

Four Approaches to Gregorian Rhythm

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Chapter 1

Accentualism

1.1 Overview

Accentualism is based on Dom Joseph Pothier's understanding of the pronunciation of Latin as governing the rhythm of the chant. This is propounded in his *Les mélodies grégoriennes* of 1880. Pothier's theory was somewhat anticipated by Augustin-Mathurin Gontier in 1859 and represents the dominant school of free Gregorian rhythm developed at Solesmes in the nineteenth century. Another important source is in the works of Dom Lucien David, Pothier's personal secretary, in many articles and a short method book from 1919, which features a brief endorsement by Pothier himself. This style of performance is also closely related to what is described in the preface to the Vatican Edition of the chant repertoire promulgated in the first decades of the twentieth century. The summary that follows is paraphrased from Pothier's work.

There are two essential elements of Accentualist performance: accent (dynamic intensity) and pauses. Both of these operate at several levels in a melody hierarchically.

Latin speech is likewise arranged hierarchically by levels of sense (that is, language conveys meaning on the level of the word and the sentence and the paragraph). The smallest sense unit is the word. The unity of the Latin word is maintained by pronouncing one note as principally accented, with the rest of the syllables weaker by comparison.

The accented syllable is, according to the accentualists:

1. Short in itself, but there can be a slight "elasticity" or "amplification" of the vowel that comes naturally with the greater intensity with which it is pronounced. Lengthening the vowel too much destroys the unity of the word.
2. Generally pronounced on a higher pitch. This is the idea of a "tonic" accent.

Each word has a *slight* pause at the end. This helps to separate the words from each other in time. Say "Pater noster" rather than "Paternoster." We do this by lengthening the second syllable of *Pater* slightly. The consequence in chant is what is called the "lengthening of the last note," which is best way to translate the frequently encountered Latin term "mora ultimae vocis" described first by Guido in the eleventh century.

The length of this "mora" depends on a rhetorical hierarchy of the meaning of the sentence. As Guido says, it is shorter at the end of a word, longer at the end of a phrase, and longest of all at the end of a sentence. Pothier combined this with a later "golden rule" described by the thirteenth-century writer Elias Salamonis, which states that one must never lengthen a note just before a change of syllable within the word, since

this divides the unity of the word unnaturally. A syllabic chant's rhythm arises naturally and with a great deal of freedom from treating the sense of words according, with dynamic intensity on the accented notes and slight length added to distinguish various sense units.

The idea is extended to melismatic chant by considering each neume as a kind of melodic "word," each with a slight "accent" on a main note that corresponds to the tonic accent of the Latin word. These are also arranged hierarchically, so that there are longer *morae* between groups of neumes. The smallest groups are distinguished primarily by giving a dynamic accent to the beginning of each neume. But this is all subordinate to the hierarchy and coherence of the phrase as a whole. Precedence is given to higher-pitched neumes, which govern the other neumes around them.

Some special neumes are described by Dom David: liquescent neumes should be taken up with the liquid consonant of articulation as a matter of pronunciation; an *oriscus* at the unison on F or C can be preceded by a dip of the voice on the note before, as happens in the introit *Gaudete*; the second note of a *salicus* is accented; the notes of the *strophicus* may be repercussed, joined, or sung with a light vibrato; and the note (or pair of notes) before a *quilisma* is lengthened. The *quilisma* note itself may be performed either lightly or as a turn or mordent. The high note at the end of a *quilisma* ascent is always accented.

1.2 Pothier's Analysis of Communion Justus Dominus

The following analysis is given in Pothier's 1880 book. This translation and commentary is excerpted from my 2023 dissertation. The numbered list and all remarks in quotation marks are by Pothier.

1 2 1 3 4 * 5 3 5 5 2 * 3 5 6 7 * 6 8 9 ..

Justus Dóminus et justí-ti- am diléxi- i- i- li- it;

3 3 1 6 6 5 10 * 6 5 12 13 14 11 10 ***

æquitátem vi- dit vu- ltu- us e- jus.

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.

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 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.¹ 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, 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.

¹Pothier suggests that the accent, the primary means of rhythmic organization in syllabic chant, can disappear entirely in melismatic or neumatic chants.

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 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*.² 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.

1.3 David’s Lesson on Agnus III

This is a translation of chapter 11 of Dom David’s book. All of what follows is David’s text. Page-number references in this section refer back to earlier explanations in David’s book.



1.3.1 Recitation of the Text

General Observations

One looks first of all for good posture in the singers (p. 6). We recommend a good placement of the vocal organs, both in particular the opening of the mouth for the vowels and the necessary muscular movements for a forthright and clean articulation of the consonants (pp. 7 to 10).

If the formation of the singers leaves too much to be desired on these points, one could first recite the vowels alone, on a fermata, afterwards accompanied by the consonants: a-u, a-gnus; e-i, De-i; A-gnus De-i.

Insist, from the beginning and on each word, on the accent, to which one will give all the necessary force and elasticity. It will often be appropriate, especially in the beginning, to exaggerate this double effect of intensity and elasticity temporarily (pp. 18 and 19, remarks section) and to ensure that every final syllable is set down gently, without the vowel losing any of its clarity.

