes approach:

> The horizontal episema is thus a shade of expression which means that its value is in no way mathematical but depends on numerous factors based on no fixed rules. The interpreter will have to choose the shade of color he thinks best for it. Speaking generally, it is best treated gently. It is an invitation, not to external display, but to enter into one's soul and there to find the indwelling Guest. It is one of the elements which greatly helps to give our Gregorian melodies their contemplative value. (71)

We have seen that in the old Solesmes method, all repeated notes on C or F (the *strophicus*) were treated as a single long note in singing. Mocquereau argues that this was not the historically correct approach, since the neume forms are graphically suggestive of articulation of each individual note.[48] But Mocquereau also believed that the correct interpretation was too difficult to demand of inexperienced or large choirs. In this case, he suggests a compromise in which the choir articulates only on the beginning of each composite beat (every two or three notes within the *strophicus* group); he also suggests that this neume be sung with a marked vibrato (Mocquereau 1908, 338). The other repeated-note neume, the *pressus*, formed by the juxtaposition of two neumes whose adjacent notes are in unison, is sung exactly as in the older Solesmes method, with especial weight and preceded by an acceleration.

Unlike Gontier and Pothier, Mocquereau does not believe that the *quilisma* indicates an ornament (404). Instead, he interprets it as a note that acts retroactively—a light note that causes the previous note to be long (404). If the *quilisma* is preceded by a two-note neume, both notes are lengthened (405). A similar ascending three-note neume is the *salicus*. In chapter 1, we observed this neume at the beginning of the St. Gall version of *Alleluia Ostende*. Based on a comparative reading of adiastematic manuscripts, Mocquereau argued for an interpretation of the *salicus* as a lengthening of the penultimate note. In the Solesmes books, the *salicus* is distinguished from the simpler *scandicus* by the placement of the ictus mark under the penultimate note. This is the one exception to the rule about the ictus mark not equating with added length.

One final and rather different expressive figure is the disaggregate neume. This occurs when a figure of four or more notes, beginning with a melodic ascent, is notated with an isolated *punctum* as the first note.[49] In this case, the separation of the first note from the notes that follow is taken as rhythmically significant, since the figure could have been notated more easily with a neume joining these notes together. The separate punctum is lengthened slightly, as though it were a note preceding a *quilisma* or the penultimate note of a *salicus*. All the expressive neumes of the Solesmes method

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48. Mocquereau also cites several medieval writers in favor of individual articulation of the notes (Mocquereau 1908, 336–7).

49. This *punctum* generally corresponds to an isolated *virga* in the St. Gall manuscripts.

are shown in Figure 2.14. If Mocquereau's system of simple and composite beats applies a bit of

Episema   Strophicus   Pressus   Salicus Scandicus   Quilisma   Disaggregate
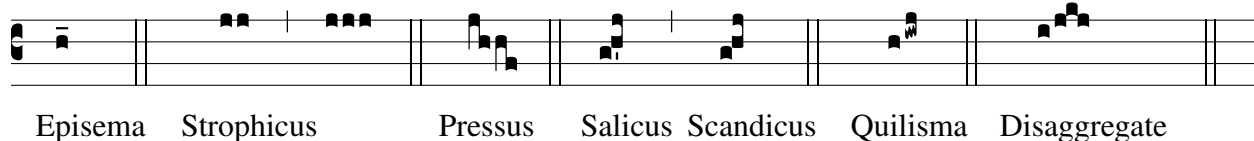
Figure 2.14: Expressive Notes in the Solesmes Method

mensuralism or equalism to Pothier's more free method, the expressive neumes restore some of the

flexibility of the earlier system. The main difference is that this flexibility is generally based on

Mocquereau's interpretation of particular neumes and signs from the early manuscripts. Because

of the controversy over the rhythmic signs, Mocquereau's choice of expressive neumes represents

only a fraction of what he wished to include in the editions, as was saw in chapter 1. The signs that

appear in the Solesmes books, then, are subject to Mocquereau's editorial judgment.

2.3   SEMIOLOGY

The methods of Pothier and Mocquereau represent two closely related but independent systems

of Gregorian rhythm. Each system offers a complete interpretation of a piece of plainchant. Dom

Eugene Cardine's approach is not an entirely new system but rather a new discipline involving

a systematic comparative reading of early neumes. *Gregorian Semiology* (Cardine 1982) is the

foundational text. Mocquereau's system of beats, rhythms, and larger groups is rejected, to be

replaced by a return to Pothier's free oratorical approach based on the words, supplemented by a

close coordination of the earliest, sign-rich neume manuscripts. The basic time value is no longer

the elementary pulse, which is considered too abstract, but the syllable, the flexible and changing

time value in which one utters a syllable of Latin in oration. Agustoni and Göschl (2006) offer a

fuller account of this method of interpretation. De Lillo and Rampi (2019) offer a simpler and more

systematic approach. Guilmard (2022) gives a much more concise account of the method, grounded

firmly in the idea of the time value of the average syllable.

The central focus of Cardine's study is the individual neumes and the way neumes connect to

each other. Cardine saw this as an extension of Mocquereau's work in the interpretation of particular

signs and neumes. If Mocquereau's use of expressive nuances drawn from the St. Gall neumes was limited by the controversies that followed the promulgation of the Vatican edition, Cardine's approach goes much further in its reliance on those neumes. In addition to the far greater number of rhythmic signs to be considered, Cardine's interpretations of the meaning of individual signs generally differs from those of Mocquereau. For instance, Cardine argues that an *episema* on a two-note neume should lengthen both notes, while Mocquereau had interpreted the same sign to indicate a lengthening of sometimes one note only and sometimes both notes (Cardine 1982, 33). Cardine sees both the *quilisma* and *salicus* as emphasizing the final note by lengthening, whereas Mocquereau had suggested lengthening of one or two preceding notes and the penultimate note respectively in these neumes (209). Finally, for Cardine, all neumes made up of repeated notes are always sung with each note articulated, not tied or joined together.[50] This applies both to the *strophicus* and the *pressus* (143).

Cardine also develops the idea of liquescence further than the previous theories. In the St. Gall and Laon manuscripts, the phenomenon of liquescence is shown with a curl added to a neume. An example of this is in the two adiastematic readings of *Alleluia Ostende* in chapter 1, at the end of the first neume. This curl sometimes represents an extra note and sometimes does not.[51] The Vatican Edition only notates the phenomenon of liquescence in the former case; the liquescent note is shown as a small note appended to the larger note. Cardine recognizes that the two phenomena are approached from different sides, which he calls augmentative and diminutive liquescence (219–20). In augmentative liquescence, the note is pronounced in the normal way and then extended slightly in time in order to facilitate the pronunciation of the liquid consonant or diphthong. In diminutive liquescence, the liquescent portion gets its own pitch, which is consequently shortened. Either way, the liquescent neume will occupy a length between one and two times the normal value of a syllable.

While for Mocquereau, the neume signs provided nuances of expressive performance, Cardine solidifies their meaning into signs that augment or diminish the value of a note. These fluctuations

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50. In a whimsical simile, Cardine suggests that the articulation of these notes is extremely light, like a ping-pong ball bouncing on a jet of water at a public fountain (Guilmard 2022, 27n).

51. Compare the alternate readings on *-lu-* in the versions of *Alleluia Ostende* from the 1883 Solesmes Graduale (figure 1.13 on page 42) and the Vatican Edition (figure 1.15 on page 47) for an example of the conflict.
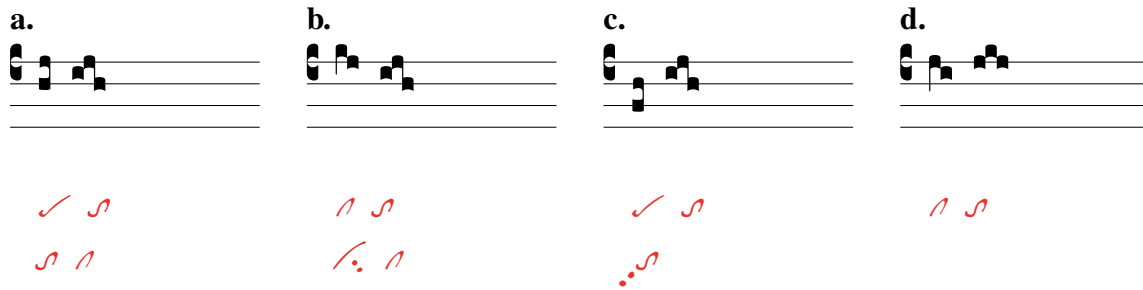
Figure 2.15: Melodic Breaks, after Cardine (1982, 86)

in duration are important for the perception of the organization of time in chant, but they do not constitute rhythmic theory *per se*. Cardine's development of the idea of the neumatic break provides a more foundational way of thinking about that organization. This idea, which is related to the earlier practice of the disaggregate neume, is Cardine's most significant contribution to the theory of Gregorian rhythm. The idea stems from the examination of a question posed in chapter 1 with regard to the earliest rhythmic notations: in a melismatic figure, when there are multiple ways that a scribe might group the notes, why is a particular way chosen over another? Cardine suggests that the act of lifting the pen means that the note just before the break is marked for emphasis, i.e., it is lengthened.

The phenomenon of the break is dependent on melodic context. A high note within a figure (a note preceded and followed by lower notes) may be emphasized by a break. A note midway in a figure (a note with a higher note on one side and a lower note on the other) may also be emphasized in this way. A low note within a figure (a note preceded and followed by a higher note) cannot be emphasized only by the break. To see why, consider Figure 2.15. In the first three examples, the break is meaningful because the neume could have been written in an easier fashion, as on the second line beneath the diastematic notation. But in the fourth case, there is no easier way to notate the figure, so the break between the two neumes cannot have any rhythmic significance. Any melodic break within a melisma likely implies an emphasis on the final note before the break, except when this note is lower than both of the surrounding notes.

According to this logic, the way a scribe would emphasize particular notes in a melismatic passage would be to place them at the ends of neumes. This is precisely the opposite conclusion

on the meaning of neumes from Pothier's. For Pothier, neumes were typically beginning-accented; this effect is heightened with the "impulse of the voice" on the first note of each neume, possibly marked by a slight lengthening. For Cardine, the final note of a neume group is emphasized and lengthened, as the act of lifting the pen is one of the scribe's chief ways to indicate a break in the melodic flow. This is something like the way the earlier theories use the term *mora vocis* to suggest the length at the end of a group, but Cardine's neumatic break operates on a much smaller scale and carries a sense of dynamic accent. In support of his theory, Cardine notes that notes just before a break are often drawn with an *episema* in the St. Gall neumes, but the *episema* is unnecessary, since the break itself carries the same meaning (Cardine 1982, 84).

Figure 2.16: *Justus Dominus*, *Graduale Triplex*

Figure 2.16 shows the version of *Justus Dominus* from the *Graduale Triplex*. I will analyze the rhythm of these signs according to the method of Cardine, which assigns more definite meaning than the more neutral description of the neumes of *Alleluia Ostende* I offered in chapter 1. Working within an essentially free rhythmic framework, the neumes suggest several particular rhythmic nuances. Some are the same as in the Pothier and Mocquereau schemes, while others differ. In the

first section, the two notes on *-mi-* of *Dominus* would be sung more quickly than the single pitches that precede them, while the neume form in Einsiedeln and the letter t in Laon suggest added length at the end of *-nus*, on the first C.[52] In the second section, both notes (A–D) of *et*, both notes (D–E) of *-ti-*, and both notes (A–C) of *-le* should be slightly elongated, as confirmed by both sets of neumes. In the melisma on *-xit*, the three *mora vocis* dots of the Solesmes edition all correspond to signs of added length in the neumes or in the letters (x stands for *expectare* or "wait"). In the third section, there is a sign of speed on the second C in *tem*, followed by an augmentative liquescence at the end of the same syllable. The first and last notes (A and A) of *vi-* should be lengthened on account of the non-cursive neume form in Einsiedeln and the letter a for *augete* in Laon. The two notes (G–F) on *-dit* are lengthened, corresponding to the Solesmes dot notation. In the fourth section, the first note (A) of *vul-* should be lengthened because of the *episema* and the neume form (*virga*) in Laon. The fourth note of the same syllable (G) should be lengthened because of the neumatic break. The last note of this syllable (C) has an augmentative liquescence. In *-tus*, neither neume set shows a *quilisma* on the second note. Instead, both show four long notes with the contour up–down–down (probably A–C–B–G).[53] The B♮ is long in both neume sets. Laon also suggests the final G of this syllable is long (*uncinus* instead of *punctum*). In the typical cadential figure on *eius*, the A is long in both sets (*episema* in Einsiedeln, large *virga* in Laon), as are the final two notes of the chant.

All of the information given by the rhythmic signs suggests lengthening and shortening, but it does not give much guidance on what the starting point is, or what the duration of the note before its augmentation or diminution. The recent book by Dom Jacques-Marie Guilmard, a monk of Solesmes and follower of Cardine, has provided a clarification of this point, suggesting that there is little difficulty when the chant is considered within the context of a monastic practice (Guilmard 2022). Guilmard suggests that semiological interpretation only makes sense in the context of the regular practice of syllabic chant in the form of the liturgical cycle of office and Mass (37).

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52. The sign after the t in Laon is a shorthand symbol meaning *iusum* or "low." This, together with the letter e that follows in St. Gall suggests that there may be a melodic discrepancy between the neumes and the notes of the Vatican edition here.

53. The use of the letter i in this and at the end of the previous syllable likely refers to the two downward leaps of a third (C–A and B–G).

The regular practice of psalmody ensures that the singer is calibrated to the basic rhythmic value, which belongs to a syllable of medium weight, which in Cardine's teaching was known as the "average syllabic value" (Guilmard 2022, 34).[54] In a more melismatic passage, the value of each individual note is somewhat shorter than the "syllabic value," while the notes lengthened according to the procedures of neumatic break, additional letters, or *episemata* regain something of the full "syllabic value." In each case, Guilmard suggests that it is impossible to attempt to calculate precise mathematical relationships between these values, which depend primarily on the word (31). The rejection of mensuralism or proportionalism continues to the present at Solesmes.

2.4 MENSURALISM

In chapter 1, we saw that Lambillotte's approach to plainchant involved a mensuralist understanding of the note values in the earliest manuscripts. Lambillotte (1855) reprints the writings of many medieval theorists in support of this theory.[55] Modern mensuralists draw on the same writers and on more recent semiological research into the nature of the early neumes. Rayburn (1964) summarizes the rhythmic theories of several writers of the early twentieth century, with a marked preference for those with mensuralist theories. Stäblein (1968) provides a more balanced and critical assessment of various mensuralist theories in the nineteenth and twentieth centuries. Vollaerts (1960) and Murray (1963) are representative mensuralist treatises of the modern school. The theories of Vollaerts have been received with approval by some scholars of medieval performance practice (McGee 2018, 586–7).

In essence, the mensuralist theory rests on two central claims. First, chant in the early centuries was sung with two different note values, with a strict time proportion of 2:1 between long and short notes. Second, the long and short notes are indicated by the differentiation in signs in the early notations of St. Gall, Laon, Chartres, and Nonantola. According to the proportionalist theory, this

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54. "la valeur syllabique moyenne."

55. The Solesmes writers, beginning with Gontier, quote the same passages by the same authors, but with a different interpretation of some key terms. In particular, mensuralists tend to translate *mora* as "duration" as it might refer to any note, while the Solesmes authors reserve its use only for lengths or gaps at the ends of rhythmic units.

tradition was lost within the first two centuries of neumatic notation, so that by the middle of the eleventh century, Aribo wrote that the former care for proportion by singers "perished some time ago and is now entirely buried" (quoted in Rayburn 1964, 5).

The medieval writings that mention qualities of long and short with reference to plainchant are too numerous to reproduce here. The most important medieval witnesses (all of whom we have encountered before) are Hucbald (together with the anonymous related works *Commemoratio brevis* and *Scolica enchiriadis*), Guido, and Aribo. Murray (1957) conveniently gathers all this written evidence, compiled from a mensuralist perspective. The evidence depends on the frequent analogy between the sounds of music and the long and short syllables of quantitative poetry.[56] Two examples from Murray's translations will suffice. The bracketed sections are Murray's comments on the medieval text. Murray offers the following quotation from the *Commemoratio brevis*, which stems from the circle around Hucbald:

> In fact all the longs must be equally long, all the shorts of equal brevity; the only exceptions are the distinctions (phrase endings), which in the chant must likewise be observed with care, Everything of long duration must rhythmically concur with what is not long by legitimate and reciprocal durations, and let every single melody run its full length from end to end at the same level of speed. (Murray 1963, 248)

Murray gives the following from Aribo's commentary on Guido's *Micrologus*:

> A tenor is the length of a note which is in equal proportion if two notes are made equal to four and their length is in inverse proportion to their number (i.e. two long notes being equal to four short ones). So it is that in the old antiphonaries we very often find the letters 'c,' 't,' 'm,' indicating respectively 'celeritas' (quick), 'tarditas' (slow), and 'mediocritas' (moderate). In olden times great care was observed not only by the composers of the chant but also by the singers themselves to compose and sing proportionally. But this idea has already been dead for a long time, even buried.

These writers can be read to be discussing long and short notes of proportional length, along the lines of quantitative poetic meter, which was the traditional way of describing rhythm from the time of the ancient Greeks through the middle ages.[57] For Aribo, the practice of singing this way

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56. Indeed, the longs and shorts of classical poetry can also inform abstract thinking about the phenomenon of duration as experienced in more general contexts. See Augustine's *Confessions*, 11.26.33 and 11.27.35.

57. Crocker (1958) offers a useful summary of the ancient tradition of metrics and the issues involved in applying it to Gregorian chant.

had completely disappeared by his time (the end of the eleventh century). Aribo mentions the old significative letters, which we have encountered before in the manuscripts of St. Gall and Laon. For Aribo, these represent a past practice that seems, he suggests, to have had a mensural meaning.

From this insight, the last step is to connect this theoretical tradition with the rhythmic evidence of the neumes we have encountered in discussing semiology. According to Vollaerts and Murray, the isolated *virga* and *tractulus* in St. Gall are long and of a fixed proportional relationship (2:1) to the short notes. The Laon *uncinus* and *virga* are long, and the *punctum* is short.[58] With figures of two or more notes, the cursive versions of the neumes consist of short notes, while *episemata* and non-cursive forms indicate the longer value. A liquescent *virga* is equal in value to a liquescent *clivis* (Murray 1963, 36).[59] Murray interprets the *quilisma* as two ascending short notes (38).

Figure 2.17: *Justus Dominus*, analyzed according to Vollaerts's method

In Figure 2.17, I have transcribed the notation of the Graduale Triplex version of *Justus Dominus* into long and short values according to the rules of Vollaerts. When there is a discrepancy between Laon and Einsiedeln, I have adopted the reading of Laon. Quite a different rhythmic profile emerges from this version, when compared with all the previous versions. Short notes tend to appear in groups of two or four. There are only four ternary groups (either three shorts or long-short) created by the appearance of one or three short notes together: during the melisma on -*xit*, an the long-short unison A figure; on the same syllable at the three shorts A–C–B; at *vi*- on the three shorts C–B–G;

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58. Murray (1963, 11–13) gives a clear summary, in table form, of the note values according this method.

59. This is similar to Cardine's concept of augmentative and diminutive liquescence, but it applies a fixed value to this equivalence.

at *-tus*, on the isolated short A. This prevailing duple ordering means that it is possible to infer a pulse in quarter notes, which persists through most of the chant. Some writers have attempted to go further in this direction by eliminating ternary groups altogether.

2.5 CONCLUSIONS

While these four theories yield very different readings of this single chant melody, we may highlight some similarities as well. The first of these is in the regard for neumes. Mocquereau, Cardine, and Vollaerts share the idea that there was a medieval rhythmic tradition that was already falling into decline at the time of the earliest notations. For Mocquereau and for Cardine, this tradition involved nuances and free speech rhythm—unquantifiable values. For Vollaerts, this tradition is one of proportional note values, as evidenced by theoretical writings roughly contemporary with the earliest notated versions of the Gregorian melodies. For Vollaerts, the neume signs are the only indicator of rhythm, but within the Solesmes tradition shared by Cardine and Mocquereau, these signs are always interpreted within the framework of the rhythm of language. Mocquereau goes much further in applying external concepts to the rhythm of the melody, as his theoretical constructs of composite beat and compound rhythm often overrule rhythmic information suggested by the neume signs. Pothier goes furthest of all, only regarding the early neume signs as confirmation of his theory of grouping by neumes based on later sources.

More fundamentally, all four methods share the idea of a basic note value, whose amount of exactness varies between authors. In order from strictest to loosest, the spectrum runs from Vollaerts through Mocquereau and Cardine to Pothier. On this spectrum, Mocquereau represents some form of mensuralism, even though this is heavily tempered by considerations of language and tradition. In the case of long notes indicated with the *mora vocis* dot, which are interpreted as twice as long as the short notes, Mocquereau comes close to Vollaert's theory. More broadly, Mocquereau's system of composite beats means that his rhythm can be counted, just as mensuralist rhythm can, while accentualist and semiological versions maintain an indeterminacy of rhythm, founded on the basic time value of the syllable of text. In these styles, there is no counting of beats.

As for the differences, it is somewhat misleading to speak of these four approaches as interpretations of the same Gregorian rhythm. It is more accurate to say that each writer is motivated by different goals. All of the writers express some sympathy with the idea of historically informed performance, but each approaches this idea differently. For Cardine and for Vollaerts, a primary goal of chant performance is to recreate the rhythmic practice of the chant as it was sung in the ninth century. For Pothier, the goal is to sing the chant in a rhetorically organized way that represents the long melodic tradition of the diastematic neumes. For Mocquereau, there is some interest in the ninth-century recreation project, but much more interest in rationalizing the rhetorical approach already established by the earlier tradition at Solesmes.

These different motivations and aims suggest that no single interpretation can be objectively considered as correct in every situation. Pothier's method is a creative and aesthetically pleasing way of singing chant as it might have existed in the fourteenth century. The methods of Vollaerts and Cardine perform the same function for the ninth century. Mocquereau's method imposes a system of ictus, arsis, and thesis that is not found in either the theoretical sources or in chant manuscripts but that leads to a more systematic form of Pothier's rhetorical approach. For this reason, most scholars have rejected the classic Solesmes method as a historically informed performance style. Mocquereau, like the mensuralists, claimed to have found the authentic Gregorian rhythm, but his theory is very much a product of his own aesthetic choices.

Indeed, Mocquereau's willingness to incorporate ideas from outside the given text of the chant mansucripts is the most distinctive feature of his approach, compared to the other approaches discussed. Mocquereau is not just a chant interpreter but a real theoretician of musical rhythm. Having considered his work only as a performance method for plainchant as we have here, we must now move on to a fuller consideration of Mocquereau's theory. As we have already seen with his comparison of rhythm to physical motion, Mocquereau makes claims about the nature of rhythm that go beyond the particular concerns of the interpretation of medieval liturgical chant and into more universal questions of accentuation and phrase rhythm in music. It is to this broader dimension of Mocquereau as a theorist of accent that we turn in the next chapter.

3   THE CLASSIC SOLESMES METHOD AS A THEORY OF ACCENT

The account of the classic Solesmes method given in chapter 2 recapitulates the theory laid out in the first volume of *Le nombre musical grégorien* (Mocquereau 1908). The theory as described there is built on two pillars: rhythm as the hierarchical organization of movement and the interpretation of neumes. The first pillar, ordering of movement, divides a chant melody into dynamic timespans of energy and repose on multiple temporal levels, from the smallest group of two notes up to the construction of an entire melody. The second pillar, interpretation of neumes, overlays the theory of rhythmic motion onto a melody notated in neumes by placing the ictus on particular notes. This organizes the melody into composite beats, which allow the singer to count and perform the music from the neume-based notation of the Solesmes editions. Reflecting on these two pillars, we see that while the entire book is oriented toward the performance of plainchant, only its second part deals with issues particular to plainchant. The first part—an abstract theory of rhythmic motion—betrays Mocquereau's desire to theorize more broadly about the nature of musical rhythm.

In spite of this, Mocquereau's theory has been received primarily as a performance method of plainchant. My goal in chapter 2 was to present it as such, and to consider it in relation to other available methods with which it has been in dialogue since the Solesmes publications of the 1890s. This dialogue has focused on the second of the pillars described above, the interpretation of neumes. Proponents of semiology and mensuralism have provided alternative approaches to the reading of the earliest manuscripts and have criticized both Mocquereau's interpretation of particular neumes and his reading of the early rhythmic signs in their totality. Given the nature of Mocquereau's work, it is impossible to understand his theory apart from these performance questions, but a consideration of the classic Solesmes method from this perspective alone can only provide a partial understanding

of Mocquereau's rhythmic theory. The final two chapters of this dissertation turn to the aspects of his theory that do not depend on the interpretation of particular neumes or signs.

Considerations of word rhythm, which were so central to both Pothier's and Cardine's theories, were absent from the discussion of Mocquereau's theory in chapter 2, as they are absent from the first volume of *Le nombre musical grégorien*. This omission was strategic, as Mocquereau's complex views on the rhythm of words require a much fuller discussion. The rhythm and pronunciation of the words are the subject of the longer second volume of *Le nombre musical grégorien*, published only near the end of Mocquereau's life (Mocquereau 1927). Most of the substance of his theory of accent had already been published in the seventh volume of *Paléographie musicale*, released serially between 1901 and 1905 (Bénédictins de Solesmes 1901). Some of the contents of the earlier work are reprinted in the 1927 volume, while many other aspects of the theory are expanded on or revised. In this book, Mocquereau develops an account of the nature of the Latin accent that forms a third pillar of his rhythmic theory.

In discussing the method of chironomic analysis given in figure 2.13, I identified the placement of accented syllables on the non-ictic part of the composite beat as a characteristic part of the Solesmes method. This characteristic trait has been the subject of much criticism from other chant interpreters and is one of the most striking qualities of the Solesmes scores. But it is not an incidental feature of Mocquereau's method; Mocquereau considered it the basis of his entire conception of Gregorian rhythm: "The independence of the Latin tonic accent and the rhythmic ictus has always been and will always remain the foundation and the basis of the Solesmes Method" (Mocquereau 1927, 624).[1] While Mocquereau's primary aim is to understand word accent as it relates to Gregorian melodies, we will see that his theory draws on other styles of music and makes theoretical claims about those styles as well. Far from being merely a feature of chant performance in the Solesmes style, this assertion—the independence of accent from ictus—is the most significant element of Mocquereau's work as a music theorist.

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1. "L'indépendance de l'accent tonique latin et de l'ictus rythmique a toujours été et reste toujours le fond et la base de la Méthode de Solesmes."

Mocquereau begins his discussion of accent by defining his terms. For Mocquereau, "a word is the sign of an idea" (86).[2] An idea is a single, unified concept, so the word that represents an idea semantically must likewise have a sense of unity and integrity. Drawing on the writings of medieval grammarians, Mocquereau identifies the principle that unifies the word as accentuation, which is a differentiation between the syllables with regard to their pitch, intensity, length, and rhythm (86). The first three of these dimensions are self-explanatory. By the fourth, rhythm, Mocquereau means where the individual syllables are placed in the rhythmic order, whether they are characterized by the impulse and rising energy of the arsis or the repose and dragging-out of the thesis, as discussed in chapter 2. "Accentuation" is the general term for the organization of the whole word, while "accent" refers specifically to the quality of a single syllable with regard to these four dimensions. In different languages, differentiation between the syllables may arise in only one dimension or in a combination of several. The differentiation of the syllables and the placement of the accent is what animates the word, giving it the quality of unity that ties it to the concept it represents; the accent is like the soul and the word is like the body (88).

Latin, being the language of Gregorian chant, is the language of most interest to Mocquereau. But describing the nature of the Latin accent in terms of the four dimensions is difficult. Since Latin is not a living, spoken language, and since the pronunciation of languages changes over time and varies from place to place, any consideration of how the Latin accent worked in the past is a matter of historical reconstruction. The sources for this reconstruction are primarily the testimony of Latin authors and grammarians, as well as linguistic evidence from changes in spelling over time. In his discussions of the Latin accent, Mocquereau emphasizes that he wishes to avoid the influence of modern languages. Regional variation in the pronunciation of Latin has been remarked on since at least the sixteenth century, but Mocquereau wishes to arrive at an understanding of Latin accentuation and pronunciation that is as close as possible to that of the composers of the Gregorian melodies and free from the influence of geography or dialect. In his early works, Mocquereau's

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2. "le mot est le signe d'une idée."

theory of accent draws heavily on Bennett (1898), who argues for a relatively light stress accent in classical prosody. In the second volume of *Le nombre musical grégorien*, Mocquereau goes further by outlining a whole history of Latin accentuation, beginning with the linguistic origins of Latin within the Indo-European family of archaic languages and continuing to the development of the modern Romance languages.

Mocquereau divides the history of Latin into four periods: archaic, before the second century BC; classical, from the second century BC to the fourth century AD; ecclesiastical, in the fifth century and following; and Romance, covering the period of the differentiation of modern Romance languages (Mocquereau 1927, 107). Drawing on contemporary philological works, Mocquereau asserts that archaic Latin had an accent of intensity on the first syllable of the word as well as a pitch accent that was variable within the word (108). During the classical era, Latin developed its characteristic placement of the accent on either the penultimate or antepenultimate syllable, as discussed in chapter 1 (23). At the time of Mocquereau's work, the nature of the classical accent was a matter of some dispute, with scholars disagreeing over whether the accent had elements of both intensity and pitch. Mocquereau notes that German scholars believed that there was a strong intensity component to the accent, while French scholars believed that there was no element of intensity at all and that the Latin accent depended entirely on pitch (113). Unsurprisingly, Mocquereau sided with the French school in this debate (also drawing on the discussion by Bennett (1898)). According to this understanding, classical Latin had no intensity accent at all, but only a melodic accent—also described as a tonic accent or pitch accent—in which the accented syllable would be uttered at a higher pitch than the others. Over the course of several centuries, the accent took on an element of intensity, so that in the ecclesiastical period, the Latin accent had elements of both pitch and intensity, as discussed by grammarians of the period. In addition, ecclesiastical Latin developed a secondary accent, so that longer words are pronounced both with a main accent on the penultimate or antepenultimate syllable and a slighter accent on every second syllable preceding the main accent. For example, in the word *misericordia*, the main accent is on *-cor-*, but there is a secondary accent on *-se-*. According to Mocquereau, it was not until the twelfth century that writers

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begin to describe a durational element to the accent. This marks the final period of Mocquereau's scheme, in which Latin gave rise to the Romance languages, whose pronunciation of the accent lost its pitch dimension and increased in terms of intensity and length.

To summarize Mocquereau's views, the classical accent was purely melodic, with no element of intensity or lengthening. Over the centuries of the era of the Roman Church, the accented syllable took on first an element of intensity and subsequently an element of lengthening as the Latin language evolved into the Romance languages. The beginning and end of this historical narrative were and are widely accepted. For modern classicists, there is widespread agreement both that the archaic accent was a stress on the first syllable, as implied by phonetic evidence involving the transformation of vowels over time, and that the accent of late Latin (Mocquereau's Romance period) was one of intensity (Allen 1973, 151). The middle of Mocquereau's narrative, describing the nature of the classical accent and its immediate successor in early centuries of the Church, remains in dispute. Allen (1973, 151–4) provides a critique of the French approach on logical and phonetic grounds. Allen argues that it is more logical for the Latin accent to have stress from the beginning and to change over time only by losing its melodic qualities. The evidence of Latin writers (as cited by Mocquereau and other French scholars) suggests an entirely melodic accent, but for Allen this reflects a conscious imitation of the accent patterns of Greek, which more obviously lacked a stress accent, rather than the actual pronunciation of Latin. Given the fact that the phonetic evidence described by Allen and the testimony of the Latin writers cited by Mocquereau are in disagreement, it is unlikely that any definitive determination is possible.[3]

For Mocquereau, then, the central feature of the classical Latin accent is its tonic character. From this idea, he develops an elaborate theory of accentuation in which classical pronunciation is idealized as the basis for musical speech. The accented syllable governs the word by forming the summit of a melodic arch when spoken. The syllables of a word have a different quality depending on whether they are pre-tonic, tonic, or post-tonic: "The pre-tonic syllables run with hastened steps toward the accent; the tonic syllable, short and light but gently rounded, is like the

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3. Rankin (2018, 289–94) offers a list of recent classicists more or less skeptical of a primarily pitch-based understanding of the Latin accent.

keystone of this little rhythmic edifice; the post-tonic syllables, on the contrary, move away from it slowly and as though with regret" (Mocquereau 1927, 244).[4] According to the fifth-century author Martianus Cappella, the accent is the "soul of the voice" ("anima vocis") and the "seedbed of music" ("seminarium musici"), as accent itself is akin to melody (147). Using an exegetical mode of thought unusual in music-theoretic discourse but common among Benedictine monks, Mocquereau extends this first metaphor into a characterization of words as organic entities. The syllables on their own are dead and inert. When they are joined by the accent, they come to life in this dynamic motion toward the tonic accent and away from it. In exactly this sense, the accent is the unifying element of the word. The tonic accent literally animates the word—giving it form and life according to the principle of the soul ("anima").

According to Mocquereau's outline, this idealized classical accent was gradually replaced by the intensive and durational Romance accent. The composition of Gregorian chant took place in a middle period along this path, so that the character of the Latin accent used in the Gregorian repertoire is one of melodic height, light intensity, and no element of lengthening. This accounts for three of the dimensions described above. The fourth is the rhythmic dimension, which considers the placement of the accent within a rhythm consisting of arsis and thesis. Mocquereau, drawing on the elements of height, lightness, and brevity of the Latin accent, asserts that the proper place of the accented syllable is on the arsis of a rhythm. In this conception, a Latin word constitutes a rhythm in itself when pronounced, a single metaphorical motion. In Mocquereau's rather scholastic conception, within an isolated Latin word there is a threefold unity: the unity of concept; the unity of pronunciation, the word animated by the tonic accent; and the unity of motion, an ordered movement from arsis to thesis. Since the thesis is the place of the rhythmic touch or ictus, this conception also results in an ictus that falls ideally on the last syllable of the word and consequently bears no intrinsic dynamic stress.

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4. "Les syllabes antétoniques courent d'un pas accéléré vers l'accent; La syllabe tonique, brève, légère, mais doucement arrondie, est comme la clé de voûte de ce petit édifice rythmique; Les syllabes postoniques s'en éloignent au contraire lentement et comme à regret."

The theory of accent sketched above provides a way to think about the rhythmic structure of Gregorian melodies as they relate to the Latin text. We will consider four aspects of the Latin accent as theorized by Mocquereau: its height, brevity, lightness, and arsic character. While each of these may contribute to a particular method of performing the Gregorian melodies, each has theoretical implications that can be considered separately.

3.2.1   The Accent is High

According to Mocquereau's theory, the Latin accent is tonic. Since the Gregorian melodies were composed during the ecclesiastical period, this implies that the composers were setting a Latin text that retained this natural melody when spoken. Consequently, the accented syllable within an isolated word falls most naturally on a relatively high note in Gregorian chant, corresponding to the natural speech pattern. Mocquereau asserts that, as a result, the melodies often display melodic contours that underscore the tonic accent. This leads to a testable observation, since Mocquereau is making a specific claim about a feature of Gregorian melody that unifies several different forms.

Liturgical Recitation

In the most basic instance, a series of syllables recited on a single pitch is interrupted by a change of pitch, generally signaled by an important tonic accent. Recitation on a single pitch occurs frequently in Gregorian melody. In liturgical recitation of the readings and prayers at Mass, and in the psalmody that forms the bulk of the Office, such recitation constitutes the entire form of a chant. In addition to these entirely recitational forms, it is often possible to consider more elaborate melodies as relying for certain stretches on this same recitational framework, choosing a particular note as a "reciting tone," a structural tone around which a span of text is declaimed. Within the entirely recitational chants, Mocquereau lists seven ways in which a particular tonic accent of the final word is signaled in musical terms (161–63). The seven possibilities, with examples of each,

are:

1. Lowering of the syllable after the accented syllable, as in the Ambrosian Gloria.
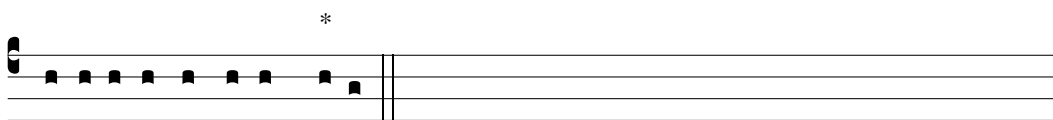
Gló-ri- a   in excélsis De- o.

2. Raising the accented syllable, as in psalm tone 8.
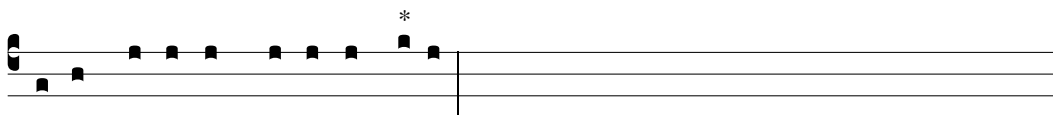
Di-xit Dómi-nus Dómi-no me- o:

3. Raising the accented syllable and one syllable before, as in the communion verse from the Mass for the Dead.
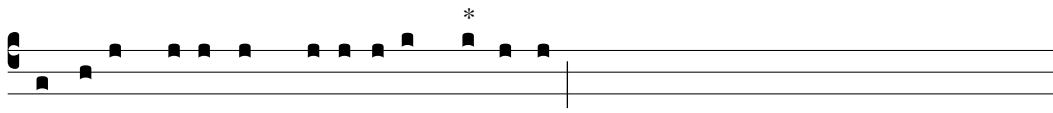
Réqui- em aetérnam dona e- is Dómi-ne,

4. Lowering of both the syllables before and after, as in psalm tone 6.
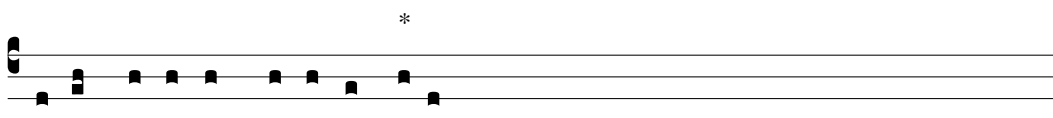
Di-xit Dómi-nus Dómi-no me- o:

5. Placing the accented syllable on a two-note neume, as in the recitational passages of the great responsories.
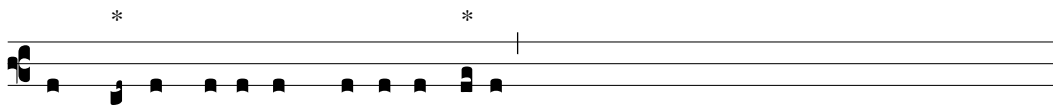
et propter honó-rem nómi-nis tu- i,

6. Lowering only the syllable before the accented syllable, as in the tone for the Passion.
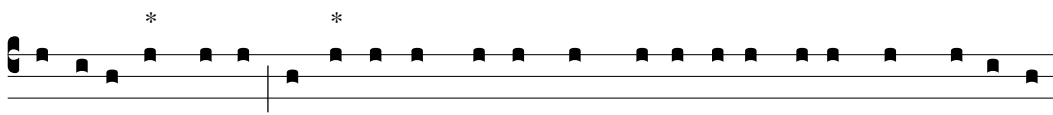
In illo témpo-re: Egréssus est Je-sus cum discí-pu-lis su- is trans torréntem
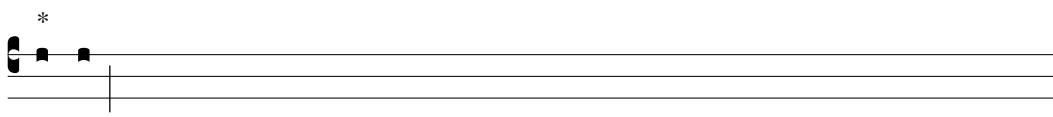
Cedron,

7. Lowering of the following note, even though the preceding note is higher, as in the ending on A of psalm tone 4.
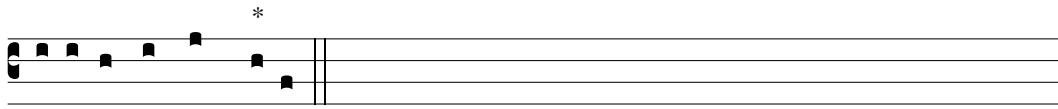
Sede a dextris me- is:

Examining this list, we see that the only melodic possibility not included is a situation where the accented syllable is on a note that is lower than both the preceding and following syllables. This shape is rare in liturgical recitation.

More Elaborate Melodies

Mocquereau extends these patterns to the Gregorian repertoire more broadly, with the idea that there is a frequent correlation between melodic high points and the tonic accent of Latin words. This implies a unified approach to text declamation, where the elaborate melodies are extensions of the accentual (and, consequently, rhythmic) principles that govern the liturgical recitatives and psalmody. Ferretti (1938) develops this idea, while Apel (1958) and Veltman (2004) have provided partial critiques.

To place Mocquereau's claim in more precise terms, he takes the correlation of pitch accentuation within an isolated word as a rule, but this is often superseded by melodic considerations within phrases: "The *isolated* word has, it is understood, its proper melody, whose most characteristic note is the acute accent; but the *great word* which belongs to the member of the phrase also has its melody, whose acute and grave accents are of an infinite variety" (Mocquereau 1927, 164).[5] A grave accent in this context would be a syllable whose accentual quality is highlighted by a low note rather than by a high one, as an exception to the usual rule of high (acute) accents. The placement of the tonic accent on a relatively high pitch may occur within a chant melody, but this rule is a weak one that submits readily to melodic construction.

