

## THEORY FORUM

### A PROPOS METER AND RHYTHM IN THE ARS ANTIQUA

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Two recent articles on meter and rhythm in the so-called *ars antiqua* provide much food for thought: Leo Treitler's ideas have been sharply criticized by Ernest Sanders without clarifying the issues as much as befogging them.<sup>1</sup> The difference between the two points-of-view can be briefly characterized as that of a musician who lacks sufficient theoretical insight and experience with the repertory versus that of the scholar who knows all the theory but has no relationship to the music. The ideas of the one are basically sound but often go astray in details and even dates, and thus provoke justified criticism which may unduly overshadow his main insights; those of the other, while in many details correct, miss the central points.

Before starting to set things straight, it may be best to put them in perspective. The term *ars antiqua* should surely be finally abandoned. *Ars nova* has a justified currency as the title of an epoch-making treatise; in fact, the cry of "new art" has been repeatedly heard through the centuries. But how often do we speak of "old art"? The term *ars antiqua* was created by a conservative who did not feel at home in the generation of the *Ars nova* and applied the term to what went before, that is to the period of Franco and Pierre de la Croix—the second half of the 13th century. The term thus does not cover the period of Leonin and

Perotin and their successors in the first half of the century, with whom both Treitler and Sanders deal in their papers. Indeed, by trying to cover the whole 150 years from Leonin to the early years of the 14th century, Treitler dilutes his argument and puts it on a shifting, insecure basis, for both musical style and notation changed greatly over this time span.

In the following discussion we shall therefore concentrate on, indeed limit ourselves to, the Notre-Dame repertory of organa, with only a few excursions into other music of the period—circa 1165 to 1225. In this connection it is important to recall the facts concerning the dates of Perotin, which I clarified in a paper of 1967, though it seems that few people have absorbed these facts as yet.<sup>2</sup> I showed that either as a living person or as an active composer Perotin disappeared from the scene about 1205; perhaps the end of the construction of the cathedral of Notre Dame in 1208 can be associated with his departure, just as the laying of its cornerstone in 1163 gives an approximate date for the start of Leonin's activities.

It would lead too far here to refute or correct every detail of the two presentations referred to above; but it will be necessary to discuss some of them. Let it be stated at the outset that Treitler's main thesis—that metric accent is an essential feature of the music of the time—is completely borne out by the musical interpretations of texts, both Latin and French, in conductus, motets, Latin songs, and *trouvère* lyrics, all of which clearly and indisputably demonstrate this fact. One need only compare the complete disregard for poetic meter, rhyme, anacruses, and stresses within lines of the musical settings in the 14th and 15th centuries to make the metric thinking of poets and musicians during the period here concerned obvious by contrast. It must have been obvious, too, to those who wrote about this music so that it did not seem necessary to discuss it; for it constituted the vital core of the innovations of the period that saw metric stress daily in the flying buttresses and columns of its cathedrals and in many other manifestations of proportional patterning. What was necessary was to develop musical symbols that would indicate relative note values so as to clarify the novel metric rhythm and to render polyphony possible.

Having stated our position as to the main point at contention between Messrs. Treitler and Sanders—the latter concludes from the silence of contemporary theorists about accentual meter that the music flowed along without it—we must now take issue with numerous statements in both their articles.

The music of the Notre-Dame composers is not dedicated to triple meter, as Treitler (p. 527) says, but triple meter does not necessarily imply waltz character, as Sanders (p. 603) implies. Triple meter became important only in the Franconian notation of the mid-13th century, when the tempo of the *longa* had slowed up to accommodate the

syllabicated semibreves. Even then 6/4 and 9/4 often prevail. Notre-Dame music normally employs 6/8 meter, sometimes 9/8, and combinations of these two. This fact is proved by the system of the rhythmic modes, which includes the “*ultra-mensuram*” modes 3-5, by the Perotinian tenor patterns (see Fig. 1) and by the sequence of simultaneities, which finds perfect consonances on most first beats of units of two (or three) perfections, but quite often places imperfect consonances on the beginnings of the second (or third) perfection, this particularly in pieces employing modes 3 or 5. Similarly the frequent dissonances on what we would call the second, third, fifth, and sixth eighth-notes of the measure and the exclusive use of plicae for such secondary beats disprove Sanders’s contention of an unaccented flow; for these offbeats are definitely heard as passing, unimportant tones and are so explained by the theorists who give free reign to dissonance on them. And this is equally true of all modes, not only the first, which serves all theorists as the model for their explanations. Treitler is thus mistaken when he claims that “There is no evidence in the notation or the theory of a concept of compound meter” (p. 547). Both the music and theorists in adopting the third, fourth, and fifth modes, exemplify this concept, though obviously not defining any meter in modern terms.