Observations on the Vowels

Pay particular attention, in the recitation and afterwards in the singing, to:

²This final note receives “some bite” (“du mordant”).

1. **The vowel “u.”** We have this vowel accented in “mundi” and unaccented in “agnus.” The mouth should be opened almost as if one were going to pronounce the vowel “o.” One can, as an exercise, pronounce the sounds “o” and “u” in alternation, keeping the opening of the mouth almost in the same position. The sounds will be formed further back for “u” and closer to the lips for “o.”
2. **The vowel “i.”** This is unaccented in “Dei,” “mundi,” and “nobis,” and it receives a secondary accent (p. 19) in “miserere.” In final syllables, there is too much of a tendency to muffle it by letting the sound lose itself in the nasal cavities and almost closing the mouth. Elsewhere than in the final syllables, the defect consists rather of separating the lips and giving the “i” a sharp sound without resonance. To give the “i” its maximum sonority (whether accented or not) one should bring it closer to the vowel “é” (lips not separated) [English speakers could substitute “i as in give” here], as was just said about the vowels “u” and “o.”
3. **The vowel “e.”** This has the accented on the third syllable “miserere” and is weak in the second and fourth syllables of that word and in “pacem.” This should be given a rather open sound, above all in the tonic vowels or in those where the vowel is distinguished by a closing consonant (“pacem”). In the final syllables of “miserere” and “pacem,” the mouth will remain open for the entire time necessary to lay down the vowel with clarity, while reducing its intensity.

Observations on the Consonants

1. **Agnus.** We pronounce the gn as in “agneau.” However, the pronunciation with the hard g (“ag-nus”) can be tolerated without any trouble for singing. This pronunciation, in fact, while it is uncustomary for French speakers, corresponds to the ancient Roman pronunciation.
2. **Tollis.** The double “l” should be pronounced doubly like the double “c” in “peccata,” without it being necessary to introduce a schwa between the two. It is the presence and the joining of the two “l” sounds in a kind of prolonged pronunciation that gives rise, in the melody, to the liquescent neume, the *epiphonus* (p. 32). One should not say “tolis” or “pecata.”
3. **Mundi.** The correct pronunciation of the “u” will bring out the articulation of the “n,” which disappears in the French nasal vowel. It is likewise the double articulation “n-d” that explains the liquescent character of the *climacus* (p. 33).

1.3.2 Sense and Character of the Piece

If one wants to chant an *Agnus Dei* well, one has to know the sense and character of this prayer, both in its entirety and in its parts. (*V. Analyse grégoriennes pratique, quatrième série. Cf. Revue du chant grégorien*, vol. 22, no. 6.)

The *Agnus Dei*, in its form and its proper liturgical place, is a prayer of preparation for Eucharistic Communion.

It can be divided into three parts: “Agnus Dei—qui tollis peccata mundi—miserere nobis.” (“Dona nobis pacem” in the third invocation.) That is to say: “Lamb of God—who erases the sins of the world (and carries their weight)—have pity on us.” (Or “give us peace.”)

1. In the Eucharist, we find Christ in the role of the sacrificial victim, offered for us on the altar as He was on the Cross for the love of God. He is the Lamb of God: “Agnus Dei.”
2. By communion with the divine Victim, we will be purified from all stain, for the Lamb of God, in bearing the burden of our iniquity, has merited to wipe out the sins of the world: “qui tollis peccata

mundi.”

3. To obtain the fruits of this communion, we should first of all, considering our misery, recognize our need for divine mercy, which alone can fill the abyss opened between our unworthiness and the fullness of divine love. We beg the pity of the Lord: “*miserere nobis*.”

As a consequence:

1. In singing *Agnus Dei*, let us fix the eyes of the soul on the infinite sweetness and the perfect abnegation of Him who is presented to us in the symbol of the innocent Lamb.
2. In singing *qui tollis peccata mundi*, let us be penetrated by a living sorrow in recalling our sins and the Passion of the Savior as well as a burning trust in Him who comes to purify and save us by the gift of the Eucharist.
3. In singing *miserere nobis*, let us have a sentiment of our unworthiness, and let us beseech the Savior to take pity on our poverty.

Only this understanding of the liturgical prayer will allow us to understand the sense and the details of the musical composition. And only the actualization of the prayer in the soul of the singer will enable him to find the true accents that will give the performance of the melody all its artistic beauty and its maximum religious power.

1.3.3 Performance of the Melody

Before beginning to sing a piece of Gregorian chant, it will be good to warm up the vocal cords by singing scales or chains of intervals (thirds, for example). One can also perform some relaxation exercises by holding out notes with a crescendo or diminuendo. This can be followed by series of neumes well accented (*podatus* or *torculus*, etc.).

One should then solfège the chant to be sung, at least if the expertise of the singers does not allow you to pass directly to the words.

For studying the singing of our *Agnus Dei*, we will look successively at each of the three parts described above.³

Agnus Dei



In this slightly ornamented chant, the unity of the word must be considered above all. This unity will be realized by the accent. The accent should govern entirely the melody of the word. It falls on the tonic syllable, and within this syllable, on the first note of the neume with which it is associated.