Reformulating his rule to examine the broader repertoire, Mocquereau lists five situations, which may be paraphrased as follows (169–70):

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5. "Le mot isolé a sa mélodie propre, dont la note la plus caractéristique est l'accent aigu, c'est entendu ; mais le grand mot qu'est le membre de phrase a, lui aussi, sa mélodie, ses accents aigus et graves d'une infinie variété."

1. Perfect agreement between the word and the melody, in which the tonic syllable is higher than both the pre-tonic and post-tonic syllables.

2. Incomplete agreement, in which the tonic syllable is only higher than the post-tonic syllables.

3. Reverse incomplete agreement, in which the tonic syllable is only higher than the pre-tonic syllables.

4. No agreement, in which the tonic syllable is lower than those that precede and follow.

5. The redoubled thesis, in which the tonic syllable is at a unison with the final syllable at the end of a phrase or section.

According to Mocquereau, situation 1 represents a complete concordance between word and tonic accent, while situations 2 and 3 represent partial concordances. He posits that these partial concordances arise by the process of melodic phrase construction, in which the individual word loses its customary melodic shape in subordinating itself to the accent of another word (Mocquereau 1927, 169). This idea has profound consequences for the development of melodic form, as we shall discuss in section 3.3.2. Situation 4 generally arises as a result of adaptation of a melodic type to a different text, as occurs frequently in the repertoire of office antiphons. Situation 5 reflects a melodic choice by the composer to create a cadential or ending effect, as the doubled (repeated) pitch at the end emphasizes the sense of finality and arrival.

Mocquereau provides many examples from several genres of the Office and Mass repertoires. For our purpose, one example will suffice to illustrate Mocquereau's accentual analysis. Figure 3.1 shows an Office antiphon with a near-perfect correspondence between Mocquereau's proposed melodic accent and the shape of the melody. I have marked each accented syllable with its melodic context. The ictus marks shown in this example are the same as the ones printed in the Solesmes editions of this melody. A performer trained in the Solesmes method would arrive at the same organization of composite beats merely by following the rules for ictus placement given in chapter 2. Many words feature the characteristic non-alignment between accented syllable and ictus. We will examine this feature of this melody in section 3.2.4.

By far the most common melodic disposition of the words in this chant is situation 1, where the accented syllable is sung at a higher pitch than both the pre-tonic and post-tonic syllables. This rule

Figure 3.1: Tonic Accents in the Antiphon *Nolite solliciti*

applies even to the only secondary accent in the antiphon, *man-* of *manducábimus.* The exceptions

are clustered at the end of the melody. The tonic accents of *caelestis* and *vobis* are partially in

accordance with the rule, as they are higher than the post-tonic and pre-tonic syllables respectively.[6]

The last two accents show the two situations where the tonic accent does not correspond to the rule.

The first of these arises from melodic considerations, while the last represents a typical "redundant"

ending where the final pitch of the chant is reached on the penultimate syllable of a paroxytone.

The pitch is repeated, reinforcing the sense of finality at the end of the antiphon.

The Rhetorical Cursus

One frequent exception to the rule of the high tonic accent arises in cadential patterns in psalmody

and other strophic forms that rely on a fixed number of syllables for their structure. Beginning

with his early work in *Paléographie musicale*, Mocquereau hypothesizes a connection between

these cadences and the rhetorical device known as the *cursus*, which is a particular stress pattern

favored by medieval Latin prose writers for phrase endings. More broadly, a metrical arrangement

of syllables at phrase endings of prose is known as a *clausula*, and its use in Latin is associated with

Cicero and his famous prose style. The classical *clausula* was based on quantity—the long and

short syllables that governed classical verse forms—but the medieval versions were based on the

arrangement of accents, since by the period of late Latin, accent had replaced quantity as the basis

of verse. The most common medieval *clausula* is the *cursus planus*, which arises when a sentence

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6. In this case, *quid* in *quid vobis necesse sit* is conceived of as a pre-tonic syllable to the tonic accent *vo-* of *vobis*.

or clause ends with two paroxytones, with the first having two syllables and the second having three. Daniel 3:52, the beginning of the "Song of the Three Young Men," offers an example: "Benedictus es, Domine Deus patrum nostrorum." The last five syllables, with the accents on the first and fourth and the word division after the second, represents the *cursus planus*.

This biblical canticle is chanted (in part) as a hymn during Mass on four Saturdays a year in the Gregorian repertoire. The musical setting of these words conforms to this stress pattern according to Mocquereau's rule of the melodic accent, with both tonic syllables conforming to situation 2. But this is the beginning of a long and strophic melody, where the subsequent strophes do not necessarily conform to this stress pattern. Figure 3.2 shows the first two verses. In verse 2, the melodic motion dictated by the *cursus planus* does not align with the words but occupies the final five syllables *-ae quod est sánctum.* In this case the melody follows the ideal, abstract melodic accentuation of the *cursus planus* rather than the accentuation of the actual text, creating a melodic accent on the weak final syllable of *tuae*. Mocquereau believes that the stress pattern of the *cursus planus* governs several situations in the Gregorian repertoire, where a five-syllable melodic formula arises with no regard for the actual word stress being used. Precisely this situation arises in the psalmody of the introit. After the antiphon itself, one or more verses follows using a tone that is related to the psalm tone associated with the mode of the antiphon but is rather more elaborate. With the exception of introits in the fifth mode, all introit psalmody has a final cadence that follows the *cursus planus*: a melodic formula consisting of five syllables, the first and fourth of which are usually marked by a melodic accent. The result is that the last five syllables of the psalm verse commence the cadential melodic motion, regardless of the stress pattern of these syllables.[7]

Melodic Types

This use of the *cursus planus* illustrates a broader point: Mocquereau often proposes a reason for situtations where a melody does not conform to the expected disposition of accented syllables on high notes. For instance, the melody may be an adaptation from a model whose accentuation

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7. Apel (1958, 297–301) offers a critique of Mocquereau's hypothesis of the *cursus*.

a.

Be- ne-díctus es Dómi-ne De-us pa-trum nostró- rum.

b.
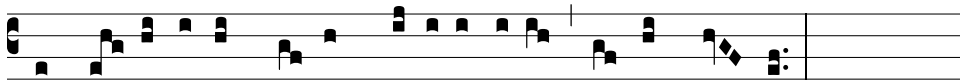
Et be- ne-díctum nomen gló-ri-æ tu-æ, quod est san-ctum,

Figure 3.2: The *cursus planus* in *Benedictus es*, verses 1–2

conformed to the normal pattern. Figure 3.3 shows the beginning of three antiphons belonging to the same melodic type. The first word of the first two examples exemplify situation 5, a disagreement between the rule of melodic accent and the accentuation of the word. Mocquereau offers two reasons for this. First, the melodic gesture here is preparatory; it is oriented toward the accent that comes on the F. In figure 3.3a, this is the secondary accent *ca-* of *caritatem*, and in figure 3.3b, this is the tonic accent of *dixit* (Mocquereau 1927, 168). Second, these may be adaptations of an original melody whose first word better fits the model of melodic accent, as in figure 3.3c.

Reception and Critique of the Tonic-Accent Theory

Ferretti (1938) takes up Mocquereau's ideas about the melodic accent of words and makes them a principal feature of his discussion of form in plainchant. In this broader sense, the hypothesis of the tonic accent becomes more a feature of theory than practice, suggesting that the melodic structure of Gregorian chant depends in a deep sense on the accentual structure of the words themselves. Ferretti formulates the hypothesis in the form of a law: "Gregorian melody, if we consider its architectonic line, is modelled on the grammatical accents of the liturgical text. That is to say that the melodic peaks generally coincide with the tonic accents of the words" (14).[8] There was

8. "La mélodie grégorienne, si l'on considère sa ligne architectonique, est calquée sur les accents grammaticaux du texte liturgique. Ce qui veux dire que les sommets mélodiques coïncident en général avec les accents toniques des paroles."

a. *Majorem caritatem*

Ma- jó-rem ca-ri-tá-tem
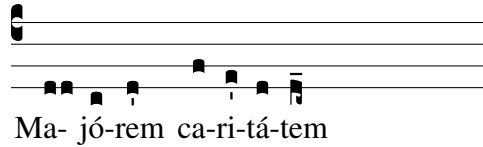
b. *Ancilla dixit Petro*

An-cíl-la di-xit Pe-tro:

c. *Lapides pretiosi*

Lá- pi-des pre-ti- ó-si
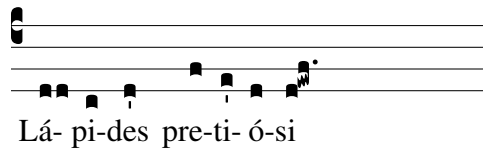
Figure 3.3: Variation in Tonic Accents among Melodic Types

widespread agreement on this point among other scholars early in the twentieth century, even outside the realm of Mocquereau's sphere of influence.[9]

Apel (1958) turns a critical eye to Mocquereau's hypothesis, as part of a broader critique of Mocquereau's scholarly methods. For Apel, Mocquereau's listing of examples is not systematic enough: "Considering the fact that the texts of the Gregorian chants contain perhaps between 40,000 and 50,000 words with an accent, it is not surprising that a hundred or more examples can easily be adduced to support any one of these theories. . . . Such examples, impressive though they often look if gathered together on a couple of pages, prove nothing, since it is just as easy to present an equally impressive list of examples supporting the opposite view" (282). Instead, Apel proposes a statistical approach, analyzing a sizable corpus of melodies to test Mocquereau's and Ferretti's theories.

The corpus chosen to test the melodic accent consists of fifty-eight office antiphons drawn from the period of the liturgical year running from the first Sunday of Advent to the end of Christmas.

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9. Veltman (2004, 13–16) provides a useful account of the reception of this idea in plainchant scholarship, including agreement by Wagner and Johner as well as indifference by more recent scholars.

Apel's goal is to provide a clear definition of a positive correlation between melody and tonic accent and to examine the prevalence of that correlation; for Apel, the only criterion that matters is that the post-tonic syllables be lower than the tonic syllable (292). In other words, Mocquereau's situation 3 does not count as a melodic accent in Apel's system. Settings of words are divided into positive, negative, and indifferent, depending on whether the tonic syllable is higher, lower, or equivalent to the syllable that follows. Apel's results are summarized in table 3.1.

Table 3.1: Prevalence of Tonic Accents in Fifty-Eight Office Antiphons (Apel 1958, 295)

	Positive	Negative	Indifferent
Number:	259	114	84
Percentage:	57	25	18

By this method, Apel finds a real correlation, but he also concludes that the correlation is far from being a universal law. In Apel's view, this invalidates Ferretti's claims in particular, but it is worth considering whether his results contradict the earlier writers at all. The discrepancy is a matter of the criteria used, as can be seen by approaching a melody using the two different analytical methods. Apel cites the antiphon *Crastina die*, shown in figure 3.4, as a "particularly striking" example of a negative correlation between melodic word accent and musical setting (295). Figure 3.4a reproduces Apel's analysis, while figure 3.4b analyzes the melody according to Mocquereau's five situations described above. The difference between the two assessments results from the different definitions of what constitutes a melodic accent. Mocquereau's understanding is more inclusive.[10] For Mocquereau, the word *Salvátor* falls under situation 3 and is therefore not a violation of the principle of the melodic accent but a partial correlation. A closer look at the remaining three negative cases in this example reveals explanations for each exception as well.

This antiphon belongs to a melodic type used frequently for antiphons in the transposed fourth mode; other versions of the first two phrases exist that correspond better to the melodic-accent rule.

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10. Apel believed that the idea that a tonic accent can be expressed by a note higher than the preceding syllables was "wishful thinking" (Apel 1958, 292).

a. Apel's analysis

Crásti-na di- e * de-lé-bi-tur in-íqui-tas terræ : et regná-bit super nos Salvá-tor mundi

b. A Mocquereau-style analysis

Crásti-na di- e * de-lé-bi-tur in-íqui-tas terræ : et regná-bit super nos Salvá-tor mundi

Figure 3.4: Tonic Accent in the Antiphon *Crastina die*

Mocquereau speculates that in such cases, the versions with the melodic accent are the originals and the versions that contradict the melodic accent are the adaptations. Such speculation is unprovable, but it does provide a reasonable explanation. Mocquereau prints a table of the first phrase in this melodic type, which shows that the accent falls on the *podatus* corresponding to *-bi-* of *delebitur* when this phrase ends with a paroxytone (Mocquereau 1927, 384). Likewise, Mocquereau gives three examples of the second phrase with perfect correspondence between accent and melody, along with numerous other patterns of stressed syllables (474). In the case of the third problematic word, *regnabit*, there is widespread disagreement in the manuscript sources about the melodic reading, but it is worth noting that the new *Antiphonale Monasticum*, published by Solesmes in 2000, reverses the B and the C in this word, so that the new reading corresponds partially (situation 2) to Mocquereau's tonic-accent principle.

This analysis highlights the different methods of these two scholars who nevertheless have much in common. Apel's and Mocquereau's conclusions regarding the importance of the tonic accent for the composition of Gregorian melodies are practically indistinguishable. Mocquereau's claims for the tonic accent are made primarily in the section of his book dedicated to the isolated word. When considering a series of words together, the individual words give way to an orientation toward a larger sense of accent and melodic direction:

In fact, there are profound differences between the *isolated* word and the word *rolled up and entangled in the flow of the sentence.* The *isolated* word has its proper melody, whose most characteristic note is the high accent, that is understood; but the *greater word* which is the member of sentence has, as well, its melody, its high and low accents of an infinite variety. That these phraseological accents agree with the accents of the words is what happens very often; but often the general pace of the sentence and its great accents also modify the individual melody of the words. These accents dominate and envelop the words of each member and of each sentence, to the detriment of their melodic form. Thus, "individualities fade away and lose something of their particular physiognomy when entering a social organization."[11] (164)

Apel's conclusion is stated in much less flowery terms: "The purpose of this study is not to assign to the tonic accent a statistical figure, but to present a picture of its role in Gregorian chant. That this role is important, nobody will deny; but it is equally undeniable that this role does not amount to a law, however hedged in by exceptions" (Apel 1958, 296). Both authors support the claim of a correlation of accented syllable and melody height, but, for both, this correlation is often mixed in with other melodic considerations in the construction of phrases. In other words, the melodic placement of the tonic accent seems to offer real insight into the rhythmic structure of a melody. More recent scholars have tended to attack (Bailey 1990) or ignore (Hiley 1993) this conclusion, especially as chant research has broadened to repertoires other than what is included in modern liturgical books. Terence Bailey dismisses the entire question of melodic accent as Romanticism:

> To determine whether a close connection between the accent of word and melody was a normal attribute of ecclesiastical chant from its beginnings would require an exhaustive investigation one that no scholar could complete, or even hope to complete, for it would need to include all the chants of the Gregorian tradition. And even more than that: if the results were to be entirely reliable the inquiry ought to include the chants of the other Latin Uses such as the Ambrosian and Visigothic and even the music of the Greek Churches of the East.
>
> It need hardly be said that even the more limited investigation has not been carried out. But if the desultory observations of half a lifetime (mine) are any indication, a

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11. "En effet, entre le mot isolé, et le mot roulé, entraîné dans le torrent de la phrase, il y a des différences profondes. Le mot isolé asa mélodie propre, dont la note la plus caractéristique est l'accent aigu, c'est entendu ; mais le grand mot qu'est le membre de phrase a, lui aussi, sa mélodie, ses accents aigus et graves d'une infinie variété. Que ces accents phraséologiques concordent avec les accents des mots, c'est ce qui arrive très souvent ; mais souvent aussi l'allure générale de la phrase et ses grands accents modifient la mélodie individuelle des mots. Ces accents dominent et enveloppent les mots de chaque membre et de chaque phrase, au détriment de leur forme mélodique. Ainsi les 'individualités s'effacent et perdent quelque chose de leur physionomie particulière en entrant dans une organisation sociale.'" Mocquereau's quotation is from Chaignet (1887, 22).

thorough examination of the chants of the oldest stratum would show only that the relationship between the musical and textual accent is neutral. The monks, however, declared otherwise. They were accustomed to judging vocal music by criteria that (whatever their force in the time of classical antiquity) became aesthetic imperatives again only in the sixteenth century. And they were convinced that the chant should be considered "beautiful music" in the same sense as the music of Palestrina or Schubert. As a consequence, they dedicated a great deal of ingenuity and even more ink and paper to their purpose, adducing, from a vast repertory, sufficient examples to daunt if not convince—and all with a view to "proving" a point (the sensitivity of chant to the text accent) that, for practical reasons, is unprovable, even if it were true. (Bailey 1990, 2–3)

In Bailey's view, the question of whether the tonic accent has a role in the structure of melodies is an incorrect one, because the question was first asked with a particular aesthetic agenda: proving the value of the restored melodies as music for a nineteenth-century audience. Bailey does not elaborate on the motivations he discusses, but the history laid out in chapter 1 suggests why authors writing at the beginning of the twentieth century were so keen to establish a principle of the tonic accent. Since the Medicean edition that Solesmes set out to displace in official use was based on corrections of the melodies according to certain principles of Latin accentuation—namely the alignment of strong syllables with melismas—then the theory of the tonic accent arose as a means of showing that the Gregorian composers conformed to proper accentuation more through pitch than through length. In Bailey's view, now that the nineteenth-century debates over melodic restoration have been put to rest, we no longer have to advocate on behalf of the older melodies and their accentual design. Modern reference works like Hiley (1993) do not even raise the issue of the tonic accent.

If the hypothesis of the tonic accent should indeed be dismissed on historical grounds, it may retain some utility in terms of theoretical discussion and analysis. The correlation between pitch height and accented syllables is still apparent on a daily basis to many practitioners of plainchant, even as the wider geographic and historical scope of recent scholarship calls this impression into question. Veltman (2004) devotes a chapter to the question of tonic accent, repeating Apel's statistical study on the 57 antiphons of Advent and Christmas but using digital methods. Like Apel, Veltman cautiously confirms the basic principle: "These results taken together suggest a moderate but statistically significant tendency, in the context of syllabic text setting, for melodic accent to

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coincide with and underscore prosodic accent" (22). But Veltman's methodology differs from both Apel and from Mocquereau, as his model assigns numerical scores based on various melodic contours, not only locally high notes. As a result, his findings are often entirely at odds with the conclusions any of the earlier scholars would have drawn. For instance, the lowest correlation between melodic and textual accents in his survey belongs to the antiphon *Omnipotens sermo*, shown in figure 3.5.[12] Both Mocquereau and Apel would have assigned a very high correlation to this chant, with the only exceptions being *tuus* (situation 3) and and *alleluia* (situation 5). Apel also believed that the standard accentuation of the word *alleluia*, with the accent on the third syllable, was uncertain. Veltman's approach provides a more objective and scholarly way back into the question, but it cannot be considered a precise evaluation of the theories of earlier scholars. Mocquereau's tonic-accent theory continues to provide a viable analytical tool.
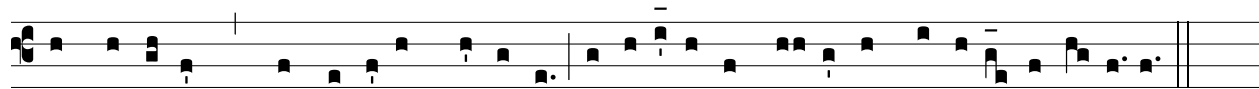
Omní-pot-ens * sermo tu- us Dómi-ne   a regá-li-bus sé- di-bus vé-ni- et, al-le-lú- ia.

Figure 3.5: Antiphon *Omnipotens sermo*

3.2.2 The Accent is Short

Mocquereau also contends that the accent in spoken Latin during the Gregorian centuries was short, and that this characteristic is reflected in text setting in the chant repertoire. The implications for analysis of this claim are slightly less fundamental and useful than those that arise from the tonic accent, but we will see that many of the same authors have engaged with Mocquereau's contention. Mocquereau does not mean that the accented syllable was actually shortened in speech, but rather that the quality of a syllable being accented did not have any especial impact on the length of that syllable when uttered: "To avoid any misunderstanding, let us clarify the meaning of this word 'brevity.' We do not mean to say that the accented syllable was shorter and faster than the other syllables, but only that it was not longer, that it was worth a simple beat, an elementary beat, like the

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12. In Veltman's model, syllables whose pitch is the same as the previous syllable get a particularly low score in terms of melodic accent, as in the accented first syllables of *sermo* and *Domine*.

unaccented syllables. We will even see later that this brevity, this lightness of the accent does not prevent, on the contrary, giving the accented syllable a certain length" (Mocquereau 1927, 209n).[13] As with the discussion of the tonic accent, the imprecision of this language has been the subject of some criticism (Apel 1958, 280). Mocquereau sometimes seems to argue that the accented syllable is always short and at other times seems to argue that the accented syllable is sometimes long and sometimes short. When describing texts set as chant melodies, the latter contention is clearly more defensible, as accented syllables are often set on long notes or groups of notes. I believe this to be Mocquereau's position.

To untangle the apparent inconsistency, we must distinguish between Mocquereau's theorizing about the nature of the spoken accent in classical and ecclesiastic Latin (short) from the way this translates into length of syllables when set to music (more or less indifferent). Mocquereau begins his discussion by speaking in purely grammatical terms, with the testimony of Latin authors, especially the second-century author Varro: "The high [syllable] is narrower and shorter and in every way less than the low, as it easy to understand from music, whose image is prosody" (quoted in Mocquereau 1927, 759).[14] According to the resulting theory, the acute accent or high part of the accent could only occupy a brief time. We have seen that the Latin accent can fall on syllables with either a short or a long quantity. According to the classicist Georges Édon (1837–1905), a short accented syllable received one high sound, but a long accented syllable received a circumflex accent, consisting of a high part of the syllable followed by a low part (209n). In other words, the accent itself, in the sense of a high sound when pronouncing a syllable, applies to only half of a long syllable, which is spoken with a pitch that falls over the course of the syllable.

The consideration of length and accent in Gregorian chant is distinct from this linguistic hypothesis. Instead, we speak of length or brevity by considering the number of notes sung on a

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13. "Pour éviter tout malentendu, précisons le sens de ce mot 'brièveté.' Nous n'entendons pas dire par là que la syllabe accentuée était plus brève et plus rapide que les autres, mais seulement qu'elle n'était pas plus longue, qu'elle valait un temps simple, un temps premier, comme les syllabes non accentuées. Nous verrons même plus loin que cette brièveté, cette légèreté de l'accent n'empêche pas, tout au contraire, de lui donner une certaine ampleur."

14. "Acuta exilior et brevior et omni modo minor est quam gravis, ut est facile ex musica cognoscere, cujus imago prosodia."

single syllable.[15] Mocquereau believed that the placement of melismas was most naturally on the final syllable of the word and secondarily on the accented syllable of the word, but that any syllable may receive a melisma, which is an extension of the syllable without regard to its quality of accent: "This blossoming of vocalizations on these various syllables is only the result of an aptitude, proper to all Latin syllables, to receive more or less long melismas" (213).[16]

By contrast, Mocquereau considered a marked preference for melismas on accented syllables to reflect a modern compositional aesthetic. He believed that the Gregorian composers, by contrast, favored placing melismas on final syllables. To illustrate these two different compositional strategies, he offers a hypothetical modern setting of the words *scio cui credidi*, and compares it to the introit beginning with those words. Both are shown in figure 3.6 (213–14).

a. A Hypothetical Modern Setting

Sci-   o cu-   i
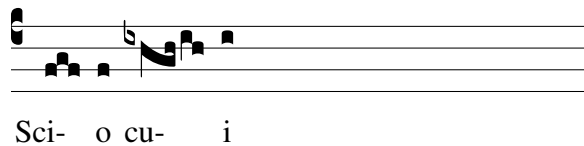
b. The Gregorian Setting

Sci- o   cu- i
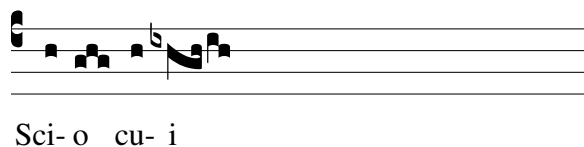
Figure 3.6: Modern and Gregorian Settings of the Accent

Mocquereau does not believe that any rules of Gregorian composition forbid the first setting; instead, he believes that the Gregorian composers were under none of the self-imposed constraints of the modern composer. As with his discussion of the tonic accent, Mocquereau provides several musical examples involving phrases where the accented syllable is on a single note followed or

15. For the purposes of this investigation into the phenomenon of melisma, or what Apel (1958, 279) calls the "melismatic accent," we sidestep the question of different note lengths (measured or nuanced) implied by the various notations discussed in chapter 1.

16. "Cet épanouissement de vocalises sur ces diverses syllabes n'est que le résultat d'une aptitude, propre à toutes les syllabes latines, de recevoir des mélismes plus ou moins longs."

preceded by a larger group of notes.[17] In chapter 1, we saw that this was a feature of the Gregorian melodies heavily criticized by Zarlino and his contemporaries, as it seemed to violate the principles of Latin quantity. This served as an impetus for some of the recompositions and rearrangements of the Medicean edition. In Mocquereau's view, these examples merely reinforce his contention that the accented syllable enjoys no special affinity with melismatic treatment.

As with the theory of the tonic accent, Apel (1958, 279–80) applies statistical methods to investigating the alignment between melismas and accented syllables. In this case, his results show a marked disagreement with Mocquereau's findings. Since the office antiphons used to investigate the tonic accent are mostly syllabic, Apel uses the Mass chants belonging to the temporal cycle from Advent through the end of Easter for the study of melismatic accent. Apel's criterion for a melismatic accent is when a melisma (defined as four or more notes) on one syllable substantially outnumbers those on the other syllables of a word. A positive correlation would occur when this applies to the accented syllable, while a negative correlation would occur when this applies to an unaccented syllable. Apel also excludes certain formulaic devices like the *jubilus* of Alleluia settings. Apel's findings are reproduced in table 3.2.

Table 3.2: Prevalence of Melismatic Accents in Mass Chants (Apel 1958, 286)

	Positive	Negative	Indifferent
Introits	146	75	20
Graduals	158	165	53
Alleluias	110	59	8
Offertories	240	108	47
Communions	91	57	9

The conclusions favor a correlation between accented syllables and lengthier melismas.[18] Mocquereau's hypothesized brevity of the accent is supported only in the case of Graduals, although

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17. Apart from the illustration provided figure 3.6, we can see the same approach in figure 2.4 at the words *Dominus*, *dilexit* and *aequitatem*.

18. Veltman also tests the placement of melismas, defined less restrictively as any group of more than one note, within the original set of fifty-eight Office antiphons and also finds a correlation (Veltman 2004, 23). The office antiphons provide a less rich sample, since the presence of any non-syllabic text setting is usually limited to groups of only a few notes.

Mocquereau and Apel adopt different criteria for assessing melodic settings. Apel's analysis of the melismatic accent in *Alleluia Dominus dixit*, shown in figure 3.7, exemplifies these differences. The numbers above the neumes indicate the number of notes assigned to each syllable. The melody belongs to the same type as *Alleluia Ostende*, examined in chapter 1. Apel gives this chant a score of four positive correlations, one negative correlation, and no indifferent correlations (284). Including the word *alleluia* and excluding monosyllables, the chant contains eight words with an accent. Apel's three positive correlations are on *Dominus*, *ego*, and *hodie*, while his negative correlation is on *genui*. Not considered are *alleluia* (since the long melisma on the final syllable is part of the form), *dixit*, *Filius*, and *meus*. If we expand the examination of length to include groups shorter than four notes, we would add *dixit* to Apel's positive correlations, and *Filius* and *meus* (both classic examples of the type cited by Mocquereau) to the negative ones. This yields a much more even score of four positive correlations and three negative, not including the negative correlation in the word *alleluia*.

Figure 3.7: *Alleluia Dominus dixit*

Apel's findings challenge and complicate Mocquereau's assertions about the brevity of the accent, but they do so in part by changing the criteria for analysis in a way that excludes some situations included in Mocquereau's reckoning. Still, they show, contrary to Mocquereau's theory, that the Gregorian melodies slightly favor placing melismas on accented syllables, with the interesting

exception of the Graduals. Mocquereau's suggestion that this does not exclude the placement of melismas on other syllables remains valid.

3.2.3   The Accent is Light

The two previous qualities of the Latin accent, its height and brevity, led Mocquereau to make several claims about the style and structure of Gregorian melodies. The third supposed quality, the lightness of the accent, is different in that it has no evidentiary basis in the melodies themselves (Mocquereau 1927, 226). In other words, the level of intensity given to the accent is a matter of performance practice rather than of notational analysis. As with the other two qualities of the Latin accent, Mocquereau bases his theory of intensity on the historical outline of a progression from a classical accent that was entirely tonic to a Romance-language accent that based primarily on stress and length (231). According to the grammarians of late antiquity and the early middle ages (the fifth and sixth centuries), the accented syllable is spoken with both a higher pitch and with greater intensity (226). Reasoning that the progression was a gradual one lasting centuries, Mocquereau attributes to the Gregorian centuries a medium sort of accentuation, with some intensity on the accented syllable but less than would occur in a Romance language.

justi-fi-ca-ti- ó-ni-bus
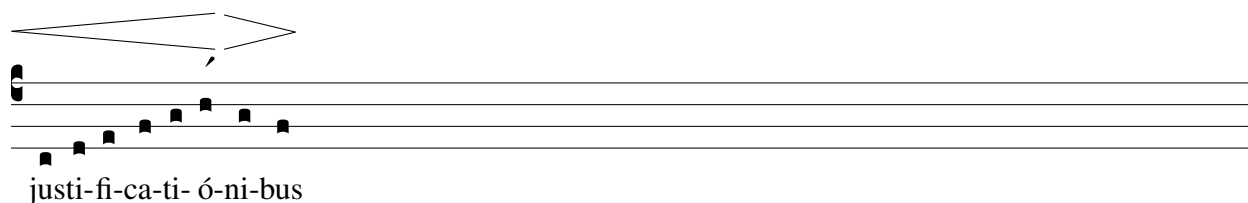
Figure 3.8: The Melody of the Isolated Word (Mocquereau 1927, 232)

For Mocquereau, the intensity should follow the natural melody of the word in speech. Translated into the musical and liturgical speech of plainchant, the intensity follows the curve of the melody. Figure 3.8 illustrates this idea. The idealized Latin word is conceived of as a Romanesque arch (gently sloping and lacking any point) in both the melodic and intensive dimensions:

> One should carefully take pains to reach the accented syllable by a gentle slope, by a
> moderate crescendo, well executed, increasing with the ascending movement of the
> melody, and based on the greater or lesser number of pre-tonic syllables.

Having arrived at the top, one should avoid hardness, surprise, and brilliance of force on the high note. Let us never forget that height is always the first and the most spiritual quality of the accent, and force, more material, comes only afterwards, even after lightness.

One should take care at the turn of the two slopes, which should not form an acute angle but a sonorous curve, light and gracefully rounded. On the opposite side, the line of intensity curves and comes to rests gently on the last syllable, like the melody.[19] (237)

In effect, Mocquereau's conception of how to sing or speak a word idealizes his theoretical classical accent in order to advance an anti-modern aesthetic. Pitch height is "the most spiritual quality of the accent," while intensity is "more material." Carrying this logic further, we arrive at an aesthetic of chant that deliberately rejects the typical conception of accent and stress, which is associated with modernity and measured music.[20] The light accent that follows the melodic contour is a rejection of the modern and an embrace of the ancient: "The more the accent, high and intense, approaches, in our lections and in our chants, its classical (that is to say, musical) performance, the more these lections and chants will be penetrated with the ancient savor, the aesthetic sense, and the spiritual unction that belong eminently to the ecclesiastical chant" (238).[21] This way of thinking is tied too closely to a particular religious and musical practice to have a place in the more objective study of plainchant used in present scholarship. Unlike the melodic and durational qualities of the accent, there is no trace of the accent of intensity in the notation that we can test. I include Mocquereau's thoughts on the matter to provide a complete picture of the aesthetic motivations behind his theory.

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19. "On veillera soigneusement à atteindre la syllabe accentuée par une pente douce, par un crescendo modéré, bien conduit, croissant avec le mouvement ascendant de la mélodie, et calculé sur le nombre plus ou moins abondant de syllabes antétoniques.

"Arrivé au sommet, on évitera sur l'aiguë la dureté, la surprise, l'éclat de la force. Ne l'oublions jamais : l'acuité est toujours la première, la plus spirituelle des qualités de l'accent, et la force, plus matérielle, ne vient qu'ensuite, après même la légèreté.

"On veillera au tournant des deux versants, qui ne doit pas former un angle aigu, mais une courbe sonore, légère, gracieusement arrondie. Au versant opposé, la ligne intensive s'incline et se repose doucement sur la dernière syllabe, comme la mélodie."

20. This aesthetic preference presents clear parallels to the Gothic revival and other nineteenth-century antiquarian movements, as described at length by Bergeron (1998). The smoothness of the Solesmes style has come under particular criticism in light of more recent scholarship on performance practice (McGee 2018, 587). We will encounter an extreme view of this anti-modern aesthetic in the writings of Vincent d'Indy in chapter 4.

21. "Plus l'accent, aigu et intense, se rapprochera dans nos lectures et dans nos chants de son exécution classique, c'est-à-dire musicale, plus ces lectures et ces chants seront pénétrés de saveur antique, et de ce sens esthétique, de cette onction spirituelle, qui conviennent éminemment à la cantilène ecclésiastique."

3.2.4 The Accent Tends to the Arsis

The opposition of Mocquereau's aesthetic to the modern carries over into his consideration of how Latin accentuation aligns with the rhythmic order. Since, in Mocquereau's view, the Latin accent used in the composition of Gregorian chant is high, light, and brief, the accented syllable naturally falls on the arsis of a rhythm, since the arsis is also defined as the part of the rhythm given to height, lightness, and brevity. Mocquereau believes that the more common conception of accent, in which the accented syllable aligns with the downbeat, presumed to be the strong or accented part of the measure, is a modern idea foreign to what he sees as the true Gregorian aesthetic (Mocquereau 1927, 319). For Mocquereau, this view is based on an impoverished understanding of accent that applies only to modern languages and not to ecclesiastical Latin. It is better that the syllables of *élan* and the syllables of *repos* should fall naturally on the parts of the rhythm (moving from arsis to thesis) that share those characteristics. In other words, the natural placement of the syllables within the measure is opposite in Latin to their natural placement in French, English, and other modern languages.

In any Latin word of chant, then, the most natural placement of the ictus is on the final syllable, regardless of where the accent falls. Such placements of the ictus mark are illustrated by several words in figure 3.1 and figure 3.3. In the Classic Solesmes Method, each ictus mark can be conceptualized as the downbeat of a short measure of either $\frac{2}{8}$ or $\frac{3}{8}$ time. The downbeats of these measures do not necessarily align with the accented syllables and indeed usually do not. As quoted at the beginning of this chapter, this freedom with regard to accent and ictus is the very essence of Mocquereau's theory (624).

While Mocquereau's writing was quite clear on this point, the widespread equation of downbeat with "strong beat" has led to a great deal of misunderstanding of the classic Solesmes method. My own experience with first encountering the Solesmes books was bafflement at the placement of the ictus or downbeats in syllabic chants, as it seems on first glance to represent a French-like pronunciation of Latin, with the stress given to the final syllable of the word. It is possible that an unspoken preference for rhythms with weight and length on the ends of time units would be a

natural development from the formative years of a native French speaker. Regardless, Mocquereau's point, based on his elaborately constructed theory of the Latin tonic accent, is rather more subtle and is intended to oppose rather than mimic the normal accentuation of French when applied to Latin.

Mocquereau illustrates his view of the difference between modern languages and Latin with an illuminating discussion of the third *incise* of the antiphon *Nolite solliciti* (318).[22] The entire melody is given above in figure 3.1, and the figure in question is given as figure 3.9a. Mocquereau makes a short analysis, reminiscent of Schenkerian principles, in which he identifies the fundamental notes of an underlying melodic progression (fig. 3.9b). Mocquereau believes that the placement of the downbeats falls naturally on these more fundamental notes, and the entire figure falls into a binary rhythmic pattern (fig. 3.9c). Mocquereau then fits doggerel to the melody in three modern languages, with the accented syllables coinciding with the ictic notes (fig. 3.9d–g). This is contrasted with the Latin setting, where all the accented syllables except the last coincide with the non-ictic notes of each rhythm or composite beat. To understand Mocquereau's theory of the Latin accent, the reader should sing through these four settings, paying special attention to the interaction of accent (high, light, and short) and beat in the Latin version. It is not that the pronunciation of Latin imitates modern French but rather that the pronunciation of the Latin accent is theorized as high, light, brief, and on the upbeat, in a way that may be counterintuitive to some singers.

It is noteworthy that in all the languages represented here, words of two or more syllables tend to begin in one measure and end in another. Put another way, the words align with the rhythms (upbeat to downbeat) rather than with the measures (downbeat to upbeat). The words in all the languages, when set well, lie astride the barlines rather than between them (626–27). This relates to a feature of classical Latin verse, in which the words should not all align with the poetic feet but should intersect with them.[23]

Different melodic circumstances can lead the accent to coincide with the ictus, as in the word

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22. Mocquereau's examples here use modern notation, which I have adapted to Solesmes square notation for consistency's sake.

23. This is sometimes considered nearly a requirement, as with the rule that there must be a caesura within the third foot of a hexameter verse.

a. The melodic figure
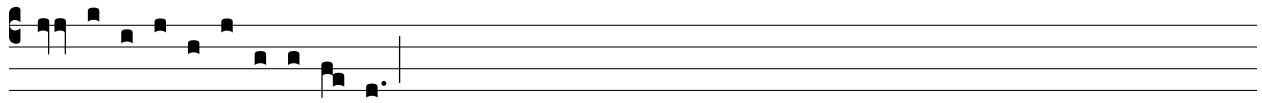
b. The fundamental notes
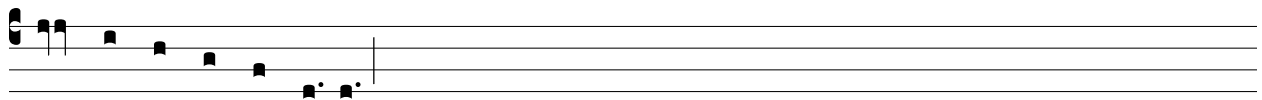
c. The placement of the rhythm
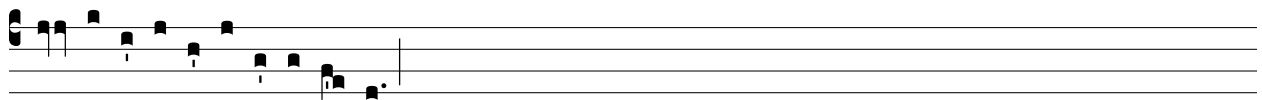
d. Adaptation to French words

Je viens se-lon l'u-sage antique et sollennel

e. Adaptation to Italian words
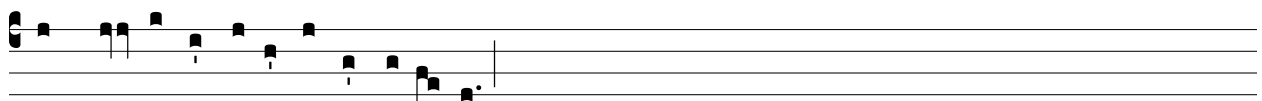
Per me   si va nella cit-tà do-lente

f. Adaptation to English words
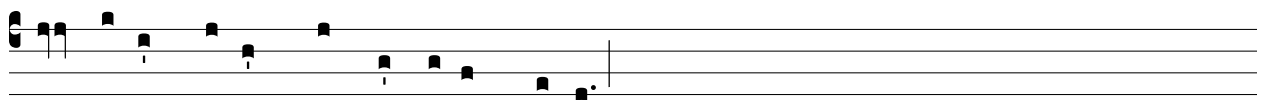
Ah hurrah, hurrah, the bread arrives today

g. The Latin setting
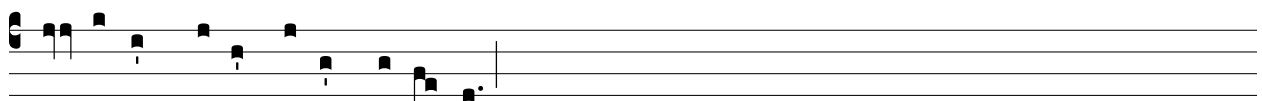
Scit   e-nim Pa-ter vester cae-lé-stis

Figure 3.9: Accent and Ictus in Various Languages

caeléstis in figure 3.9g; the position of the accent is free with respect to the downbeat. The possibility of the accent on the upbeat provides an explanation for the situation, described above in section 3.2.2, where the accented syllable falls on a single note followed by a longer group. A particularly striking example of this situation is the first phrase of the communion antiphon Memento verbi tui, shown in figure 3.10a.

a. The phrase as presented in the Solesmes editions
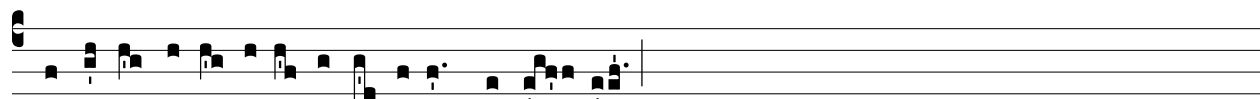
Meménto verbi tu- i servo tu- o, Dómi-   ne

b. Hypothetical alignment of ictus and accent

Meménto verbi tu- i servo tu- o, Dómi-   ne

c. Mocquereau's approach

Meménto verbi tu- i servo tu- o, Dómi-   ne

Figure 3.10: Accent and Ictus in the antiphon *Memento verbi tui*

In the words *verbi*, *tui*, *servo*, and *Domine*, the accented syllable falls on a single note followed by a group of two or more notes. Assuming a relative equality of note lengths, a question arises naturally as to which notes are felt as downbeats and which as upbeats in singing.[24] The reader should sing through versions b and c in figure 3.10 while tapping the beats marked with the ictus sign. Version b presents several successive triple measures with two syllables arranged in a short-long pattern. Most listeners will hear this as a reversal of the expected melodic pattern, even as

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24. It should be noted that in either a semiological or a mensuralist interpretation, the single notes on the accented syllables are all longer than the notes that make up the groups that follow, since the St. Gall neumes for these groups are written in their cursive form and also appear with the appended letter c in the Einsiedeln codex discussed in chapter 1.

it respects the widespread tendency to favor strong syllables on downbeats. In version c, several accented syllables in a row fall on the upbeat to a triple measure, followed by a weak syllable on the downbeat. This reading is consistent with Mocquereau's understanding of the accent. Mocquereau compared version b to a chain whose rings were broken apart: "Who does not feel, while singing, that this phrase ends at each word and goes to pieces" (Mocquereau 1927, 299)?[25] This passage is also discussed, with similar conclusions, by Johner (1906, 44).