On the other hand, “the principle that the long durations should in the main be consonant, and that any dissonance should be short” (Treitler, p. 528) derives from a misreading of John of Garland (and other authors). These writers, to stress this point again, always take the first mode as their paradigm. For this paradigm the above principle does indeed hold, but it would be totally wrong if applied to modes 2 or 3. It is in the same light that one must interpret Garland’s dictum “Everything that meets with another according to the virtue of consonance is to be long” (Treitler, p. 528). If followed, this rule would destroy all modal rhythm and would make nonsense of all organal sections. Example 1 below proves the general inapplicability of this rule, which is, of course, absurd, unless we turn the sentence around to read in analogy to the preceding quotation. In this excerpt, dissonances are marked by x and imperfect consonances (thirds) by o. It becomes obvious that far more dissonances occur on secondary beats than on main beats, that is, on longs rather than on breves; but of course, the rule was given with only the first mode in mind. Moreover, we must take with a grain of salt any theorists’s rules, for such rules do not consider exceptions. Take, for example, the related idea, propounded by Franco: “In all modes consonances are always to be used at the beginning of the perfection, whether this beginning be a long, a breve, or a semibreve” (Treitler, p. 529). In the preceding example this rule is squarely contradicted in the last measure. Furthermore, the second example proves that, what we call *apoggiaturas*, were well known at the time. Here

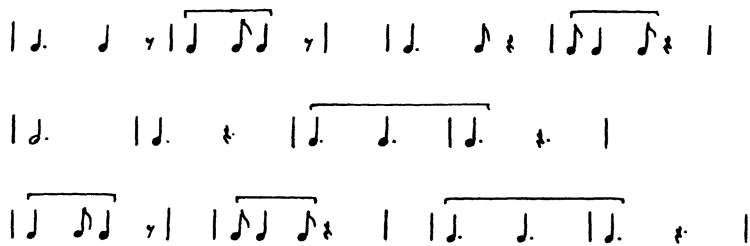


Figure 1



Example 1. <sup>3</sup> F f.156 (F No. 83, M13), beginning



Example 2. F f.158r-v (F No. 103, M14), end

again all dissonances, all appoggiaturas, are marked by x. Example 2, like Example 1, also disposes of Treitler's contention that "The resolution of a dissonance by a consonance . . . defines accent" (p. 529). Neither is a dissonance needed to achieve accent—there are rhythmic, pitch, sonority, and other accents—nor is the resolution of a dissonance necessarily accented, as the feminine ending in Example 2 proves. In fact, in the music we are discussing, stress is commonly associated with perfect consonance, though, as has been shown above, it is independent of it.

To be sure, this entire discussion runs counter to Sanders's main tenet: "Thus there is nothing to indicate that the rhythm of either organal dupla or of discant sections in Notre-Dame organa is metrical" (p. 604). This is, of course, true, as regards the silence in theoretical writings on the matter. But not only does the music contradict this statement, but it is a psychological necessity to organize our environment in patterns—and modes are undoubtedly patterns—for example, the ticking of a clock or a drip from a faucet. And patterns are recognized by their recurrence, which inevitably carries with it emphasis. Sanders continues: "the musical thinking of the polyphonists of the time . . . did not accommodate . . . regularly alternating accented and unaccented beats." This is, of course, nowhere stated by those authors who were quite familiar with dance music, rondeaux, and settings of rhymed, metric poetry, all of which are predicated on just this concept. In another curious passage (p. 603) Sanders objects to Treitler's statement that "Modal rhythm arose . . . earliest . . . in the context of organum." He claims that it arose in discant. But is not discant in its beginnings a subspecies of organum? Indeed, it is difficult to determine where and when modal rhythm arose. But it is certain that its first notational expression occurs in the earliest layer of Notre-Dame organa, attributable to Leonin's inspiration; there short discant and copula passages for the first time clearly employ the characteristic ligature patterns of the first mode.