Agnus. The melodic accent of the whole word is on the first note of the *climacus*, the initial F. The vocal impetus given to the accented note should, so to speak, encompass and support the singing of not only of the other two notes of the first syllable but the two notes of the second syllable as well.

³It goes without saying that the observations that follow do not necessarily need to be discussed in full detail in the course of a lesson. But one should know enough of the substance to be able to take stock of the least defects of a performance and to be able to apply a useful corrective.

Doubtless, this *podatus* can be considered as a melodic word of two notes, just as the *climacus* is a word of three notes. And each of these two melodic words will have its accent. But the second should be clearly subordinate to the first. Also, in practice, in this weak *podatus*, as in neumes of a similar type, one should consider the first note as simply a little more important than the second rather than as accented properly speaking.

If one pays too much attention to the accent of every neume, without exception, one obtains a simple succession of binary and ternary rhythms, leading to the disappearance of the unity of the words and the well-ordered hierarchy of accents, which, together with the pauses, are the foundations of the rhythm of the Gregorian phrase and the secret to its beauty.

On the first syllable of the word "Agnus," one should attack the F quite cleanly, with a vocal aperture corresponding precisely to the vowel, and not by progressively opening the mouth (p. 9). This point is to be observed with every attack, but most particularly when one attacks the vowel directly, without a consonance of articulation.

One should give to this first and accented note a little fullness [of length] without going so far as to double its duration, and one should avoid rushing through the other two notes of the *climacus*.

On the second syllable, the small rhythmic group formed by the two notes of the *podatus* should have its impulse on the first of these notes, but, as we have said, this accent should be barely audible and much less important than the accent of the *climacus*.

The second note of the *podatus* will be weak; indeed it is the weakest note of the word, because it is at once the last note of the word, the last note of a neume, and, here, a simple connecting note preparing the accent of *Dei*, which is on the same pitch.

It might be said that this *podatus*, with its weak syllable, represents the element of repose or of thesis, just as the *climacus*, with its accented syllable, represents the element of impulse or arsis, in the rhythm formed by these two neumes.

Dei. In this new rhythmic group, the arsis is represented by the *torculus* of the first syllable and the thesis by the single note (long by position) of the second.

The unity of the whole will be strengthened by the accent of the word, which is carried on the first note of the *torculus*. And the voice will come, as in a single impulse, to rest on the E of the second syllable, having passed softly, in an equal movement with neither lengthening nor acceleration, over the second and third notes of the *torculus*.

On the four notes of "Dei," one should observe a slight effect of slowing down (by comparison to "Agnus") demanded by the parse marked with the quarter barline and above all by the quite audible independence, at once grammatical and musical, of the invocation "Agnus Dei." One could take note, from the musical point of view, of the final character well represented by the formula of "Dei," with its three notes resting on the tonic or final of the mode.

The last note of "Dei" should be a little elongated (pp. 52 and 53).

The pause marked after "Dei" by the quarter barline is a minimal pause (pp. 52, 56, and 57). As a result, after the words "Agnus Dei," which form the intonation of the piece, the choir should take up the following notes immediately after the final elongated note of "Dei."

Agnus Dei. In addition to the unity of each word, one should respect and put into relief the unity of the group of words.

In a simple recitation or speech, the close grammatical link between the words “Agnus Dei” should be observed, and the unity of the expression should be put into relief by the prevalence of one of the two accents over the other. Here, as in the majority of similar cases (p. 21), the accent of “Dei” will be more important than that of “Agnus.”

In singing, this subordination of accents will be observed insofar as the seriousness or the character of melodic development will permit. The more a chant is simple and approaches recitation, the more it will be marked. Thus, it will be very audible in Agnus XVIII (or of the dead) and X. It will be a little less audible in Agnus IV and less still in Agnus VIII and in the one that we are looking at. We should also add that the melodic shape of the accent of “Dei” will play a large part in the predominance of this accent. Thus, in the accent of “Dei” in Agnus IV or Agnus VIII (second invocation), there will be a more marked predominance than in our Agnus III.

Nuances of Expression. For the tempo of the chant and its relative intensity, one should take account of the soft character suggested by the words, and of the small compass of the melody, consisting of three notes, and of the low modal ambitus. This softness and calm are also implied by the continuity of the melodic line, which is not even interrupted even by a single skip of a third.

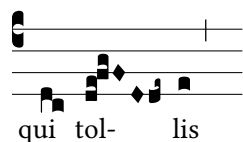
The tempo should be rather tranquil and a little slow, but without heaviness. And the accents should be pronounced moderately, more with softness than with brilliance.

Qui tollis peccata mundi

The four words of this phrase are grouped naturally two by two by the sense. This division will be scarcely noticeable in either declamation or in a simple melody (in the Agnus for the dead, for example). But in our case, the melodic development is rich enough to arrest the spirit at greater length on each idea that composes the thought of the whole phrase: the effort of the Savior (“qui tollis”) and the universality and cruelty of sin (“peccata mundi”). It transforms at once each of these two subdivisions into a sorte of little phrase with a distinct personality.