3.2.5 The Different Rhythmic Orders

We have seen that the word, conceptualized as a unified rhythmic motion, gives rise to Mocquereau's principle that the ictus or downbeat belongs on the last syllable, which is the point of repose in the utterance of the word. It remains to clarify what this theory implies for the part of the word that comes before the downbeat. In Mocquereau's theory, the ictus naturally falls every two or three pulses, as a result of deep-seated features of the human psyche, which tends to divide a series of pulses in this way. This means that some words, namely those with more than two syllables, will contain more than one ictus. Here the two possible placements of the Latin accent (on the penultimate or antepenultimate syllable) give rise to two fundamental rhythmic categories, which Mocquereau calls the spondaic order and the dactylic order, relating to paroxytones and proparoxytones respectively. In the spondaic order, the accented syllable falls between two ictus, on the lightest and highest part of the elementary rhythm. The singer perceives this as the placement of the accented syllable on the upbeat. For example, in the word *Salvátor*, the downbeats are felt on *Sal-* and *-tor*, while the accented syllable falls on the upbeat. Since the secondary accents in a word fall on every second syllable before the principal accent, several such displacements may occur in a single word, and each relatively accented syllable will be felt on an upbeat.[26]

By contrast, in a three-syllable proparoxytone (e.g., *Dóminus*), the two ictus fall on both the accented syllable and on the unaccented final syllable. Since the ictus and the accent are aligned,

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25. "Qui ne sent, en chantant, que cette phrase tombe à chaque mot, et s'en va par morceaux?"

26. In Mocquereau's system, secondary accents only fall on every alternate syllable before the principal accent. Some authors determine the placement of secondary accents differently, especially in words formed as compounds of other polysyllabic words.

there is a fundamentally different psychological experience of the pronunciation of the word, since the rhythm arising between the tonic and post-tonic syllables is a composite rhythm rather than an elementary rhythm. In concrete terms, the accented syllable falls not on the most lifted part of the measure but on a pulse that is both the downbeat of a composite beat and the initiation of an arsis. In a proparoxytone of five or more syllables, all of the secondary accents will coincide with the ictus.

The two rhythmic orders are shown in figure 3.11. The words *justificationem* and *justificationibus* have two different rhythmic profiles resulting from the different placement of the accent. Both placements of the accent relative to the rhythm are basic constituent elements of Mocquereau's Gregorian rhythm. Both consist of composite rhythms moving toward a thesis or downbeat on the final syllable, but in the first part of the rhythm, made by combining several arses, the relatively accented syllables, represented here by the higher pitches, relate differently to the placement of the downbeats.

a. The spondaic order

justi-fi-ca-ti- ónem
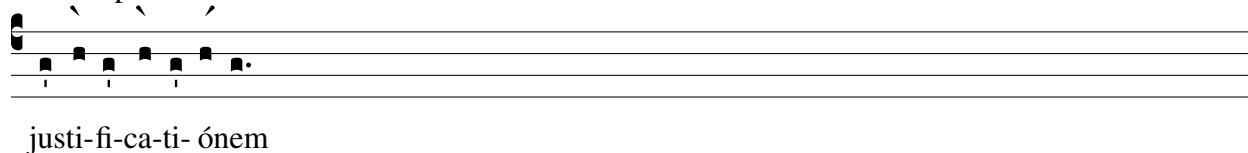
b. The dactylic order

justi-fi-ca-ti- ó-ni-bus
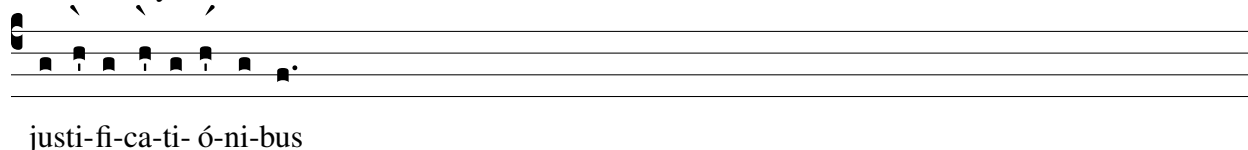
Figure 3.11: The Two Rhythmic Orders

Late in his book Mocquereau distills his conception of the Latin accent into the following list-like summary, which restates in short form many of the points described above:

> The Latin accent, high, short, delicately strong, almost spiritual (*anima vocis*), always placed on the penultimate or the antepenultimate, is:
>
> - An impulse, which runs toward its point of arrival;
> - A beginning which claims its end;
> - A rising, a strong arsis which demands a weak thesis.

Hence, a Latin rhythmics, whose principal characteristics are:

- The strong beat on the arsis;
- The weak beat on the thesis.

Hence, the weak ictic cadences of all Latin words.

The Romance accent, on the contrary, heavy, grave, long, and often placed, in certain languages especially, on the last syllable, is:

- A point of arrival, instead of being an *elan*
- An end instead of a beginning
- A strong thesis instead of a strong arsis

Hence, a masculine, Romance rhythmics, whose principal characteristics are:

- The weak beat on the upbeat, on the arsis
- The strong beat on downbeat, on the thesis

Hence, the strong ictic cadences of the Romance languages, unknown to Latin rhythmics.[27] (Mocquereau 1927, 644)

Mocquereau believes that the Latin accent, as practiced by the composers of Gregorian chant, is high, light, brief, and coincides naturally with the upbeat of a rhythmic motion. Each of these four qualities is contrasted with an opposing modern conception of accent—indifferent to pitch height, heavy, long, and naturally on the thesis—which governs how modern languages are set to music.

3.3 The Joining of Words

3.3.1 Word-Rhythms and Word-Beats

So far, we have only considered Mocquereau's theory in relation to individual, isolated words, with only passing attention paid to the way words interact with each other in the context of a melody.

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27. "L'accent latin, aigu, bref, délicatement fort, presque spirituel (anima vocis), toujours placé sur la pénultième ou l'antépénultième, est un élan qui court vers son point d'arrivée, un début qui réclame sa fin, un levé, une arsis forte qui demande sa thésis faible. De là, une rythmique latine, dont le principal caractère est le temps fort à l'arsis, le temps faible à la thésis. De là, les cadences ictiques faibles de tous les mots latins.

"L'accent roman, au contraire, lourd, grave, long, et placé souvent, dans certaines langues surtout, sur la dernière syllabe, est un point d'arrivée, au lieu d'être un élan, une fin, au lieu d'un début, une thésis forte, au lieu d'une arsis forte. De là, une rythmique masculine romane dont le principal caractère est le temps faible au levé, à l'arsis, le temps fort au frappé, à la thésis. De là, les cadences ictiques fortes des langues romanes, inconnues de la rythmique latine."

The theory is refined and extended when applied to texts of more than one word. Each word is naturally a rhythm, but in the context of a piece of chant the individual rhythmic motions of arsis and thesis are folded into larger motions at the level of the *incise*, member, phrase, and the piece as a whole.

The connection of words to each other has consequences for the rhythmic profile of the words. In a group of words like *dixit Dóminus*, the natural rhythm of each word would result in ictus on *-xit*, *Do-*, and *-nus*, but this is impossible when the words are spoken together, since this would result in ictus falling on two adjacent syllables, disrupting the natural flow of the rhythm. In this case, the ictus is pushed back to *di-*, allowing for the steady progression of binary rhythms. Such a word is called a word-beat ("mot-temps"), since its tonic and post-tonic portions align with the composite beat (the measure) rather than with the rhythm. Since the final syllable falls after the ictus, this is not a possible ending to any rhythmic unit. In other words, these words may be considered post-ictic or feminine. A word that retains its natural state of having an ictus on the final syllable is called a word-rhythm ("mot-rythme"). In application to chant melodies, the words are sometimes all set as rhythms (as in figure 3.10c), sometimes all set as beats, and sometimes set as a mixture of both. The interplay between these two patterns amounts to the experience of word rhythm within Mocquereau's conception of Gregorian chant.

Figure 3.12 shows the first two strophes of the sequence *Lauda Sion*, set to the same music. In the Solesmes editions of this chant, there are no ictus marks; I have added them to clarify the rhythmic situation. The poetry is based on a mostly trochaic (strong-weak) stress pattern (with a reversal in the beginning of line 3), but with each strophe ending with a dactyl:

> Láuda Síon Salvatórem,
> Láuda dúcem et pastórem,
> In hymnis et cánticis.
>
> Quántum pótes, tántum áude:
> Quía májor ómni láude,
> Nec laudáre súfficis.

In the first line, the last syllable is sung long, according to the Guidonian principle of the *mora vocis*.

Lauda Si- on Salva-tó-rem, Lauda du-cem et pastó-rem, In hymnis et cánti-cis. Quantum pot-es,

tantum aude : Qui- a ma-jor omni laude, Nec laudá-re súffi-cis.

Figure 3.12: Sequence *Lauda Sion*, strophes 1–2

Working backwards by binary composite beats, we see that each of these words is a word-rhythm, since each final syllable of a word coincides with an ictus. In the second line, the situation is different because of the two-note neume on *-sto-* of *pastórem*. Counting backwards by twos, we see that the words *lauda* and *ducem* become word-beats, with the final syllables falling between two ictus. In the third line, counting backwards from the *mora vocis* on the last syllable results in an ictus falling on the accented syllable of *cánticis* (in accordance with the scheme of the dactylic order) and with the word *hymnis* being treated as a word-rhythm. In the second strophe, set to the same music, the same pattern of ictus placement results in *laudáre* being treated as a word-beat. Singing through this example while tapping the ictus gives a sense of the difference between the experience of word-beats and word-rhythms, even when set to the same music.[28]

3.3.2 Higher Structure and Accent

The interaction of the word accents with melody provides a conceptual basis for the practice of analyzing the higher structure of a chant discussed in chapter 2. For in placing the words together in a chant, the music, in the form of melody, becomes the dominant force, to which the words are a servant rather than a master:

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28. The principle of counting backwards suggests that the performer must generally plan the placement of the ictus in advance. It also assumes that slight variations in the melody, as in variant versions of a chant that change a single note on a syllable to a two-note neume, have the ability to completely turn around the rhythmic structure of a melody. A striking example of this may be found in two different but closely related versions of the hymn stanza *Tantum ergo*, found on pages 952 and 954 of the *Liber usualis*. The relationship of downbeats to accented syllables is completely different in the two melodies, in spite of the melodic similarities. This underscores Mocquereau's basic indifference to the placement of the ictus with respect to the accented syllables.

One might believe, from the importance we have given to the study of *isolated words*, that Gregorian melody seeks to follow exactly the melodic, dynamic, quantitative, and rhythmic shape of each word, and takes care never to deviate from it. This would be a mistake. Music is too noble a mistress, too conscious of her independence and power to constantly subject herself to such servitude. She knows that her own resources infinitely exceed in number, in variety, in power, in beauty, those of the pure word; she reserves the right to use them as she pleases, not to the detriment of the text, but to her own advantage: she enlightens its meaning, develops its feeling, and makes its lessons penetrate to the depths of our souls.[29] (Mocquereau 1927, 277)

As with his claims for the tonic accent, Mocquereau lists several ancient authorities for the subordination (in this limited sense) of words to music (278–83). The melody has absolute freedom to follow or enhance the natural melody of a particular word or to reverse it for melodic or rhetorical reasons.[30] Either procedure may be significant for the analyst. In particular, a "reversal" ("renversement") can signal a larger design. In an *incise*, a word may be reversed to point to a more important word, signaled by a melodic high point, as in the first *incise* of figure 2.9, in which the tonic accent of *cantáte* is subordinated to the larger motion of the phrase, becoming, in effect, a secondary accent to the principal accent of the phrase, which is the accented syllable of *Dómino* (287). The principal accent, then, is an application of the principle of the tonic accent to an entire *incise* rather than an individual word. It gives unity to a phrase member in precisely the same way that the tonic accent gives unity to the word. The melody arises as a rhythmically unified speech out of the rhythmic profile of the individual words and their connection to each other. The principal accent is always found on the highest-pitched composite beat of an *incise*, especially if this group contains the primary accented syllable of a word (573). Continuing with this process of reversal and subordination, we can combine the several smaller units into phrases, arriving at the general

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29. "On pourrait croire, d'après l'importâtes que nous avons accordée à l'étude des mots isolés, que la mélodie grégorienne s'attache à suivre exactement la marche mélodique, dynamique, quantitative et rythmique de chaque mot, et veille avec attention à ne s'en écarter jamais ; ce serait une erreur. La musique est trop noble dame, elle a trop conscience de son indépendance et de son pouvoir pour s'astreindre constamment à une telle servitude. Elle sait que ses propres ressources dépassent infiniment en nombre, en variété, en puissance, en beauté, celles de la parole pure ; elle se réserve d'en user à son gré, non pas au détriment du texte, mais à son avantage : elle en éclaire le sens, en développe le sentiment, et en fait pénétrer les leçons jusqu'au fond des âmes."

30. Apel thought that by having it both ways, Mocquereau was failing to assert much of anything: "By dividing the whole field into three categories: *Prééminence du texte*, *Transaction entre le texte et la mélodie*, and *Prééminence de la musique*, Dom Mocquereau somehow succeeds in proving [his thesis], without proving anything" (Apel 1958, 280). Apel's interest is in making broad claims about the mechanism of Gregorian melody as a whole, whereas Mocquereau is developing a methodology for discussing individual cases.

accent, which is the highest tonic accent in a phrase or an entire chant. At each stage of this process, it is worth considering Mocquereau's extended metaphor of the accent as the unifying, animating principle of an organic entity. In addition to this organic unity, Mocquereau's aesthetics demand that there be a pleasing proportionality between the lengths of the various members and phrases. In practice, this amounts to the idea that the phrase members are of roughly the same length in terms of number of notes (Mocquereau 1927, 597).[31] Each member and each phrase is governed by an accent, according to the model of the individual word. Finding these accents, and determining how the rhythms approach and depart these individual high points—generally arsis for rising lines and thesis for falling—is not merely a performance method but constitutes a real rhythmic and melodic analysis of a piece of plainchant.

3.3.3 Rests

A more concrete way that Mocquereau crafts his hierarchical phrase architecture is by the addition of rests or pauses at the ends of divisions. Mocquereau conceives of the divisions not only as boundaries between sections but as unifying elements of rhetorical or musical speech: "The pause, too, is melody, intensity, etc. It is a principle of union as effective as all the other notes; it is not a pole legally planted between two properties to delimit them. When properly understood, it will serve as a link between the members of the same sentence; while distinguishing the members, it will unite them" (550).[32]

The pauses are proportional to the grammatical importance of the groups they follow, in a manner derived from the methods of Gontier and Pothier described in chapter 2. The principal theoretical source is, again, Guido, and his discussion of the *tenor* or hold: "A 'hold' ['tenor']—that is, a pause on the last note—which is very small for a 'syllable,' larger for a 'part,' and longest for a phrase [distinction], is in these cases a sign of division" (Guido 1978, 70). For Pothier and Gontier, the lengths are left indeterminate, but for Mocquereau, in his later writings, these divisions

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31. We will see in chapter 4 that this idea is likely due to the direct influence of Hugo Riemann.

32. "La pause, elle aussi, est mélodie, intensité, etc. ; elle est principe d'union aussi efficace que toutes les autres notes ; elle n'est pas un poteau légalement planté entre deux propriétés pour les limiter. Bien comprise, elle servira de lien entre les membres d'une même phrase : tout en distinguant les membres, elle saura les unir."

become more clearly quantified, while retaining the sense of varying weight: "The slowing of the voice on the last note or syllable should be proportionate to the literary or melodic importance of the division" (Mocquereau 1927, 553).[33]

In the interest of completing the notation system, the second volume of *Le nombre musical grégorien* introduces the idea of rests of precise length, as represented by the barlines of various sizes. Mocquereau bases this idea on the axiom that "In all music, the system of pauses and rests must correspond exactly to that of the notes or syllables expressed" (556).[34]

Guido mentions three relative lengths of division—for the "syllable," the "part," and the "phrase." Each receives a time value in Mocquereau's later system. For Guido, a "syllable" is a short melodic figure of one or more notes capable of being drawn as a single neume. In Mocquereau's theory, this division corresponds to the word, the most basic unit of sense. In Mocquereau's system, there is no extra time given at the ends of individual words, but only a very slight possible lengthening that occurs when the word is a word-rhythm, resulting only from the placement of the ictus on the last syllable. There is essentially no lengthening, or if it occurs it exists as a quantitative analogue to the idea of the small pitch intervals used in temperament (553). The division of the part, member, or *incise* is shown with a quarter barline or half barline. For Mocquereau, these represent no additional time, but suggest that, when they follow a double-length (dotted) note, up to half of the time of the dotted note may be given to a breath (561n). If these are sung without a breath, it is an important part of the theory that the long note has a dynamic shape based on the nature of the beginning of the following member. If the next *incise* begins on a high note, the *mora vocis* is sung with a crescendo; if the next *incise* is part of a melodic descent in progress, the *mora vocis* is sung with a diminuendo (600). Between phrases, the full barline itself adds a time value of one simple beat, so that the preceding doubled note receives two counts and the barline itself one count (562). Since, in Mocquereau's system, the phrase ending is always approached with a slackening of tempo, the time value discussed here is not measured too precisely.

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33. "Le retard de la voix sur la dernière note ou syllabe doit être proportionné à l'importance littéraire ou mélodique de la division."

34. "Dans toute musique, le système des pauses et des silences doit correspondre exactement à celui des notes ou des syllabes exprimées."

3.4 THE ANALYSIS OF GREGORIAN CHANT

In the preceding sections, I have summarized Mocquereau's theory of Gregorian rhythm in greatly condensed form; the two volumes of *Le nombre musical grégorien* amount to some 1200 pages. Little of this theory—essentially only what was discussed in chapter 2—involves the standard methods of historical performance practice as they are followed today: reading sources on interpretation and performance and engaging with original notation. Mocquereau does both of these things, but primarily in the service of advancing his own theoretical ideas, which come from extramusical sources, especially from writers on classical prosody. This raises the question of what this lengthy theoretical discourse accomplishes and whether it has any ongoing value apart from its possible usefulness as a performing method. I believe there are two ways in which this theory remains worthwhile: first as a way to analyze and think about individual Gregorian melodies; second as a way to think about the rhythm of polyphony from the era of mensural notation and, more broadly, about the nature of musical rhythm and measure.

There are elements of the analytical approach to chant developed by Mocquereau that go beyond performance directions. Specifically, the Solesmes theory makes several theoretical claims about the Gregorian repertoire:

1. The Gregorian composers were responding to the accent of the word with melodic structure, giving high notes to the accented syllable. This hypothesis, in general terms applying to the entire repertoire, has been partially affirmed by some subsequent scholars and rejected by others.

2. The Gregorian composers responded to the accent of the word with rhythmic structure, often favoring a single short note for the accented syllable, followed by a longer group. This accounts for what an earlier generation of chant authors had rejected as bad prosody.

3. The Gregorian composers often "reverse" the natural melody of the word for melodic reasons.

4. These reversals lead to the formation of melodic/rhythmic structures that exist in proportion to one another; these constitute one of the chief beauties of Gregorian chant.

These claims amount to a way of analyzing a Gregorian melody in relation to its words. There are two potentially negative aspects of this style of analysis. First, the analysis is embedded within

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a specific performance tradition, which is not based entirely on sources and methods contemporary with the music being performed. Second, the analysis is based on tools and methods that do not belong to the music itself or to contemporary discussions of that music. To be sure, non-reliance on historical methods is a hallmark of many schools of musical analysis; furthermore, analysis did not become a central feature of writing about music until much later.[35] Many other approaches to the analysis of Gregorian chant focus almost exclusively on modal or melodic processes independent of word rhythm and accent.[36] Mocquereau's method may therefore continue to offer some interest as an analytical tool.

Model analyses are given by Mocquereau (1927, 731–48) and Suñol (1930, 125–37), as well as over the course of Mocquereau's other writings. A certain amount of analysis is contained within the Solesmes editorial practice. As an example of how the process works, I will revisit an antiphon given earlier, at figure 3.1. Figure 3.13 shows the same antiphon with composite beats marked according to Mocquereau's principles. The letters "a" (arsis) and "t" (thesis) are placed above the staff to show the nature of the rhythmic motion.[37] Each ictus marks the beginning of a composite beat, and each combination of arsis and thesis forms a composite rhythm. The placement of the arsis and thesis correspond roughly to the melodic contour, with the arsis corresponding to a rising contour and the thesis corresponding to a falling contour. Sometimes a rhythm—a combination of a simple or composite arsis with a simple or composite thesis—may contain a single word of text, and sometimes it may encompass several words, as dictated by the variety of melodic shapes.

The text is a paraphrase of the words of Jesus at Matthew 6:31–32: "Do not be solicitous, saying: 'what shall we eat or what shall we drink?' For your heavenly Father knows what is necessary for you, alleluia." The Solesmes editors divide the text into four segments, based on the grammatical sense:

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35. Pre-1600 writers about music often make analytical claims about particular passages or works of music, but their aim is usually to develop a theoretical argument rather than to explain or examine the structure of the work in question.

36. Porterfield (2014, 134–84) provides a valuable survey of several such approaches.

37. These choices differ slightly from those implied by Mocquereau's chironomy of this piece (Mocquereau 1927, 321), which sometimes shows rising lines in undulating fashion rather than with energetic arses, but the differences do not significantly alter the analysis.

No-lí-te sollí-ci-ti esse di-céntes : Quid mandu-cá-bimus aut quid bi-bémus?

Scit e-nim Pa-ter vester cae-lé-stis quid vo-bis ne-césse sit,   alle-lú-ia.

Figure 3.13: Antiphon *Nolite solliciti*, analyzed by arsis and thesis

> Nolite solliciti esse dicentes:
> quid manducabimus aut quid bibemus?
> Scit enim Pater vester caelestis
> quid vobis necesse sit, alleluia.

The barlines indicate that this text should be considered as two phrases of two members each, corresponding to these four segments. In the melodic setting, there is a rough proportionality in length between these segments, since they are set with 15, 14, 12, and 16 notes respectively. In the first member, each word corresponds perfectly to the expected melodic accent. Each accented syllable except for that of *esse* corresponds to the arsis of a compound rhythm. But the high notes of these accented syllables descend over the course of the member, corresponding to a descent through the modal fourth of the eighth mode, c–G.[38] The principal accent of this member is on the first word, which is the word of command: "Do not." In the second member, the words again correspond to the expected melodic accent, including on the secondary accent *man-* of *manducabimus*. Here there are two compound rhythms corresponding to the two actions of eating and drinking. The range of this member is considerably narrower, F–A, and the descent continues from the previous member, ending with a melodic cadence on F. This suggests that the long note at the end of the first member should be sung with a diminuendo, unifying the sense of the first phrase, descending from its initial word of command.

In the third member, there is another initial high note, this time reaching one note higher to d on

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38. That is, the tenor of the eighth mode is c, while its final is G, so descending through that fourth melodically is reminiscent of the second half of the related psalm tone 8.

enim, although as discussed above in section 3.2.4, Mocquereau considered the d as an auxiliary note to the c of the underlying melodic progression. The words again all correspond to the natural melody (tonic accent), with the exception of the last, which corresponds only partially. The range is broadened considerably, descending an octave d–D over a span of ten notes. In the rhythmic order, the contour suggests one long compound rhythm containing mostly thetic beats. In the fourth member, we get the only melodic reversals of words in this melody. The high note of the member, a, occurs already on *vobis*, so that the phrase *quid vobis necesse sit* is understood, in Mocquereau's terms, as having the unified rhythmic character of a single "word," with the meaning centered around the melodic high point on *vobis*. The melodic shape also treats the final *alleluia* as an annexed word, subordinated to the principal accent of the member on *necesse* but rising to the final of the mode after the melodic low point of *sit*. Members 3 and 4 are joined by a melodic ascent across the half barline; if the performer chooses not to breathe here, the low note of *caelestis* can be sung with a crescendo, again unifying the sense of the text, which continues without real rhetorical division.

The two general accents are marked, falling on the melodically highest rhythmic groups in each phrase. In this analysis, we have a detailed set of performance instructions, based not on the information offered by any particular early neumatic source but only on an entirely mechanical and replicable process, applying the ictus rules to determine where the composite beats begin and then determining the character of each beat based on the melodic direction in which it takes part. Scholars associated with Solesmes in the first half of the twentieth century treated this mechanical process with a certain dogmatism, but the objective and repeatable nature of the process is what makes it particularly useful as a set of performance instructions. Embedded within these performance instructions and in the editorial notation itself are several observations about the nature of this melody and the way we experience its rhythmic profile in singing it. We see which words are set according to the apparent principle of the Latin tonic accent, with some suggestions for particular words that are brought out rhetorically. In other words, apart from its aspect as a set of performance instructions, this analysis offers a reasonably complete picture of the structure of the melody and its

text, which could be combined with an analysis of the modal elements and with other approaches.

3.5   THE LATIN ACCENT IN RENAISSANCE POLYPHONY

Apart from its use in the analysis of plainchant, Mocquereau's method also has applications to the analysis of Renaissance polyphony. An account of his study of word accent in polyphonic music will serve as a bridge to the consideration of Mocquereau as a music theorist in the next chapter, since the application to measured music broadens the scope of his theory considerably. In both *Paléographie musicale* and the second volume of *Le nombre* (Bénédictins de Solesmes 1901; Mocquereau 1927), Mocquereau gives several examples of Renaissance polyphony in order to bolster his claims about the light, upbeat nature of the Latin accent. With these examples, Mocquereau makes several interesting observations about the nature of text rhythm in sixteenth-century polyphony, and he does so while standing on much firmer historical ground than with his claims for Gregorian rhythm.

Along with the plainchant revival, the polyphony of the sixteenth century, and the music of Palestrina in particular, was also the subject of keen historical interest and revival in the late nineteenth century. Two figures later associated with the founding of the Schola Cantorum in Paris—Charles Bordes and Vincent d'Indy—were instrumental in this revival, which was tied up with both French and ecclesiastical politics.[39] We saw in chapter 1 that Palestrina's apparent involvement in the production of the Medicean edition was used an an argument from authority to increase the importance and the official status of that edition. Mocquereau's similar citation of Palestrina is an appeal to authority designed to further his anti-modern program, based on the rejection of the modern understanding of musical meter and rhythm. His observations apply equally well to the style of many other sixteenth-century composers.

Mocquereau's central claim is that there is no rule requiring the coincidence of downbeat (in a sense to be explained below) and accent in sixteenth-century style, and that consequently the downbeat is not necessarily a "strong" beat. This is an adaptation of the idea of the dissociation of

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39. Flint (2006) offers a complete account of the political situation, including the connections between the Schola and Solesmes. We will return to this subject in chapter 4.

ictus and accent, which we have already seen in the Solesmes approach to plainchant, into terms that relate to modern or measured music. Mocquereau summarizes what he sees as the modern view as one in which the accented syllable must fall on a downbeat: "We know that for modern composers the Latin accent is intensity and nothing more. Consequently, they try to make it coincide with what they call the strong beat or the downbeat of the measure, in the same way that they make the modern accent, the French accent for example, coincide with the strong beat of the measure. A barline in front of all accents is the rule!" (Mocquereau 1927, 625).[40] By contrast, Mocquereau believes that the polyphonic composers of the sixteenth century enjoyed the same apparent freedom with regard to this rule as the composers of the Gregorian melodies. Mocquereau also contends that this freedom also characterizes the music of later authoritative composers like Beethoven: "And what can be said about the squareness, the symmetry of the measures, the members of the phrase and the sentences, which complete the rigidity of this first rule! Surprisingly, composers, trained from childhood to observe these laws, do not feel cramped! Like a bird born and raised in its cage, they do not suspect the freedom of the true greater rhythm, such as one finds in the works of a Beethoven, in those of the religious masters of the fifteenth and sixteenth centuries, and, even better, in the Gregorian musical number" (628).[41]

Mocquereau's arguments here are as tendentious as they are colorful, but we may still examine his claims about the rhythm of sixteenth-century polyphony. I believe that Mocquereau's discussion presents an explanation of sixteenth-century word rhythm that differs from the standard one and can enrich our understanding of that rhythm.

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40. "On sait que pour les compositeurs modernes l'accent latin est une intensité, rien de plus. En conséquence, ils s'efforcent de le faire coïncider avec ce qu'ils appellent le temps fort ou frappé de leurs mesures, de la même manière qu'ils font coïncider l'accent moderne, l'accent français par exemple, avec le temps fort de la mesure. Une barre devant tous les accents, voilà la règle !"

41. "Et que dire de la carrure, de la symétrie des mesures, des membres de phrase et des phrases, qui complètent la rigidité de cette première règle ! Chose surprenante : les compositeurs, dressés dès leur enfance à l'observation de ces lois, ne s'y sentent pas à l'étroit ! Comme l'oiseau né et élevé dans sa cage, ils ne soupçonnent pas la liberté du vrai grand rythme, tel qu'on le trouve dans les oeuvres d'un Beethoven, dans celles des maîtres religieux des XVe et xvie siècles, et, mieux encore, dans le nombre musical grégorien."

3.5.1 Rhythm and *Tactus* in Mensural Notation

The notation of sixteenth-century vocal music uses note values similar to those still in use.[42] On various levels—semibreve, breve, long, maxima—there was a theoretical possibility that these values could be divided into either two or three of the notes of the next shorter value. The arrangement of these divisions was called the mensuration, which was signaled by the placement of various signs at the beginning of the notated music. In practice, by the sixteenth century, the vast majority of music was in the mensuration known as imperfect time with minor prolation, which is given by the signs **C** and **₵**. In this mensuration, every note value divides into two notes of a smaller value. This duple-only division became the basis for modern music notation, which still retains these common mensuration signs as time signatures.

Most polyphonic music in the sixteenth century was written with a single part notated at a time. Each part would be located either on a different part of the page from the other parts (choirbook format) or in separate books, which would be kept together as a set (partbook format). The individual parts usually did not have regularly recurring barlines. Barlines were reserved for use in instrumental tablatures, where several parts are written simultaneously on the same staff, or when music was notated in score.

Many historical sources indicate that sixteenth-century performance was marked by the presence of the *tactus* (pl. *tactus*), which is a regular motion of down and up (thesis and arsis) given by the conductor or the individual singers when singing a polyphonic piece. DeFord (2015, 51) has usefully disentangled the various meanings of the word *tactus* into the concepts of "performance *tactus*," the time value governing the actual physical motion of thesis and arsis in performance; "compositional *tactus*," which is the way the regularly recurring time value of the *tactus* relates to features of counterpoint and dissonance treatment; and "theoretical *tactus*," which relates to the time value supposedly governing a particular relationship. For instance, **C** and **₵** have a theoretical *tactus* that lasts for a semibreve and a breve respectively, but the compositional *tactus* is generally

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42. In the discussion that follows, I will use names for the note values that are translations of the standard sixteenth-century terms (breve, semibreve, minim, semiminim) rather than the names we use for the equivalent notes (double whole note, whole note, half note, quarter note).

the semibreve in both cases, and the performance *tactus* may be either the breve or the semibreve depending on the skill and preferences of the singers.

The semibreve *tactus* is thus divided into one minim of downward motion (thesis), which I will call the downbeat in the discussion that follows, and one minim of upward motion (arsis), which I will call the upbeat. I use these terms advisedly, in order to clarify the connection between Mocquereau's chant theory and the modern theorization of sixteenth-century rhythm. Boone (2000, 6) argues that using terms such as "downbeat" is inappropriate in discussions of the rhythm of mensural notation because of the connection to modern conceptions of meter.[43] Since it is precisely those conceptions that Mocquereau attacks, I adopt the terms downbeat and upbeat as translations of thesis and arsis respectively, with the understanding that the downbeat has no presumed connection with dynamic stress.

Most modern editions place barlines before each breve *initium*, so that the measures of the modern edition correspond to the timespan of the theoretical *tactus* in ₵. Since the compositional and performance *tactus* do not necessarily correspond to the theoretical one, it is usually safe to assume a compositional *tactus* of a semibreve, which makes both the first and third minims of each measure downbeats and the second and fourth minims upbeats, in the sense of *tactus* motions. As we will see, some differences in quality between the two downbeats of each measure—that is between breve *initia* and semibreve-max *initia*—are often observable. The recurring motion of the *tactus* and the alternation of down and up bear a clear resemblance to the more modern concept of the measure, and this resemblance is reinforced by standard editorial practice. This raises the question of the relationship between *tactus* and accent, which has often been conflated with the question of *tactus* and meter. Following Mocquereau, I will focus on the first of these questions as it relates to the grammatical accent of Latin.[44]

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43. Boone prefers the more neutral term *initium* (plural *initia*), referring to the point in time that commences a note of a certain length within the hierarchical mensural framework. What I am calling downbeats are semibreve *initia*, while the upbeats are minim *initia* but not semibreve *initia*. In DeFord's terms, we may categorize a beat by the highest mensural value of which it marks the beginning, so the upbeats are minim-max *initia* because they do not mark the beginning of a semibreve in the mensural framework.

44. In discussing the setting of individual words in polyphonic style, the uncertainty of the notation of text underlay limits us to certain periods and certain kinds of text. The style of the later sixteenth century is more syllabic, allowing for more certainty in the placement of particular syllables. This is especially true in longer texts, such as the Gloria

3.5.2 Word Accent and Mensural Placement

Jeppesen (1970), the classic work on Palestrina's musical style, provides a good introduction to the question of text accentuation and *tactus* in sixteenth-century music. Jeppesen points out that in sixteenth-century style, there is a marked difference in the way dissonance is handled on downbeats and upbeats, since all non-suspension dissonances occur only on the upbeat, while all suspensions occur on the downbeat (23).[45] This leads Jeppesen to the conclusion that the downbeat is accented or strong while the upbeat is unaccented or weak; in other words, the standard editorial practice has real metrical meaning analogous to the modern conception, owing to the different melodic and contrapuntal treatment of downbeats and upbeats. In text setting, however, this does not always lead to a coincidence between accented syllables and downbeats. Figure 3.14 shows an excerpt drawn by Jeppesen from the Gloria of Palestrina's four-voice *Missa sine nomine* (only the soprano, altus, and tenor are shown, as the bass is resting in this passage), in which the accented syllables of the lower two parts do not coincide with the downbeats. Jeppesen writes, "There is no reason to suspect

Figure 3.14: Excerpt from Palestrina, *Missa sine nomine* (Jeppesen 1970, 21)

that Palestrina is guilty here of such a careless declamation as: 'propter magnam gloriam tuam'" (22).[46] Jeppesen proposes an alternative barring for the altus in this excerpt, shown in figure 3.15,

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or the Credo of the Mass, which are typically set in a more syllabic style than other texts, such as the Kyrie and the Sanctus.

45. For the sake of clarity, I am using my own proposed terminology of downbeat and upbeat, which Jeppesen does not use. He speaks first of odd-numbered minims and even-numbered minims and later of "strong" and "weak" parts of the measure.

46. Jeppesen uses the scansion symbols for long and short syllables interchangeably with the concept of accented and unaccented syllables.

Figure 3.15: Hypothetical Rebarring of Altus (Jeppesen 1970, 23)

stating that with this barring, "Everything falls naturally into its place, and the melody accurately follows the stress of the text (23). This shifting of the barlines is possible because the passage has only one instance of a downbeat-type dissonance, just before the end of the phrase in the suspension in the altus. Given the conflict between the accentual pattern of this voice and the tendency of the style more broadly to treat downbeats and upbeats differently, Jeppesen proposes a model of listening where contradictions between the "macro" rhythm, which corresponds to the *tactus* and the regular pattern of barlines, and the "micro" rhythm, which corresponds to the individual words in each voice, are a feature adding to the complexity of Palestrina's style (28). In performance, he recommends a light touch with regard to the stress accent of Latin in order to minimize the disturbance to the listener (29–30).

Jeppesen's ideas about the relationship of accent to barlines are widespread. Boone (2000, 26n44) surveys other modern theories of *tactus*, which generally refrain from equating the perception of *tactus* with the experience of meter. Boone shows, however, that the alignment of voices (like the dissonance treatment cited by Jeppesen) gives a privileged place to semibreve *initia* and to higher-level *initia* as well. As a result, he cautiously suggests some analogy between *tactus* and meter, even as he is careful to avoid terminology with too much modern baggage. Boone stops short of discussing the way word accent enters the picture, but elsewhere he suggests that in French texts with an alternation between accented and unaccented syllables, these tend to fall on the downbeat and upbeat respectively (DeFord 2015, 105).

In discussing Palestrina's treatment of words, DeFord offers a view that is more flexible than Jeppesen's and quite close, as we shall see, to Mocquereau's view: "Accented syllables are usually set to longer notes than unaccented syllables, which may or may not be aligned with stronger mensural positions than the shorter notes that follow them. In a series of equal minims, however,

accented syllables fall on semibreve *initia* and unaccented syllables on minim-max *initia* about 80–90 percent of the time. Agogic accents that are independent of the semibreve *initia* lead to irregular and constantly shifting groups of minims within phrases. Semibreve *initia* are always audible, however, and final notes of phrases fall on semibreve *initia* whether or not they are supported by cadences" (DeFord 2015, 376). In this context, "agogic accent" refers to the emphasis felt when hearing a relatively long duration. The last part of DeFord's statement suggests that Jeppesen's rebarring in figure 3.15 is incorrect, since the last note shown is a phrase ending and is supported by a cadence.[47] Jeppesen's realignment means that the cadence falls on an upbeat, so the accentuation is improved with respect to downbeats and accents at the expense of the shape of the phrase. DeFord's formulation makes better sense of the passage in figure 3.14; the most rhythmically salient feature of the duet is that the phrase ends on a semibreve *initia*, with the accented syllables falling into the 10–20 percent of cases where they do not coincide with the downbeats.[48]

Looking at late sixteenth-century polyphonic style more broadly, we see an extension of the principles relating accent and tactus to even more mensural levels. Sometimes this yields a proportion of non-coincidence between accent and downbeat even higher than the figure given by DeFord. Figure 3.16 shows an excerpt from a five-voice Mass setting by the Slovenian composer Jacobus Gallus (1550–1591), first published in 1580. For reasons of space, I show only one of the two soprano parts, but the analysis that follows would apply equally well to any of the other voices. The punctuation in figure 3.16 is that of the original edition. Using punctuation and line breaks to break the text into sense units, we get:

> [Glória in excélsis Deo]
> Et in terra pax homínibus bonæ voluntátis.
> Laudámus te.
> Benedícimus te.
> Adorámus te.
> Glorificámus te.

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47. By the term "cadence," I mean a vertical octave between two parts at a phrase ending, approached by contrary motion from the nearest imperfect consonance and usually preceded by a suspension in one of the parts. This describes the situation between the lower two parts in figure 3.14.

48. An alternative and slightly more complicated approach is to consider the minims as grouping into "measures" of three in the approach to cadence, thus ignoring the metrical implications of the periodic down-up motion of the *tactus*.

Grátias ágimus tibi [propter magnam glóriam tuam.]
Dómine Deus, Rex cæléstis,
Deus Pater omnípotens.
[Dómine Fili] unigénite,
Iesu Christe.
Dómine Deus, Agnus Dei, Fílius Patris.

Qui tollis peccáta mundi, miserére nobis.
Qui tollis peccáta mundi, súscipe deprecatiónem nostram.
Qui sedes ad déxteram Patris, miserére nobis.
Quóniam [tu solus Sanctus.]
Tu solus Dóminus.
Tu solus Altíssimus, Iesu Christe.
Cum Sancto Spíritu, in glória Dei Patris. Amen.

Figure 3.16 follows the standard editorial convention of placing the bars before each breve *initium*. As we shall see, the analysis below will confirm this choice. The style is overwhelmingly syllabic, with only a single syllable in m. 31 lasting for more than one note. Given the high frequency of syllables set to semiminims, it is likely that the performance *tactus* here is a divided semibreve that marks each minim distinctly, or even possibly the minim itself. But periodicity at higher levels—the semibreve and the breve—are observable as well, so that at least three levels of metric hierarchy are present. I have marked with a star every time the accented syllable falls on a less "downward" part of the measure than the syllable that follows; that is, I mark cases where the note of the accented syllable coincides with a shorter maximum value of *initium* than the following syllable.[49] I have also excluded cases of syncopation, as in mm. 6 and 7, or cases of DeFord's "agogic accent," where the accented syllable coincides with a lower-level *initium* than the unaccented syllable, but the accented syllable is longer than the unaccented one. In this example, the upbeat accent happens quite frequently, raising the question of whether this is faulty declamation or whether the downbeats have any meaning.

The accentual implications of the *tactus* are clarified if we start instead from the principle of phrase endings landing on downbeats. This excerpt lasts for 56 measures, divided into two sections of 27 and 29 measures. This gives us 112 downbeats: 56 breve *initia* and 56 semibreve-max *initia*.

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49. This mark is adapted from various writings of Mocquereau.

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Figure 3.16: Discantus primus, Gloria from *Missa super Ich stund an einem Morgen*

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Table 3.3 shows the syllable placement on each of these downbeats. The function of each of these downbeats and the differentiation between them is striking. At the level of the breve *initia*, there are 44 measures with an attack on the downbeat. Of those 44, 37 are endings of either words or sense units that end with a monosyllable (e.g., *laudamus te*). It is clear that the idea of the downbeat of the measure as a "strong" beat is in constant conflict with the text declamation. The situation is different with the semibreve-max *initia*. Here, accented syllables, including secondary accents, occur in just under half of the measures with an attack on this beat—17 out of 40. This analysis

Table 3.3: Downbeats and Words in Figure 3.16

Breve *initia*	
Final, unstressed syllable of a word or sense unit	32
No attack	12
Monosyllable at the end of a sense unit	5
Accented syllable	3
Secondary accent	2
Neutral syllable	1
Monosyllable beginning a sense unit	1
Semibreve-max *initia*	
Accented syllable	16
No attack	16
Final, unstressed syllable	14
Neutral syllable	9
Secondary accent	1

shows the emergence of a clear differentiation between beats on the level of the breve or notated measure. But the differentiation is one in which the notated downbeat overwhelmingly performs an ending function and coincides with a weak final syllable in Latin. Accented syllables happen on downbeats of the semibreve tactus (the semibreve *initia*), but only rarely with the breve *initia*. The complex layering of metric levels, which do not correspond to a simplistic view of accented downbeats, is typical of many of Gallus's contemporaries, even as the coincidence of weak final syllable with downbeats is a feature of sixteenth-century sacred style more broadly.

3.5.3 Mocquereau's View

Mocquereau's view of rhythm in the sixteenth century was one of freedom with regard to the placement of the accented syllable within the measure: "The religious masters of the fifteenth, sixteenth, and seventeenth centuries were not yet subject to the bondage of the strong beat; and the further back we go, the more evidence we have that religious polyphonic music rejected the obligatory concordance of the Latin accent and the so-called strong beat" (Mocquereau 1927, 628).[50] The governing principle is not an alignment of downbeat with accent but an alignment of downbeat with ending function. For Mocquereau, this is because each phrase or phrase member constitutes a rhythm, in the same sense in which he uses that term with Gregorian chant—a motion ending with repose on the thesis or downbeat (637). The composer has complete freedom to lengthen the notes preceding the arrival on the phrase-ending downbeat, so that the accented syllables may or may not correspond to downbeats as well. For Mocquereau, the position of the accent is secondary to the position of the final note. To put this into Mocquereau's specialized terminology, the individual words may be word-beats (with the final syllable on the upbeat) or word-rhythms (with the final syllable on the downbeat), but the phrase itself is always a rhythm, in that it always reaches its repose on a thesis (639).

Mocquereau's formulation provides a way to think about the phrase in sixteenth-century style that accords well with the way I experience those phrases in singing. Indeed, much of Mocquereau's description of Gregorian rhythm can apply to the experience of polyphonic rhythm, and it sidesteps some of the concerns about the perception of meter raised by Boone and the authors he cites. Questions of meter and *tactus* are difficult and have been the subject of controversy, but what follows is an attempt to describe the experience of *tactus* in sixteenth-century music, using terms drawn from Mocquereau.

The *tactus* is a motion (physical or imagined) of down and up that measures time in polyphonic music. The downbeat or thesis is the place of repose and natural length, while the upbeat or arsis is

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50. "Les maîtres religieux des xve, xvie et xviie siècles ne subissaient pas encore la servitude du temps fort ; et plus on remonte vers les siècles passés, plus on a de preuves que la musique polyphonique religieuse repoussait la concordance obligatoire de l'accent latin et du prétendu temps fort."

the place of impulse, energy, and lightness. Phrase endings tend, as a rule, toward the downbeat. By placing attacks primarily on downbeats—as is typical at the beginning of a piece or to highlight particular words—composers increase the relative repose of the phrase, while energetic phrases usually contain more attacks on upbeats, often including syncopation, which we can think of as a durational accent beginning on an arsis. Such upbeat-beginning writing is frequently featured in later sections of a piece. We do not feel the downbeat as strong in and of itself, since the perception of intensity is driven by the word accentuation. Many downbeats are actually arrival points on weak final syllables.

While Mocquereau's observations about Renaissance rhythm are meant to bolster his claims about Gregorian rhythm, they are actually founded on a more solid historical basis than his more speculative arguments about Gregorian chant. The *tactus* is a real historical term, with a real motion of arsis and thesis. Mocquereau's claims about the placement of the final syllable of a phrase on the thesis accord well with the surviving music. By formulating ideas about meter, with regular periodicity and regular downbeats, Mocquereau also enters into a wider theoretical discourse that describes many types of music outside of the more specialized realm of plainchant. Mocquereau's place within this theoretical discourse will form the subject of the next chapter.

4 DOM MOCQUEREAU AND MUSIC THEORY

4.1 MOCQUEREAU AS MUSICIAN

In the previous chapters, I have described Dom Mocquereau's theory of Gregorian rhythm in its context of the nineteenth-century restoration of plainchant. We have considered the classic Solesmes method from three angles within that context: as an editorial method for notating the Gregorian repertoire (chapter 1); as a system for counting, conducting, and singing Gregorian chant (chapter 2); and as a theory of the nature of the Latin tonic accent as it relates to music (chapter 3). In this concluding chapter, I will consider it as a theory of musical rhythm in dialogue with the broader field of music theory.

One distinctive feature of Mocquereau's method, in relation to others' writings about plainchant, is its reliance on the language and methods of music theory: its highly systematized arrangement of melodic groups; its equation of the thesis (the falling part of a poetic foot) with the concept of the downbeat of modern western music; and its quantification of musical time as the arrangement of roughly equal elementary pulses. In the course of his arguments, Mocquereau discusses the experience of rhythm in measured music by Mozart and Beethoven, but above all in renaissance polyphony. As I argued at the conclusion of chapter 3, this discussion moves Mocquereau beyond the particular concerns of the performance of plainchant. It is impossible to understand his system fully without considering the other theories of rhythm and meter with which he was engaging as he approached modern music.

The details of Mocquereau's biography before entering the monastery provide one possible source for his tendency to write more about modern music than his fellow chant practitioners. Guéranger and Pothier were both interested in Gregorian chant as a matter of liturgical revival,

but their experiences and ideas on the subject were not shaped by any formal musical training. Mocquereau, on the other hand, considered his musical background and training an essential part of his formation, as he explained in an 1896 address at the *Institut catholique de Paris*: "Far be it from me that, in thus criticising these great composers, 1 should seem to disparage them. To disown them would be to disown my dearest memories. Often, as a child, I was lulled to sleep to the sound of the sonatas, the trios and the quartets of Beethoven, Mozart, or Haydn. And when I grew to man's estate, I took my place as 'cellist in an orchestra conducted by that revered master, M. Charles Dancla, a professor at the Conservatoire. I know the power of orchestral music" (Mocquereau 1923, 5–6).[1]

Because of this background, Mocquereau brings the concerns of a nineteenth-century performing musician—especially concerns of rhythm, accentuation, and nuance—to his elaboration of the rhetorical, word-based chant method he inherited from Guéranger, Gontier, and Pothier. The older Solesmes approach was entirely focused on a rhetorical delivery based on words and syllables and only secondarily on melodic considerations. In Pothier's analysis of the antiphon *Justus Dominus* (figure 2.4 on page 71), there is no discussion of musical time apart from the indeterminate time used when uttering a particular syllable or word. The rhythm of the analysis is entirely unquantifiable. Mocquereau's formation as a performer evidently led him to seek a more definite quantification of time in plainchant.

It is telling that of the three Solesmes theorists of rhythm discussed in chapter 2—Pothier, Mocquereau, and Cardine—only Mocquereau is comfortable showing Gregorian chant in modern musical notation. In general, the use of modern rhythmic notation—with stems, beams, and flags— is reserved for mensuralist interpretations of plainchaint, which assign proportional note values to the various signs shown in some of the earliest manuscript sources. Mocquereau rejects the idea of proportionalism on principle, insisting on the primacy of free rhetorical rhythm as handed down in the Solesmes tradition. His theory of Gregorian rhythm is one of freedom governed by the tonic accent, but it is a freedom that can be described using the theoretical tools of modern musical

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1. Charles Dancla (1817–1907) was concertmaster at the Opéra-Comique and later violin professor at the Paris Conservatoire.

notation and practice. The result is a theory that more closely resembles a mainstream European theory of rhythm than any of the other approaches to Gregorian rhythm discussed in chapters 1 and 2.

In fact, it is fair to summarize the difference between Mocquereau's approach and the approaches of Pothier and Cardine as a different formulation of the relationship between plainchant and modern music. Gontier explicitly defined plainchant as modulated speech, belonging to a different realm entirely from music. Mocquereau's understanding of the matter was different. During his novitiate, the initial period of adjusting to monastic life before taking final vows, Mocquereau was initially uninterested in plainchant, precisely until he came to see it as music worthy of comparison with the great music he had studied before entering the religious life. In a 1950 retrospective initially published in the American periodical *The Catholic Choirmaster*, Justine Ward recounts the moment of Mocquereau's "conversion" to the Gregorian cause:

> At this time [ca. 1875], Dom Pothier was choirmaster at Solesmes. The rude, untrained voices of the monastic choir failed to charm the young postulant. He would have laughed at the idea that he was destined to devote his life to the defense of his master, Dom Pothier, in a formidable work of Gregorian research, the *Paléographie musicale*. He still found the Chant boring, rude, colorless, and uncouth.
>
> In the quiet of his cell, Dom Mocquereau was preparing an Offertory for the feast of a martyr, 'Posuisti Domine in capite ejus coronam de lapide pretioso.' He hummed the melody softly. Fascinated, astonished, he exclaimed, 'Why this is music, real music, beautiful music.' He reached for his cello, tuned it, and played the melody, very legato. That was the moment of his conversion. (Combe 1987, 372)

For Mocquereau, the musicality of plainchant, even when performed, as on this occasion, without words, is an important part of its aesthetic appeal.[2] The words and the liturgical context have their place in formulating his theory of rhythm and melody in chant, but purely musical considerations have a place as well.

The question of musicality in chant became a point of contention during the years of controversy over Solesmes's addition of rhythmic signs to the Vatican Edition. Auguste Pécoul, a close associate

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2. Significantly, Mocquereau's chief works, the *Paléographie musicale* and *Le nombre musical grégorien*, both contain the word "musical" in their very titles.

of Pothier and one of Mocquereau's strongest critics, pursued precisely this line in his condemnation of the newer Solesmes theories: "The two monasteries of Solesmes, the abbeys of St-Pierre and Ste-Cécile, are *conservatoires* of Gregorian chant. Perhaps the first in the Catholic world, but *conservatoires.* Performance perfection is brought to unsurpassable heights, and responds fully to the musical sense. But are these chants still prayer?"[3] For Pécoul, making the pedagogy and practice of chant too much like that of other music was a betrayal of the ethos and practice of Guéranger and Pothier.

The more recent interpretive approaches, based on Cardine's semiology, have revived the idea of chant as something set apart from other music in its organization of time. Guilmard (2022, 23) writes, "Gregorian rhythmics, before being a rhythmics of a musical and artistic order, is a rhythmics determined by the verbal foundation. Gregorian chant does not depend in any way on a pre-existing musical aesthetic, and it does not fit into a premade musical framework. It is only musical in a secondary degree, once the verbal foundation has been established."[4] Rhythmic values, as described by Cardine and Guilmard, are not durations that can be expressed in modern musical notation. They are rather the unquantifiable rhythm of speech.

4.2 THEORETICAL SOURCES

Mocquereau's nineteenth-century musical training left an indelible mark in his writings, and not only in the choice of musical examples. Mocquereau also draws freely on authors who wrote about musical topics other than Gregorian chant. The most important of these are Mathis Lussy (1828–1910), Rudolf Westphal (1826–1892), Jules Combarieu (1859–1916), Vincent d'Indy (1851–1931), Hugo Riemann (1849–1919), and Jérome-Joseph de Momigny (1762–1842).[5] As we

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3. A private note quoted in Ellis (2013, 63). The translation is Ellis's. Ellis (2013, 119n) also remarks on the republican connotations of the idea of the *conservatoire* within French politics around 1900. Ste-Cécile is the abbey of nuns just down the road from that of the Solesmes monks.

4. "La rythmique grégorienne, avant d'être une rythmique d'ordre musical et artistique, est une rythmique déterminée par son soubassement verbal. Le grégorien ne dépend aucunement d'une esthétique musicale préexistante, et il ne s'inscrit pas dans un cadre musical préfabriqué. Il n'est musical qu'au deuxième degré, une fois que la base verbale a été établie."

5. For reasons that will become clear later, I have given these authors not in chronological order but in the order in which they influenced and shaped the formation of Mocquereau's theory.

shall see, some of these authors differed sharply with Mocquereau on the rhythmic interpretation of Gregorian chant, even as they agreed with him on more abstract theoretical principles. While I will discuss these differences, I believe it is only possible to consider the points of agreement and difference in comparing musical theories if we consider Mocquereau's ideas as severable from their original application to Gregorian chant.

   To that end, it will be useful to reformulate Mocquereau's main theoretical ideas as a series of propositions, lifted as far as possible from their connection with the specific interpretive questions of Gregorian chant. These propositions summarize the theory laid out in greater detail in chapters 2 and 3. The page citations for each proposition refer to the present dissertation.

1. Rhythm is an ordering of motion in the arts. In music, it is an ordering of melodic motion through time (76).

2. This order always runs from impulse to rest, or, in musical terms, from upbeat to downbeat (the classical arsis to thesis), as in the case of a ball moving through the air. The practice of conducting, tracing the upbeat and downbeat with the hand, gives physical expression to the analogously ordered melodic motion (82).

3. Research into human cognition conducted in the first decade of the twentieth century suggests that listeners naturally group a series of isochronous pulses into groups of two or three (76). In the context of music, this suggests that we can always divide melodies into elementary motions comprising two or three notes. This lowest level of melodic motion is called the simple rhythm. Another way to measure the grouping of pulses is to measure from arrival to arrival (downbeat to downbeat); this distance is the measure (or the composite beat) in the musical sense.

4. Several simple rhythms may be joined by fusion, so that the arrival point (thesis) of one rhythm can serve as the beginning of a new impulse or motion (81). The timespan between these downbeats, considered previously as the composite beat or measure, become part of a rhythm by taking on an arsic or thetic character.

5. The simple rhythms always form dynamic (in the sense of motion) groups that are represented as moving across the barline. In notated music, the rhythms straddle the barlines (77).

6. A good performance will tend to respond to these larger rhythmic motions by establishing an affinity between rising melodic contour, subtle acceleration, and crescendo with the groups representing the arsis and falling melodic contour, slackening in the tempo, and diminuendo with the thesis (82).

7. The peak of a group of any length (*incise*, member, phrase, period) is an accent, which divides the group into a protasis and an apodosis. The model for this experience is the tonic accent of

the word: "The accent is the soul of the voice" (100). This shape is repeated on the higher level of the whole piece, which is called the general accent (84).

8. Larger musical groups are set off from each other and punctuated by adding length to the final note of a group. This is a cadence or point of division. Length generally accrues on the downbeat, so a group only definitively ends when the last note is a downbeat coinciding with a long note. This phenomenon is known as an ictic cadence (82). A long note separated from the downbeat is a form of syncopation, which is not discussed or developed in the classic Solesmes theory.

9. Sounds may be distinguished from each other either by melodic accent or by other forms of differentiation. In general, differentiation can be accomplished by changes in pitch, intensity, duration, or timbre (76).

10. While the natural alignment of long durations and the downbeat is a real phenomenon, the alignment of the accent with the downbeat is not universal to music but is a modern convention (126). In sixteenth-century polyphony and in earlier music, the accent is driven by the nature of the language, especially Latin, and is freely placed with respect to the succession of downbeats and upbeats. The Latin accent is theorized as being light in intensity and mostly marked by pitch height. This light form of accentuation is felt as more supple and spiritual than the usual modern conception of the strong downbeat and the weak upbeat. Such accentuation also marks the rhythm of the best modern composers, including Beethoven (143).

4.2.1 Musical Expression and Accentuation: Lussy

The theoretical starting point of Mocquereau's theory being performance, a principal early influence is Mathis Lussy's *Traité de l'expression musicale* (Lussy 1874), which also deals with matters of performance.[6] Mocquereau includes this book in the bibliography to *Le nombre musical grégorien* (Mocquereau 1927, xxii). The main purpose of this work, drawing on Lussy's extensive experience as a piano teacher, is to theorize the elements of an expressive performance (nuances of dynamics and rhythm), which had seldom previously been the subject of theoretical investigation: "The object of this work is to demonstrate the hitherto unknown reason which guides artists and professors in their accentuation, and to furnish a system of rules by which a player will be enabled to annotate and perform with expression every kind of vocal and instrumental music" (Lussy 1896, iv). Smither (1960, 79–142) and Dogantan (1997) give full and systematic accounts of Lussy's theory. In particular, Dogantan (1997, 198–205) briefly discusses the influence of Lussy on Mocquereau.

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6. Lussy (1896) is an English translation of this work, based on a later edition.

For Lussy, there are three chief tools of musical expression for the performer: accentuation (the emphasis of particular notes); the manipulation of time (*accelerando* and *rallentando*); and dynamic nuances (Lussy 1874, 11–12). The performer uses three kinds of accentuation, which are arranged in order of increasing importance: metrical accents are dynamic accents on strong beats of the measure (i.e., downbeats); rhythmic accents are accents that delineate rhythmic groups, which need not align with the metrical design; pathetic (*pathétique*) accents are those that bring out particularly characteristic or unexpected notes or rhythms. These three correspond roughly to the body, mind, and spirit of the human person. Rhythmic accents override metrical ones, and expressive accents override rhythmic ones.

In Lussy's view, the purpose of metric accentuation is to reinforce the listener's instinctual perception of the metrical organization of the music (75). According to his rules, the downbeat of each measure is accented (75). While this principle is frequently overridden by musical considerations, including rhythmic grouping and other features of the musical texture, the acceptance of the idea of an inherently strong beat within the measure is a fundamental difference between Lussy's understanding of musical meter and Mocquereau's. This applies especially to the consideration of the placement of accented syllables, which Lussy believes should align with the strong beats of the measure (51). It is in the context of metric accentuation that Lussy makes his only mention of plainchant, as a form of music that lacks any metrical accentuation or differentiation at all. For Mocquereau, music relies not on the perception of strong and weak beats (in the sense of performed dynamic or agogic stress) but merely on the subdivision of time into arsis and thesis, which have no direct correlation with the perception of relative strength or weakness. In measured music, this alternation of arsis and thesis happens with a regular periodicity, but without any special attention to accentuation, at least in the purely melodic and rhythmic sphere. The frequent coincidence of a weak syllable and the thesis is not an exception to a rule of strong and weak beats or something to be amended but exemplifies the separation of the concepts of metrical construction and accent (proposition 10).

In the hierarchy of accentuation, one level higher than the metrical accent is the rhythmic accent.

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Citing Choron and Reicha as his predecessors, Lussy calls the fundamental rhythmic group a rhythm ("rhythme") (13).[7] The model for the rhythm is the line of poetry, which corresponds to melodic groups ranging from one to eight measures. A rhythm may begin anywhere in the measure; the only rule for the metrical placement of the rhythm is that the final rhythm in a piece must end on a downbeat (22). Lussy describes rhythms whose beginnings and endings do not correspond to the barlines as being astride the measures; for Mocquereau this usage becomes a general rule (proposition 5).

Considering the endings of rhythms, Lussy distinguishes between masculine and feminine rhythms, on the model of the French language, where masculine words usually have the strong syllable last, while feminine words usually have a weak syllable after the accent. A rhythm that ends with a note on the beginning of a measure or on a strong beat is masculine, and a rhythm that ends with a note on a weak beat is feminine (18). Mocquereau borrows Lussy's usage of these terms, but he prefers to describe these as ictic and post-ictic cadences respectively, presumably because he wishes to dissociate the ideas of accent and ictus (Mocquereau 1908, 79). In the standard pronunciation of ecclesial Latin, there is never an accent on the final syllable, so the only masculine rhythms would be what Lussy calls "apparently masculine" rhythms, where a weak syllable falls on a downbeat because of a particular compositional choice (Lussy 1874, 19). Mocquereau's usage sidesteps the question of accent altogether.

Lussy's conception of rhythmic grouping is hierarchical. He distinguishes levels of grouping by considering the degree of completeness and repose that their endings provide, on the model of different levels of punctuation in spoken language: "The cadence is for music exactly what punctuation is for speech" (25–26).[8] Lussy credits this idea to earlier theorists, including Mattheson, who wrote about hierarchical musical punctuation in the 1730s. For Lussy, every type of cadence (complete, half, evaded) corresponds to some form of punctuation—period, colon, or comma (25–26). The most complete group, the phrase, consists of several smaller groups punctuated by

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7. Following the changing conventions of French orthography, Lussy changed the spelling of this word between his early publications ("rhythme") and his later ones ("rythme").

8. "La cadence est exactement à la musique ce qu'est la ponctuation au discours."

a complete cadence (Lussy 1874, 25).[9] Smaller groups, with less final punctuation, include the phrase member, the hemistich, and the *incise*, the last of which is often a very small group of only a few notes (27).[10]

Lussy's rules for performing the accentuation of rhythmic groups overlap with Mocquereau's approach as well. For Lussy, the performer must understand and distinguish the rhythmic groups, which are apparent from the tonal and musical sense of the progression. Failing to distinguish them is like reading without punctuation or understanding (13).[11] Lussy mentions three principal ways to distinguish rhythmic groups: parallelism (when a rhythmic figure repeats, this implies that each repetition forms a group); rests or long notes; and tonal cadences. *Incises* in instrumental music are very small groups distinguished from each other by articulation; these are easiest to distinguish when a pitch is repeated. The performer must highlight the rhythmic groups with accentuation. This is done by marking the first and last notes of each rhythm for special treatment. According to the musical context, these notes can be accented or unaccented, but the general tendency is for the first note of the rhythm to be dynamically strong as a means of articulation and for the last note to conform to the nature of the cadence, i.e., strong in a masculine cadence and weak in a feminine one (58–63). Rhythmic strength in this sense is independent of metric strength dictated by the position of a note within the measure. These generalities are subject to tonal forces: "In brief, the more a note is desired, invited, and wished for by the attraction of the preceding notes, the less strong it is" (63).[12]

The performer accentuates the *incises* by making the first note of each *incise* strong and the last note weak, regardless of metric placement (63). Lussy offers two linguistic models for the *incise* in both instrumental and vocal music; it is either a single syllable or a two-syllable word with a

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9. In French, the word *phrase* is used both for the English "phrase" in the musical sense as well as for "sentence." Lussy's idea of a complete cadence corresponds to what modern writers call a perfect authentic cadence.

10. This list is likely the source of the names Mocquereau uses, although the correspondence is not exact; Lussy's *incise* corresponds to Mocquereau's neume or elementary rhythm. Mocquereau also never employs the term hemistich, meaning half a line of poetry, as he prefers to base his understanding of rhythmic grouping on prose rather than poetry. We can also compare Lussy's hierarchy with Anton Reicha's earlier hierarchy, which consists of (from small to large) figures, members, and periods (Reicha 1814, 10–12).

11. Compare Gontier's account of bad declamation described in chapter 2 (page 65).

12. "En résumé, plus une note est désirée, appelée, sollicitée par l'attraction des notes précédentes, moins elle est forte."

weak final syllable (31). The accentuation of the *incises* overrides the metrical accent. There is a clear affinity with Mocquereau's understanding of the placement of the tonic accent in relation to the downbeats. But in the case of vocal music, Lussy advocates for an alignment of linguistic and metrical accentuation; he even suggests that performers adjust the syllabification of misaligned passages so accented syllables coincide with downbeats (54–55). While there is much agreement between Lussy and Mocquereau about the nature of rhythmic groups, they approach the relationship between rhythmic groups and metric structure differently.

For Lussy, rhythmic accentuation itself gives way to pathetic or expressive accentuation. In his 1896 address to the *Institut catholique de Paris*, Mocquereau provides his own paraphrase of Lussy's theory of musical expression:

> Modern music is composed of three principal elements—
>
> 1. The Scale, or tonality, in the two modes, major and minor.
> 2. Time, that is, the periodic recurrence at short intervals of a strong beat, breaking up a piece of music into small fragments, called measures, of equal value or duration.
> 3. Rhythm, that is, the periodic recurrence of two, three, or four measures of the same value so as to form groups or symmetrical schemes, each of which contains a section of a musical phrase and corresponds to a verse of poetry.
>
> These three elements impress upon our consciousness a threefold need of attraction, of regularity, and of symmetry.
>
> No sooner has the ear heard a series of sounds subject to the laws of tonality, of time, and of rhythm, than it anticipates and expects a succession of sounds and analogous groups in the same scale, time, and rhythm. But, as a rule, the ear is disappointed of its expectation. Very often the group anticipated contains notes extraneous to the scale-mode of the preceding group, which displace the tonic and change the mode. Or, again, it may contain notes which interrupt the regularity of the time, and destroy the symmetry of the original rhythmic plan. Now, it is precisely these unforeseen and irregular notes, upsetting tone, mode, time, and the original rhythm, which have a particular knack of impressing themselves upon our consciousness. They are elements of excitement, of movement, of force, of energy, of contrast: by such notes is expression engendered. (Mocquereau 1923, 11–12)[13]

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13. Compare Lussy (1874, 92–93).

The performer should enhance the listener's experience of these expressive contrasts and surprises by emphasizing notes that are chromatic or syncopated or that disrupt the expected rhythmic structure. While Mocquereau admires this theory, he frames it as incompatible with his approach both to plainchant and to music in general: "It must be admitted that this theory contains a certain measure of truth, but can it be said to be complete? Are not order, calm, and regularity most potent factors of expression, even in modern music? Moreover, if expression must be denied to all music which does not employ such elements of excitement, then it must be denied to Gregorian music, which rejects, on principle, all such expedients, being thereby distinguished from all compositions of modern times" (Mocquereau 1923, 12). Mocquereau, writing at the beginning of the twentieth century, is arguing for a theory of musical expression that does not rely on tonality or conventional metric structure. His aim is to promote his particular Gregorian aesthetics, as Gregorian chant as practiced at Solesmes lacks modern tonality, regular measure, and exactly proportional phrase structure. One might just as easily apply this aesthetic to other music being devised at that period that abandons tonality and regular phrase structure. For chant at least, the expressive power of music does not depend on tonal attraction, regularity, or symmetry in the way Lussy describes. This leads Mocquereau to conclude that Lussy's theory of pathetic accentuation is incomplete.

Closely related to the expressive accent are the performer's expressive use of tempo fluctuation ("le mouvement passionel") and dynamics ("nuances"). For Lussy as for Mocquereau, these follow the melodic contour. Lussy uses a comparison between the physical exertion of climbing and melodic ascent:

> The steeper the slope, bristling with obstacles and difficulties, the more force is needed; the more force is used, the faster the pulse beats, the greater the animation, but also the faster one is exhausted. However, when one reaches the top, one feels a certain well-being; one breathes at ease: victory brings happiness! This comparison provides us with a simple and rational explanation for the tendency of musicians to accelerate at the beginning of a phrase in an ascending context and to slow down towards the end. (Lussy 1874, 117)[14]

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14. "Plus la pente est raide, hérissée d'obstacles, d'aspérités, plus il faut déployer de force; plus on déploie de force,

Ascending passages, together with the natural tendency to accelerate, should also be performed with a crescendo, while descending passages should be performed with a diminuendo, which complements the tendency to slow down (139). There is a clear correspondence with Mocquereau's understanding of musical expression. The relationship between tempo fluctuation, dynamics, and melodic contour exists in the classic Solesmes method as well, both in the idealized form of the Latin word as discussed in chapter 3 (Mocquereau 1927, 237) and with reference to the sung phrase (Mocquereau 1908, 416; Gajard 1960, 68).

Lussy's discussion of such nuances surely influenced Mocquereau's ideas about nuance, which are often expressed in most striking fashion in his writings. Like Lussy, Mocquereau provides physical analogies for rhythmic expression, but he prefers analogies that emphasize the quality of weightlessness rather than those of weight:

> In fact, the fall of a heavy and inert body can only be abrupt and heavy, like the hammer bouncing on the anvil; but there is nothing similar to this fatal fall in the musical rhythm. Besides, nature itself can provide examples of gentler falls. The lighter the falling body, the less heavy the fall. The flight of the bird which, with each stroke of the wing, leans noiselessly on the air to take up a new impulse, the flutter of the light snowflake which descends slowly and and finally touches the earth—these are much closer to the imponderable reality of motion and vocal rhythm. But here again still there remains a material element, a fatal heaviness. (Mocquereau 1908, 99)[15]

Mocquereau prefers to avoid even such analogies, as they deprive the understanding of musical motion of its immateriality. Musical expression, especially vocal expression in singing, is a spiritual action of the artistic soul:

> The artist, by singing, hands over his soul—externalizes his thought, his feelings, and

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plus le pouls bat rapidement, plus l'animation devient grande, mais aussi plus vite on est épuisé. Toutefois, le sommet atteint, on éprouve un certain bien-être, on respire à l'aise : la victoire rend heureux! Cette comparaison nous fournit une explication simple et rationnelle de la tendance qu'éprouvent les musiciens à accélérer au commencement d'une phrase à contexture ascendante et à ralentir vers la fin."

15. "De fait, la chute d'un corps lourd et inerte ne peut être que rude et forte, comme le marteau rebondissant sur l'enclume ; mais il n'y a rien de semblable à cette chute fatale dans la cadence rythmique musicale. D'ailleurs la nature elle-même peut fournir des exemples de chutes plus douces. Plus léger est le corps qui tombe, moins pesante est la chute. Le vol de l'oiseau qui, à chaque coup d'aile, s'appuie sans bruit sur l'air pour reprendre un nouvel élan ; les balancements du léger flocon de neige qui descend lentement et touche enfin la terre, se rapprochent bien plus de la réalité impondérable du mouvement et du rythme vocal. Cependant ici encore il reste un élément matériel, une pesanteur fatale."

can translate its least nuances. Master of his voice, he directs all its qualities of duration, strength, melody, and expression with the most complete freedom. He broadens at will the duration of the impulses and the resting points. like a painter on the lines of his drawing, he distributes the colors as he pleases, the infinite nuances of the intensity of the notes. He unfolds in a thousand meanderings the contours of his melody, all in accordance with the requirements of order, of right proportion which constitute one of his most delicate faculties, taste—the aesthetic sense. Are we not very far from the mechanical motion of the hammer and the anvil, very far even from the animal motion of the bird folding and unfolding its wings? (Mocquereau 1908, 100)[16]

In sum, many aspects of Lussy's theory find their way into Mocquereau's theory, but there are key differences. Of Lussy's three kinds of accentuation, Mocquereau only agrees with the idea of rhythmic accentuation, in which rhythmic groups, often moving across the barlines, are a main feature of intelligent performance. For Lussy, there also exists a metric accentuation, with strong downbeats, even though this kind of accentuation is often overruled by the rhythmic. Mocquereau dispenses with the idea altogether, writing in reference to metrically accentuated music, "Only bad music holds to this process" (Mocquereau 1927, 268).[17] At the juncture of these two forms of accentuation is the distinction between masculine and feminine cadences, depending on whether the rhythmic group ends on a downbeat. Mocquereau adopts this distinction, which is the only element of Lussy's conception of meter that he retains.

For both authors, music is an expressive medium, but Mocquereau moves beyond Lussy's theory of expression in several ways. While retaining the natural affinities for rising melody, crescendo, and acceleration on the one hand and falling melody, diminuendo, and slackening on the other, Mocquereau rejects the elements of Lussy's theory of expression that depend on tonality, regularity of phrase, or metric periodicity. In essence, this makes Mocquereau's theory better adapted to analyzing expression in modern music that does not rely on functional tonality or regular metrical or phrase structure. I will return to this idea at the end of this chapter.

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16. "L'artiste en chantant livre son âme, extériorise sa pensée, ses sentiments et peut en traduire les moindres nuances. Maître de sa voix, il en dirige toutes les qualités de durée, de force, de mélodie, d'expression avec la plus entière liberté. Il élargit, comme il le veut, la durée des élans et des repos, il étale à sa guise, comme le peintre sur les lignes de son dessin, les couleurs, les nuances infinies de l'intensité des sons ; il déploie en mille méandres les contours de sa mélodie, tout cela conformément aux exigences d'ordre, de juste proportion qui constituent l'une de ses facultés les plus délicates, le goût, le sens esthétique. Nous sommes bien loin du mouvement mécanique du marteau sur l'enclume, bien loin même du mouvement animal de l'oiseau ployant et reployant ses ailes ?"

17. "Seule, la mauvaise musique tient à ce procédé."

4.2.2 Ancient Rhythm and Modern Music

Mocquereau was not the only writer to be influenced by Lussy's rhythmic ideas while rejecting his theory of metrical accentuation. Westphal also took precisely this stand: "We must protest against the nomenclature of metrical and rhythmical accents. Precisely in what we call meter, the accent that Lussy calls metrical must not prevail; if it does, it is called scansion. It is the way beginners, who are still untrained in reading meter, emphasize the words according to the meter, which they no longer do once they have attained some firmness" (Westphal 1880, 69–70).[18] For Westphal, performing Lussy's metrical accent results in a performance that sounds like that of a beginner who has not yet learned to grasp the real rhythmic design. Westphal chooses this analogy—a beginning student of ancient meter stumbling through a reading of classical verse—because the whole basis for his musical theory is the adaptation of ancient Greek ideas about rhythm to modern music.

Westphal was a well-known scholar of classics whose interest in modern music was only secondary. Still, his influence on the theory of musical rhythm was immense. The appropriation of ancient metrics constitutes a major part of the late nineteenth-century discourse on musical rhythm. The adoption of ancient Greek terminology was a way to place the theory of musical rhythm on a new foundation and correct the perceived faults of music theorists: "A return to the Greek tradition is the only way to pull our musical terminology—so poor, adrift, and contradictory—out of the barbarism into which it fell at the beginning of this century. The faulty language of our theorists betrays the weakness of their ideas and explains why a theory of rhythm has not yet been able to be established" (Combarieu 1897, 36).[19] The history of Western thought is, of course, punctuated with returns to Greek tradition; within the particular late nineteenth-century revival, influenced by the growing scholarly prominence of philology, any theory of rhythm or phrase that does not

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18. "Aber gegen die Nomenklatur metrischer und rhythmischer Accente müssen wir protestiren. Gerade in dem, was wir Metrum nennen, darf der jenige Accent, welchen Lussy den metrischen nennt, nicht vorherr schen; wenn es geschieht, so nennt man das Skandiren. Es ist die Art und Weise, wie Anfänger, die im Lesen des Metrums noch ungeübt sind, die Wörter des Metrums betonen, wie sie aber nicht mehr lesen, sobald sie einige Festigkeit erlangt haben."

19. "Le retour à la tradition grecque est le seul moyen de tirer notre terminologie musicale, si pauvre, si flottante, si contradictoire, de la barbarie où elle est tombée au commencement de ce siècle. Les fautes de langage de nos théoriciens trahissent la faiblesse de leurs idées, et expliquent pourquoi une théorie du rythme n'a pu être encore constituée."

incorporate the ancient understanding of rhythm would, according to Westphal, necessarily fall into error.

Gevaert

In beginning his approach to rhythm with a definition drawn from Plato (proposition 1), Mocquereau wishes to build his theory on these same Greek foundations. This wish has consequences for Mocquereau's entire aesthetic. In the 1896 address, he equates the musical simplicity of chant with the noble simplicity of all the ancient Greek arts: "The most striking charactertistic of plainsong is its simplicity, and herein it is truly artistic. Among the Greeks, simplicity was the essential condition of all art; truth, beauty, goodness cannot be otherwise than simple" (Mocquereau 1923, 18). The first sentence of *Le nombre musical grégorien* refers to Westphal and François-Auguste Gevaert (1828–1908) as authorities on the place of rhythm in the Greek understanding of the arts (Mocquereau 1908, 25). It is likely that Gevaert, writing in French, provided the more direct influence on Mocquereau. As with Mocquereau and most of the theorists discussed further on, it is important to make a distinction between Gevaert's ideas on plainchant and those on musical rhythm more generally in order to see how these ideas traveled between thinkers.

Gevaert was a prominent Belgian composer and musicologist who wrote on a wide variety of musical topics. One early book is his method of plainchant accompaniment, in which the rhythmic style is the slow, homophonic approach favored in France before the Solesmes revival (Gevaert 1856; Shironishi 2021, 33–38). Later, Gevaert was involved in a debate with the Solesmes school that centered mainly on the supposed role of Gregory I in the formation of the Gregorian repertoire and also touched on questions of modality in modern editions (Scarcez 2010, 160–63). On questions of plainchant, Gevaert was often opposed to Solesmes, even as Mocquereau incorporated his more general musical and historical ideas into the Solesmes tradition.

Much of Mocquereau's terminology and theory depends on the ideas of Aristoxenus (fl. 335 BC) from his *Elements of Rhythm*, as discussed by Gevaert (Gevaert 1875).[20] In his history of

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20. Marchetti (2009) gives an English translation of Aristoxenus's *Elements of Rhythm*. All citations of Gevaert in this section refer to the second volume of his book.

Ancient Greek music, Gevaert describes the rhythmic theory of Aristoxenus as an abstraction and an improvement on a theory built entirely on poetry, since he replaced the reliance on long and short syllables with the idea of simple and composite beats (7). The basic unit of time is the simple beat, the *chronos protos*, which Gevaert renders in French as *temps premier*. Gevaert equates it to the modern eighth note (10–11). Mocquereau adopts this term and notation for his own simple beat.

For Gevaert, the formation of groups of simple beats depends on differentiation in intensity. In a thought experiment shared with many writers since Johann Philipp Kirnberger (1721–1783), Gevaert imagines an undifferentiated series of isochronous pulses.[21] These only form groups (measures) when some of the pulses are given an accent of intensity, which he equates with the rhythmic ictus (14).[22] With the help of the ictus, we naturally hear these isochronous beats in groups of two or three, which can be combined to form groups of four, five, and six pulses (15). The measure that arises is analogous to the foot of poetry, and verses made of different types of feet can be equated with different modern time signatures (15). The measure contains a thesis and an arsis (a downbeat and an upbeat), but these are often referred to in the reverse order, which Gevaert suggests makes logical sense, as every downbeat of the foot or hand must be preceded by raising the foot or hand into the air (22). For Gevaert, a group moving from arsis to thesis is an anacrustic measure, which would encompass an equivalent timespan to Mocquereau's elementary rhythm (propositions 2 and 5). The nomenclature "anacrusis" for such a beginning of a measure was invented by the philologist Gottfried Hermann (1772–1848).

Measures group into a phrase member, which is, in Aristoxenus's terms, a *kolon*. According to Gevaert, Aristoxenus envisaged each *kolon* as a compound measure ("mesure composée"), which itself contains simple measures that act as the thesis and arsis of the larger measure (32). This is remarkably close to Mocquereau's idea of the composite rhythm, in which the composite beats (equivalent to the measure) take on the character of arsis or thesis within a larger rhythmic motion

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21. Kirnberger, writing together with his student Johann Abraham Peter Schulz (1747–1800), discussed such an experiment in the article on rhythm in Sulzer's encyclopedia *Allgemeine Theorie der schönen Künste* (Kirnberger and Schulz 1774, 976–7).

22. Note that for every writer mentioned besides Mocquereau, the use of the term ictus always carries a connotation of stress accent.

(proposition 4). Between Gevaert and Mocquereau, the order of segments is reversed. Gevaert envisions the compound measure as having the order thesis–arsis, just as Mocquereau's measure or composite beat does. For Mocquereau, the compound rhythm takes some variation of the order arsis–thesis, just as the elementary rhythm does. But the idea of considering smaller measures as taking on the role of thesis or arsis within a larger group is the same.