The construction of “tollis,” whose closing *pressus* + *podatus* arrives strongly at the tonic of the mode, leads naturally to a cadence of repose or of rest, which justifies the presence of the quarter barline in the notation.

Let us examine therefore in turn the two parts of this phrase.



Qui. This relative pronoun does not have, properly speaking, a tonic accent. But the *clivis* with which it is set increases its value and forms, with these two notes, something like a new word, more important, which has a right to an accent. One should therefore place an accent, moderate however, on the first note of the *clivis*. The second note will be light, especially as it serves as an introduction to the accent of the following word.

Tollis. On the first syllable there is a composite neume, which we may recognize as a *scandicus subbipunctis* forming a *pressus* of juxtaposition with a *podatus* (p. 35). The *podatus* is liquescent; it ends in an *epiphonus* for the pronunciation of the double liquid consonant.

The four-note *scandicus* breaks down naturally for the rhythm into two superimposed *podatus*. The attack, well articulated, will be made on the D (first *podatus*), but the principal accent will be on the F (second *podatus*), in the manner of a crescendo. The voice must, in fact, carry through without new effort all the way

to the *pressus*. An accent on the first D would be too far away to achieve this. Besides, the low placement of this accent should cede its priority to the accent of F as more culminating (p. 36, remarks 1 and 2).

After the accent of F, the voice should pass softly and without rushing over the two following notes, to take on a new force, a new impulse, on the *pressus*. From this new departure point, the voice will bring itself to rest on the E of the final syllable.

One should take care not to abbreviate the note of the *epiphonus*. The quarter barline indicates a quite short rest, the length of one syllable and no more.



peccá- ta mun- di :

Care must be taken to safeguard the unity of each of these two words, reserving to one of their notes a principal accent that will govern the others.

Peccata. The first note of the *torculus*, on the accented syllable, will be well accentuated, prepared as it is by the note of the first syllable and the strong articulation of the two “c” consonants. However the principal accent, which we should not be afraid of singing with force and even with a certain brilliance, will fall on the C of the *podatus*.

The particular force of this accent, which is like the culminating point and the center of attraction of the whole *Agnus Dei*, will allow the voice to pass softly, without renewed effort, not only over the D of the *podatus* but over the whole *climacus* on the final syllable of the word, which is naturally weak.

One should highlight less the relative importance of the initial *virga* of the *climacus* than the weakness of the entire syllable and descend without any rushing through the three steps of the *climacus*.

We find after the last note of the *climacus* an added single note, called an *oriscus*, which should be neither emphasized nor lengthened (p. 37, 2). This note simply allows us to better distinguish the two words by a light *mora vocis* (if possible, without stopping the voice) and to provide a transition between the descent of the *climacus* and the renewed ascent of the *scandicus* that follows.

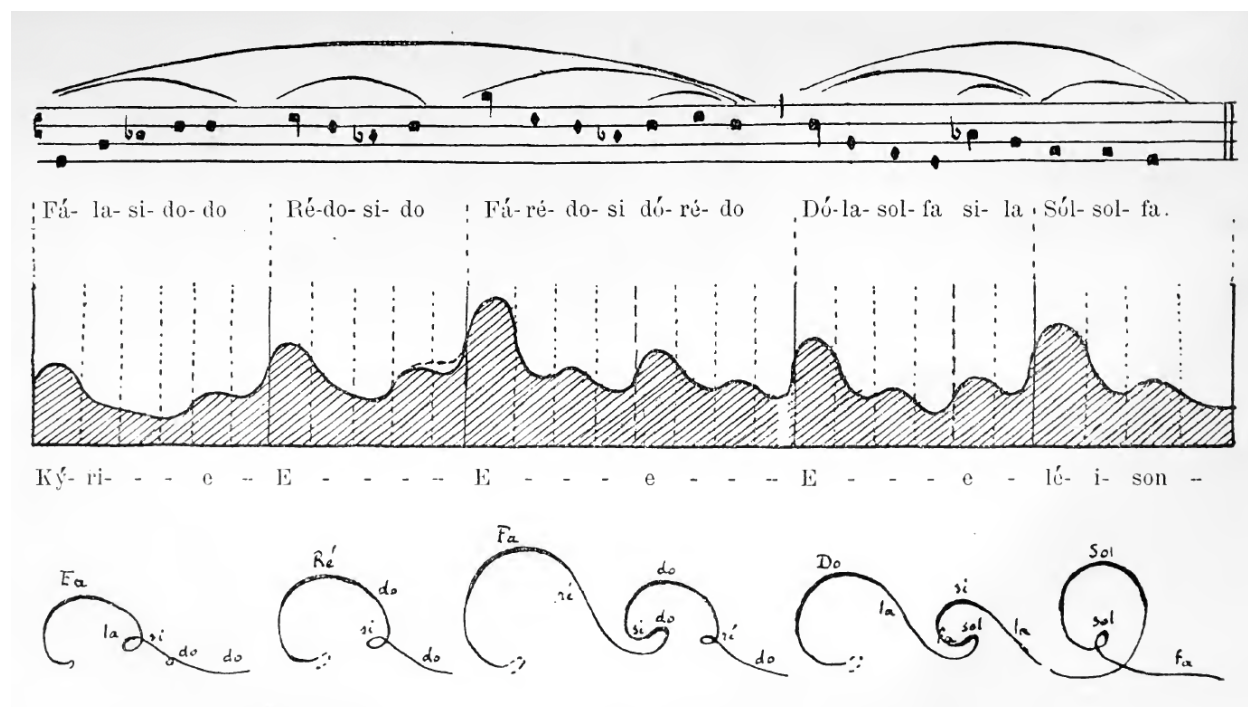
Mundi. The composite neume of the first syllable is a *scandicus* with *quilisma* followed by an *ancus* or a liquescent *climacus*. According to the rules, the voice will place well the G, which will be a little bit lengthened (p. 38, 2), and it will pass lightly over the *quilisma* (p. 38, 1) and over the following note to dash to the culminating *virga* (p. 38, 3, ex. 4 and p. 35, 2), which will be the center of accentuation of the whole neume and of the whole word. This accent on the C should be given a roundness, but it should not have more brilliance than the principal accent of *peccata*.