Westphal and Combarieu

Much of Gevaert's understanding of Aristoxenus is based on Westphal's earlier work exploring ancient metrics. In his *Allgemeine Theorie der musikalischen Rhythmik seit J.S. Bach*, Westphal applies Aristoxenus's ideas to modern music (Westphal 1880).[23] In 1897, the musicologist Jules Combarieu, a close associate of Mocquereau, wrote his *Théorie du rythme* with the object of presenting Westphal's ideas to a French readership "in a simplified form" (Combarieu 1897, 6). Gevaert saw this work as the logical continuation of his own ideas, writing to Combarieu, "I am convinced that a complete understanding of the rhythmic structure of the works of our great classical musicians is not possible without a careful study of Aristoxenus's rhythmics; a modern theory of rhythm does not exist. If I am not mistaken, this idea is expressed in several places in my book, but you have had the great merit of pursuing its logical application" (i–ii).[24] All of Combarieu's terminology is borrowed from Westphal; since Mocquereau never cites Westphal's 1880 book, Combarieu's book is his likeliest source for these ideas.

Combarieu defines rhythm as the alternation of strong and weak beats (13) and the study of musical rhythm as the application of musical punctuation in order to form groups (15). As in Gevaert's theory, the groups are formed by combining metrical feet. The smaller groups (*kola* or members of the phrase) are to be separated from each other by articulation or caesura; the *kola* are shown in musical editions by the use of the slur (55).[25] In classical rhythm, and consequently in

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23. Smither (1960, 143–185) provides a synopsis of Westphal's book.

24. "Je suis convaincu qu'une intelligence complète de la contexture rythmique des oeuvres de nos grands musiciens classiques n'est pas possible sans une étudé soigneuse de la rythmique d'Aristoxène; une théorie moderne du rythme n'existe pas. Si je ne me trompe, cette idée se trouve exprimée dans plusieurs endroits de mon livre; mais vous avez eu l'immense mérite d'en poursuivre l'application logique."

25. Combarieu's specific use of the slur suggests that slur indications that do not correspond to *kola* are faulty. Some

modern music, the division between *kola* should only exceptionally coincide with the barlines. A rhythmic group beginning before the first strong beat is considered to have an anacrusis (59). The ending of each *kolon* usually comes after a strong beat (masculine cadence), which communicates a more emphatic character than a division after the weak beat (feminine cadence) (57). This idea, shared with Lussy, forms the basis for Mocquereau's proposition 5.

Kola combine with each other to form periods, which are equivalent to the portion of a speech made in one breath (75). In music, the period always takes the shape of a protasis and apodosis, or crescendo and diminuendo, which echoes the architectural design of a Greek temple, as shown in figure 4.1 (76). Mocquereau reprints Combarieu's figure, as it forms the basis for his theory of the greater rhythm, which I have called proposition 7 (Mocquereau 1927, 571).
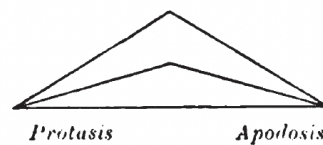
Figure 4.1: The Period as a Greek Temple

On the model of poetry, larger structures called systems can be formed, which are equivalent to the strophes, antistrophes, and epodes of lyric verse (Combarieu 1897, 81). In this way, the entire piece is contemplated as a rhythmic structure made up of systems. Mocquereau uses a similar hierarchical framework in his approach to Gregorian melodies.

Lussy's Response

Westphal's criticism of Lussy led the latter to recast his theory in light of the ideas of Ancient Greek rhythm. The result is his *Le rythme musical* (Lussy 1883). Lussy now presents a model of rhythm that is entirely along Aristoxenian lines. He casts his new research as a search for a physiological basis for rhythm, which he finds in the act of breathing. He criticizes Hugo Riemann's idea of

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editors in the late nineteenth century, including Riemann, advocated for altering composers' slur notations in order to show the correct phrasing. Combarieu adopts this position as well, describing the need to be able to correct faulty phrasing as the chief reason for a theory of rhythm (Combarieu 1897, 18).

rhythm based on the human pulse, since the two parts of the pulse are equal in force. Breathing, by contrast, has a real distinction between the intake of air—which is related to the energy of the arsis, the upbeat, and the weak syllable—and the exhalation—which is related to the thesis, the downbeat, and the strong syllable (Lussy 1883, 3). This description is accompanied by the illustration in figure 4.2. This formulation is remarkably close to Mocquereau's conception of the elementary rhythm moving from impulse to rest (proposition 2). The placement of the accent marks is striking, as they are in conflict with the theory of metrical accentuation. Dogantan points out that the placement of the accent marks in this figure changed in Lussy's subsequent writings, sometimes appearing beneath or even slightly to the right of the barline (Dogantan 1997, 73n).

Figure 4.2: Arsis and Thesis, (Lussy 1883, 3)

In this new conception of meter, the downbeat is the place of repose, as exhalation is related to rest and even death, but it also marks the beats that anchor the perception of the phrase. The accents that formerly represented the beginnings and endings of rhythmic groups are now given the name of ictus, a term drawn directly from Westphal.[26] Lussy compares the rhythm to an architectural construction like an arch, with a support at either end (Lussy 1883, 5). For Lussy, the ictus always falls on the first and last thesis (strong beat) of a rhythm. In its simplest form, the ictus may be the first and last notes of a rhythm, but notes falling before the initial ictus are the anacrusis, while notes falling after the final ictus are feminine endings. While adopting all this terminology from Westphal, the rest of Lussy's theory—the hierarchical importance of metrical, rhythmic, and expressive accents—remains the same.[27]

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26. As in Gevaert, the ictus is associated with accent.

27. Writing of Lussy, Dogantan states that "[t]he basic principles of his theory of rhythm and expression remained unchanged throughout his career" (Dogantan 1997, v). While this is largely true in effect, there is a decisive shift in theoretical orientation and terminology in response to Westphal's critique.

There are clear parallels between the Aristoxenus-derived theory laid out by Gevaert and Combarieu and the theory of rhythm behind the classic Solesmes method. In Pothier's system, there are no lengths described apart from the lengths of syllables. In a conscious parallel to Aristoxenus's theorizing, Mocquereau changes this unit from the syllable to the abstract timespan associated with the average short syllable (Mocquereau 1923, 14–15). This smallest unit of time discussed by Mocquereau, the elementary beat, is derived directly from the Aristoxenian *chronos protos* as described by Gevaert and Westphal. Within Aristoxenus's theory, a timespan equal to one half of the *chronos protos* is occasionally introduced; this time is considered "irrational" (Gevaert 1875). For Mocquereau and Combarieu, the avoidance of irrational lengths is part of the aesthetic appeal of Gregorian chant: "First of all, we may recall that plainchant never subdivides the *chronos protos*; this is one of its most important characteristics. It owes much of its serenity and nobility to the observance of this law" (Combarieu 1897, 38).[28] This fact may explain why Combarieu later came to reject Mocquereau's rhythmic notation, whcih allows for some irrational lengthening, through the observance of some expressive signs (Ellis 2013, 93–94; Combarieu 1904, 15).

Mocquereau groups the *chronoi protoi* into composite beats in a manner similar to Gevaert's account of Aristoxenus. He also adopts the terminology of arsis, thesis, and ictus from Gevaert and Westphal.[29] While the use of the terms arsis and thesis is the same, with the words being used interchangeably with upbeat and downbeat, Mocquereau's use of ictus is entirely different from every other author and is one of the most distinctive features of his rhythmic theory. For the other authors, the ictus is a mark of accent, coinciding with the strike that one makes with a hand or foot to accompany a rhythm. For Mocquereau, the ictus is similarly something that one might tap along with the music, but it has no correlation with stress accent in singing, which is determined by the

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28. "On peut rappeler d'abord que le plain-chant ne subdivise jamais le temps premier; c'est là un de ses caractères les plus importants. Il doit à l'observation de cette loi une grande partie de sa sérénité et de sa noblesse." Combarieu is quoting a line of Mocquereau's from his 1896 address (Mocquereau 1923, 15).

29. Dogantan (1997, 200) suggests that Lussy's theory may be the source of Mocquereau's use of the word ictus, but given the way Mocquereau uses the ictus to denote the beginning of every composite beat rather than as a rhythm-level accent, Gevaert and Westphal seem the more likely sources.

accentuation of the words without regard to the ictus.

The source of this extraordinary redefinition lies undoubtedly in the Solesmes tradition. Mocquereau referrs to Pothier's teaching on the pronunciation of the Latin word as "containing the seed of the whole Solesmes theory" (Mocquereau 1927, 619).[30] This teaching, laid out in *Les mélodies grégoriennes*, is the idea that the word is pronounced as a unified dynamic event, moving toward a point of energy on the accent followed by repose on the final syllable (Pothier 1880, 100–101). According to Mocquereau, during the 1880s, Pothier developed the principle that this motion has an arsis and a thesis, coinciding respectively with the accented and final syllables. Pothier articulates this idea in his 1891 book *Principes pour la bonne exécution du chant grégorien*:

> Each word must form a whole. The rule for syllabic readings and chant is that the word is pronounced in a single motion.
>
> The motion which, in recitation and in syllabic chant, carries all the syllables of a word along, must be arranged in such a way that it ends when the word ends, falling away gently on the last syllable. For this reason the attack of the voice does not reach its full extension and the climax of its force until a little before the end of the word, that is, at the penultimate or antepenultimate syllable; this syllable is thus emphasized to serve as the starting point or arsis for the cadence of the word. The point of arrival of this cadence is the thesis, which coincides with the last syllable. (Mocquereau 1927, 620)[31]

Antonin Lhoumeau (1852–1920), writing in 1892, expanded on the idea of the word as a motion from arsis to thesis. Adopting Pothier's terminology, Lhoumeau equates every accented syllable with the arsis, not the thesis. Broadening this idea of rhythmic motion to measured music, the motion of arsis to thesis corresponds to any small rhythmic group, regardless of metrical position. Thus the arsis may fall on the downbeat of the measure, if the accented syllable (the arsis of the word or group) coincides with the downbeat (Lhoumeau 1892, 100–103). In essence, this means that a kind of rhythmic accentuation always *replaces* the metrical framework, so that the differentiation

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30. "...contenant en germe toute la théorie solesmienne."

31. "Chaque mot doit former un tout. La règle de la lecture et du chant syllabique est que le mot soit proféré d'un seul mouvement.

"Le mouvement qui, dans la lecture et dans le chant syllabique, entraîne toutes les syllabes d'un même mot, doit être ménagé de telle sorte qu'il vienne finir avec le mot, en tombant doucement sur la dernière syllabe. Pour cela l'impulsion ne prend sa complète extension et n'arrive au point culminant de sa force qu'un peu avant la fin du mot, c'est-à-dire à la pénultième ou à l'antépénultième syllabe : celle-ci est ainsi mise en relief pour servir de point de départ ou d'arsis à la cadence du mot ; le point d"arrivée de cette cadence est la thésis, qui coïncide avec la dernière syllabe."

between downbeats and upbeats has nothing to do with the differentiation between thesis and arsis. Mocquereau's approach works along similar lines, with the emphasis on unified motion and the word as the model for rhythmic groups, but he restores the alignment of the downbeat with the thesis while retaining Pothier's preference for the Latin accent to occur on the arsis of a rhythmic motion. In this view, the downbeat carries no quality of accent; it becomes only the place of repose and ending. A rhythmic motion, to have a sense of closure, must end with a long note on the downbeat. Within a melody, this is the only function Mocquereau envisions for the thesis. The ictus, as in the classical authors, is a way to beat time by placing an event, the tap of a hand or foot, on the downbeat. But this does not make the beat a strong beat, let alone an accented beat. The theory of metrical accentuation as laid out by Lussy is entirely rejected.

As with Westphal's imagined student learning to scan verse, Mocquereau allows that it is useful, when first learning to sing Gregorian chant, to apply some emphasis to the ictus, gradually letting go of this tendency when mastering the technique of singing (Mocquereau 1908, 418). In the full flower of the technique, "The touch is then so soft, so caressing, that it remains imponderable, more spiritual than material: the inner feeling alone can realize it, when it wishes to become aware of it; which in any case is not necessary" (418).[32] As a result of this idea, Mocquereau does not speak of strong and weak beats but only of arses and theses.

The removal of the downbeat's strength has ramifications for the setting of text. The other authors all suggest that the accented syllables of a text should coincide with the strong beats of the measure. In French verse, Gevaert (1875, 102) suggests that this is only a firm rule at the caesura and at the line ending, but at other points composers may set a weak final syllable on the downbeat. He ascribes this to the fact that the principal French composers before the middle nineteenth century were not native French speakers (102n). Similar misalignments were characteristic of earlier music elsewhere: "Until the end of the sixteenth century, Italian and Spanish composers took the same license, which they have since wisely left to popular song" (102).[33] Mocquereau turns this

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32. "Le touchement est alors si doux, si caressant, qu'il demeure impondérable, plus spirituel que matériel : le sentiment intérieur est seul à pouvoir s'en rendre compte, quand il veut en prendre conscience ; ce qui d'ailleurs n'est pas nécessaire."

33. "Jusq'à la fin du XVIe siècle les compositeurs italiens et espagnols usaient de la même licence, que depuis lors ils

conception around; the sixteenth-century composers' freedom with respect to the placement of the accent is not a license but reflects a more correct understanding of the nature of meter.

Another aspect of Westphal's theory that Mocquereau rejects is the idea of the anacrusis. Because of his conception of the unified arsis and thesis as the only form of ordered rhythmic motion, there is no need to add a modern term to describe when a rhythm begins on the arsis: "The Solesmes school 'absolutely rejects the theory' of the anacrusis, either in metrics, or in Gregorian chant, or in modern music. The words arsis and thesis suffice to explain all phenomena and all rhythmic forms of rhetorical art and of musical art in every country and in every era" (Mocquereau 1927, 666).[34] If every rhythmic motion proceeds from upbeat to downbeat, there is no need to coin a term for rhythmic groups that follow this rule. The exceptions for Mocquereau are groups that begin on a downbeat, but in this case the beginning is still preceded by an intake of air and by a preparation beat or a silent arsis.

4.3 *Jambomanie*: Upbeat Approaches to Meter

The use of the anacrusis in music theory goes far beyond its classical roots, extending into more general theories. By removing the need for the idea of the anacrusis in a theory of rhythm, Mocquereau represents himself as clarifying and improving the ideas of two of his contemporaries:

> Somewhere in his works, Mr. H. Riemann formulated this rule: "There is no melody that begins with a heavy beat," our thesis.
>
> Mr. V. d'Indy proposes the following formula, which is even clearer: "All melodies begin with an anacrusis, expressed or implied."
>
> As it follows, let us express in our turn the same melodic and rhythmic fact, but considered from the rhythmic point of view: "Any melody, any rhythm, begins with an arsis, expressed or implied." (665)[35]

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ont sagement abandonnée à la chanson populaire."

34. "L'Ecole de Solesmes 'rejette absolument la théorie' de l'anacrouse, soit en métrique, soit en chant grégorien, soit en musique moderne : les mots arsis et thésis suffisent pour expliquer tous les phénomènes, toutes les formes rythmiques de l'art oratoire, de l'art musical dans tous les pays, dans tous les temps."

35. "Quelque part dans ses ouvrages, M. H. Riemann a formulé cette règle : 'Il n'est point de mélodie qui commence par un temps lourd,' notre thésis.

M. V. d'Indy propose la formule suivante, plus claire encore : 'Toute mélodie commence par une anacrouse, exprimée ou sousentendue.'

Like Mocquereau, d'Indy and Riemann also see a motion from upbeat to downbeat as the fundamental way to conceive of musical rhythm. Such a conception was widespread in theoretical writings of the nineteenth century, not only among theorists who based their systems on ancient models. It represents one alternative among two competing traditions of phrase rhythm, which differ as to whether the beginning or the end of the phrase is the metrical and rhythmic focus. Rothstein (2008) has associated these two musical traditions with linguistic and national boundaries, with French and Italian composers typically putting the focus at the end of the phrase, and German composers typically putting the focus at the beginning. Wilson (2016) coins the useful terms "arrival meter" and "departure meter" for these different conceptions. In these terms, Mocquereau, d'Indy, and Riemann are all arrival theorists, or, as Riemann described the approach of the three authors, they share their preference for the upbeat-to-downbeat motive, which he calls their "iambomania" (Riemann 1904a, 160).

During the crucial period of the formation of his theory, between 1900 and 1908, Mocquereau corresponded with both writers, expressing mutual admiration and engaging in an exchange of ideas with them. As with Gevaert and Combarieu, we must separate the disagreements d'Indy and Riemann had with Mocquereau on the performance and editorial practice of plainchant from their mutual influence on general theoretical questions. Neither d'Indy nor Riemann promoted or approved of the classic Solesmes method as a way of interpreting Gregorian chant, but both shared many theoretical ideas with Mocquereau.

4.3.1 Theoretical Background: Riemann's Dynamics, Agogics, and Periods

The publication of Riemann's ideas about rhythm and meter precedes that of the other two writers. Riemann's first major publication on rhythm, his *Musikalische Dynamik und Agogik* of 1884, was written in the immediate aftermath of the advent of Lussy's and Westphal's theories, with which it engages.[36] Riemann begins by describing a phenomenon in which rhythmic subdivisions are shown

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Qu'on nous permette d'exprimer à notre tour, comme il suit, le même fait mélodique et rythmique, mais en nous plaçant surtout au point de vue rythmique : 'Toute mélodie, tout rythme, commence par une arsis, exprimée ou sous-entendue.'" Compare Indy and Sérieux (1903, 35).

36. Smither (1960, 186–229) offers a detailed summary of this book.

by means of a slight lengthening of particular notes in performance (Riemann 1884, 8–9). This lengthening—reminiscent of Aristoxenus's irrational lengthening—is the agogic accent.[37] This agogic manipulation is used together with dynamics to form the basis of the experience of rhythm, just as pitch is used to form the basis of the experience of melody (10). This insistence on motion and energy suggests a clear parallel with the Solesmes conception of the unity of the rhythmic motion.

For Riemann, a small rhythmic group is a motive, with the normal motive being the one of a measure's length (the *Taktmotiv*), the boundaries of which may or may not correspond to the barlines.[38] In his initial investigation of the measure-motive, Riemann uses only equal note values arranged in groups forming various meters. In these equal note values, measure-motives are associated with a dynamic shape (crescendo and/or diminuendo), with the peak of the dynamic curve coinciding with the downbeat, which Riemann calls the heavy beat (*Schwerpunkt*) (30), as opposed to the upbeat (*Auftakt*) (13). Rhythmic subdivisions are expressed with agogic accents. While there is a parallel to Mocquereau's discussion of the pronunciation of the word, unified by its accent, there is still a clear association of the downbeat with accent that is absent in Mocquereau's account.

Moving beyond equal note values, the use of a long note, theorized as the joining together (*Zusammenziehung*) of some equal pulses, always creates an impression of repose or rest, so that a long downbeat will always create a sense of new energy and motion in the upbeat that follows. In other words, Riemann considers upbeat orientation of grouping more natural than downbeat orientation (50). In Riemann's subsequent publications, this upbeat orientation takes on more significance at every timespan level. Riemann replaces the term "rhythm" in Lussy's grouping sense by the term "phrase" (243). The phrase generally has a dynamic shape of crescendo-diminuendo, aligned with both the melodic contour and the harmonic progression. The melodic alignment uses dynamics to represent changes in melodic direction, so that a dynamic peak can occur on either a low

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37. This usage is different from DeFord's usage described in chapter 3, since it usually refers only to unnotated and slight lengthening of a note.

38. As with Mocquereau, the concept of motion is inherent in the etymology of Riemann's rhythmic terminology.

or high point of the melody depending on context (173). Similarly, the dynamic shape aligns with harmonic motion so that motion away from the tonic is accompanied by a crescendo and motion back to the tonic is accompanied by a diminuendo (186). Mocquereau cites Riemann in support of his idea of the dynamic curve following that of the melody (Bénédictins de Solesmes 1901, 187). At this point in his career, Riemann rejects the idea of the understood upbeat (as described in Mocquereau's quotation above) in the case of a piece starting on a strong downbeat, preferring to see such an initial accent merely as a starting point of motion toward a more usual accent that follows (Riemann 1884, 244). Riemann concludes his treatise by arguing for the editorial addition of phrasing marks that follow his interpretive scheme (267–69).

Much of Riemann's approach in this book is similar to the ideas of Lussy and Westphal, in its emphases on performance and dynamic nuances; however, Riemann rejects classical (Greek) terminology as too limiting. The most distinctive part of Riemann's theory of rhythm, not laid out in *Musikalische Dynamik und Agogik* but also developed in the 1880s, is the way that the upbeat idea is carried over into larger time periods in the construction of musical form.[39] The iamb, figure 4.3, is the *Urmotiv* of all formal construction (Riemann 1891, 2), as the second note forms an answer to the first. The motive is naturally performed with a crescendo, according to the dynamic principle. The agogic principle accounts for the formation of triple meter, which is merely a lengthening by agogic accent of the arrival note—not an irrational lengthening this time but a doubling. In this account, duple and triple meters come from the same basic motive.

Figure 4.3: The Urmotive, the Dynamic, and the Agogic (Riemann 1891, 2)

The question-and-answer dynamic of the two-note motive is also repeated at longer timespans, so a measure-motive is answered by another, weightier measure-motive. This pair of motives is answered by another pair, forming the antecedent portion (*Vordersatz*) of a period. This in turn

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39. Caplin (2002, 684) refers to this last aspect as "Riemann's mature theory," but it is neither separated from the dynamic and agogic theories by a long stretch of time nor does it fully replace those ideas.

is answered by a consequent phrase (*Nachsatz*). The whole schema is laid out in figure 4.4. For Riemann, all formal construction either follows this eight-measure schema or is an alteration or deformation of it. In his phrase analyses, he marks the heavy measures with the labels 2, 4, 6, and 8, which may or may not correspond to the actual second, fourth, sixth, or eighth measures of the period. This flexibility allows Riemann to show phrases of any length in terms of expansions, contractions, or overlaps of the basic eight-measure schema. This idea, based on symmetry and regular periodicity, is the point of greatest difference between Riemann and Mocquereau, to which they return repeatedly in their letters.
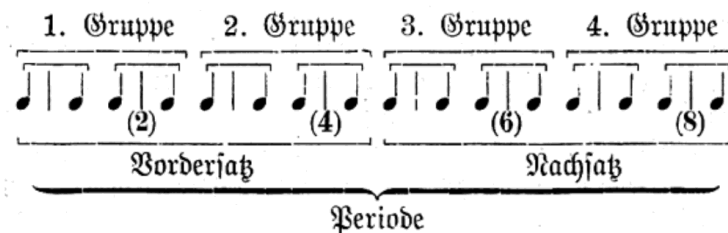
Figure 4.4: The Period (Riemann 1891, 2)

The results of Riemann's theory of periodic structure are best communicated with an example. Figure 4.5 shows the first Arioso section from the slow movement of Beethoven's Piano Sonata op. 110 (Riemann 1920, 440–441).[40] Riemann analyzes this melody as two periods; the roman numerals indicate that these are the third and fourth periods of the movement. The numbers below the barlines show the relatively heavy measures. Since even-numbered measures within the period are seen as heavy, in that they answer the light measures that precede them, only the even-numbered measures are labeled. Of these, measure 8 receives the most weight, while measure 4 receives the next most and measures 2 and 6 receive the least. After the final cadence, the two-measure codetta is shown by the labels 8a and 8b. The slurs below the staff show rhythmic groups, ranging from roughly one to two measures in length. Two-measure groups occur only when there is no way to hear a resting point after one measure motive; in this example, this only happens in the middle of measures 3 and 7 of each period. Characteristically, none of the groups begins on a downbeat; this

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40. This melody presents no significant deformations of the eight-measure framework, but this example will be useful for a comparison with another analysis of the same passage later.

Figure 4.5: Beethoven, op. 110, ii, mm. 9–24 (Riemann 1920, 440–441)

requires Riemann to consider the first note of melody as having an imaginary anacrusis, or at least to be the ending of a motive begun during the left-hand chords that introduce the section. This is shown by the initial slur ending with the first note of the melody. There is also one instance of overlap, or what Riemann calls motive crossing (*Motivverschränkung*) (Riemann 1903, 122). In measures 4–6 of the second period, the dominant E♭ major is being prolonged. The G in measure 5 (this should be G♮) is both the resolution of the A♭ that ends the motive as well as the upbeat to the next motive. Because of these two facts, it is not possible to imagine a separation either before or after this note, so it must belong to both motives.

Riemann's theory, probably the most widely read synthesis of nineteenth-century theories of arrival meter, serves as the background to the exchange of ideas (both by letter and in print) between Mocquereau, d'Indy, and Riemann that took place during the formative period of the classic Solesmes method.

4.3.2   D'Indy and Mocquereau

Shared Aesthetics

In these years, d'Indy was engaged in the formation of the Schola Cantorum, a joint attempt with Charles Bordes and Alexandre Guilmant to reform the education of young French musicians. D'Indy had offered several proposals for the reform of the Paris Conservatoire in 1892; most of his proposals were rejected (Thomson 1996, 83). The Schola was opened in 1896 as an alternative educational establishment, associated with the Institut Catholique, with d'Indy teaching courses in composition and counterpoint. Part of the mission of the Schola in its early years was to give sacred music special prominence, which involved the Schola closely with the plainchant reforms undertaken at Solesmes.[41]

In spite of this connection, d'Indy and Mocquereau were never close, and their epistolary relationship was relatively short-lived. In 1896, Mocquereau sent d'Indy a copy of his address on Gregorian aesthetics (Hala 2017, 401). Bordes took students of the Schola on a pilgrimage to

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41. Flint (2006, 220–92) and Hala (2017) give a full account of this relationship.

Solesmes the following year, which was followed by an invitation for Mocquereau to deliver a series of classes in Paris, at which d'Indy reportedly took notes for inclusion in his new course in composition (404–5). In d'Indy's pedagogical vision, laid out in a speech at the inauguration of the Schola's new premises in 1900, Gregorian chant plays a central role:

> It should also be noted that everyone—singers and instrumentalists as well as composers—will be required to study Gregorian chant, medieval liturgical melodies, and religious works from the era of vocal polyphony, in more or less depth, because I believe that no artist has the right to ignore the way his art was shaped. And as it is absolutely proven that the principle of all art, as well as of painting and architecture as of music, is of a religious nature, the students will have nothing to lose and everything to gain in an acquaintance with the beautiful works of those ages of faith, the whole of which will be for their spirit like the primitive stock onto which the branches of the modern social art will later be grafted. (Indy 1901, 8)[42]

In d'Indy's view, even the training of young composers should be based in no small part on the study of Gregorian chant and sixteenth-century polyphony, aligning him with Mocquereau's own aesthetics.[43] The notes for d'Indy's lectures given at the Schola in 1897 and 1898 were edited into book form with the help of his student Auguste Sérieyx and published as his *Cours de composition musicale*, with the first volume appearing in 1903 (Indy and Sérieux 1903).

Mocquereau was working in these years on the extensive essay on the tonic accent that took up the entire seventh volume of *Paléographie musicale* (Bénédictins de Solesmes 1901). This essay was published in quarterly installments between October 1900 and July 1905 (issues 47–67 of the periodical series, gathered into volumes only later). After reading d'Indy's inaugural address, Mocquereau began his brief epistolary exchange with d'Indy.[44] On 9 December 1900, Mocquereau wrote to d'Indy requesting a copy of the portion of d'Indy's course dealing with rhythm (Hala 2017,

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42. "On remarquera de plus que tous, chanteurs et instrumentistes aussi bien que compositeurs, seront tenus d'étudier de façon plus ou moins approfondie et au moins de connaître le chant grégorien, les mélodies liturgiques médiévales et les oeuvres religieuses de l'époque de la polyphonie vocale, c'est que j'estime que nul artiste n'a le droit d'ignorer le mode de formation de son art, et comme il est absolument avéré que le principe de tout art, aussi bien de la peinture et de l'architecture que de la musique, est d'ordre religieux, les élèves n'auront rien à perdre et tout à gagner dans la fréquentation des belles oeuvres de ces époques de croyance, dont l'ensemble sera pour leur esprit comme la souche primitive sur laquelle viendront plus tard se gretîer les rameaux de l'art social moderne."

43. D'Indy's copy of Pothier's 1883 *Graduale*, full of annotations, is in the Bibliothèque nationale de France and can be consulted online.

44. Walden (2015) briefly discusses this correspondence and its impact on Mocquereau's aesthetics and theory. Hala (2017, 426–43) prints all the extant letters, preceded by a full historical account of their interaction.

426–27). In his reply of 26 December, d'Indy gives a full account of the place of rhythm in his aesthetics and in his idiosyncratic conception of music history:

> Alas! my dear Father, Rhythm, true Rhythm, is a completely unknown thing—and very difficult to know in a sure way. In my *Cours de composition*, I have been able to say perhaps some useful things, but, for sure, it is not half of what I would like to say and what I have not yet been able to enunciate in a precise way, for lack of materials offering certainty.
>
> Only one truth is obvious: in the fifteenth and sixteenth centuries, for example, Music was absolutely based on Rhythm and Rhythm alone, because at that time the tonal laws, although practically observed, were not yet established as laws.
>
> The Protestant movement of the Renaissance (a movement which had its counterpart in Music only in the 17th century), by enthroning the reign of personality in Art (free exploration) in place of the Collective, brought about the Solo, the *Basso Continuo*, and consequently also the Measure, which was the death (momentary, let us hope) of Rhythm. Therefore modern Music has abounded in harmonic discoveries and has left Rhythm aside for 300 years; that is why we have so much difficulty finding it ourselves and unfastening the hinges of this door closed for 3 centuries. You say that my observations could be useful to you…but it seems to me that it is I who would have infinitely more need of yours—and besides, perhaps in collaboration, we could manage (you see that I am showing an almost protestant vanity!) to clear up some of these rhythmic arcana…(Hala 2017, 428)[45]

Mocquereau replied with enthusiastic agreement, writing on 21 January, "…for me, the enemy is measure and rhythm is everything; and it is in Gregorian chant above all that this is true" (429).[46] Mocquereau's understanding of the historical development is similar, but the point of decline

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45. "Hélas ! mon cher Père, le Rythme, le vrai Rythme est chose bien méconnue – et bien difficile à connaître d'une façon sûre. J'ai pu, dans mon cours de composition, dire peut-être quelques chose utiles, mais, à coup sûr, ce n'est pas la moitié de ce que je voudrais dire et de ce que je n'ai pu encore énoncer d'une façon précise, faute de matériaux donnant la certitude.

"Une seule vérité est patente c'est qu'au XVe et au XVIe siècle, par exemple, la Musique était absolument basée sur le Rythme et sur le Rythme seul, car, à ce moment les lois tonales, quoique observées virtuellement, n'étaient point encore posées comme lois.

"Le mouvement protestant de la Renaissance (mouvement qui n'eut son contrecoup en Musique qu'au XVIIe siècle) en intronisant le règne de la personnalité en Art (libre examen) à la place de la Collectivité, amena par cela même le Solo, la Basse continue, conséquemment aussi la Mesure, qui fut la mort (momentanée, espérons-le), du Rythme. En sorte que la Musique moderne a abondé en découvertes harmoniques et a laissé de côté le Rythme depuis 300 ans, c'est ce qui fait que nous avons tant de mal à le retrouver, nous, et à dérouiller les gonds de cette porte fermée depuis 3 siècles. – Vous dites que mes observations pourraient vous servir…mais il me semble que c'est moi qui aurais infiniment plus besoin des vôtres – et au reste peut-être en collaboration, arriverions-nous (vous voyez que je fais preuve d'une vanité quasi protestante !) à découvrir quelques-uns de ces arcanes rythmiques…"

46. "…pour moi, l'ennemi, c'est la mesure, et le rythme est tout ; et c'est surtout dans le chant grégorien que cela est vrai."

comes sooner, with the adoption of the Romance accent, as discussed in chapter 3. In this reply, Mocquereau asked about d'Indy's opinion of the terms arsis and thesis (430). At this point, d'Indy sent Mocquereau a copy of the chapter on rhythm as it would later apper in the *Cours*.

D'Indy's Theory of Rhythm

Of all the authors discussed in this chapter, d'Indy is most in agreement with Mocquereau as a theorist. D'Indy defines musical rhythm as "order and proportion *in Time*" (Indy and Sérieux 1903, 23).[47] D'Indy suggests the usual thought experiment, envisioned also by Gevaert, Lussy, Mocquereau, Riemann, and others, of listening to an undifferentiated series of isochronous pulses, here imagined as an actual metronome. In d'Indy's account, the mind readily groups the beats into twos by imagining every other beat as more intense. With a mental effort, the listener can alternate between hearing the odd and even beats as more intense, which shows that this relationship is a function of the mind (24). One of the composer's tasks is to give definition to this vague mental perception by consciously manipulating the rhythm, marking some beats as more intense than others through changes of either duration, volume, or pitch. These are the same categories mentioned by Mocquereau, although Mocquereau also discusses the possibility of differentiation by timbre (Mocquereau 1908, 29).

The smallest musical *incise* is a combination of a light (*léger*) beat and a heavy (*lourd*) beat as shown in figure 4.6 (Indy and Sérieux 1903, 25).

Light   Heavy

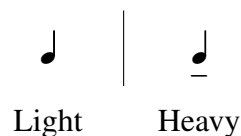Figure 4.6: The Rhythmic Monad (Indy and Sérieux 1903, 25)

D'Indy's use of light and heavy is borrowed explicitly from Riemann, and it led to some difficulty for d'Indy, as he was at pains to dissociate the heavy beat from any notion of stress. In the letter to Mocquereau (30 January 1901) that accompanied the copy of the chapter, d'Indy writes,

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47. "l'ordre et la proportion *dans le Temps*."

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"You will notice that I have replaced the terms arsis and thesis with the words light beat and heavy beat, borrowed from the rhythmic system of Hugo Riemann. That is only in order to avoid confusion in the brains of the students who could get lost in the too numerous controversies surrounding the Greek terms. But, ultimately, it is the same thing" (Hala 2017, 430).[48]

D'Indy insists that heavy and light beats differ fundamentally from the concept of metrically strong and weak beats within a measure. He sees the measure—an imperfect and formulaic approximation of rhythm—as an unfortunate consequence of the theoretically disastrous seventeenth century. For d'Indy, the advent of the measure has had a stifling effect on the rhythmic element in more recent music. Contrary to the usual assertion that the first beat of the measure is always strong, d'Indy suggests the opposite: "It could even be argued that, more often than not, the first beat of the measure is rhythmically a weak beat; the adoption of this principle would avoid many errors and mistakes of interpretation" (Indy and Sérieux 1903, 27).[49]

Expanding the idea of rhythmic grouping beyond the simplest case, d'Indy brings his medievalist aesthetics to bear on his theory, classifying all basic melodic gestures as neumes.[50] Analysis of melodic and rhythmic development can be accomplished by considering a change in neume forms. For instance, d'Indy describes the triumphant change in the recapitulation of the first movement of Beethoven's "Eroica" Symphony as the substitution of a *scandicus* (♪) for a *torculus* (♩♪), as shown in figure 4.7.

(a) Exposition (b) Recapitulation
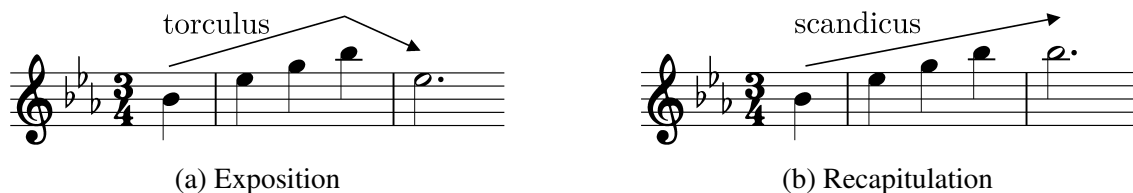
Figure 4.7: Neumes in the "Eroica" Symphony (Indy and Sérieux 1909, 127)

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48. "Vous remarquerez que j'ai remplacé les dénominations : arsis, thésis, par les mots : temps léger, temps lourd, empruntés au système rythmique de Hugo Riemann, mais, cela uniquement pour ne pas créer de confusion dans la cervelle des élèves qui pourraient se perdre dans les trop nombreuses controverses établies sur les termes grecs. Mais, au fond, c'est la même chose."

49. "On pourrait même avancer que, le plus souvent, le premier temps de la mesure est rythmiquement un temps faible ; l'adoption de ce prinipe éviterait bien des erreurs et bien dea fautes d'interprétation."

50. This is the modern usage of the term neume, also discussed in chapter 1, where any single graphic sign of the early chant manuscripts is called a neume.

When a neume proceeds from the light beat to a heavy beat, it also constitutes a rhythm, which shares something of both Mocquereau's and Lussy's use of the term. As for Mocquereau, the rhythm always proceeds from the upbeat to the downbeat. A neume that corresponds to such a group is, in Mocquereau's terms, a rhythm group, as opposed to a beat group (Mocquereau 1908, 238). As with Mocquereau's theory, the temporal alignment between the neumes and the metric framework is not strict for d'Indy, but he adapts Lussy's terminology of masculine and feminine rhythms, now applied to the neumes. A masculine neume has only one note on the heavy beat, while a feminine neume has notes falling after the heavy beat. This definition is not complete without a consideration of accentuation.[51]

D'Indy's theory of accent is closely related to the theories of Lussy and Mocquereau. For d'Indy, melodic accentuation developed, by way of Gregorian chant and especially psalmody, from the accentuation patterns of ancient languages (Indy and Sérieux 1903, 29). We have seen that d'Indy rejected, and indeed inverted, Lussy's concept of metric accent, but he retained both the rhythmic accent and the pathetic accent, now recast in linguistic terms. The rhythmic accent becomes the tonic accent, which corresponds to the accentuation of individual words, while the pathetic accent is related instead to the emphasis a speaker applies to different words (30).[52]

In language, the expressive accent always outweighs the tonic accent, since small adjustments in emphasis in speaking can convey a wide variety of differences in meaning. D'Indy transfers these ideas to music, with the tonic accent governing accentuation at the lowest levels of rhythmic structure—the melodic group or neume—and the expressive accent governing accentuation at the higher levels of the period and the phrase (36). Rhythmic groups combine to form periods, which are segments of melodic motion composed of an uninterupted series of groups punctuated and divided from each other by points of articulation, which d'Indy calls half cadences (*demi-cadences*) or temporary resting points (*repos provisoires*) (39). This usage of *demi-cadence* is borrowed from

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51. D'Indy's discussion of accentuation is reserved for his chapter on melody; it is unknown whether he sent this to Mocquereau in 1901, but it is in any case closely related to the two theories of rhythm.

52. Mattheson (1739, 174) already makes a similar distinction between these two types of verbal stress as applied to music, which Mattheson calls *accent* and *emphasis*.

Reicha (1814, 12). Periods combine into phrases, which conclude with a definitive cadence.[53] Phrases are the largest purely melodic structure. There is no set number of periods within the phrase. Phrases are categorized as primary, binary, ternary, square, and so forth, depending on the number of periods involved; the archetypal examples of each type come from the plainchant repertoire, confirming d'Indy's insistence on plainchant as the model for composition.

For d'Indy, the tonic accent can never fall on the last note of a rhythm. While he does not give a reason for this rule, it must be because the accent never falls on the final syllable of a Latin word, which is the historical foundation for musical rhythm in the West. This doctrine leads to the completion of the definition of masculine and feminine groups, which differs radically from Lussy's conception. A masculine group is redefined as a one whose tonic accent falls on the light part of the rhythm, which is followed by one or more notes that constitute the heavy part.[54] A feminine group is one whose tonic accent falls on the heavy part of the rhythm, followed by one or more afterbeat notes (Indy and Sérieux 1903, 33).[55] In either case, the tonic accent is always preceded by an anacrusis, either in actual music or—in the case of an accented beginning to a rhythm—implied by the preparation beat (35).[56] This is also an unusual conception of the idea of the anacrusis, since most other writers would describe the light-beat accent of d'Indy's masculine rhythm as itself an anacrusis, while for d'Indy the term is reserved for the real or imagined music that comes before the light-beat accent.

In his analyses, d'Indy shows the tonic accent with the ∧ symbol.[57] Example 4.8 shows his placement of the tonic accent in the opening melody of the slow movement of Beethoven's Fifth

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53. D'Indy's use of these terms is a reversal (phrases are made up of periods) of the more common usage (periods are made up of phrases). While there are resonances with the theories of phrase rhythm laid out by Reicha and Lussy, there are no exact parallels with either of these earlier writers (Indy and Sérieux 1903, 37).

54. This corresponds not to Lussy's masculine group, which has an accent on the final note, but rather an "apparently masculine" group, which ends with a weak downbeat.

55. D'Indy uses his principle of the masculine and feminine tonic accent to justify the performance practice of accentuation on the dissonant suspension and the appoggiatura; both of these notes are accented, but the first is masculine (accent before the arrival of the heavy beat) and the second feminine (accent on the heavy beat) (Indy and Sérieux 1903, 32).

56. Mocquereau mentions both Lussy's and d'Indy's definitions of masculine and feminine rhythms, but they are only interchangeable in a context, like the Latin of Gregorian chant, where the accented syllable never coincides with the end of the word but always must have at least one syllable after it.

57. This closely resembles Riemann's symbol for the agogic accent.

Symphony. Although the passage is originally notated in $\frac{3}{8}$, d'Indy removes the barlines. Instead, he uses two types of vertical lines as rhythmic divisions, which correspond only coincidentally with some of the barlines: the dotted lines separate the light and heavy portions of the rhythmic groups, while the solid line separates two groups. The melody is an elaboration of the rhythmic scheme given above the melody, in which the melodic accent is placed on the high notes of each group while the heavy beat is placed on the lower notes that end each group.