One should come back down with suppleness and softness on the two liquescent notes of the *ancus* (p. 33) by articulating completely the “n” before passing to the *clivis* of the second syllable.

The first note of the *clivis* will be endowed with an accent, but one that is relatively weak, as is the syllable itself. The two notes will be elongated to mark the final cadence signalled by the half barline.

Peccata mundi. In simple declamation and in a syllabic or very slightly elaborated melody, it is the word “mundi” that will be the more important of the two from the point of view of accentuation. In our *Agnus*, the melodic construction gives, on the contrary, more importance to the word “peccata.” The musical formulation of this word is even, as we have said, like the keystone of the whole piece. Around this arises progressively, with a growing force of *élan*, “Agnus Dei” and then “qui tollis.” From it also descends, with diminishing brilliance, “mundi,” then “miserere,” and finally “nobis.”

1.4 David's Analysis of Kyrie VIII



Chapter 2

The Classic Solesmes Method

2.1 Overview

This method was developed by Dom André Mocquereau, successor to Dom Pothier as choirmaster at Solesmes, around the turn of the twentieth century. Representative recordings are those from the mid-twentieth century conducted by Dom Gajard at Solesmes and the more recent recordings from Fontgombault.

In many ways, Mocquereau's system is modeled on Pothier's, so it is helpful to review some of the ideas mentioned in the previous chapter. Mocquereau draws on two very different sources to alter some of Pothier's fundamental ideas: the first of these is the mainstream music theory of the nineteenth century and the second of these is the interpretation of paleographic study of some early chant manuscripts, what would later be called semiology. Many of these ideas (ictus, arsis, thesis) are familiar to anyone who has been around the liturgical performance of chant, but I hope that reframing Mocquereau's views in the context of nineteenth-century theory can illuminate these ideas in a new way.

The following summary of the ideas behind the Solesmes method is my own, but I have drawn it as much as possible from Mocquereau's many writings on the subject.

2.1.1 Rationalizing Theory

According to Plato, rhythm is an ordered motion. All musical rhythm takes the natural motion inherent in music (or what we perceive as motion) and gives it an order in the dimension of time. Order of this kind involves a kind of measurement, which presumes a basic unit of time, which Mocquereau borrows from Aristoxenus, called a *chronos protos* or simple beat. In Mocquereau's understanding of Gregorian rhythm, there is a basic equality of length, say the length of an average note, that may fluctuate somewhat in speed but without ever being divided. This is the simple beat. Note that this idea of a basic steady value applies a fixed (but flexible) time value to something that had been merely a function of language rhythm in Pothier's system. This amounts to a kind of measure.

As a matter of natural musical cognition, we tend to group these beats into larger units of two or three beats. When counting these beats, the place where we start the group over (i.e., each time we say one) is the touch point or ictus. The ictus is then a measuring tool, and should not be confused with accent, which it really has nothing to do with. Any longer timespan than that will be naturally subdivided by the mind. The beats themselves have no sense of motion unless they are connected by the phenomenon of rhythm, that is they are unified together in a way that makes one feel that the beats move from one to another. In music, this is usually accomplished by varying either pitch, dynamics, length, articulation, or timbre.

Musical rhythm, hence motion, is modeled on the natural motion of objects on the earth; they rise and fall. Consider a ball being thrown. The departure point, or the beginning of the motion, is the rise, arsis, or upbeat. The arrival point, the end of the motion, is the fall, thesis, or downbeat. The combination of arsis and thesis constitutes a rhythm, or a musical motion. Mocquereau's formulation that motion moves from upbeat to downbeat puts him firmly in the "arrival" camp among music theorists (what a professor of mine used to call "the upbeatniks") together with Vincent d'Indy, Hugo Riemann, and Jérôme-Joseph de Momigny. The other camp theorizing musical meter would be the "departure" side, which includes Heinrich Schenker and consequently most basic music textbooks used in North America today.

Musical-rhythmic motions may be chained together, so that the arrival point of one motion becomes a renewed departure point. Here we may think of a ball bouncing on the ground or a stone skipping on the water. We can also think of things hierarchically, so that an entire rhythmic group may also function as a departure point in some larger motion.

Thus when we apply the idea to chant, we divide the music into groups of two or three notes. every group is either felt as going toward the next group (arsis, upbeat) or coming from the group that precedes it (thesis, downbeat). In a sense, the clearest model for this is the Latin word, considered just as Pothier had. The accented syllable unites the arsis half of the word, while the weak final syllable is the thesis. There are musical/expressive repercussions of this idea. Length is associated with the thesis rather than the arsis. The real point of arrival of some large group must (if you think about it) be a long single note. And we reinforce the idea of motion by applying dynamic shapes systematically to the arsis and thesis quality of each group. In addition, several layers of shapes can occur simultaneously (as with Pothier), so that a long phrase or even the entire chant may replicate the rhythmic model of the Latin word, with an arsis phase (also called the protasis) moving toward some accent that unifies the whole melody, followed by a thesis phase (also called the apodosis) moving away from it and bringing the musical motion of the chant to rest.

There are a couple of interesting and (for some) problematic consequences of this. In a word like "Deus," there is a short quick energetic arsis/accent on De- followed by a long, weak thesis/arrival on the final -us. Naturally, since Mocquereau is an upbeatnik, the place of the ictus is on the thesis or arrival point. This feels backwards to many people, especially if we are inclined to associate length and accent as is the case in many languages. Mocquereau, following a French school of classicists as well as the tradition of Solesmes (see the Accentualism section above), believed the accented syllable was properly high, light, brief, and typically on the upbeat. Notice that the sense of intensity on the accent favored by the mensuralists is rejected by Mocquereau, who favors a lighter touch a smoother dynamic shapes (he mentions Romanesque arches). In principle, the placement of ictus and accent is variable within the method.

2.1.2 The Place of Paleography

In addition to constructing this complex theoretical framework, Mocquereau was also interested in interpreting the rhythm of some early schools of neumed manuscripts, especially that of St. Gall. There was a limit to how far he was willing to go, though, since he considered the ideas described above to be basic facts revealed by musical logic. One consequence, for instance, is that he was unwilling to allow the basic pulse to be divided. This meant that, contrary to the understanding of recent researchers, the basic value corresponding to a single syllable is the short or cursive value, whether this appears on a solitary note or within a longer neume. Similarly, all neumes must be divided into groups of two or three notes whether or not this is indicated by any features of the neumes themselves.

It should be remembered that Mocquereau was also hampered by controversies over the Solesmes editions of the chant, which included rhythmic signs to help singers follow the method. Among these signs was the horizontal *episema* (the coinage is Mocquereau's), drawn from the St. Gall neumes. But many of the signs

were considered to alter the standardized text of the Vatican edition too much. The Solesmes editions we have are essentially a compromise of this reality. Mocquereau chose some signs to include, but not all. He subordinated his protosemiology both to his own theory of musical rhythm and to the demands of keeping close to the received Vatican-Edition text.

Thus many ideas from paleography are used to color the interpretation of particular neumes rather than as the starting point for interpretation as a whole. These fall into the category of “expressive” neumes. Some later editions from the Solesmes of the Mocquereau/Gajard era (after some of the rhythmic controversies had subsided), such as the *Antiphonale monasticum*, are arguably almost fully faithful to the rhythmic signs from the early neumes.

2.2 The Antiphon Cantate Domino

This analysis appeared first around 1903–4 in *Paléographie musicale* vol. 7 and was later reprinted in *Le nombre musical grégorien* (1908).

CHIRONOMIE GREGORIENNE

1^{er} Membre 2^e Membre 3^e Membre 4^e Membre

Can-ta-te Do-mi-no, can-ti-cum no-vum, laus e-jus, ab ex-tre-mis-ter-rae,

Analyse par membres de phrase

Le 1^{er} Membre – se compose de: Deux arsis, une thésis

Le 2^e Membre – se compose de: Une arsis, deux thésis

Le 3^e Membre – se compose de: Une arsis, deux thésis

Le 4^e Membre – se compose de: Une arsis, trois thésis

Le courant dynamique de toute la phrase est indiqué par le crescendo et le decrescendo. L'accent général au sommet de la phrase est marqué par l'accent sur le mot "canticum."

Sing ye to the Lord a new song, his praise is from the ends of the earth.

Isaias 42:10

2.3 Alleluia Ostende nobis

From *Paléographie musicale* vol. 10, this analysis shows the proto-semiological side of Mocquereau's study.

Verset alléluiatique : "Ostende nobis.."

Alleluia. *j. x. Osten- de nobis Do-

Mss. Sangalliens

Laon 239

Troyes 522

Chartres 47

mi-ne mi-se-ri-cor-di-am tu-am et sa-lu-ta-re tu-

Mss. Sangalliens

Laon 239

Troyes 522

Chartres 47

2.4 Application to Justus

Justus Dómi-nus, * et justí-ti-am di-lé-xit : aequi-tá-tem

vi-dit vul-tus e-jus.