Figure 4.8: The Tonic Accent in Beethoven, Symphony no. 5, Second Movement (Indy and Sérieux 1903, 35)

D'Indy's conception of the tonic accent complicates the relationship of his theory to that of Riemann. Saint-Saëns, writing after the First World War, is critical of accepting German ideas in French musical discourse; on this point, he skewers both d'Indy and Combarieu:

> What makes me feel very comfortable in discussing M. d'Indy's ideas is that quite often, by his own admission, these ideas are not his own but those of the German Hugo Riemann.
>
> We see here an example of the habit that was so widespread before the war—and not only in music—to go seeking the truth on the other side of the Rhine. Thus Combarieu tried to inculcate in us the crazy ideas of Westphal, wanting to apply the principles of Greek metrics to the performance of works by Bach, Beethoven, etc., which have no relation to it. (Saint-Saëns 1919, 11)[58]

For Riemann, the accent generally corresponds with the heavy part of the rhythm, as in figure 4.3. For d'Indy, this is only the case in feminine rhythms; since the two notes of Riemann's *Urmotiv*

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58. "Ce qui me met fort à l'aise pour discuter les idées de M. d'Indy, c'est que bien souvent, de son propre aveu, ces idées ne sont pas les siennes, mais celles de l'Allemand Hugo Riemann.

Nous trouvons ici un exemple de l'habitude qu'on avait si souvent avant la guerre, – et pas seulement en musique, – d'aller chercher la vérité de l'autre côté du Rhin. C'est ainsi que Combarieu s'est efforcé de nous inculquer les folles idées de Westphal, voulant appliquer les principes de la métrique grecque à l'exécution des oeuvres de Bach, de Beethoven, etc., qui n'ont avec elle aucun rapport."

conclude on the heavy part of the rhythm, they are masculine and would therefore have the tonic accent fall on the first note. This idea is much closer to the traditional Solesmes doctrine of the accent on the arsis; it is also the clearest representation in the theories of any of Mocquereau's contemporaries of what I have called proposition 10, the principle that the accent is not necessarily related to the downbeat. D'Indy is almost certainly borrowing this idea from the monks of Solesmes rather than the other way round, since the Solesmes publications were the primary locus of discussion of the idea of the Latin tonic accent in plainchant. D'Indy's theory of accentuation is not so much Riemannian as Solesmian.[59]

D'Indy's expressive accent (*accent expressif*) is the musical analogue of the emphasis placed on a spoken word to color the meaning of a sentence. In his analyses, d'Indy uses the $\rightharpoondown$ symbol to show the expressive accent. While d'Indy does not describe all the factors that go into determining the expressive accent, mentioning only the usual presence of repeated notes, in practice his choices are very close to those of Lussy, as can best be illustrated by an example. D'Indy's notations for tonic and expressive accents are very similar to Riemann's agogic and dynamic accents respectively, but in their usage it is clear that d'Indy's analytical instincts are much closer to those of Mocquereau and Lussy than to Riemann's.

Figure 4.9 shows d'Indy's melodic analysis of the Beethoven arioso, analyzed by Riemann in figure 4.5.[60] While Riemann considered this passage to contain two periods, d'Indy categorizes it as a *square* phrase, meaning that it is composed of four periods that share no melodic material. The first three periods end with *demi-cadences*—half cadences in mm. 12 and 20—and a perfect cadence in C♮ in m. 16.[61] Period 4 ends with a perfect cadence in the tonic A♭ minor. Periods 2, 3,

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59. Rhythmic theories of plainchant are another object of Saint-Saëns's scorn: "In the music of the Middle Ages, of which M. d'Indy gives examples and which we call plainchant, created before the barbaric invention of the measure, I search in vain for rhythm; it is only the absence of rhythm that I find there" (Saint-Saëns 1919, 13).

"Dans la musique du moyen âge, dont M. d'Indy donne des exemples et que l'on désigne sous le nom de *plain-chant*, créée avant l'invention barbare de la mesure, j'ai beau chercher le rythme; c'est seulement l'absence de rythme que j'y trouve."

60. I have altered the example slightly for clarity by combining two layers of schematic reduction (what d'Indy calls the melodic scheme and the rhythmic scheme, which are almost identical in this case). I have also added bar numbers for easy reference to the original score.

61. According to Reicha (1814, 31), this cadence in a non-tonic key would constitute a three-quarters cadence (a perfect cadence in a non-tonic key). For Reicha as for Riemann, the passage would consist of two periods.

Figure 4.9: Beethoven, Arioso from Op. 110, (Indy and Sérieux 1903, 44–45)

and 4 each begin with an anacrusis, shown as a small note in the rhythmic/melodic scheme.

In period 1, the tonic accents of the two groups correspond with Riemann's heavy measures, since the groups are feminine. Riemann's assumed anacrusis is not shown; the downbeat of m. 9 is merely considered as part of the light portion of the first group. Three expressive accents are marked. The first is on the appoggiatura suspension that also creates the feminine tonic accent. The second is on the appoggiatura F♭ over an E♭ dominant $^6_5$ harmony. The third mark, consisting of both a crescendo and diminuendo, is for the high note of the period, A♭5. In Mocquereau's terms, this would be the principal accent. In contrast to Riemann's system, the arrival on m. 12 is hardly

stressed at all; d'Indy remarks: "Here the tonic accent is completely destroyed, or rather, displaced by the expressive accent, which is itself reinforced by an equally expressive anacrusis" (Indy and Sérieux 1903, 44n).[62]

Period 2 begins with two overlapping masculine groups. These two groups are beginning-accented and masculine (i.e., the tonic accents are on the light part of the rhythm), which is not really possible in Riemann's system. The expressive accent falls on the A♭6, which is the highest pitch in the phrase; this overrules the tonic accent on the cadence. For Mocquereau, the high note of this second period would be the general accent. The analysis of period 3 is very similar to Riemann's: the expressive accents align with the feminine tonic accents, which coincide with the heavy measures 18 and 20. There is another expressive accent on the B♭♭, which corresponds to Lussy's use of the pathetic accent for a chromatically inflected note.

In period 4, there are more differences with Riemann's reading. Where Riemann sees overlap-ping groups, with the G♮ in m. 21 serving as both arrival point and anacrusis, d'Indy does not share the requirement for an anacrusis in every group. Instead, he reads the downbeats of mm. 21 and 22 as starting with a double accent. The downbeats carry the tonic accent because the rhythmic groups indicated by the slurs begin on the downbeat, and any two-note group must carry the accent on the first note like a Latin word. The downbeats carry the expressive accent because the notes on the downbeat are incomplete neighbors to the notes of the dominant harmony being prolonged. This coincidence of the measures and the rhythms is impossible in Riemann's theory, but Riemann's rule of the upbeat is only a norm for d'Indy. In d'Indy's downbeat-beginning groups, the heavy beat of the rhythm falls on the third beat of the notated measure, while the notated downbeat is, necessarily, the light part of the rhythm. The group that follows is more straightforward, with the crescendo sign indicating the melodic high point, which receives an expressive accent. The tonic accent of the third group falls on the appoggiatura in m. 24. For Riemann, this is the heaviest beat of the period, but for d'Indy, the accent gives way to the expressive accent that precedes it.

Comparing this analysis with Riemann's shows how many differences exist between these two

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62. "Ici l'accent tonique est absolument détruit, ou plutôt déplacé par l'accent expressif, qui est lui-même renforcé par une anacrouse également expressive."

authors' conceptions of musical phrase rhythm and meter, despite the similarities in notation and in their general "iambomania." In fact, d'Indy's analysis is much clsoer in spirit, methods, and outlook to Mocquereau's analysis of the antiphon *Cantate Domino* shown in figure 2.11 (page 87). *Cantate Domino* is, in d'Indy's terms, a square period, composed of four groups, each of which is made up of smaller rhythms that proceed from upbeat to downbeat. On the time scale of the entire period, Mocquereau theorizes an organization by way of a dynamic curve that follows the contour of the melody. While the analysis of the divisions is nearly symmetrical, this is dictated by the circumstances of the melody in question and not by a rule. Riemann's insistence on regular periodicity is entirely absent from both Mocquereau's and d'Indy's analyses. D'Indy's analysis of the arioso first appeared in print in 1903, and Mocquereau's analysis of *Cantate Domino* in 1904. Given the similarities in approach between Mocquereau and d'Indy, it is likely that the influence ran both ways, especially as d'Indy was so eager to make the melodic analysis of plainchant the basis for all his compositional pedagogy.[63]

Exchanges and Disagreements

Mocquereau cited d'Indy's book at length in support of his own views: "This work by M. Vincent d'lndy is full of investigations in this matter; new and correct ideas abound and entirely confirm the teaching of Solesmes" (Bénédictins de Solesmes 1901, 161).[64] Most of Mocquereau's replies to d'Indy are lost, but it can be inferred from drafts and from d'Indy's letters that their exchange moved to the topic of chant accompaniment, on which there was considerably less agreement than on the question of abstract rhythm. Accompaniment is a secondary question for Mocquereau; in his last extant letter to d'Indy, Mocquereau compares the experience of accompaniment to a plaster covering on a Greek statue (Hala 2017, 442). But the publication of chant editions with accompaniment was a necessary economic reality, and the treatment of rhythm in such editions played a part in the larger

63. Hala (2017, 415) argues that d'Indy never followed Mocquereau in theoretical matters, but the evidence suggests otherwise. What source could d'Indy have had for the redefinition of masculine and feminine rhythms based on the placement of the tonic accent? This is only a feature of the Latin language, specifically as its accentuation pattern was theorized by Pothier and Mocquereau in the 1890s.

64. "Cet ouvrage de M. Vincent d'lndy est rempli d'instructions sous ce rapport; les idées nouvelles et justes y abondent et confirment entièrement l'enseignement de Solesmes."

controversy over Gregorian rhythm in the early twentieth century.

Prior to the Solesmes reform, plainchant accompaniment was generally note-against-note, with each note of the melody receiving a different chord.[65] With the faster tempo used in wake of the Solesmes reforms, it became necessary to place chords only on some notes and not on others. Mocquereau contends that changes of harmony should coincide with the ictus, as the ictus and the change of harmony together clarify the rhythmic progression: "In elementary analysis, each ictus, each touch during the rhythmic progression is given a double character: it is at once the point of arrival of the preceding rhythm and the point of departure of the following one. Now, it is this renewal of the movement that is well expressed by the chords, which are endowed with a character of movement. Nothing shows more clearly the intimate union of rhythm and harmony" (Bénédictins de Solesmes 1901, 334n).[66] As a result, subsequent editions of accompanied chant in the Solesmes style only permit changes of harmony on ictic notes, even in the frequent case where the ictus does not align with the accented syllable.[67]

Mocquereau approached d'Indy for support of this view, as he was preparing his essay for publication in *Paléographie musicale*. On 10 February 1901, d'Indy responded negatively to this overture, arguing that Mocquereau's examples were "the condemnation of the system of harmonic accompaniment of Gregorian chant, which truly deprives it of much of its purity" (Hala 2017, 431).[68] For d'Indy, "The only rule must be to reinforce the accent, (the accented beat, whether light or heavy) by the harmony..." (431–2).[69] In cases where the accent is not aligned with the ictus, the harmony will be syncopated with respect to the beat, in order to further decrease the accent on the downbeat. D'Indy expresses his rule of weak (but heavy) downbeats even more forcefully than in his own published work: "I beg you, do not let yourself be influenced by the German theorists but

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65. Shironishi (2021) offers several examples of this style of accompaniment, beginning with the treatise on Gregorian accompaniment by Louis Niedermeyer (1802–1861).

66. "En analyse élémentaire, chaque ictus, chaque touchement est doué pendant la marche rythmique d'un double caractère : il est en même temps le point d'arrivée du rythme précédent , et le point de départ du suivant ; or, c'est cette reprise du mouvement qui est exprimée avec bonheur par les accords doués de caractère de mouvement. Rien ne montre avec plus de clarté l'union intime du rythme et de l'harmonie."

67. Potiron (1933, 73–75) gives a thorough account of this style from the harmonist's point of view.

68. "la condamnation du système d'accompagnement harmonique du Chant grégorien, ce qui lui enlève, vraiment, une grande partie de sa pureté."

69. "La seule règle doit être de renforcer l'accent, (le temps accentué, qu'il soit léger ou lourd) par l'harmonie..."

believe, as I have come to believe myself since studying the expressive phrase rhythm of modern music, that '*the first beat of each measure is almost never a strong beat.*' This seems to me an indisputable axiom for those who have thought a little about rhythm" (432).[70]

In fact, d'Indy and Mocquereau had already collaborated a few years previously on an edition of accompanied Easter chants published by the Schola Cantorum, which nicely illustrates their different views (Mocquereau 1898).[71] The book presents Easter melodies transcribed into modern notation by Mocquereau. The first melody in the book, the Introit *Resurrexi*, is harmonized by d'Indy. In the neumatic style of introits, most of the tonic accents coincide with the beginnings of neumes, making them ictic according to Mocquereau's theory. The first word of the chant provides a revealing exception. Figure 4.10 shows Mocquereau's rhythmic reading of this word, together with three harmonizations—d'Indy's from the 1898 book and two later harmonizations in the Solesmes style. For Mocquereau, both the secondarily accented syllable *Re-* and the principally accented syllable *-re-* fall on single notes preceding a longer group, making them non-ictic.

D'Indy's harmonization places a new harmony on both of these syllables, while the two Solesmes-style accompaniments avoid doing so. Figure 4.10b places an ictus and a chord on the rest preceding the first syllable, while figure 4.10c treats the first note as an anacrusis, placing the first chord on the note that follows. D'Indy's version is printed with rhythmic signs above the staff, which may mark an early version of Mocquereau's ictus. While the use of the dots in this publication is never explained, the context suggests that a composite rhythmic group is shown by a high dot on the arsis and a low dot on the thesis, while two vertically aligned dots represent a form of overlap. While the rhythm shown in figure 4.10a does not correspond exactly to Mocquereau's mature theory, it is likely that d'Indy would have accepted Mocquereau's later placement of the ictus as the downbeats. In this case, the accompaniment, with chord changes on accented syllables, is syncopated with respect to the ictus. This use of syncopation in the accompaniment is the chief

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70. "Je vous en supplie, ne vous laissez point influencer par les théoriciens allemands et croyez, comme je le crois moi-même depuis que j'étudie le rythme expressif des phrases de musique moderne que : '*Le premier temps de chaque mesure n'est presque jamais un temps fort*' cela me parait un axiome indiscutable pour qui a un peu réfléchi sur le rythme." Bénédictins de Solesmes (1901, 31–32) prints this quotation, leaving out only the word "German."

71. This collaboration is not mentioned by Hala.

Mocquereau's Rhythm

Re-sur-re-xi,

A. D'Indy 1898

B. Giulio Bas 1925

C. Henri Potiron 1933

Figure 4.10: Three Accompaniments for *Resurrexi*

point of disagreement between the two writers.

D'Indy and Mocquereau met over two days in Paris in February 1901. After these meetings, there was another exchange of letters; Mocquereau had sent d'Indy some melodies to harmonize, but d'Indy, with some scruples about systematizing the style of accompaniment too much, asks for more time (Hala 2017, 440). In a letter of 6 April 1901, Mocquereau writes that he is still waiting for d'Indy's examples (442).

In these last letters, the two writers also discuss some examples from Beethoven where melodic accents coincide with the upbeat of the measure (440–1). Mocquereau later incorporated these examples into his essay in *Paléographie musicale* (Bénédictins de Solesmes 1901, 30–31). No further letters remain. In July 1901, the anticlerical law of associations was passed, forcing the Solesmes community into exile on the Isle of Wight. The Schola distanced itself from association with the Benedictine order in these years. Flint (2006, 243) speculates that this distancing may have been a reaction to the anti-Dreyfusard politics of the Schola, but it is possible that disagreements over Gregorian rhythm and accompaniment were more to blame.

By the time the men met again in Paris in 1904, the commision to create the Vatican edition was assembling, which led to further controversies over Mocquereau's rhythmic signs (Hala 2017, 415). On this point, d'Indy took the side of Pothier against Mocquereau's signs, writing to the pontifical commision in favor of "the complete suppression of the rhythmic signs with which the last editions were crowded" (522).[72] At the same time, the disagreement over the proper placement of chords in accompaniment led to a prolonged and bitter debate carried out in various journals and tracts. While the particulars in this debate add nothing to the basic disagreements described above, it led d'Indy to a complete repudiation of his association with Mocquereau, in a letter reprinted in the journal *Revue du Chant grégorien* in 1906:

> I remember very well having said to Dom Mocquereau, in the first interview I had with him, something to warn him against assimilating Gregorian rhythms with the measured rhythm of our modern music. I remain absolutely of the same opinion as to the condemnation of this principle of the *strong beat* after the barline... but I do not see

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72. "la suppression complète des signes rythmiques dont les dernières éditions étaient chargées."

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how one could draw any argument from it concerning Gregorian rhythm, my assertion applying and being able to apply only to *measured* musical pieces...I authorize you to deny in my name any statement contrary to what you know to be my ideas, for which one would want to use words of mine diverted from their true meaning. (Hala 2017, 422)[73]

D'Indy and Mocquereau were both in attendance at a Gregorian conference in 1920, where d'Indy continued his campaign against the Solesmes rhythmic signs (Thomson 1996, 205). In spite of this, Mocquereau continued to cite d'Indy as a source of rhythmic ideas even until his last publications.[74] This apparent contradiction rests on an important distinction, which runs through this entire chapter. The rather intense disagreements between these authors over particular questions of Gregorian chant have, unfortunately, obscured their very real agreement on general questions of theory. Only by making a real distinction between Mocquereau the theorist and Mocquereau the chant scholar can any real understanding of the theoretical relationship between these authors be found.

This is a distinction already mentioned in a letter to Mocquereau from Dom Augustin Gatard (1862–192), a student and ally of Mocquereau who was a monk of St. Michael's Abbey in Farnborough:

> I believe that it would be necessary to shed light on this subject, for it is written and repeated that you falsely invoke Riemann and Vincent d'Indy in favor of your theory of rhythm; it seems to me that a clear statement should be given, saying that you invoke the authority of these authors for the principles of rhythm, and not for the application of these principles to plainchant. (Hala 2017, 420)[75]

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73. "Je me rappelle très bien avoir dit à dom Mocquereau, dans la première entrevue que j'ai eue avec lui, de quoi le mettre en garde contre l'assimilation des rythmes grégoriens avec le rythme mesuré de notre musique moderne. Je reste absolument dans le même sentiment quant à la condamnation de ce principe du *temps fort* après la barre de mesure...mais je ne vois pas comment on pourrait en tirer quelque argu ment au sujet du rythme grégorien, mon affirmation ne s'appliquant et ne pouvant s'appliquer qu'aux pièces musicales *mesurées*...Je vous autorise à démentir en mon nom toute affirmation contraire à ce que vous savez être mes idées, pour laquelle on voudrait se servir de paroles de moi détournées de leur vrai sens."

74. Hala (2017, 422–3) notes that Mocquereau never harbored any rancour or resentment toward d'Indy, but maintained an attitude of admiration and affection toward him.

75. "Je crois qu'il faudrait faire la lumière sur ce sujet, car on écrit et on répète que vous invoquez à faux Riemann et Vincent d'Indy en faveur de votre théorie du rythme ; il me semble qu'une déclaration nette serait à donner, disant que vous invoquez l'autorité de ces auteurs pour les principes du rythme; et non pour l'application de ces principes au plain-chant."

D'Indy's repudiation rests on the idea that plainchant is not like other music, since it is entirely free of the taint of measure. In this view, Mocquereau's desire to analyze Gregorian rhythm using the terminology of measured music moves in the wrong direction, since d'Indy would prefer that the unmeasured, accentualist approach to Gregorian chant should inform the analysis of measured music. For d'Indy, Mocquereau's theory is too reliant on the modernist methods of the conservatory. We have seen Pécoul taking a similar position throughout the years following the promulgation of the Vatican edition. While d'Indy and Mocquereau disagreed about plainchant—at least in terms of its notation and the proper way to accompany it—it is clear from a comparison of their writings that their ideas about the nature of musical rhythm are quite similar.

4.3.3   Riemann and Mocquereau

Commonalities and Disagreements

As mentioned by Gatard, Riemann also disagreed with Mocquereau on the question of Gregorian rhythm. Here, too, Riemann's ideas on the matter predate those of Mocquereau. In his early study of the history of notation, Riemann lists all the early theoretical evidence for the singing of unequal note values in medieval chant (Riemann 1878, 189–205). He was the German translator of one of Gevaert's books challenging the involvement of Gregory I in the development of the plainchant repertoire. After the development of his rhythmic theory, Riemann advocated an essentially mensuralist approach to plainchant (Riemann 1904b, 1904a).[76] In spite of these fundamental differences with the Solesmes theory, the relationship between Mocquereau and Riemann was considerably warmer than that between Mocquereau and d'Indy, because Riemann, operating outside the fraught environment of French liturgical politics, had no difficulty separating Mocquereau's general theoretical ideas from the particular ones.

Solesmes has in its archives twenty-one letters from Riemann to Mocquereau, written between 1899 and 1914, as well as one copy of a letter from Mocquereau to Riemann. None of these

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76. As we shall see, Riemann's mensuralism was based more on abstract principles than on neume signs. Stäblein (1968, 88) relates Riemann's theory to a tradition of syllabic equalists, whose rhythmic system depends on proportional lengths between syllables regardless of how many notes are sung on each syllable.

has appeared in print before. These letters document an exchange of ideas considerably more fruitful than that between Mocquereau and d'Indy. In some letters, including the earliest from 1899, Riemann writes seeking biographical details on Mocquereau and other monks of Solesmes for inclusion in his lexicon. The last letters, from early 1914, deal with negotiations between Solesmes and the University of Leipzig library over photographing its copy of the tonary of Regino of Prüm. The letters from the period 1903 to 1905 are of particular interest with respect to music theory, as they coincide with Mocquereau's writing of the second half of the *Paléographie musicale* essay, just as the letters from d'Indy coincide with the writing of the first half. The following account involves extensive direct quotation of these letters, with much of the commentary consigned to the footnotes.

On 2 October 1903, Riemann wrote to Mocquereau:

You do me too much honor by your letter of 30 September, which I am happy and proud to have received. Being busy with other kinds of work, I had not opened the last two issues of the *Paléographie*, whose importance and special interest for me I did not suspect. But today I have read your new treatise on the tonic accent from the first page (21) to the last in my hands (152). I hasten, then, to tell you that from page to page my interest increases and that I end up wishing for the continuation. The way in which you trace the development of theories from Dom Pothier to P. Lhoumeau is admirable—you make us see the approach of the truth without drawing back the last veil!

I do not doubt that the final result will be the same as my personal ideas; this conviction is based on the fact that you have progressed from the unity of the word to the unity of several words and that you have replaced the theory of metric accents by that of impulse and repose. I need not tell you that this is the dynamic-agogic $\asymp$ of my 1884 book. In my editions of songs of Schumann, Schubert, Mendelssohn etc. (Steingraeber), you will find this system applied with consequence, for example:

Hie und da ist an den Bäu - men man - ches bun - te Blatt zu seh'n,

As a proof that I too have made progress, I have taken the liberty of sending you my latest book, *System der musikalische Rhythmik und Metrik*, which was published eight days ago. My publisher will also send you my *Katechismus des Gesangskomposition (Vokalmusik)*, in which you will find some things in the index, p. 272ff.

Let me direct your attention to page 5 of my *Rhythmik* (and furthermore to p. VIII of the foreword [R. Wagner]). I hope that my establishment of the ultimate nature of rhythm will find your approval. I believe that you too are convinced that a true rhythm,

that is a more or less exactly steady distance between the peaks of the phrases, is hidden in the free rhythm of Gregorian chant.

New and convincing for me was the thesis as well that in a word or a phrase whose first syllable carries the accent, it is not simply an end but rather the sharpest of impulses. This is doubtless true, but I had not yet found the formulation.

Your eminent works are very precious to me for my studies; the *Paléographie* has its place beside my desk. You will see that I am the one who has to learn from you, when you receive the first volume of my *History of Music*, which Messrs. Breitkopf and Härtel will publish next year… (Appendix A)

This letter sets the tone for their entire subsequent correspondence. Riemann expresses great admiration for Mocquereau's work and identifies several points of agreement. The musical excerpt is from Schubert's "Letzte Hoffnung," in which Riemann's marks for the dynamic accent place the accents on beat 2 in the first measure and beat 3 in the third, reinforcing the melodic high points with dynamics in a manner we have also seen in analyses by d'Indy and Mocquereau. Riemann also approves of Mocquereau's contention that an accented beginning is only a more forceful impulse of the rhythmic motion, rather than the ending of the preceding group. This is more like Riemann's own opinion in his 1884 book, discussed above, than it is like Riemann's later view, with an implied anacrusis.

Riemann turns also to his more recent theoretical ideas, as laid out in his most recent book, *System der musikalischen Rhythmik und Metrik* (Riemann 1903).[77] Riemann directs Mocquereau to the points in his book where he defines what he calls his ultimate principle of rhythm, which is an even division of time creating a strict measure (3). This division of time is not Aristoxenus's and Westphal's *chronos protos* (4), but is based instead on an isochronous pulse that is perceived as being of a medium tempo, roughly 75–80 beats per minute (5). The average temporal standard of evenly spaced beats that governs a piece of music—what other theorists might prefer to call the tactus—is the "rhythmic quality" (5), which is antecedent to the perception of differing weights between those beats, which is called the "metric quality" (8). Music requires both regular beats—the rhythmic quality—and measures—the metric quality. These requirements are so foundational to the

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77. Hunnicutt (2000) gives a partial translation with an extensive commentary. Smither (1960, 229–48) gives a more concise summary.

experience of music that Riemann, while approving of much of Mocquereau's theorizing, is unable to accept Mocquereau's form of chant rhythm, since it does not rely on evenly spaced beats.

The consequences of this difference are so drastic in terms of the rhythmic interpretation of plainchant that it makes the practical results of the two writers' theories almost diametrically opposed. Riemann, accepting Mocquereau's view that the tonic accents of the words are the governing principle of Gregorian rhythm, combines the tonic accent with the need for even division of time, so that the tonic accents all must fall on downbeats of measures. Rather than the basic equality of the short syllable as the time value for each note, Riemann prefers to assume the existence of the measure, and to divide that measure in such a way that the accented syllables are always evenly spaced. Riemann illustrates this difference in the book mentioned in the last quoted paragraph, his *Handbuch der Musikgeschichte*, where he presents four different rhythmic transcriptions of the same section of a gradual (Riemann 1904b, 102–103). One of these is Mocquereau's version in modern notation, while the other three are different mensuralist/proportionalist versions: one by Dechevrens based on the early neume forms; one by Houdard based on the idea that all neumes are equal in value to the neumes of a single note, so the individual notes are subdivisions of a steadily recurring beat; and one by Riemann himself based on the principle of the four-measure phrase. Figure 4.11 reproduces Riemann's interpretation of Mocquereau (staff A), Mocquereau's own version from his later editions (staff B), and Riemann's version (staff C). For all his admiration for Mocquereau, it is clear that his chant rhythmicization is very far from both the spirit and the actuality of Mocquereau's theory.

Mocquereau's response must have asked about the relationship between tactus and accent among sixteenth-century German composers, since Riemann opens his next letter, 14 November 1903, with a discussion of this issue (Appendix B). Riemann writes that the accentuation of German is different from that of French and Latin, and that any accented syllable placed on the weak beat is emphasized either by means of length or at least by a melodic accent. While Riemann uses the term "weak beat" here, as opposed to his usual preference for terminology of light and heavy, he goes on to argue for a nuanced view of dynamics in relation to strong beats: "I am far from arguing that the 'strong' beats

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Figure 4.11: *Timebunt gentes* according to Mocquereau and Riemann

should be pronounced more forcefully than the weak ones—on the contrary, my conviction is the same as yours, that the dynamic depends on the entirety of the phrase. Nevertheless I believe in the supremacy of the metric quality (given by the measure) for the weight, that is, for the cadential form of the values." There is for Riemann (as opposed to d'Indy) some added importance to the heavy beat that is not negated by the displacement of the accented syllables or by the absence of a dynamic accent in performance. In other words, Riemann does not reject Lussy's metric accentuation, even in cases where it is superseded by a rhythmic accentuation.

Riemann continues by suggesting how his principle of the downbeat should be incorporated into Gregorian rhythm:

> If, moreover, there is any difference between your way of seeing things and mine, it surely depends on the starting point. You only discuss vocal music, I discuss instrumental music. . . . in vocal music the word is master everywhere. The word of sung music corresponds to the motive of absolute music. All the rules I develop for the determination of motives are based only on harmony and abstract rhythm. In sung music only the words and the *incises* of the text determine the ends, or rather they are themselves the determinations given without contradiction. Also, the points of emphasis are dictated by the sense of the words. I believe that these logical accents must generally fall on the "strong" beats, at least in the case where the text is not metrical and therefore does not form a metrical scheme for the melody. In this case of prose text, it is, in my opinion, these logical accents that give rise to a real rhythm,

governing the steadiness of equal distances between the principal accents.

Unlike Mocquereau, who is indifferent to the position of the tonic accent with respect to the beat, Riemann insists that prominent tonic accents should fall on the downbeat of a measure of fixed length. Riemann illustrates this with a rhythmicized version of the Te Deum, in which each phrase of the melody conforms to a few basic schemas of two measures' length. Riemann goes to extreme lengths to conform to his metrical scheme, so that a note represented by a single punctum in the Solesmes edition is shown as anything from a thirty-second note to a half note in Riemann version, depending on the context.[78]

The next issue of Mocquereau's essay quotes Riemann at length in favor of proposition 2, that the basic unit of musical time is the motion from upbeat to downbeat, including a printing of the schema shown in figure 4.4, which reproduces the principle at multiple hierarchical levels (Bénédictins de Solesmes 1901, 173). Mocquereau does not include any of Riemann's rhythmicized versions of chant. He makes a sharp distinction between abstract questions of rhythm, where he finds points of agreement with Riemann, and the application of rhythmic theory to chant in particular, where he differs from Riemann.

In a brief letter of 25 January 1904, Riemann requests page proofs of Mocquereau's essay, so that Mocquereau's most recent work can be incorporated into his (Appendix C). Riemann's letter of 17 February 1904 goes into more detail on the similarities and differences between the two theories:

> Everything you say about rhythmics is in accordance with my own ideas (especially your statement that only rhythm created the measure, which is nothing in itself!). Even for the free mixture of binary and ternary feet you will find the statement in my *System der musikalischen Rhythmik und Metrik*, page 73, seventeen lines from the bottom.[79] For the negation of the "metrical accent" as such, see my *Lexicon*, French edition, article Accent page 4 column 2 at the top.[80]
>
> Your thesis that the beats carrying the rhythm should also be the beats carrying the harmony[81] is so dominant in all my writings on this subject, that I thought it was formu-

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78. Riemann (1904b, 42–45) prints a shorter version of the same rhythmic analysis.

79. This is Mocquereau's proposition 3. The connection between these ideas is not perfect; Riemann's reference is to the possibility of duple or triple divisions of the same isochronous beat in the course of a melody.

80. This is Mocquereau's proposition 10. Mocquereau's position (indifference to the accented nature of the downbeat) lies between Riemann's and d'Indy's.

81. This is the point on which Mocquereau and d'Indy had disagreed previously.

lated in many places. Strangely, I find it only in the *Katechismus der Kompositionslehre* part 1, page 51: "the heavier a value is, the more it is expected to change harmony."

Page 62: "The actual carrier of the harmony is also in the big picture always the beginning of the measure, the heavy count of the heavy bar of the heavy group."[82]

In my *Elemente der musikalische Ästhetik*, p. 178, I read: "The times at which the harmony changes are usually heavy."

Rhythmik p. 8: "Under all circumstances, the beats (beat units or basic rhythmic times) only gain real existence through their contents."

In sum, my whole theory of the continuity of musical forms is derived from this fundamental thesis, that the beats carrying the harmony are at the same time the beats carrying the rhythm and that every contradiction against this fundamental law gives rise to exceptional events (syncopation).

Also, on another question we are perfectly in agreement—it is in the theory of words as motives of vocal music. I am convinced that the unity of the word forces into unity what in absolute music, instrumental music, is separated by succession.[83]

But I suspect that from one point of view we will diverge. What do you think of what I read on page 5 of my *Rhythmik* (fourteen lines from the bottom) of the rhythmization of language in speaking?[84] I have sent my rhythmic analysis of the *Te deum* to you; you have not responded to me about it so far. I can easily believe that for you, a well known performer of the chants of the Church, it would be very difficult to go as far as I go. But it would be of the utmost importance for me to know your opinion on the principle that I defend there. I am too much a musician by birth and education to admit the existence of a rhythm not based on the regularity of the distances in time of the main accents (or rather of the beats carrying the rhythm and the harmony). And, moreover, I have too high a consideration of the musical value of these venerable old melodies not to believe that they must be derived from a real way of chanting, organized and regularly arranged. Otherwise it would seem unthinkable to me that they could have survived for thousands of years.[85] And for this reason neither of the two harmonizations or rhythms of the songs that you have deigned to receive satisfy me completely. Undoubtedly the final syllable must be a carrier of rhythm and harmony. Where it is a question of verses with numbered syllables (rhymed or not) a real measure seems to me indispensable. Then I would like to have "Sicut sidus radium" in the following way (with your harmonization A):

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82. This refers to the downbeat of measure 8 in a normative, eight-measure period.

83. This must refer to the question of the strong beginning of a phrase. For Riemann there must always be a separation, since any accented note is the end of a group. This is obviously incompatible with a beginning-accented word, which must be pronounced as a single unit.

84. Riemann's point in the cited passage is that even speech rhythm conforms to his idea of the average tempo, so that in speaking faster the speaker will emphasize fewer words, so that the main accents are still roughly periodic.

85. Rehding (2003, 99) describes Riemann's persistent view that only adherence to a rational musical logic makes music of lasting value.

Si - cut si - dus ra - di - um Pro - fert Vir - go_ Fi - li - um Pa - ri__ for - ma

Similarly I would like to rhythmicize the Antiphon "Iste sanctus" in this way:

Of course this could be written in less short values so as not to seem too fast.

Please excuse my frankness, but my musical feeling requires an order reducible to a perfect symmetry of distinctions.

Riemann's last musical example is a piece that Mocquereau used in several places to demonstrate his rhythmic ideas. The third phrase member—beginning, in Riemann's version, with the upbeat to m. 9—provides several examples of the accent coinciding with the non-ictic notes, as shown in figure 4.12. This phrase was also discussed by d'Indy and Mocquereau and neatly encapsulates the differences between the three writers. In one of his letters, later included in Mocquereau's essay, d'Indy calls figure 4.12b "heavy and anti-rhythmic," since it places each accented syllable on a downbeat (Hala 2017, 432; Bénédictins de Solesmes 1901, 164).[86] Riemann, for whom the downbeat should normally carry an accented syllable, arranges his version in such a way that the phrase begins on an upbeat, creating a rhythmic version that is almost the same as figure 4.12b. Instead, both d'Indy and Mocquereau prefer figure 4.12c.[87] The difference between Mocquereau and d'Indy is that d'Indy would accompany figure 4.12c with changes of harmony on the accented syllables (the second notes of mm. 1, 2, and 3), while Mocquereau would only allow changes of harmony on the notated downbeats. The downbeats—the ictic notes—are the support points of the

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86. To make a direct comparison simpler, I have transposed d'Indy's example to the same pitch as Riemann's.

87. The phrase is also closely related to the passage discussed in figure 3.9 (page 128). In that passage, Mocquereau identified the stepwise descent C–B–A–G as structural, which also supports placing these notes on the beat.

rhythm, or the *temps porteurs* in Riemann's terminology, which must also be the support points of the harmony.

Figure 4.12: Ictus in *Iste sanctus*, after Bénédictins de Solesmes (1901, 164)

The most consequential letter of the set is Riemann's of 5 March 1904. Riemann begins by addressing the usual point of division between the two theories—the question of regular measure:

> You have rightly been expecting a few lines from me sufficient to smooth out the small difference that has come to be felt between your theory of rhythm and mine. Here they are.
>
> Your analysis of "Cantate Domino" answers so completely to all that I would like to see established that I subscribe to it wholeheartedly. From the beginning, I did not expect that you would concede me a strict measure for the rhythm of Gregorian chant. All I hoped for was that the four distinctions of a notated verse would be of equal or nearly equal length, except perhaps for rich neumations occuring on the final, which could be explained as appendices or formulas. I concede therefore, that a true measure is not necessary, because the units of the words are rhythm-bearing and can well compensate for the lack of a strict mensuration. So you have my applause. If you would take the trouble to read what I have written about recitative based on the eight-measure phrase, you will see that my idea of the rhythmization of spoken language is quite flexible, and that it can also undergo the application that you make for Gregorian chant.

I have previously discussed the analysis in question at figure 2.11 and in connection to d'Indy (page 193); it is reproduced here as figure 4.13. In Riemann's view, Mocquereau's analysis, with its attention to the tonic accent that unifies the words, convincingly allows some flexibility into the rhythmic construction of the melody, providing an alternative basis for the rhythm besides that of regular periodicity. This is possible because the individual phrase members have a rough proportionality with each other.

Figure 4.13: Analysis of *Cantate Domino* (Mocquereau 1908, 116)

Riemann continued this theme in a letter from 20 June 1904, showing that while he accepted Mocquereau's wish to dispense with strict periodicity, his agreement with Mocquereau was not unqualified:

> …I cannot renounce the idea that a true rhythm reigns in these melodies, whose support-beats are the tonic accents themselves. Your last letters made me a little afraid that you would end up looking for the rhythm in the individual notes, and that a text richer in notes would have to take a much longer extent of time than a shorter one. This, then, would finally lead to a truly *plain* chant—the infamous plainchant of the Middle Ages. I am more convinced than ever that every large rhythm is based above all on an intelligible periodicity. To constitute a rhythm it is not enough to discover

impulses and rests without any more correlation than a simple succession. I am not thinking of a strict measure. On the contrary, I believe that the small figures could vary in such a way that the notation in modern notes allows changes of meter at any moment. But the large proportions of each distinction should remain the same; the main accents would again follow at the same distance—if not an exact distance, then certainly an approximate one. This is, briefly, the cause of my trouble.

As for Mr. Combarieu, indeed his rather superficial article does not amount to much; he does not seem to have understood what you want.[88] His doubts about the heavy and light beat are a bit childish. But there is something more serious behind it that Mr. Combarieu has not yet been able to formulate himself. If in truth you deny in any case any feminine cadence and always attribute the weight, the resting point, to the last syllable, what then is the tonic accent? For the small melodic figure it would be quite possible that the last cadence would take its repose on the last syllable, but I have in view the larger dimensions, for which such a rule seems quite unacceptable. It is the great march of the rhythm that interests me most, because only it gives the possibility of finding the true essence of any of these ancient melodies.

I am convinced that you are also looking for this last truth, the resolution of the enigma of the rhythmicization of a prose text.

This exchange with Riemann is a possible source for Mocquereau's idea, discussed in section 3.3.2, that the higher-level units of Gregorian melody have a flexible proportionality between them as a matter of aesthetics.

The Discovery of Momigny

Returning to the earlier letter of 5 March, Riemann continues with some news, his discovery of many ideas common to Mocquereau and himself in the writings of Momigny:

Today I have something new for you, which I think will please you very much. As it is always my fate to find myself the precursors of my ideas (for example Zarlino[89] for the dualistic theory of harmony, Heinrich Koch for the structure of the musical phrase) I found 10 minutes ago the one who probably for the first time stated that rhythm always runs from the upbeat to the downbeat. It is Mr. Momigny in *Encyclopédie méthodique, Musique*... Here are the striking lines in the article "Punctuation" (Theory of Mr. Momigny)—I beg you to publish them in your essay in *Paléographie* (naming me as the one who commissioned them, in which case I promise to make a great deal of noise about them on other occasions):

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88. This probably refers to the negative review of Mocquereau's editions from earlier in 1904 (Combarieu 1904).
89. Riemann sees Zarlino's description of the major and minor triads as harmonic and arithmetic divisions of the fifth as a precursor to his dualist harmonic theory.

"Sentiment is a natural and interior light that guides those in whom it exists. But when one has not reflected enough on the indications of sentiment to draw precepts from them, one can only transmit these precious indications to others by example, and not by rules which explain the principle.

"The feeling of the musical cadence made me discover that all music proceeds from the upbeat (*levé*) to the downbeat (*frappé*). Without this discovery, the analysis of the musical phrase became impossible; for that is the answer to the riddle.

"Musicians who are unaware of this secret are therefore stopped at the first step in the explanation of the period. The idea that the downbeat is the first beat of the measure and that the measure is enclosed between two barlines makes them turn their backs on the truth they seek.

"When I say that the downbeat is the last beat of the measure and not the first, it does not mean that one must fall where one rises and rise where one falls.[90] One rises where one should rise, and one also falls where one should fall, thanks to the feeling of the cadence; but it is wrong, very wrong, to call the downbeat the first beat, because it is certainly the last of the two, the whole of which forms a cadence or a measure.[91]

"To see a measure in the downbeat and the upbeat which follows it, is, in a line of men, to see a whole man in half of the first and half of the second, instead of seeing this man in his two halves to himself.... [92]

. . . . . (five lines without interest)

"When I say that music proceeds entirely from upbeat to downbeat, this does not mean either that one cannot begin a piece with such and such a beat or with such and such a section of a beat; but it does mean that if it begins with a downbeat, this downbeat ending the measure without having had an upbeat, the piece then begins with the end of a cadence and not with the beginning of this same cadence.[93]

. . . . . (twelve lines of less interest)

"It is also important to know that there is no three-beat measure in this sense, but two kinds of two-beat measures, one whose beat is equal to the beat, and the other whose beat is double the other beat."[94] . . . 9 lines (paraphrase of the same idea, with reference to the article "measure," which is also of the utmost interest.