Chapter 3

Semiology

3.1 Overview

Compared to the other approaches described in this handout, semiology (developed by Eugene Cardine in the second half of the twentieth century) is less of a method of performance and more of a method of chant study marked by a certain performance-related attitude. I characterize this attitude as respect and fidelity to the early manuscript sources, above all the neumes of St. Gall and Laon. These include a pretty complete record of the Mass and Office repertoire from the first millennium. As much as possible, a chant performance in this style would incorporate every detail of these manuscripts into the performance of the rhythm.

The reason it does not constitute a complete method is that the manuscripts themselves do not build up a rhythmic system anything like those of the other three rhythmic styles studied this week. The early neumes show a lot about rhythm but do not give a complete account of the pitches of the melody, so these must be taken from elsewhere. Consequently, many semiologists take their starting point from the earlier Solesmes traditions of free rhetorical rhythm, whereas others reject this and begin from some other starting point.

For those interested in learning about this style of performance, I suggest four paths of study. The first two involve what semiologists typically do with paleography and its interpretation. The latter two are points of musical interpretation more closely tied to Cardine's particular school.

3.1.1 Elements of Paleography

Neume Forms

The best thing is to get a *Graduale Triplex* and learn how to read it. This involves studying the widely available tables of neumes of St. Gall and Laon, which are reproduced below. Another option is the *Graduale Novum*, which provides some corrections to the notes of the Vatican Edition to bring them more in line with those early manuscripts. A similar project can be found online by searching for the *Graduale Restitutum*. The manuscripts themselves are widely available online; gregorien.info is an extremely useful starting site for looking at sources, since it is organized by chant, with links to modern editions, textual analysis, and images of several early sources:



The basic neumes are fairly easy to grasp. It is worthwhile to study, in turn, neumes of one, two, and three notes. Single notes can be shown as being somewhat lengthened by, in St. Gall, the addition of a little tick mark called an *episema*, or, in Laon 239, by drawing the neume bigger. The two- and three-note neumes come in shorter and longer forms as well. The other table element worth learning early is the presence of liquescence, which is generally more widespread than what gets included in the Vatican Edition, since it includes single notes with liquescence (this is known as “augmentative” liquescence).

Further study has suggested that certain older approaches to some special neumes does not match the manuscript evidence. For instance, both notes of the most common form of long *clivis* should be long. Similarly, the *salicus* should direct the weight and length to the last note rather than the penultimate one. Most importantly, notes that are fused together in other approaches (e.g., *strophicus* and *pressus*) are always separated in a semiological style.

Additional Signs

This mainly consists of additional letters drawn near the neumes. The most frequent and useful for rhythmic study are c for quick, t for hold, x for wait, and st (the s is elongated; do not mistake it for ft!) for immediately. Many of the other letters signify details of melody, such as progressions to particularly low or high pitches or repetitions of the same pitch.

3.1.2 The Neumatic Break

This concept developed by Cardine investigates the significance of the way a scribe groups the notes of a long compound neume. The act of breaking a compound neume can always carry some meaning, since it lends a particular weight or significance (i.e., a longer note) to the last note before the break. This is dependent on melodic context, since it does not apply to low notes surrounded by higher notes before and after. To see why, consider the following example adapted from Cardine.

The image displays four examples (a, b, c, d) of neumatic notation on a four-line staff. Each example shows a sequence of notes with different break symbols (red squiggles) indicating various rhythmic or melodic meanings.

- a.** Shows a break after the first note, with a red squiggle below the first note and another red squiggle below the second note.
- b.** Shows a break after the second note, with a red squiggle below the second note and another red squiggle below the third note.
- c.** Shows a break after the third note, with a red squiggle below the third note and another red squiggle below the fourth note.
- d.** Shows a break after the fourth note, with a red squiggle below the fourth note.

The best way to practice these is with exercises of reversal, where you try to notate particular rhythms using the St. Gall signs and the neumatic break. Many examples can be found in *Nella mente del notatore* by De Lillo and Rampi.

3.1.3 The Concept of Value

At the heart of Dom Cardine's approach to the rhythm of chant is the concept of the value of the note. This concept does not appear in his *Gregorian Semiology*, but it is described in full in Dom Guilmard's recent book.

The starting point of all the actions of lengthening and shortening is the average syllabic value. This is a unit of time of somewhat flexible duration that corresponds to how long it takes to sing an average Latin syllable. According to Guilmard, the way one finds this value is by becoming habituated to singing psalmody in choir. In this liturgical context of free-flowing speech-based rhythm, the syllabic chanting of the office antiphons and psalms provides a rhythmic structure that is the background to the more complex Mass chants. The rhythm of the language is the starting point. When there is more than one note on a syllable, these notes go by somewhat more quickly than the basic syllabic value, unless there is some indication of length.