The following eight lines repeat that it is impossible to analyze the punctuation of a piece without this new knowledge.

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90. The words here are forms of the verbs *lever* (to rise) and *frapper* (to strike), which are related to the nouns I translated previously as upbeat and downbeat respectively. I have rendered *frapper* as fall in this case, as it is related to the idea of a thesis, but also with the idea of the footfall that strikes the ground.

91. For Momigny, the term cadence is interchangable with the term measure. This concept is also equivalent to Mocquereau's elementary rhythm, d'Indy's rhythmic monad, and Riemann's Ur-motive.

92. As with Riemann and Mocquereau, this striking image asserts that unity belongs to the rhythm rather than to the measure.

93. This is precisely Riemann's idea that any accented beginning is the end of a group with an assumed beginning.

94. This idea is echoed in Lussy, d'Indy, Mocquereau, and Riemann.

"It is not enough just to distinguish cadences with two equal beats from those with two beats, one of which is twice as long as the other; but it is also necessary to distinguish those with a masculine ending from those with a feminine ending.

"It should also be noted that ternary rhythms can be used in binary measures and that binary rhythms can be used in ternary measures. Thus, any masculine cadence can become feminine by adding a note after the downbeat...

"The phrase can be composed of several cadences; the number of these cadences differs according to the movement of the piece and the context of the period. The phrase can be composed of several melodic cadences which all pass during the duration of a single harmonic cadence. The harmonic cadence is almost always two or four, or eight or sixteen times slower than the melodic one.

"Phrases can never end on a first cadence member, but on its last, because the phrase cannot end without the cadence where it ends ending at the same time."

Page 133 (article "Measure"): "What! The first beat of the measure should be the upbeat and not the downbeat? Although this scandalizes you, it is nevertheless so, not in my opinion only, but in reality and without it being possible to be otherwise."

Page 134: "The true measure is not therefore that prisoner which one sees enclosed between two bars, and which begins by striking and ends by raising; but it is that which, straddling the bar, has the first of its beats to the left of this bar, and the other to the right.

Etc. etc.! (I am sure you will soon have the book in your hand.)

Here I am deprived of the originality of my idea and Mr. Lussy too.[95]

But I am happy to be the one who discovered it, and by this cause I beg that you name me as the finder. To finish one might suspect that I have very simply copied Momigny without naming him.

I end by hoping that my discovery pleases you. After all, we are, I think, more in agreement than ever.

Momigny's ideas about the measure, laid out most comprehensively and succinctly in his *La seule vraie théorie de la musique* (Momigny 1821, 112–123), are very close to Riemann's. The most visually striking aspect of Momigny's approach is that he counts beats grouped according to the rhythm (that is, up to down) rather than according to the notated measure. A downbeat of a measure, then, can never be counted as 1. Unlike the usual way of counting beats, only actual sounding notes receive a number in the count, and these are almost always groups of 2 or 3.[96] This

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95. Riemann is referring to Lussy's idea of the group astride the barline, which was so important in Mocquereau's theory. Momigny also elsewhere anticipates Lussy's distinction between masculine and feminine rhythms.

96. Groups of 4 only occur in certain unusual feminine cadences (Momigny 1821, 123).

gives rise to the visual idea that duple and triple meters arise from the same basic motive, just as Riemann was to formulate it in his *Rhythmik*.

Figure 4.14: Duple and Triple Motives (Momigny 1821, 113)

Momigny's ideas, considered this way, are more similar to Riemann's than to those of either d'Indy or Mocquereau, since they still involve some amount of metric accentuation. As for Riemann, the downbeat still has an elevated importance; the crucial point is that the emphasis on the downbeat is always as the arrival point of a group and never as the beginning of a group. This differs from d'Indy in that d'Indy did not consider the downbeat to have any degree of intensity, and it differs from Mocquereau in that Mocquereau allows for groups that start on a downbeat, as in a proparoxytonic word.

Riemann had never encountered Momigny's theory of rhythm until several months after the publication of his *Rhythmik*, his last book-length treatment of the subject, and within ten minutes of the discovery of the theory, he wrote a hasty letter to Mocquereau, with multiple underlinings, exclamation marks, and marginal comments. Mocquereau either missed Riemann's letter or was unable to turn to the publication of Momigny's ideas, as he spent March 1904 in Rome negotiating the involvement of Solesmes in the new commision for the Vatican Edition (Combe 2003, 240). After receiving Mocquereau's address in Rome, Riemann followed up with a postcard on 25 March (appendix F), laying out his plans to publish an article in *Die Musik* discussing Mocquereau's work and the discovery of Momigny (Riemann 1904a).

This article, which appeared in the following month, summarizes Mocquereau's aspirations as a general theorist:

> The subscribers and interested readers of the *Paléographie* may have looked at the first installments of the new treatise on the rhythm of Gregorian chant with some astonishment as to the musical examples with which they are illustrated. Dom Mocquereau has

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used melodies of secular French chansons, Marian chants of recent date, fragments of Beethoven sonatas, arias and polyphonic movements from the Christmas Oratorio of Saint-Saëns, then, of course, polyphonic fragments from the sacred works of the most important Franco-Flemish, Italian, Spanish, and German masters of the Palestrina era to prepare the statement of the problem whose solution the study attempts. It was necessary to show how freely music, since the development of polyphony, has dealt with the musical interpretation of linguistic accents: how the French language, in particular, does not even know a fixed accentuation, in order to show the deep gulf that separates the rhythmics of Gregorian melodies based on Latin prose texts from our contemporary practice of vocal composition.

Only after a long detour does Dom Mocquereau uncover the principle of the rhythm of Gregorian melodies by flatly rejecting what he sees as all high-art formations, such as syncopations, long, extended feminine endings, etc. (p. 176) and establishing as the supreme proposition that everything must be of the simplest nature and ease. But what is simple nature and ease in the field of rhythm? The need to define the basic nature of rhythm, so as to be able to prove and at the same time explain its unimpeded free reign in the field of Gregorian chant, forces Dom Mocquereau to cross over into philosophical and aesthetic territory, and thus his study acquires a more general significance. Works such as those of Mathis Lussy, Lhoumeau (*Rythme, execution et accompagnement du Chant Gregorien*), Karl Bücher (*Arbeit und Rhythmus*), Vincent d'Indy (*Cours de Composition* etc.), Charles Bordes etc. are drawn in, and finally my own work in this field is brought to the fore in a very marked way…(156).[97]

Riemann goes on to describe his discovery of Momigny, but the article's main purpose is to place Mocquereau in the intellectual current of the general theory of musical rhythm.[98]

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97. "Die Abonnenten und Interessenten der "Paleographie" mögen wohl bei den ersten Lieferungen der neuen Abhandlung über den Rhythmus der gregorianischen Gesänge einigermassen mit Verwunderung die Notenbeispiele betrachtet haben, mit denen diese illustriert sind. Melodieen weltlicher französischer Chansons, Marienlieder jüngsten Datums, Bruchstücke Beethovenscher Sonaten, Melodieen und mehrstimmige Sätze aus dem Weihnachtsoratorium von Sains-Saens, dann freilich mehrstimmige Bruchstücke aus den kirchlichen Werken der bedeutendsten französisch-niederländischen, italienischen, spanischen und deutschen Meister der Palestrina-Epoche hat Dom Mocquereau herangezogen, um die Stellung des Problems vorzubereiten, dessen Lösung die Studie versucht. Es musste gezeigt werden, wie frei die Musik seit der Entwicklung der Mehrstimmigkeit mit der musikalischen Ausdeutung der sprachlichen Akzente umspringt, wie insbesondere die französische Sprache eine festliegende Akzentuierung gar nicht kennt, um die tiefe Kluft aufzuweisen, welche die Rhythmik der auf lateinische Prosatexte basierten gregorianischen Melodieen von unsrer heutigen Praxis der Vokalkomposition scheidet.

"Erst nach langen Umwegen deckt Dom Mocquereau das Prinzip des Rhythmus der gregorianischen Melodieen auf, indem er für ihn alle gesteigerten Kunstbildungen wie Synkopen, lang überhängende weibliche Endungen usw. rundweg ablehnt (S. 176) und als obersten Satz aufstellt, dass alles schlichteste Natur und Einfachheit sein müsse. Aber was ist schlichte Natur und Einfachheit auf dem Gebiete des Rhythmus? Die Notwendigkeit, das Grundwesen des Rhythmus zu definieren, um seine unbehinderte freie Herrschaft auf dem Gebiet des gregorianischen Chorals erweisen und zugleich erläutern zu können, zwingt Dom Mocquereau, auf philosophisch-ästhetisches Gebiet überzutreten, und damit gewinnt seine Studie eine allgemeinere Bedeutung. Arbeiten wie die von Mathis Lussy, Lhoumeau (Rythme, execution et accompagnement du Chant Gregorien), Karl Bücher (Arbeit und Rhythmus), Vincent d'Indy (Cours de Composition etc.), Ch. Bordes usw. werden angezogen und schliesslich meine eigenen Arbeiten auf diesem Gebiete in sehr markierter Weise in den Vordergrund gestellt…"

98. Riemann also praises Mocquereau's use of the terminology of impulse and repose to replace his light and heavy

The next exchange of letters was prompted by a bit of controversy, in the form of an article opposing Mocquereau's rhythmic theories by Dom Anselm Burge (1846–1929), an English Benedictine (Burge 1905). Burge attacks Mocquereau's theory on several points; most notably for our purposes, he denies that Mocquereau is relying honestly on citations of d'Indy, Combarieu, and Riemann for his ideas. Burge was entangled in the effort, driven by Pécoul, to discredit Mocquereau as an editor of plainchant editions (Truran 2022, 42). The attack against the citation of d'Indy was directed at the attempt to apply general musical principles to plainchant:

> As the result of many conversations with M. D'Indy, I am able to state that he agrees in no way with the rhythmic ideas of Dom M., not only on the accompaniment, which he regards as accessory, but also on first principles. The examples of M. D'Indy quoted in the *Paléographie* have been manipulated by Dom M., but if this expression sounds a little harsh, I will say, completed according to his rhythmical theories. D'Indy's opinion is that, perhaps, considered abstractedly, the theory might be maintained, but to apply it to the Gregorian is only waste of time or else the result will be anti-rhythmic and anti-musical. (Burge 1905, 314)

The attack on the citation of Riemann was more specific, as Burge points out correctly the different approaches to the use of the accent on the downbeat:

> But it is always necessary to look very closely into my opponent's quotations, owing to his habit of 'arranging' his authorities. On consulting Riemann's *Harmonie Simplifiée*, we find that Dom M. has carefully passed over one of the important points of Riemann's teaching. He says (Harmonie p. 198.) "The two beats of a measure form the first little symmetry. The second beat which closes the symmetry is called the strong beat and is characterised as such, as a rule, by a very slight prolongation (accent)." The word 'accent' Dom M. has carefully omitted, for Riemann's teaching that the accent is slightly long is opposed to Dom M.'s pet theory that the accent is short.
>
> Again Riemann teaches that the accent is placed on the strong note of the bar, Dom M. teaches that it is placed on the weak beat. Here is a contradiction, and where is Riemann's supposed support? Again Riemann teaches that "for three centuries the strong beat is immediately preceded by the bar; the latter is not a limit to the measure, but only indicates the strong beat." Dom M. lays it down that "the polyphonic religious music did not recognise the strong beat on the first of the bar." (p. 122). Another deviation from Riemann's teaching on elementary rhythm! (317–318)

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beats.

Burge goes on to assert that Riemann supports a trochaic, beginning-accented rhythm as an alternative to Mocquereau's view, but he misunderstands Riemann's diagram, which he reproduces and which shows, of course, the motives moving across the barline and the first note of a trochaic rhythm as the isolated end of a group (318). Burge had also contacted Riemann, in order to further discredit Mocquereau by securing Riemann's condemnation of Mocquereau's theory of Gregorian rhythm in particular. This news was enough to prompt Mocquereau to write to Riemann for support. Mocquereau appeals to Riemann on the basis of separating their agreement on general principles from particular questions of interpretation:

> Dear Sir, The scientific relations, which we have had for several years, have always been so loyal, so trusting, I would even say so amicable, that I come in all simplicity to inform you of a strange rumor, which I can hardly believe. I am told that you had protested, privately or publicly I don't know, against falsified quotations that I had made from your books.
>
> This rumor is obviously unfounded:
>
> 1. Because I am conscious of having always quoted you very loyally;
> 2. Because your letters, so kind, have never pointed out to me the errors that I might have committed in this sense and that I would be happy to correct immediately;
> 3. Because your article on Momigny clearly shows that we had perfectly understood each other and agreed on the fundamental principle of rhythm which it was about.
>
> It is on this fundamental principle indeed: the light beat and the heavy beat (impulse and repose), brevity and length, that I followed you—that I took you as my teacher, because I found in you the perfect expression of what I felt in myself.
>
> As for the theory of Gregorian rhythm properly speaking, where we obviously part ways while remaining good friends, no one will find in my writings a single word that could make one suppose that on this point we are in agreement. I have kept silent about our disagreement; I did not have to speak about it in an exposition of our doctrine.
>
> If, therefore, my dear sir, you wanted to believe that I was using and abusing your name, your high authority, or your books to support my Gregorian rhythmic theory, you were deceived; it is all too clear that we are divided on this particular point.
>
> But, I repeat, on the fundamental principle on which our theory is based, I owe very much to the reading and the consideration of your works as they are continually being published, and for that, nobody will prevent me from proclaiming it and being profoundly grateful to you. (Appendix H)

Riemann's response affirms Mocquereau's separation of general principles from specific questions:

Thank you very much for your kind letter; I had been regretting for a long time not receiving news from you, and I feared that you would be annoyed by my tenacity in the matter of the rhythm of the medieval melodies and especially those of the ecclesiastical chant, although I knew that you are too overloaded by the Vatican Edition to find time for my private correspondence.

So I am happy to have been mistaken and to see that you maintain for me your esteem and your kindness, which are very precious to me.

Finally—I have not protested in any way against your citations of my books; on the contrary I have shown myself proud of your confidence and appreciation, both in public as well as in private.

But I think that the rumor in question comes in connection with the attack that Fr. T.A. Burge has made against your theory.

Fr. Burge sent his "Examination" to me, and in return I sent him a page of my history of medieval music, which you received before him and in which there is not a single word of protest.

So as not to deceive you in anything, I am appending a page of my book, which unfortunately progresses too slowly because of my illegible writing. What I say on page 104 is not new for you, because you have known for two years my way of developing the rhythm according to the text.[99] It is indeed my firm conviction that in the chants of the Church there is a very definite rhythm; but this rhythm is not expressed by the neumatic signs (in this respect I am the polar opposite of Mr. A.G. Deschevrens). I am very disappointed that your study on the influence of the Latin tonic accent, with which I agree so well and which I admire, did not lead to its natural consequences; these consequences could not be other than those which I have drawn from it. All I ask is the preservation of the temporal distances of the main accents of the same melody with multiple texts differing in the number of syllables.[100] My way is straightforward and in agreement with the ancient authors. Distinctions, words, syllables, and even single neumes direct me at every moment to the details of the rhythmization.

I would be glad if you could do something to lessen the divergence of our opinions—for example, by conceding the approximate isometry of the distinctions in total, which would lead to a slowing down for parts with a small number of syllables and notes, and the opposite for texts with many words. But all this is well known to you; I understand that for you there are limits to respect, which I do not know.

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99. See figure 4.11, page 203, which is drawn from this section.

100. This refers to a method first practiced by Gevaert and later used by Vollaerts and Murray, in which the use of different texts in the same melodic type of office antiphon is put forward as an argument for an underlying measured rhythm.

This is the last communication between them for a few years. For Mocquereau, these were years full of polemical writings about the Vatican Edition and the Solesmes rhythmic signs. In spite of their subtle mutual influence, neither Mocquereau nor Riemann ever abandoned their convictions about whether musical rhythm requires regular periodicity or not. This did not prevent them from remaining friends. Riemann's later letters lack the theoretical interest of the earliest exchange. Riemann uses the occasions of their contact to praise Mocquereau's theoretical work, but without much detail. For instance, on 13 December 1908, he writes: "Your important book *Le nombre musical grégorien* is in my possession and I have deposited it in the Library of the seminary at my University (Collegium musicum) where it is for the serious studies of my doctoral students."[101] Similarly, on 17 January 1913, he writes, "Your criticism of the Vatican Edition in the smallest details of the grouping of signs shows again your admirable musical sensibility, which allows you to penetrate to the heart of melodic invention."[102] Presumably the onset of war in 1914 disrupted their correspondence, and Riemann died in 1919.

4.3.4   Different Conceptions of the Upbeat-Downbeat Model Compared

All of the theorists described in this chapter agree with some formulation of the notion that musical rhythm proceeds from upbeat to downbeat (Mocquereau's proposition 2). Within that broad framework, there remain many disagreements on the nature of these individual beats and their relationship. Ignoring these disagreements can lead to falsely lumping together writers whose ideas are actually quite distinct. For example, for Riemann the downbeat (the heavy beat) is almost always strong, even though he usually avoids this word, while for d'Indy the downbeat is almost always weak.

For Momigny, Lussy, Westphal, and Riemann, there is some form of metric accent, in which the downbeat is stronger than the upbeat that precedes it. Of these four, Lussy's metric accent is the most likely to be overruled, as Lussy also discusses a beginning-accented form of rhythmic accent

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101. "Votre important livre Le nombre musical grégorien est en mes mes je l'ai déposé dans la Bibliothèque de mon Séminaire à l'unversité (Collegium musicum) ou il est aux sérieux études de mes doctorands."

102. "Votre critique de la Vaticane dans les petits détails du groupement des signes révèle de nouveau votre admirable sentiment musical qui vous fait pénétrer au fond de l'invention mélodique."

that destroys the metric accentuation depending on context. Riemann also discusses situations when the metric accent is negated, but in this case he tends to view the notation as incorrect; in his editions he ameliorates this problem either with dynamic or agogic marks or by moving the barlines.

For d'Indy and for Mocquereau, there is no metric accent at all (proposition 10). In d'Indy's case, this leads to some potential confusion, since he borrows Riemann's terminology that calls the downbeat heavy and the upbeat light. Mocquereau avoids this issue by using either the Greek terms arsis and thesis or his own terms impulse and repose. D'Indy only allows a strong downbeat in a rhythmic group that has a feminine ending; he likely derives this rule from the rules of Latin accentuation. Mocquereau's method of grouping is similar, but he does allow groups that correspond with the measures—word beats—depending on the particular melodic situation.

For Mocquereau, the downbeat is not always weak but is indifferent to accent. There is one point on which the downbeat is different: it receives the ictus, the point at which one taps or beats time or counts the beginning of the measures. Mocquereau's theory of the ictus is his most original and unique theoretical idea. The ictus makes the downbeat structural (a carrier of the rhythm) without requiring any emphasis; it is the touch point of the rhythm without being an accent. Mocquereau also distinguishes between harmony, which does tend to gravitate toward the downbeats, and melody, which operates freely with respect to its accentuation.

4.4   POSTSCRIPT: MOCQUEREAU IN THE TWENTIETH CENTURY

As with our discussion of Mocquereau's interactions with his contemporaries, a complete consideration of Mocquereau's legacy requires that we separate his theory of rhythm from particular questions of plainchant interpretation. Mocquereau's method of chanting was widespread and influential among chant practitioners, especially through the recordings of the choir of Solesmes led by Dom Joseph Gajard (1885–1972), Mocquereau's successor as choirmaster of Solesmes. Even though Mocquereau frequently described his theory as the restoration of an authentic rhythmic practice transmitted by the earliest manuscripts, his way of performing chant is no longer considered viable as a matter of historically informed performance of Carolingian chant, having been succeeded by

Cardine's semiology and by various mensuralist theories. If Mocquereau has continued relevance, it is less as a guide to historically informed performance and more as a theorist of rhythm considered more broadly.

I have suggested above that Mocquereau's theory of melody and rhythm is better suited than Lussy's to approaching modern music. Mocquereau's ideas about free rhythm and accentuation are contemporary with several changes in musical style. Not only the modality of plainchant as it was practiced at Solesmes, but its rhythm as well may relate to some trends in composition in the early decades of the twentieth century. Gastoué (1911, 198) suggested this idea during Mocquereau's lifetime: "At the present time, a *revival*, to borrow the English term, is bringing back to our music some forms from the past. The revival of ancient tonalities, under the direction of Niedermeyer and d'Ortigue, half a century ago, has set the trend. If the organ versets of Guilmant and of Gigout, which espouse these tonalities, can be explained by their immediate use in the service of the Church, how much more striking will it not be to see not only the tonalities, but the rhythms themselves and the forms of this ancient art reclothe other works of a Vincent d'Indy or of a Debussy."[103]

Whether the supposed connection between Debussy and Solesmes is true (Hala 2020), there is a clear influence of Mocquereau's rhythmic ideas on composers of the Schola Cantorum (Lessmann 2018). This influence extends to many more twentieth-century composers in the French organ tradition. The understanding of the Solesmes rhythmic theory is indispensable for analyzing the choral works of Maurice Duruflé (1902–1986), as he wrote in program notes to his *Requiem* in 1980:

> Thus I have endeavored to reconcile as far as possible Gregorian rhythm, as it has been established by the Benedictines of Solesmes, with the requirements of the modern measure. The rigor of the latter, with its strong beats and weak beats recurring at regular intervals, is in fact difficult to reconcile with the variety and flexibility of the Gregorian line, which is nothing more than a series of successive impulses and relaxations.

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103. "A l'époque présente, un revival, pour parler comme les Anglais, ramène en notre musique quelques-unes des formes d'autrefois. Le renouveau des tonalités antiques, sous l'impulsion de Niedermeyer et d'Ortigue, il y a un demi-siècle, a fait école. Si les versets d'orgue de Guilmant et de Gigout, qui épousent ces tonalités, s'expliquent par l'utilisation immédiate au service de l'Eglise, combien ne sera-t-on pas frappé de voir non seulement les tonalités, mais les rythmes eux-mêmes, et les formes de cet art antique, revêtir les autres d'un Vincent d'Indy ou d'un Debussy ?"

> The strong beats had to lose their dominant character to take the same value of intensity as the weak beats, in such a way that the Gregorian rhythmic accent or the Latin tonic accent can be placed freely on any beat of our modern measure. (Eaton 1991, 223)[104]

Mocquereau's greatest influence as a theorist is on the work of Olivier Messiaen (1908–1992). Messiaen's theoretical discussion of plainchant has been published posthumously, together with an application of rhythmic analysis in the style of d'Indy to the music of both Mozart and Messiaen himself (Messiaen 1994). Healey (2013, 13–23) traces Messiaen's reliance on Mocquereau in his discussion of plainchant rhythm. Most recently, Lundblad (2023) has discussed the importance of Mocquereau's theories in Messiaen's conception of musical aesthetics. Messiaen even uses ideas drawn directly from Mocquereau—the rhythmic orders of duration, intensity, and timbre—in his analysis of Stravinsky's *Le Sacre du printemps*.

As I have stated repeatedly, a full understanding of these ideas and their place in the history of music theory depends on considering them apart from questions of medieval performance practice. While Mocquereau draws on ideas of the other theorists mentioned in this chapter, he has also made an original contribution to music theory in his formulation of the ictus. At its heart, Mocquereau's theory is one of melodic rhythm in which downbeats may be structural without being tied to either performed accentuation or to pre-determined phrase schemes. This separates him from both his predecessors and his contemporaries.

On the occasion of Mocquereau's death in 1930, d'Indy wrote of him to Gajard: "His erudition, the ardent and always interesting way in which he expounded his ideas—and he was one of those who had ideas—placed him at the forefront of the defenders of our beautiful Gregorian musical art. If sometimes our own way of seeing, as far as the performance of this chant is concerned, was not always in conformity with his, he remains, in our eyes, a great scholar who has, all his life, searched

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104. "Ainsi me suis-je efforce de concilier dans la mesure du possible la rythmique grégorienne, telle qu'elle à été fixée par les Bénédictins de Solesmes, avec les exigences de la mesure moderne. La rigueur de celle-ci, avec ses temps forts et ses temps faibles revenant à intervalles réguliers, est en effect difficilement compatible avec la variété et la souplesse de la ligne grégorienne qui n'est qu'une suite d'élans et de retombées successives.

Les temps forts ont dû perdre leur caractère de prépondérance pour prendre le meme valeur d'intensité que les temps faibles, de telle manière que l'accent rythmique grégorien ou l'accent tonique latin puisse se placer librement sur n'importe quel temps de notre mesure moderne."

in good faith for the Truth" (Hala 2017, 423).[105] By considering Mocquereau's interactions with his predecessors and contemporaries, we can get a clearer picture of the aims and methods of his search for the truth.

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 105. "Son érudition, la façon ardente et toujours intéressante avec laquelle il exposait ses idées – et il était de ceux qui ont des idées –, l'avaient placé a la tête des défenseurs de notre bel art musical grégorien ; et si parfois notre propre manière de voir, en ce qui concerne l'exécution de ce chant, ne fut pas toujours conforme à la sienne, il n'en reste pas moins, à nos yeux, le grand érudit qui a, toute sa vie, cherché de bonne foi la Vérité."

A   Riemann to Mocquereau, 2 October 1903

Très révérend Père,[1]

Vous me faites trop d'honneur par votre lettre du 30e Sept. que je suis heureux et fier d'avoir reçu. Étant comblé de travaux d'autre genre je n'avais pas ouvert les dernières 2 livraisons de la *Paléographie*, dont je ne soupçonnais l'importance et l'intérêt spécial pour moi. Mais aujourd'hui j'ai lu votre nouveau traité sur l'accent tonique de la première page (21) jusqu'à la dernière en mes mains (152). Alors je m'hâte de vous dire que de page à page mon intérêt s'accroissait et que je finis par regretter la continuation. La manière dont vous traitez les théories des Dom Pothier jusqu'à P. Lhoumeau est admirable – vous faites voir l'approchement de la vérité sans ôter la dernière voile !

Je ne doute point que le résultat final conviendra le même avec mes idées personnelles ; cette conviction se base sur le fait que vous êtes parti de l'unité de mot à l'unité de plusieurs mots et que vous avez remplacée la théorie des accents métriques par celle de l'élan et du repos. Je n'ai besoin de vous dire que c'est le $<\ >$ dynamique-agogique de mon livre de 1884. Dans mes éditions des Lieder de Schumann, Schubert, Mendelssohn etc. (chez Steingraeber) vous trouveriez ce système appliqué avec conséquence p. ex. :

Comme preuve qu'aussi moi j'ai fait des progrès je me pris la liberté de vous mettre mon plus nouveau livre *System der mus. Rhythmik und Metrik* qui à paru il y a 8 jours. De plus mon éditeur vous fera parvenir mon *Katechismus des Gesangskomposition (Vokalmusik)*, dans lequel vous trouverez quelques choses dans le registre p. 272 ff.

Permettez-moi de diriger votre attention à page 5 de ma Rhythmik (et de plus à p. VIII de Vorwort [R. Wagner]). J'espère que ma fondation de la dernière nature du rythme trouvera votre consentement. Je pense bien, qu'aussi vous êtes convaincu, qu'un essentiel rythme, c'est-à-dire une distance plus ou moins exactement continue des combles des phrases se cache dans le rythme libre du chant grégorien.

Neuf et convaincant était pour moi la thèse qu'aussi dans un mot ou une phrase, dont la première

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1. These letters are found in the archive of the Abbey of Solesmes, where I was able to view them in July of 2022. I wish to acknowledge my great debt to Dom Patrick Hala for his hospitality on that visit and his assistance in transcribing these letters. I also received assistance from Thomas Forrest Kelly and from Ana Beatriz Mujica Lafuente.

syllabe porte l'accent, ce n'est pas une simple fin mais plutôt l'élan le plus ardu. C'est sans doute vrai, mais je n'avais pas encore trouvé la formule.

Vos éminents travaux me sont très précieux pour mes études ; la paléographie a sa place tout près de mon bureau. Vous verrez que c'est moi qui ai à apprendre de vous, quand vous recevrez le premier tome de mon *Histoire de musique*, que publient MM. Breitkopf und Härtel l'année prochaine.

Pour votre envoi je vous remercie bien. C'étaient justement ces petits livres que je ni possédais ni connaissais pas.

Daignez moi aussi à l'avenir de votre bienveillance et recevez les plus respectueux salutations de votre très dévoué

Hugo Riemann

Leipzig Promenadenstrasse 11

2 Oct. 1903

Very Reverend Father,

You do me too much honor by your letter of 30 September, which I am happy and proud to have received. Being busy with other kinds of work, I had not opened the last two issues of the *Paléographie*, whose importance and special interest for me I did not suspect. But today I have read your new treatise on the tonic accent from the first page (21) to the last in my hands (152). I hasten, then, to tell you that from page to page my interest increases and that I end up wishing for the continuation. The way in which you trace the development of theories from Dom Pothier to P. Lhoumeau is admirable—you make us see the approach of the truth without drawing back the last veil!

I do not doubt that the final result will be the same as my personal ideas; this conviction is based on the fact that you have progressed from the unity of the word to the unity of several words and that you have replaced the theory of metric accents by that of impulse and repose. I need not tell you that this is the dynamic-agogic $<\,>$ of my 1884 book. In my editions of songs of Schumann, Schubert, Mendelssohn etc. (Steingraeber), you will find this system applied with consequence, for example:

As a proof that I too have made progress, I have taken the liberty of sending you my latest book, *System der musikalische Rhythmik und Metrik*, which was published eight days ago. My publisher will also send you my *Katechismus des Gesangskomposition (Vokalmusik)*, in which you will find some things in the index, p. 272ff.

Let me direct your attention to page 5 of my *Rhythmik* (and furthermore to p. VIII of the foreword

[R. Wagner]). I hope that my establishment of the ultimate nature of rhythm will find your approval. I believe that you too are convinced that a true rhythm, that is a more or less exactly steady distance between the peaks of the phrases, is hidden in the free rhythm of Gregorian chant.

New and convincing for me was the thesis as well that in a word or a phrase whose first syllable carries the accent, it is not simply an end but rather the sharpest of impulses. This is doubtless true, but I had not yet found the formulation.

Your eminent works are very precious to me for my studies; the *Paléographie* has its place beside my desk. You will see that I am the one who has to learn from you, when you receive the first volume of my *History of Music*, which Messrs. Breitkopf and Härtel will publish next year.

I thank you very much for your package. It was precisely these little books that I neither owned nor knew.

Thank you for your continued kindness. Receive the most respectful greetings of your very devoted,

Hugo Riemann

Leipzig Promenadenstrasse 11

2 Oct. 1903

French

Très révérend Père,

Avant tout il me faut répondre à votre question formulée concernant les compositeurs allemands des XV-XVIIe siècles. En général ils tiennent compte aux accents de la langue allemande parlée. Notre langue diffère en ce point beaucoup du français et aussi du latin, quelle ne permette pas de changer le rôle des syllabes du même mot. Chez nous la syllabe *radix* porte l'accent, dans les verbes composites il est transporté au mot distinctif p. ex. *Verstánd* mais *Únverstand*, *Órdnung*, *Únordnung*, *Stándrecht*, *Vórstand* etc. La texture mélodique s'applique le mieux à cette déclamation correcte et au cas que l'idée musicale conduit l'auteur à mettre une syllabe accentuée sur un temps faible il essayera de marquer l'accent demandé par un prolongement de la note. Voici deux exemples de la fin de XVe siècle, qui démontre que déjà à cette époque le principe était bien entendu et respecté. Vous les trouvez tous deux chez Ambros, vol. V p. 280 et 299. Le premier tiré du psaume XII de Thomas Stoltzer à 6v., le deuxième le début d'une chanson mondaine de Paulus Hofhaimer à 4v.

Ces exemples sont typiques. Les syllabes accentuées sur les temps faibles *Hey-, ha- hast, -spielt* sont toutes prolongées. La seule exception *Kläglich* mesurée (♩ | ♩) au lieu de (| ♩ ♩ |) est faute du poète que le compositeur a bien corrigée par la note élevée a pour *kläg-*. Vous voyez dans ce court extrait le procédé comme il est en usage jusqu'à ce jour. Mais je suis bien loin de contester que les temps « forts » seraient à prononcer effectivement plus fortement que les faibles – au contraire ma conviction est la vôtre, que la dynamique dépend du total de la phrase. Néanmoins je crois à la régence de la qualité métrique (donnée par la mesure) pour le poids, c'est-à-dire pour la force cadentielle des valeurs.

Si d'ailleurs il y a quelqu'une différence entre votre manière de voir les choses et la mienne, cela dépend sans doute du point de départ. Vous ne parlez que de la musique vocale, moi de la musique instrumentale (dernièrement dans mon dernier livre). Dans la musique vocale le mot est maître partout. Le mot de la musique chantée correspond au motif de la musique absolue. Toutes les règles que je développe pour la détermination des motifs ne se fondent que sur l'harmonie et le rythme abstrait. Dans la musique chantée seule les mots et les incises du texte déterminent les fins, ou plutôt ils sont eux-mêmes les déterminations données sans contredit. Aussi les points d'appui sont dictés par le sens des mots. Je crois que ces accents logiques doivent en général tomber sur les temps « forts », du moins dans les cas, où le texte n'est pas métrique et par-là ne fournit pas un schéma métrique pour la mélodie. Dans ce cas de texte prosaïque ce sont à mon avis ces accents logiques qui font naître un véritable rythme régnant dans la continuation des mêmes distances pour les accents capiteux.

Permettez-moi d'exemplifier par l'analyse du *Te deum* d'après l'édition du Graduel de Solesmes, comme je l'ai faite pour mes étudiants à l'université. Possiblement elle n'aura pas votre approbation ; mais pour le moment je ne vois pas encore plus clair que cette analyse se présente. J'ai essayé de réduire le tout du *Te deum* à quatre phrases mélodiques, qui sont variées selon le nombre des syllabes et mètre et les conditions changeantes les accents logiques. Le cas donne d'abord dans une forme simplifiée :

L'on pourrais définir 1 et 2 (avec vous) comme chanter fortes (quant aux notes d'appui) et 3 et 4 comme chanter faibles (1–2 diastaltiques, 3–4 hésychastiques).

Selon mon opinion sur tous les textes, que ces phrases acceptaient, les distances effectives de ces notes d'appui devront rester les mêmes ou à peu près les mêmes, les mêmes pour le sentiment du

rythme. Voyez donc comme j'ai démontré cela à mes étudiants. La phrase 1 apparait dans le *Te deum* dans les formes suivantes, certes assez différenciées :

Phrase 2 :

A — Te do - mi - num con - fi - te - mur om - nis ter - ra ve - ne - ra - tur
B

C — ti - bi coe - li et u - ni - ver - sae po - te - sta - tes in - ces - sa - bi - li vo - ce pro - cla - mant
D

E — San - ctus Do - mi - nus De - us Sa - ba - oth ma - je - sta - tis glo - ri - ae tu - ae
F

G — San - cta con - fi - te - tur ec - cle - si - a   San - cta con - fi - te - tur ec - cle - si - a
ou?

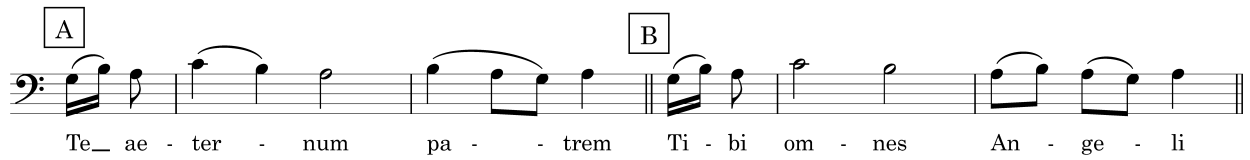H — im - men - se ma - je - sta - tis et u - ni - cum fi - li - um
I
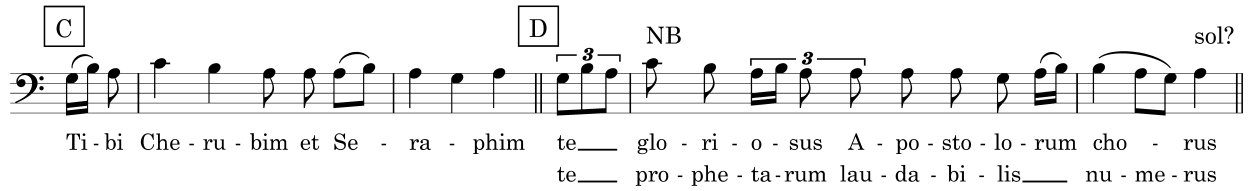
Phrase 3 :

Te＿ ae - ter - num pa - - trem Ti - bi om - nes An - ge - li

Ti - bi Che - ru - bim et Se - ra - phim te＿ glo - ri - o - sus A - po - sto - lo - rum cho - rus
te＿ pro - phe - ta - rum lau - da - bi - lis＿ nu - me - rus

te＿ mar - ty - rum can - di - da - tus lau - dat ex - er - ci - tus te＿ per or - bem ter - ra - rum

Ve - ne - ran - dum tu - um ve - rum

Phrase 4 :

San - ctum quo - que Pa - ra - cli - tum Spi - ri - tum Tu_ rex glo - ri - ae_ Chri - ste tu

pa - tris sem - pi - ter - nus es_ fi - li - us non hor - ru - i - sti Vir - gi - nis_ u - te - rum a - pe - ru-

-i - sti cre - den - ti - bus re - gnum coe - lo - rum in glo - ri - a_ Pa - tris ju - dex

cre - de - ris es - se ven - tu - rus quos pre - ti - o - so san - gui ne re - de - mi - sti

et in sae - cu - lum sae - cu - li mi - se - re - re_ no - stri quem ad - mo - dum spe - ra - vi - mus

in te si - ne pec - ca - to nos_ cu - sto - di - re be - ne - di - ci - mus te

Avec le « Aeterna fac » commence une partie finale avec une nouvelle phrase ou deux nouvelles phrases, dont la forme modèle où semble se dévoiler dans le « In te domine speravi, non confundar in aeternum ». Le caractère est tellement différent qu'il est difficile de croire qu'elles sont de même origine (trochaique ou spondaique, hésychastiques).

In te do - mi - ne spe - ra - vi non con - fun - dar in ae - ter - num.

La relation des phrases suivantes avec celles-ci me parait certaine, mais l'application est un peu difficile, peut-être l'une ou l'autre est dépravée ?

Ae - ter - na_ fac_ cum san - ctis tu - is in glo - ri - a nu - me - ra - ri
et re - ge e - os_

Sal - vum fac po - pu - lum tu - um Do - mi - ne___ et ex - tol - le il - los us - que in ae - ter-num

et be - ne - dic he - re - di - ta - ti___ tu - ae

Très possiblement vous trouverez mes idées dilettantiques. Mais en vue de la confiance dont vous me honorez je ne devais pas hésiter vous montre en un exemple vif, comme je me pense la théorie rhythmique du chant liturgique. Vous voyez je crois à une véritable sorte de mesure, laquelle peut être ralentie, çà et là ou au contraire un peu insisté, mais en effet une distance conservée entre les points d'appui.

À présent c'est à vous, de me condamner.

Je crains, que sans ma rhythmique vous ne trouverez exactement ce que vous cherchez.

Avec la plus haute admiration votre très dévoué

Hugo Riemann

Leipzig 14 Nov. 1903

ENGLISH

Very Reverend Father,

Before all else I must answer your question concerning German composers of the fourteenth to seventeenth centuries. In general, they take account of the accents of spoken German. Our language differs in this respect very much from French and also from Latin, which do not allow the syllables to change their role within the same word. Among us, the root syllable carries the accent; in composite words, it is moved to the distinctive element. For example: *Verstánd* but *Únverstand*; *Órdnung* but *Únordnung*; *Stándrecht*; *Vórstand*; etc. The melodic texture applies best to this correct declamation, and in the case where the musical theme leads the composer to place an accented syllable on a weak beat, he will try to mark the required accent with a lengthening of the note. Here are two examples from the end of the sixteenth century, which show that already at that period the rule was well understood and respected. You will find both in Ambros, vol. V pp. 280 and 299. The first is taken from Psalm 12 of Thomas Stoltzer for six voices; the second from the beginning of a secular song by Paulus Hofhaimer for four voices.

Die Heyl - li - gen ha - ben ab - ge - nohm - - - - men

Die Heyl - li - gen ha - ben ab - ge - nohm - - - - men

Die Heyl - - li - gen

Die Heyl - - li - gen ha - - - ben ab - - ge - nohm - men

Die Heyl - - li - gen ha - ben

Ach   Lieb   mit   Leid   wie hast_____ dein
Ich   hät   ge - - meint   wer stet_____ ver -
NB

Bscheid   kläg - lich in Kurz ge - spielt_____ auf mich.
- eint   des   Lieb soll nit ver - wan - - - - - deln sich.