Within this framework, the various rhythmic manipulations can have rather a wide range of interpretations. The process is essentially threefold: understand the speech rhythm that arises from psalmody; read the signs in a particular chant and take note of which notes are singled out for rhythmic differentiation; interpret the signs in a musical way, with the consciousness that there are many different reasons why a particular note may be marked out as long. Guilmard writes: "We must not forget that Gregorian chant is an art that requires a true musical sense. There are longs and shorts, but the meaning of the length is not always the same among: a long note of accent; a long cadential note; a lyrical or mystical long note. The difference in length between the longs and the shorts is in fact quite reduced. Every exaggeration should be banished and can in no way be considered part of the present work."

3.2 Application to Justus Dominus

Handwritten musical score for the chant "Justus Dominus" (Ps. 10, 7). The score is written on three staves. The first staff is labeled "CO. V RBCKS" and "I". The second staff is labeled "Ustus Dómi-nus, * et iusti-ti-as di-lé-xit:". The third staff is labeled "aequi-tá-tem vi-dit vul-tus e- ius." The score includes various rhythmic markings, including note values, rests, and accidentals. A box in the upper right corner contains the text "L 56" and "E 124".

Chapter 4

Mensuralism

4.1 Overview

The various styles of free rhythm described in the other three chapters represent something (rhythmic times not associated with proportional relationships) that was never really formulated clearly in the Western music-theoretical tradition until the nineteenth century. By comparison, the ideas behind mensuralism are very old, and various kinds of mensuralist/proportionalist approaches to chant have been used over the centuries. For example, in the centuries following the council of Trent, a kind of mensuralism was practiced using abbreviated and adjusted versions of the melodies, especially under the influence of the Italian renaissance writer Guidetti. This is the approach to which the development of the various Solesmes traditions was a reaction.

On the other hand, modern mensuralism is not based on these altered melodies but is a way of interpreting the restored melodies according to the principles of historically informed performance. This is, of course, also true of semiology. But while semiology is based entirely on a study of the chant manuscripts themselves, mensuralism combines this study with evidence from various early theorists and treatises suggesting that long and short values are to be interpreted in strict proportion one to another.

The idea of proportional rhythm is foundational to most Western formulations of the phenomenon of rhythm. Most significantly, the rhythm of ancient Greek and Latin poetry was generally described in this way, since the meter of these forms of poetry was made up of long and short syllables, with the long syllables being twice the length of the short. Much of this was codified by St. Augustine in his *De musica* (music here referring to poetic rhythm in particular), which in turn was very influential on Carolingian writers who were roughly contemporaneous with the development of the Gregorian repertoire. Thus there are numerous statements like the following from the Carolingian treatise *Commemoratio brevis*, translated here by Dom Gregory Murray: “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.”

According to this way of thinking, the signs shown in the early manuscripts are showing long and short values in the standard 2:1 proportion borrowed from Classical poetry. This early rhythmic differentiation came to be lost over time, so that by the time the neumes came to be written on a staff, the tradition of rhythmic differentiation had been lost, giving rise to the later practice of plainchant in the sense of

plain rhythmical values. The classic allusion to this change is by the eleventh century writer Aribo (again translated by Murray): “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.”

Much information about mensuralist chant, including an ongoing edition of the Mass chants, is on the website cantatorium.com, maintained by Patrick Williams:



Where does one find the binary long-short distinction in the manuscripts? In two places in particular. Broadly speaking, the rhythmic signs discussed above in the semiology chapter come in two forms: cursive and non-cursive. It is a small step from this fact to the idea that there are in fact two values of long and short.

While much of the work of semiology is carried over here, recent mensuralists (following Jan van Biezen) generally depart from semiology in two ways: cursive three-note neumes become, as a rule, short-short-long; and the onset of neumes using notes that occasionally disappear in other versions of the melody (what Cardine called fuzzy notes or *initio debilis*) become short grace notes. With these two additions, many recent mensuralist editions manage to practically eliminate odd-numbered groups of short notes, leading to a nearly steady quarter-note pulse.

4.2 Dom Murray's Analysis of Communion In Splendoribus

COMMUNION: IN SPLENDORIBUS

(1) (2) (3) (4) (5) (6)

In splen- do- ri- bus san- cto- rum ex

Metz

339

121

(7) (8)

u- te- ro an- te lu- ci-

Metz

339

121

(9) (10) (11) (12)

fe- rum ge- nu- i te.

Metz

339

121

in the brightness of the saints: from the womb before the day star I begot thee.

4.3 Application to Justus Dominus

8 Iu - stus Do - mi - nus_____ et___ iu - sti - ti - as di - le - xit_____

8 _____ ae - qui - ta - tem_____ vi - - - dit_____

8 vul - - - - tus_____ e - - - - ius.____

The image shows a musical score for the hymn 'Justus Dominus' in mensural notation. It consists of three staves, each beginning with a treble clef and a common time signature 'C' (represented by a 'C' with a vertical line through it). The first staff contains the lyrics 'Iu - stus Do - mi - nus_____ et___ iu - sti - ti - as di - le - xit_____'. The second staff contains '_____ ae - qui - ta - tem_____ vi - - - dit_____'. The third staff contains '8 vul - - - - tus_____ e - - - - ius.____'. The notation uses various note values (minims, crotchets, quavers) and rests to represent the rhythm. The lyrics are written below the notes, with horizontal lines indicating the placement of the text.