These examples are typical. The accented syllables on the weak beat—*Hey-, ha- hast, -spielt*—are all lengthened. The one exception *Kläglich*, set as (♩ | ♩) in place of (| ♩ ♩ |), is the fault of the poet rather then the composer, who indeed has corrected the fault with a high note on *kläg-.* You see in this short excerpt the procedure as it is used even to the present day. But I am far from arguing that the "strong" beats should be sung effectively more forcefully than the weak ones—on the contrary, my conviction is the same as yours, that the dynamic depends on the entirety of the phrase. Nevertheless I believe in the supremacy of the metric quality (given by the measure) for the weight, that is, for the cadential form of the values.

If, moreover, there is any difference between your way of seeing things and mine, it surely depends on the starting point. You only discuss vocal music, I discuss instrumental music (most recently in my latest book). In vocal music the word is master everywhere. The word of sung music corresponds to the motive of absolute music. All the rules I develop for the determination of motives are based only on harmony and abstract rhythm. In sung music only the words and the *incises* of the text determine the ends, or rather they are themselves the determinations given without contradiction. Also, the points of emphasis are dictated by the sense of the words. I believe that these logical accents must generally fall on the "strong" beats, at least in the case where the text is not metrical and therefore does not form a metrical scheme for the melody. In this case of prose text, it is, in my opinion, these logical accents that give rise to a real rhythm, reigning in the steadiness of equal distances between the principal accents.

Allow me to give an example with an analysis of the *Te Deum*, after the edition of the Gradual of Solesmes, as I have done for my university students. Possibly it will not meet with your approval,

but for the moment I cannot envision anything more clear than this analysis to present. I have tried to reduce the entirety of the *Te deum* to four melodic phrases, which vary according to the number and meter of the syllables and the changing conditions of the grammatical accents. First of all, I give the scheme in a simplified form:

We can define 1 and 2 (with you) as singing strongly (with stressed notes) and 3 and 4 as singing weakly (1–2 diastaltic, 3–4 hesychastic).

In my opinion, in all the texts that these phrases take, the effective distances between these stressed notes should remain the same or at least nearly the same, the same for the feeling of rhythm. See how I have shown this to my students. Phrase 1 appears in the *Te Deum* in the following form, certainly quite varied:

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Phrase 2:

Phrase 3:

Phrase 4:

With the verse "Aeterna fac," a final section begins with a new phrase or two new phrases, whose form is modeled or seems to be revealed in the verse "In te domine speravi, non confundar in aeternum." The character is so completely different that it is hard to believe that these sections share the same origin (trochaic or spondaic, hesychastic).

The relation of the following phrases with these seems certain to me, but the application is a little difficult, perhaps because one or the other is corrupt?

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Sal - vum fac po - pu - lum tu - um Do - mi - ne___ et ex - tol - le il - los us - que in ae - ter-num

et be - ne - dic he - re - di - ta - ti___ tu - ae

Very likely, you find my ideas dilettantish. But in light of the confidence with which you honor me, I should not hesitate to show you a living example of my thoughts on the rhythmic theory of liturgical chant. You see that I believe in a true kind of measure, which can perhaps be slowed down here or there or, on the contrary, sped up a little, but which conserves, in effect, a distance between the points of stress.

Now it is up to you to condemn me.

I fear that without my rhythmics you will not find precisely what you are looking for.

With the highest admiration, your very devoted,

Hugo Riemann

Leipzig 14 November 1903

Très révérend Père,

Quoique très flatté par les éloges dont vous comblez mes travaux dans la dernière livraison de la *Paléographie*, je suis trop curieux de connaître la continuation de votre étude. Comme je suis en train de l'élaboration d'un *Manuel d'histoire musicale* pour MM. Breitkopf & Hartel, ayant fini la demitome traitant de la musique des anciens grecs, il me faut préparer le manuscrit de l'histoire de la musique du Moyen-âge, dont la plus grande partie devra traiter du plain-chant, des Neumes etc. Vous comprenez, qu'il me serait de la plus haute importance de savoir jusqu'à quel point ma façon de voir ces choses serait conforme à la vôtre. Par cette cause je vous prie de me faire voir s'il est admissible, quelques pages des épreuves de la continuation de votre essai. Mon livre ne paraîtra que vers la fin de l'année courante alors vous ne risquerez point que je publierais un mot sur ces questions avant la publication de votre travail. Ce n'est que pour m'informer de ma route de marche à prendre après vous, que je vous demande cela. Je suis convaincu que la lecture rythmique des chants séculaires des moyen âge (troubadours, Minnesänger, Meistersinger), et des Séquences, Hymnes etc. doit être régie par le même principe que celle du plain-chant et je me trouve au moment en contact avec M. P. Aubry dont je combats avec ardeur les théories contraires.

Je vous prie de me daigner d'un mot de réponse pour calme mon inquiétude. Je sousigne avec le plus haut respect.

Votre très dévoué

Hugo Riemann

Leipzig 25 Jan 1904

Very Reverend Father,

Although I am very flattered by the praise with which you cover my work in the last issue of the *Paléographie*, I am very curious to know the continuation of your study. As I am in the process of writing a *Manual of Music History* for Messrs. Breitkopf & Hartel, having finished the half-volume dealing with the music of the ancient Greeks, I must prepare the manuscript of the history of music of the Middle Ages, the greater part of which will have to deal with plainsong, neumes, etc. You can see that it would be of the utmost importance for me to know to what extent my way of seeing these

things would be in conformity with yours. Therefore I beg you to show me, if it is admissible, some page proofs of the continuation of your essay. My book will not appear until the end of this year, so you will not risk my publishing a word on these matters before your work is published. I only ask you this so that I may know the course of action to take after you. I am convinced that the rhythmic reading of the secular songs of the Middle Ages (troubadours, *Minnesänger*, *Meistersinger*), and of the sequences, hymns etc., must be governed by the same principle as that of plainchant. I find myself at the moment in contact with M. P. Aubry, whose opposing theories I ardently combat.

I beg you to favor me with a word of reply to allay my concern. I sign, with the highest respect,

Your very devoted,

Hugo Riemann

Leipzig 25 Jan 1904

Très révérend Père !

Veuillez excuser la longue perte du temps entre vos lettres, qui me sont tant plein d'intérêt, et ma réponse. La préparation du manuscrit et l'émendation des épreuves me causent beaucoup de peine et absorbent toute la journée. J'aurais pu répondre en hâte et superficiellement, ce qui serait sans valeur quelconque. Alors je préfère d'évoquer votre impatience que de paraître insoucieux.

Voilà donc que j'ai à dire.

La préface du *Manuel de la Messe* est en mes mains tant en latin qu'en français ; l'un ou l'autre suffirait, mais je suis content de posséder aussi le livre complet latin.

Tout ce que vous dites de la rhythmique est conforme à mes propres idées (surtout votre déposition que *seul le rythme créa la mesure*, laquelle n'est rien en elle-même !). Même pour le *mélange tout libre des pas binaires et ternaires* vous trouverez l'affirmation dans ma *System d. mus. Rh. u. M.* page 73 l. 17 d'en bas. La négation de « l'accent métrique » comme tel, voyez mon Dictionnaire éd. franc. art. Accent p. 4 col. 2 en haut.

Votre thèse que les temps porteurs du rythme doivent être aussi les temps porteurs de l'harmonie est tellement dominatrice de tous mes écrits sur cette matière, que je la croyais formulé en maints lieux. Drôlement je ne le trouve que dans le *Katechismus der Kompositionslehre* part I page 41 :

« je schwererer ein Wert ist, desto mehr er einen Wechsel der Harmonie erwarten lässt. »

Page 62 :

« Der eigentliche Träger der Harmoniesierung ist auch in bei Diesen grössten Bildugen stets der Tacktanfang, die schwere Zählgeit des schweren Takts der schweren Gruppe. »

Dans mes *Elemente der musikalische Ästhetik* p. 178 je lis : « Schwer sind gewöhnlich die Zeiten, auf welchen di Harmonie wechselt. »

Rhythmik p. 8 : « Die Zählzeiten (Schlagzeiten, rhythmischer Grundzeiten) gewinnenunter allen Umständen erst reale Existenz durch ihre Inhalte. »

En somme toute ma théorie de la continuation des formes musicales est dérivée de cette thèse fondamentale, que les temps porteurs de l'harmonie sont en même temps les temps porteurs du rythme est que tout contredit contre cette loi fondamentale donne naissance à des phénomènes exceptionnel (syncopation).

Aussi sur une autre question nous sommes parfaitement d'accord, c'est dans la théorie des *mots*

comme *motifs* de la *musique vocale*. Je suis convaincu que l'unité du mot force d'unir ce qui dans la musique absolue, la musique instrumentale est successivement séparée.

Mais je soupçonne qu'à un seul point de vue nous voilà seront divergentes. Qu'ont ce que vous pensez de ce que je lis page 5 de ma Rhythmik (l. 14 d'en bas) de la rhythmisation de langue en parlant. Je vous ai mis mon analyse rhythmique du *Te deum* ; vous ne m'en avez parlé jusque-là. Je crois bien, que pour vous, les interprètes appelés des chants de l'église il serait bien difficile d'aller si loin, que je vais. Mais il me serait de la plus haute importance de connaître votre opinion sur le principe que j'y défends. Je suis trop musicien par naissance et éducation, pour admettre qu'il y ait un rythme hors d'une régularité des distances temporales des accents principaux (ou plutôt des temps porteurs du rythme et de l'harmonie). Et de plus j'ai une très haute considération de le valeur musicale de ces vénérables anciennes mélodies pour ne pas croire qu'elles doivent être dérivées d'un véritable chant organisé et bien régulièrement disposé. Autrement il me semblerait insaisissable qu'elles aient pu survivre des milliers d'années. Et par cette cause ni l'une ni l'autre des deux harmonisations ou rhythmisations des chants que vous avez daigné de recevoir me contente complètement. Sans doute la syllabe finale demande être porteur de rythme et l'harmonie. Où il s'agit des vers avec des syllabes numérés (rimés ou non) une véritable mesure me paraît indispensable. Alors je voudrais lire le « Sicut sidus radium » de la manière suivante (avec votre harmonisation A).

Semblablement je désirerais à rhythmiser l'Antiphon Iste Sanctus d'une telle manière.

Naturellement cela se pourrait écrire en valeurs moins courtes pour ne sembler pas trop vite.

Je vous prie d'excuser ma franchise, mais mont sentiment musical exige un ordre réductible à une parfaite symétrie, des distinctions.

Mon très révérend Père ! Je serais très heureux de vous serrer la main, de vous voir vous-même et de profiter de vous entendre parler. Malheureusement je ne suis pas assez mobile pour venir vous voir, ni à Rom ni à Wroxall ou à Bruxelles ou Paris. Mes travaux et mes devoirs me tiennent ici à ma place, il me faut travailler toute la journée sans autre vacance que deux semaines en juillet ou août pendant lesquelles je me promène en Alsace. Permettez-moi de vous envoyer mon portrait en espérant que vous me daignerez d'une . . . .

Je suis avec le plus haut respect

Votre très dévoué

Hugo Riemann

Leipzig 17/II 1904

Very Reverend Father!

Please excuse the long passage of time between your letters, which are so full of interest to me, and my reply. The preparation of my manuscript and the editing of the page proofs cause me much trouble and take up the whole day. Before now, I could only have answered superficially and in haste, which would have been of no value. For that reason, I would prefer to arouse your impatience rather than to appear careless.

Here is what I have to say.

The preface to the *Manual of the Mass* is in my hands both in Latin and in French; one or the other would suffice, but I am happy to have the complete Latin book as well.

Everything you say about rhythmics is in accordance with my own ideas (especially your statement that only rhythm created the measure, which is nothing in itself!). Even for the free mixture of binary and ternary feet you will find the statement in my *System der musikalischen Rhythmik und Metrik*, page 73, seventeen lines from the bottom. For the negation of the "metrical accent" as such, see my *Lexicon*, French edition, in the article "Accent," page 4, column 2, at the top.

Your thesis that the beats carrying the rhythm should also be the beats carrying the harmony is so dominant in all my writings on this subject, that I thought it was formulated in many places. Strangely, I find it only in the *Katechismus der Kompositionslehre* part 1, page 51: "the heavier a value is, the more it is expected to change harmony."

Page 62: "The actual carrier of the harmony is also in the big picture always the beginning of the measure, the heavy count of the heavy bar of the heavy group."

In my *Elemente der musikalische Ästhetik*, p. 178, I read: "The times at which the harmony changes are usually heavy."

Rhythmik p. 8: "Under all circumstances, the beats (beat units or basic rhythmic times) only gain real existence through their contents."

In sum, my whole theory of the continuity of musical forms is derived from this fundamental thesis, that the beats carrying the harmony are at the same time the beats carrying the rhythm and that every contradiction against this fundamental law gives rise to exceptional events (syncopation).

Also, on another question we are perfectly in agreement—it is in the theory of words as motives of vocal music. I am convinced that the unity of the word forces into unity what in absolute music, instrumental music, is separated by succession.

But I suspect that from one point of view we will diverge. What do you think of what I read on page 5 of my *Rhythmik* (fourteen lines from the bottom) of the rhythmization of language in speaking? I have sent my rhythmic analysis of the *Te deum* to you; you have not responded to me about it so far.

I can easily believe that for you, a well known performer of the chants of the Church, it would be very difficult to go as far as I go. But it would be of the utmost importance for me to know your opinion on the principle that I defend there. I am too much a musician by birth and education to admit the existence of a rhythm not based on the regularity of the distances in time of the main accents (where these are on the beats carrying the rhythm and the harmony). And, moreover, I have too high a consideration of the musical value of these venerable old melodies not to believe that they must be derived from a real way of chanting, organized and regularly arranged. Otherwise it would seem unthinkable to me that they could have survived for thousands of years. And for this reason neither of the two harmonizations or rhythms of the songs that you have deigned to receive satisfy me completely. Undoubtedly the final syllable must be a carrier of rhythm and harmony. Where it is a question of verses with numbered syllables (rhymed or not) a real measure seems to me indispensable. Then I would like to have "Sicut sidus radium" in the following way (with your harmonization A):

Similarly, I would like to rhythmicize the Antiphon "Iste sanctus" in this way:

Of course this could be written in longer values so as not to seem too fast.

Please excuse my frankness, but my musical feeling requires an order reducible to a perfect symmetry of distinctions.

My very Reverend Father! I would be very happy to shake your hand, to meet you yourself and to enjoy hearing about you. Unfortunately, I am not at liberty to come and see you, neither in Rome nor in Wroxall, or in Brussels or Paris. My work and my duties keep me here at my place; I have to work all day without any vacation other than two weeks in July or August during which I go walking in Alsace. Allow me to send you my portrait in the hope that you will deign to send me one . . . .

I am, with the highest respect,

Your very devoted,

Hugo Riemann

Leipzig, 17 February 1904

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FRENCH

Très révérend Père,

Vous attendiez à juste titre quelques lignes de moi suffisantes à aplanir la petite différence laquelle vient de se faire sentir entre votre théorie du rythme et la mienne. Les voilà.

Votre analyse du « Cantate Domino » répond si complètement à tout ce que je voudrais voir établi que je la souscris de coeur. Je n'ai pas soupçonné de tout commencement que vous me concéderiez une mesure stricte pour le rythme du chant grégorien. Tout-ce que j'attendais était que les quatre distinctions d'un vers noté seraient d'une étendue égale ou à peu près égale, excepté peut-être les neumations riches de la finale, lesquelles ne pourraient expliques comme appendices ou affirmatoires. Je concède donc, qu'une véritable mesure n'est point nécessaire, parce-que les unités des mots sont portantes et peuvent bien dédommager le manquement d'une stricte mensuration. Alors vous avez tous mes applaudissements. Si vous vous donniez la peine de lire que j'ai écrit sur le récitatif basé sur la phrase de huit mesures, vous verrez que mon idée de la rhythmisation de langage parlé est bien flexible, et qu'elle peut bien subir aussi l'application, que vous faites pour le chant grégorien.

Aujourd'hui je vous apporte quelque chose de nouveau, que je pense vous fera grand plaisir. Comme c'est toujours mon sort de trouver moi-même les pré-auteurs de mes idées (par exemple Zarlino pour la théorie dualiste de l'harmonie, M. H. Koch pour la structure de la phrase musicale) j'ai trouvé il y a 10 minutes celui qui vraisemblablement pour la première fois a énoncé que le rythme marche toujours du levé au frappé. C'est Monsieur Momigny dans *Encyclopédie méthodique, Musique* (part 1er de. Framéry et Ginguené, part 2d par Momigny [1818]). Voilà les lignes frappantes dans l'article Ponctuation (« Théorie de Mr. Momigny ») page 278 – je vous prie de les publier dans votre essai dans la *Paléographie* (en me nommant comme celui qui vous les a communiquées, dans ce cas je promets d'en faire grand bruit à d'autres occasions) :

« Le sentiment est une lumière naturelle & intérieure qui guide ceux en qui elle existe. Mais quand on n'a pas assez réfléchi sur les indications du sentiment pour en tirer des préceptes, on ne peut transmettre aux autres ces indications précieuses que par son exemple, et non par des règles qui en expliquent le principe.[1]

« Le sentiment du cadencé musical m'a fait découvrir que la musique marche toute entière du levé au frappé. Sans cette découverte, l'analyse de la phrase musicale devenait impossible ; car c'est là le mot de cette énigme.[2]

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1. Margin : NB !!
2. Margin : NB NB !!

« Or les musiciens ignorant ce secret, sont donc arrêtés dès le premier pas dans l'explication de la période. L'idée que le frappé est le premier temps de la mesure et que la mesure est renfermée entre deux barres, leur fait tourner le dos à la vérité qu'ils cherchent.[3]

« Quand je dis que le frappé est le dernier temps de la mesure et non le premier, cela ne signifie nullement qu'il faille frapper où on lève, et lever où l'on frappe. On lève où l'on doit lever, et l'on frappe aussi où il faut frapper, grâce au sentiment de la cadence ; mais on a tort et très-grand tort d'appeler le frappé le premier temps, parce qu'il est bien certainement le dernier des deux, dont l'ensemble forme une cadence ou une mesure.

« Voir une mesure dans le frappé et le levé qui le suit, c'est dans une file d'hommes, voir un homme entier dans la moitié du premier et dans la moitié du second, au lieu de voir cet homme dans ses deux moitiés à lui-même.

. . . . . (5 lignes sans intérêt)

« Quand je dis que la musique procède toute du levé au frappé, cela ne signifie pas non plus que l'on ne puisse commencer un morceau par tel temps ou par telle section de temps que ce soit ; mais cela veut dire que si elle commence par un frappé, ce frappé, terminant la mesure sans qu'elle ait eu de levé, le morceau commence alors par la fin d'une cadence, & non point par le commencement de cette même cadence.

. . . . (12 lignes de moindre intérêt)

« Il faut en outre savoir qu'il n'y a point dans ce sens de mesure à trois temps, mais deux sortes de mesures à deux temps, l'une dont le levé est égal au frappé, et l'autre dont le levé ou le frappé est le double de l'autre temps[4] . . . 9 lignes (paraphrase de la même idée avec nomination de l'article mesure qui est aussi de plus haut intérêt.)

Les 8 lignes suivantes répétons, qu'il est impossible d'analyser si comment la ponctuation d'un morceau « sans cette connaissance nouvelle. »

« Il ne suffit pas seulement de distinguer les cadences à deux temps égaux d'avec celles à deux temps, dont l'un est une fois plus long que l'autre ; mais il faut encore distinguer celles à terminaison masculine d'avec celles à terminaison féminine.

« Il faut prendre garde aussi que le rythme ternaire peut avoir lieu dans une mesure binaire et que le rythme binaire peut s'employer dans une mesure ternaire. . . . C'est ainsi que toute cadence masculine peut devenir féminine par l'addition d'une note après celle du frappé. . . .

« La phrase peut être composée de plusieurs cadences ; le nombre de ces cadences diffère selon le mouvement du morceau est la contexture de la période. La phrase peut être composée de plusieurs cadence mélodique qui passes toutes pendant la durée d'une seule cadence harmonique. Le cadence harmonique est presque toujours deux ou quatre, ou huit ou seize fois plus lent que le mélodique…[5]

« Les phrases ne peuvent jamais finir sur un premier membre de cadence, mais sur son dernier, car la phrase ne peut se terminer sans que la cadence où elle finit ne se termine en même temps.[6]

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3. Margin : NB NB NB !!!
4. Margin : NB NB NB NB !
5. Margin : NB !
6. Margin : NB NB NB NB

Page 133 (art « Mesure ») « Quoi ! Le premier temps de la mesure serait le levé et non pas le frappé ? Malgré que cela vous scandalise, il est pourtant ainsi, non dans mon opinion seulement, mais dans la réalité et sans qu'il en puisse être autrement.

Page 134 « La mesure véritable n'est donc pas cette prisonnière que l'on voit renfermée entre deux barreaux, et que commence en frappant et finit en levant ; mais c'est celle qui, à cheval sur la barre, a le premier de ses temps à gauche de cette barre, et l'autre à droite.

Etc. etc., !! (je pense bien, que vous aurez le livre à la main).

Me voilà privé de l'originalité de mon idée et Mr. Lussy aussi.

Mais je suis heureux d'être celui qui l'a découvert, et par cette cause je prie que vous me nommiez comme le trouveur. D'ailleurs, l'on pourrait soupçonner que j'eusse tout simplement copié Momigny sans le nommer.

Je termine en espérant que ma découverte vous fera plaisir. Après tout, nous sommes je le pense plus d'accord que jamais.

Avec la plus haute considération

Votre très dévoué

Hugo Riemann

Leipzig 5 März 1904

ENGLISH

Very Reverend Father,

You have rightly been expecting a few lines from me sufficient to smooth out the small difference that can be perceived between your theory of rhythm and mine. Here they are.

Your analysis of "Cantate Domino" answers so completely to all that I would like to see established that I subscribe to it wholeheartedly. From the beginning, I did not expect that you would concede me a strict measure for the rhythm of Gregorian chant. All I hoped for was that the four distinctions of a notated verse would be of equal or nearly equal length, except perhaps for rich neumations occuring on the final, which could be explained as appendices or formulas. I concede therefore, that a true measure is not necessary, because the units of the words are rhythm-bearing and can well compensate for the lack of a strict mensuration. So you have my applause. If you would take the trouble to read what I have written about recitative based on the eight-measure phrase, you will see that my idea of the rhythmization of spoken language is quite flexible, and that it can also undergo the application that you make for Gregorian chant.

Today I have something new for you, which I think will please you very much. As it is always my fate to find myself the precursors of my ideas (for example Zarlino for the dualistic theory of harmony, Heinrich Koch for the structure of the musical phrase) I found 10 minutes ago the one who probably for the first time stated that rhythm always runs from the upbeat to the downbeat. It is Mr. Momigny in *Encyclopédie méthodique, Musique*. . . Here are the striking lines in the article "Punctuation" (Theory of Mr. Momigny)—I beg you to publish them in your essay in *Paléographie*

(naming me as the one who commissioned them, in which case I promise to make a great deal of noise about them on other occasions):

"Sentiment is a natural and interior light that guides those in whom it exists. But when one has not reflected enough on the indications of sentiment to draw precepts from them, one can only transmit these precious indications to others by example, and not by rules which explain the principle.

"The feeling of the musical cadence made me discover that all music proceeds from the upbeat (*levé*) to the downbeat (*frappé*). Without this discovery, the analysis of the musical phrase became impossible; for that is the answer to the riddle.

"Musicians who are unaware of this secret are therefore stopped at the first step in the explanation of the period. The idea that the downbeat is the first beat of the measure and that the measure is enclosed between two barlines makes them turn their backs on the truth they seek.

"When I say that the downbeat is the last beat of the measure and not the first, it does not mean that one must fall where one rises and rise where one falls. One rises where one should rise, and one also falls where one should fall, thanks to the feeling of the cadence; but it is wrong, very wrong, to call the downbeat the first beat, because it is certainly the last of the two, the whole of which forms a cadence or a measure.

"To see a measure in the downbeat and the upbeat which follows it, is, in a line of men, to see a whole man in half of the first and half of the second, instead of seeing this man in his two halves to himself.…

. . . . . (five lines without interest)

"When I say that music proceeds entirely from upbeat to downbeat, this does not mean either that one cannot begin a piece with such and such a beat or with such and such a section of a beat; but it does mean that if it begins with a downbeat, this downbeat ending the measure without having had an upbeat, the piece then begins with the end of a cadence and not with the beginning of this same cadence.

. . . . . (twelve lines of less interest)

"It is also important to know that there is no three-beat measure in this sense, but two kinds of two-beat measures, one whose beat is equal to the beat, and the other whose beat is double the other beat." . . . 9 lines (paraphrase of the same idea, with reference to the article "measure," which is also of the utmost interest.

The following eight lines repeat that it is impossible to analyze the punctuation of a piece without this new knowledge.

"It is not enough just to distinguish cadences with two equal beats from those with two beats, one of which is twice as long as the other; but it is also necessary to distinguish those with a masculine ending from those with a feminine ending.

"It should also be noted that ternary rhythms can be used in binary measures and that binary rhythms can be used in ternary measures. Thus, any masculine cadence can become feminine by adding a note after the downbeat…

"The phrase can be composed of several cadences; the number of these cadences differs according to the movement of the piece and the context of the period. The phrase can be composed of several

melodic cadences which all pass during the duration of a single harmonic cadence. The harmonic cadence is almost always two or four, or eight or sixteen times slower than the melodic one.

"Phrases can never end on a first cadence member, but on its last, because the phrase cannot end without the cadence where it ends ending at the same time."

Page 133 (article "Measure"): "What! The first beat of the measure should be the upbeat and not the downbeat? Although this scandalizes you, it is nevertheless so, not in my opinion only, but in reality and without it being possible to be otherwise."

Page 134: "The true measure is not therefore that prisoner which one sees enclosed between two bars, and which begins by striking and ends by raising; but it is that which, straddling the bar, has the first of its beats to the left of this bar, and the other to the right.

Etc. etc.! (I am sure you will soon have the book in your hand.)

Thus, I am deprived of the originality of my idea and Mr. Lussy too.

But I am happy to be the one who discovered it, and for this reason I beg that you name me as the finder. Besides, one might suspect that I have very simply copied Momigny without naming him.

I end by hoping that my discovery pleases you. After all, we are, I think, more in agreement than ever.

With the highest consideration,

Your very devoted,

Hugo Riemann

5 March 1904

FRENCH

Très révérend Père,

Encouragé par la lettre Mr. Eudine O.S.B. qui me donne votre adresse, j'ai écrit quelque chose sur la *Paléographie* en général et sur votre Essai sur le rythme en spécial pour y ajouter ma découverte des mérites de Jérôme-Joseph de Momigny. Si à Rome *L'Encyclopédie méthodique, Musique* (de Ginguené, Framéry et Momigny, 1e partie 1791, 2e partie 1818) est à votre disposition, je vous signale les articles : Harmonie, Mélodie, Mesure, Mode, Modulation, Motive, Période, Phrase, Ponctuation, Proportions, Rhythme (tous dans le 2e partie) à parcourir. Vous serez très étonné de trouver là avant à peu près cent ans un système développé à tel point. Je suis tout à fait détrôné mais heureusement par moi-même. Mon petit article apparaître dans la « Musik » notre journal (mensuel !) le plus lu à présent possiblement déjà en Avril, autrement en May. Je vous salue avec le plus profond respect.

H. Riemann

25 mars 04

ENGLISH

Very Reverend Father,

Encouraged by a letter of Mr. Eudine, O.S.B., who gave me your address, I have written something on the *Paléographie* in general and on your essay on rhythm in particular, in order to add my discovery of the merits of Jérôme-Joseph de Momigny. If, in Rome, you have access to the *Encyclopédie méthodique, Musique* (by Ginguené, Framéry and Momigny, first part 1791, second part 1818), I suggest you peruse these articles: harmony, melody, measure, mode, modulation, motive, period, phrase, punctuation, proportions, and rhythm. All of these are in the second part. You will be astonished to find the extent to which this system was developed, nearly a hundred years ago. My claim to precedence is quite dethroned but, fortunately, by myself. My little article will appear in *Die Musik*, our most widely read monthly journal, possibly as early as April—otherwise in May. I salute you with the most profound respect.

H. Riemann

25 March 1904

Très révérend Père,

Vous comprendrez que j'attends avec une vive inquiétude la continuation de votre essai sur le rythme. J'ai parcouru de nouveau votre étude sur les formes variantes du « Justus ut palma », si instructif pour l'intelligence de l'identité de la mélodie dans les plus sévères altérations par l'abondance ou la variété des mots et syllabes, que je ne peut pas renoncer à l'idée, qu'un rythme véritable règne dans ces mélodies, dont les porteurs sont les accents toniques mêmes. Vos dernières lettres m'ont fait un peu craindre que vous pensiez finir par chercher le rythme dans les singles notes et que pour suite un texte plus riche de notes devait prendre une étendue bien plus longue qu'un texte plus court. Alors cela conduirait finalement un véritable chant plain si mal accrédité dès le moyen âge. Ma conviction en plus que jamais que toute sorte de rythme base avant tout sur une périodicité bien intelligible. Pour constituer un rythme, il ne suffit pas de voir des élans et de repos sans autre corrélation que la simple succession. Je ne pense point à une stricte mesure. Au contraire, je crois que le petit détail pourrait varier d'une manière telle, que la notation en notes modernes demanderait les changements de mesure en tout instant. Mais les grandes proportions des singles distinctions devraient rester les mêmes ; les accents capitaux redevraient suivre à même distance si non exacte, certes approximative. C'est là en peu de mots la cause de mon trouble.

Quant à M. Combarieu, en effet son article assez superficiel n'est pas grand-chose ; il ne semble point avoir compris ce que vous voulez. Ses doutes quant au lourd et léger sont un peu puérils. Mais il est là en derrière quelque chose de plus sérieux que M. Combarieu n'a pas encore pu formuler lui-même. Si en vérité vous niez en tous cas toute cadence féminine et attribuez toujours le poids, le repos à la dernière syllabe, qu'est-ce donc que l'accent tonique ? Pour le petit détail de la mélodie cela serait bien possible, que la dernière cadence prendrait son repos sur la dernière syllabe, mais, j'ai en vue les dimensions plus grandes, pour lesquelles une telle règle me parait tout à fait non acceptable. C'est la grande marche du rythme qui m'intéresse le plus, parce que seulement elle donne la possibilité de trouver l'essence véritable de quelqu'une de ces anciennes mélodies.

Je suis convaincu qu'aussi vous cherchez cette dernière vérité, la résolution de l'énigme d'une rhythmisation d'un texte en prose.

Pardonnez les éruptions d'un mouvement dont je ne suis pas maître.

Votre très respectueux

Hugo Riemann

Leipzig, 20 June 1904

Very Reverend Father,

You will appreciate that I anxiously await the continuation of your essay on rhythm. I have reread your study of the variant forms of the [Gradual] *Justus ut palma*. It is so suggestive for the understanding of the identity of a melody beneath the most extreme alterations according to the number of variety of words and syllables that I cannot renounce the idea that a true rhythm reigns in these melodies, whose support-beats are the tonic accents themselves. Your last letters made me a little afraid that you would end up looking for the rhythm in the individual notes, and that a text richer in notes would have to take a much longer extent of time than a shorter one. This, then, would finally lead to a truly *plain* chant—the infamous plainchant of the Middle Ages. I am more convinced than ever that every large-scale rhythm is based above all on an intelligible periodicity. To constitute a rhythm it is not enough to discover impulses and resting points without any more correlation than a simple succession. I am not thinking of a strict measure. On the contrary, I believe that the small figures could vary in such a way that the notation in modern notes allows changes of meter at any moment. But the large proportions of each distinction should remain the same; the main accents would again follow at the same distance—if not an exact distance, then certainly an approximate one. This is, briefly, the cause of my trouble.

As for Mr. Combarieu, indeed his rather superficial article does not amount to much; he does not seem to have understood what you want. His doubts about the heavy and light beat are a bit childish. But there is something more serious behind it that Mr. Combarieu has not yet been able to formulate himself. If in truth you deny in any case any feminine cadence and always attribute the weight, the resting point, to the last syllable, what then is the tonic accent? For the small melodic figure it would be quite possible that the last cadence would take its repose on the last syllable, but I have in view the larger dimensions, for which such a rule seems quite unacceptable. It is the great progression of the rhythm that interests me most, because only it gives the possibility of finding the true essence of any of these ancient melodies.

I am convinced that you are also looking for this last truth, the resolution of the enigma of the rhythmicization of a prose text.

Forgive the eruptions of motion, which are beyond my control.

Your very respectful,

Hugo Riemann

Leipzig, 20 June 1904

à M. Riemann Leipzig

Bien cher Monsieur,

Les relations scientifiques, que nous avons eues depuis plusieurs années ont toujours été si loyales, si confiantes je dirai-même si amicales, que je viens en toute simplicité vous faire part d'un bruit étrange ~~qui m'arrive aujourd'hui~~ auquel je ne puis croire. On m'affirme que vous auriez fait une protestation, privée ou publique, je ne sais, contre les citations falsifiées que j'avais faites de vos livres.

Ce bruit, évidemment, est dépourvue de fondement

1. Puisque j'ai conscience de vous avoir cité toujours très loyalement ;

2. Parce que vos lettres si aimables ne m'ont jamais signalé les erreurs que j'aurais pu commettre en ce sens et que j'aurais été heureux de corriger immédiatement ;

3. Parce que votre article sur Momigny montre clairement que nous nous étions parfaitement compris et entendu sur le ~~point~~ principe fondamental de rythmique dont il s'agissait.

C'est sur ce principe fondamental en effet : temps léger, temps lourd, (élan et repos) brièvetés et longueur que je vous ai suivi, que je vous ai pris pour maître parce que j'ai trouvé chez vous l'expression parfaite de ce que je sentais en moi-même.

Quant à la théorie du rythme grégorien proprement dit, où évidemment nous nous séparons, tout en restant bons amis, personne ne trouvera dans mes écrits un seul mot que puisse faire supposer que sur ce point nous sommes d'accord. J'ai fait silence sur notre désaccord, je n'avais pas à en parler dans une exposition de notre doctrine.

Si donc, bien cher Monsieur, on a voulu vous faire croire que j'usais et abusais de votre nom, de votre haute autorité, de vos livres pour appuyer notre théorie rythmique grégorienne, on vous a trompé ; il est trop clair que nous nous divisons à un moment donné.

Mais, je le répète, quant au *principe fondamental* sur lequel est appuyée notre théorie, je dois beaucoup à la lecture, à la méditation de vos oeuvres qui progressivement arrivent à la lumière, et cela, personne ne m'empêchera de la proclamer et de vous en être profondément reconnaissant.

Votre tout dévoué et respectueux

D. André Mocquereau

Rome 16 juin 1905

Je suis à Rome encore pour quelques jours, vous pourrez me répondre à l'adresse ci-dessus.

Par suite de mon long séjour ici, la P.M. août et juillet paraîtront ensemble. J'ai ~~fait~~ préparé un appendix sur votre découverte de Momigny.

ENGLISH

To Mr. Riemann, Leipzig

Dear Sir,

The scientific relations, which we have had for several years, have always been so loyal, so trusting, I would even say so amicable, that I come in all simplicity to inform you of a strange rumor, which I can hardly believe. I am told that you had protested, privately or publicly I don't know, against falsified quotations that I had made from your books.

This rumor is obviously unfounded:

1. Because I am conscious of having always quoted you very loyally;

2. Because your letters, so kind, have never pointed out to me the errors that I might have committed in this sense and that I would be happy to correct immediately;

3. Because your article on Momigny clearly shows that we had perfectly understood each other and agreed on the fundamental principle of rhythm which it was about.

It is on this fundamental principle indeed: the light beat and the heavy beat (impulse and repose), brevity and length, that I followed you—that I took you as my teacher, because I found in you the perfect expression of what I felt in myself.

As for the theory of Gregorian rhythm properly speaking, where we obviously part ways while remaining good friends, no one will find in my writings a single word that could make one suppose that on this point we are in agreement. I have kept silent about our disagreement; I did not have to speak about it in an exposition of our doctrine.

If, therefore, my dear sir, you wanted to believe that I was using and abusing your name, your high authority, or your books to support my Gregorian rhythmic theory, you were deceived; it is all too clear that we are divided on this particular point.

But, I repeat, on the fundamental principle on which our theory is based, I owe very much to the reading and the consideration of your works as they are continually being published, and for that, nobody will prevent me from proclaiming it and being profoundly grateful to you.

Your very devoted and respectful,

Dom André Mocquereau

Rome 16 June 1905

I will be at Rome for some days more; you can reply to me at the above address.

Because of my long stay here, the July and August issues of *Paléographie musicale* will appear together. I have prepared an appendix on your discovery of Momigny.

Très révérend Père,

Bien merci pour votre aimable lettre ; je regrettais depuis longtemps de ne pas avoir reçu de vos nouvelles, et je craignais que vous seriez fâché par ma ténacité en matière du rythme des mélodies médiévales et surtout celles du chant de l'Église, quoique je savais que vous êtes trop surchargé par l'édition Vaticane pour trouver le temps pour ma correspondance privée.

Alors je suis heureux de m'être trompé et de voir que vous me conservez votre estime et votre bienveillance, qui me sont très précieuses.

Enfin – je n'ai protesté nulle part dans aucune façon contre vos citations de mes livres ; tout au contraire, je me suis montré fier de votre confiance et appréciation si en public comme en privé.

Mais je pense bien que le bruit en question vient en connecte avec l'attaque que le P. T.A. Burge a fait contre votre théorie. Le P. Burge m'a mis son « Examination » et en revanche je lui mis une feuille de mon histoire de la musique en moyen-âge, que vous avez reçue avant lui et dans laquelle on ne trouve pas un seul mot de protestation quelconque.

Pour ne vous dissimuler rien j'y ajoute une page . . . de mon livre, qui malheureusement marche trop lentement par faute de mon écriture pas lisible. Ce que je dis page 104 n'est point nouveau pour vous, parce que vous connaissez depuis deux ans ma manière de développer le rythme selon le texte. C'est bien ma ferme conviction, que dans les chants de l'Eglise règne un rythme très défini ; mais ce rythme n'est point exprimé par les signes neumatiques (en tel point je suis l'antipode de Mr. A.G. Deschevrens). Je suis très fâché, que votre étude sur l'influence de l'accent tonique latin, avec lequel je suis si bien d'accord et que j'admire, n'a pas conduit à ses conséquences naturelles ; ces conséquences ne pouvaient pas être autres que celles que j'en ai tiré. Tout ce que je demande est la conservation des distances temporales des accents principaux d'une même mélodie avec les textes les plus différents en nombre de syllabes. Mon chemin est bien droit et en tout d'accord avec les anciens auteurs. Les distinctions, les mots, les syllabes et même les singles neumes ne donnent en chaque moment la direction pour le détail de la rythmisation.

Je serais heureux, si vous pouviez encore faire quelque chose pour amoindrir la divergence de nos opinions – par exemple en concédant l'isométrie approximative des distinctions en total, qui conduirait tout naturellement au ralentissement pour les parties à nombre restreint de syllabes et de notes, et au contraire pour les textes à mots accumulés. Mais – tout cela vous est bien connu ; je comprends bien, que pour vous il y a des limites à respecter, que je ne connais pas.

Daignez, très révérend Père, d'accepter de nouveau l'expression de ma plus haute considération et

de ma plus vive sympathie avec vos importants travaux, avec laquelle je me signe votre très dévoué

Hugo Riemann

19 Juin 1905

Very Reverend Father,

Thank you very much for your kind letter; I had been regretting for a long time not receiving news from you, and I feared that you would be annoyed by my tenacity in the matter of the rhythm of medieval melodies and especially those of ecclesiastical chant, although I knew that you are too busy with the Vatican Edition to find time for my private correspondence.

So I am happy to have been mistaken and to see that you maintain for me your esteem and your kindness, which are very precious to me.

Finally—I have not protested in any way against your citations of my books; on the contrary I have shown myself proud of your confidence and appreciation, both in public as well as in private.

I guess that the rumor in question comes in connection with the attack that Fr. T.A. Burge has made against your theory. Fr. Burge sent his "Examination" to me, and in return I sent him a page of my history of medieval music, which you received before him and in which there is not a single word of protest.

So as not to deceive you in anything, I am appending a page of my book, which unfortunately progresses too slowly because of my illegible writing. What I say on page 104 is not new for you, because you have known for two years my way of developing the rhythm according to the text. It is indeed my firm conviction that in the chants of the Church there is a very definite rhythm; but this rhythm is not expressed by the neumatic signs (in this respect I am the polar opposite of Mr. A.G. Deschevrens). I am very disappointed that your study on the influence of the Latin tonic accent, with which I agree so well and which I admire, did not lead to its natural consequences; these consequences could not be other than those which I have drawn from it. All I ask is the preservation of the temporal distances of the main accents of the same melody with multiple texts differing in the number of syllables. My way is straightforward and in agreement with the ancient authors. Distinctions, words, syllables, and even single neumes direct me at every moment to the details of the rhythmization.

I would be glad if you could do something to lessen the divergence of our opinions—for example, by conceding the approximate isometry of the distinctions in total, which would lead to a slowing down for parts with a small number of syllables and notes, and the opposite for texts with many words. But all this is well known to you; I understand that for you there are limits to respect, which I do not know.

Deign, very reverend Father, to accept again the expression of my highest consideration and my most lively sympathy with your important work, with which I sign myself your very devoted,

Hugo Riemann

19 June 1905

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