In an excellent discussion, Treitler correctly rejects the common claim that the rhythmic modes originated in the poetic meters, though obvious analogies exist between them (p. 542 ff.). And it is these analogies that facilitate the musical renderings of the lyrics of the period. Equally cogent is his discussion of the relationships among poetic syllable count, stress, stress patterns, and musical modes (p. 553 ff.). And he is quite correct to point out that, despite a well known passage in Franco's treatise—about the first mode changing, through the insertion of a rest, into a second mode—the second mode is trochaic and serves many trochaic poems. How could trochaic poetry be possibly set in this mode if verse meter were merely a matter of long and short syllables? The short-long pattern of the second mode runs counter to all

classical concepts of trochees, were it not for the fact that we are here dealing with accentual poetry—and music. It is strange, indeed, that Sanders objects to Treitler's assertion that the second mode is trochaic (p. 607). The poetic meter '-'-'-can, of course, be rendered musically, in various ways (see Fig. 2). Similarly the iamb may be set as in Figure 3, and the dactyl as in Figure 4. But examples such as Figure 5, as given by Treitler (p. 548), are anachronistic, though the former sometimes occurs in Notre-Dame music in other contexts.

Sanders is correct in criticizing as anachronistic Treitler's use of some terms, for example *foot*, *ordo*, *perfect* and *imperfect mode*, terms which were used in theoretical treatises only much later than the Leonin-Perotin period. Yet in the same paragraph he admits that, although John of Garland only discusses the first mode, "the second, third, and fourth modes must be understood analogously. . . ." But if John's silence on all modes but the first can be so easily filled, why should his silence on accented meter—or the fact that he does not use the above terms—be so telling? Anachronism is always a tenuous charge against such terms, since theoretical terminology always postdates practical application of the concepts it names.

Probably the thorniest problem for both Treitler and Sanders, and by no means only for them, is to arrive at satisfactory transcriptions of the music. Without a solution to this crucial problem, any discussion of the musical style remains tentative or even obscure. Let us first scan some of Treitler's passages concerning rhythmic problems and then approach his musical examples and Sanders's criticism of them.

Treitler argues "That there is not a counterpart in the treatises for interruptions [of organa dupla] by perfect L's [longs] is at least consistent with Odington's claim that the perfect L derives from the third and fourth modes" (p. 541f.). Everything is wrong with this sentence. (1) From the antecedent clause no such conclusion can be drawn. (2) It is hardly viable to employ Odington as a witness for a style in which the L emerged, a style lying more than a century behind him. (3) As the music proves, L's existed in the music of Notre Dame well before the third (or fourth) mode emerged. (4) Here is, by the way, another proof that not every technical feature of the music is reflected in the treatises; "*extensio modi*," as W. Apel has called such L's, obviously existed, though the theorists did not discuss it.

As to *fractio modi*, Treitler says: "Of the possible readings of a ternary ligature [in the first mode], two are plausible here: L-B-L and B-B-L . . ." (p. 535). The former reading is the normal one of the starting figure of the first mode; the latter, however, cannot possibly exist within the first mode. The ligature preceding this ternary one in the example to which the above passage refers is the normal binary figure of the first mode. Contrary to what Treitler says—that the second

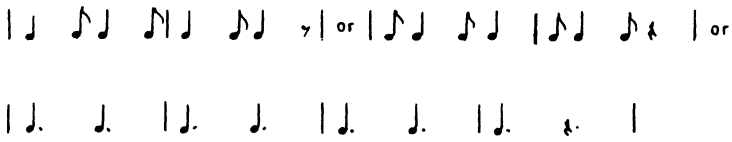


Figure 2

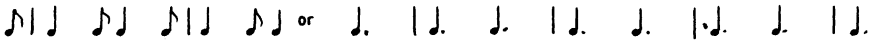


Figure 3

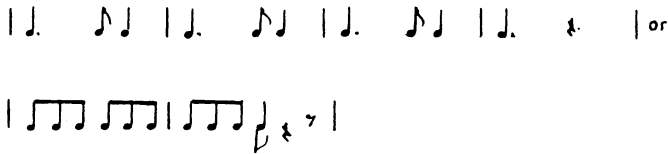


Figure 4

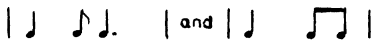


Figure 5



Figure 6

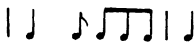


Figure 7

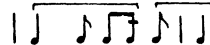


Figure 8

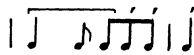


Figure 9

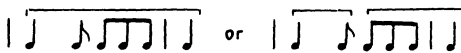


Figure 10

note of this ligature “is uncertain”—the definition of the first mode quite clearly defines this note as a longa. The following ternary figure can therefore be either another starting ternaria of L-B-L value or replace a normal binaria of the mode, that is, represent a B-L pattern, in which the B suffers a *fractio modi*, resulting in the rhythm of Figure 6. On this procedure the theorists are quite clear; John of Garland states:

Regula est, quod numquam ponuntur duae breves vel tres vel quatuor etc. pro brevi, ubi possunt poni pro longa. Omnis ligatura per oppositum cum proprietate et perfecta ultima est longa et omnes praecedentes ponuntur pro brevi, si sint plures sive pauciores.<sup>4</sup>

Indeed, the rhythm in Figure 7 can be clearly indicated by means of a plica, (see Fig. 8); when descending, by currentes (Fig. 9), (currentes are here indicated by “accents,” actually compressed diamond shapes above the notes); and elsewhere by irregular ligatures (Fig. 10). In the example given by Treitler the third phrase clearly shows that the usual L-B-L ternaria is involved. But the principle explained above is very important. Neglect of it vitiates Treitler’s examples 2b, 3-IIIb, 4c, and the figure on p. 551. Strangely Sanders (p. 606) approves of Example 4c, which is three times marred by this misinterpretation—one that similarly vitiates Waite’s renderings and those of many others—as well as by other impossibilities.<sup>5</sup> Let us investigate this example (Ex. 3), taken from the end of the Easter Alleluia I (M 14).

First of all the diplomatic transcription offered is incorrect, particularly with regard to W2. Below is the corrected diplomatic rendering, which now clarifies the transcription, plus Treitler’s two rhythmic transcriptions, followed by three separate new transcriptions. All three MSS differ slightly, and despite Sanders’s unjustified assumption that W2 is the latest, it is the best and most trustworthy of the three. (In fact, all indications are that W2 generally preserves earlier versions than F; W1, though in many instances reflecting early compositions, may preserve versions that postdate those in F and W2. In this particular alleluia it does seem that W2 preserves the earliest version, which is slightly varied in F and further varied in W1.)

In addition to the incorrect interpretations referred to above, the rests before the final binaria in Treitler’s transcriptions are totally foreign to the style and make no musical sense. On the other hand, several interpretations within modal guidelines are possible, as proved by Example 3. Where Sanders finds any indication of third mode here is a real puzzle. Moreover, he speaks of a “Perotinian pattern” in the duplum, but what do either “Perotinian” or “pattern” mean in this instance. The entire passage is most enigmatic. Treitler proceeds to two further transcriptions (p. 540), which introduce additional impossibilities—mixtures of modes 3 and 1 and a fantastic rendering of a



W1  
f.28

F  
f.109

W2  
f.72

Tenor

Treitler Ex. 4c

Treitler Ex. 4d

W1

F



W2  
(Allelu -) ya.

\*Only W2 and F have this bar

Example 3. Alleluia (Pascha nostrum), M14, I end

ternary ligature (Fig. 11). To conclude: One cannot let one's imagination reign freely; whereas often several interpretations are possible, all of them must be guided by the precepts of theorists who discuss the modes.

Treitler's imagination indeed runs riot, when he tries to analyze his Example 7 in a quasi-Schenkerian manner (p. 549 f.). Instead of following the modal indications deriving from the sequences of ligatures, he tries to determine the rhythm by a "melodic analysis." Could anyone take a melodic line minus its rhythm by Beethoven and by means of a melodic analysis hope to reestablish its correct rhythm? In this exercise tonal guidelines would give some aid, but they can be hardly appealed to in Notre-Dame music. This approach is completely futile, besides being anachronistic and begging the question, because melodic analysis depends heavily on rhythm, not the other way around. Again the diplomatic transcription of this example is not completely accurate, and its transcription into modern notation, not given but explained by Treitler, is both factually (in the description of the melodic line) and methodically (in the rhythmic interpretation) wrong. Example 4 gives a comparative transcription from all three MSS of this passage from the beginning of the First Vespers responsory of Nativity, which will thereafter be discussed.

Treitler writes: "The organal voice [duplum] establishes itself in two registers at the outset, the octave and the fifth of the tenor's *f*." This is hardly true; it would be more correct to say that this section exploits the entire octave range from *f* to *f*'. He continues: "The decisive fact of this interpretation is that the organal voice moves by step *within* each of the registers and moves by skip *between* them." Inspection immediately shows that this statement, even if we accept the wrong idea of the two registers, is incorrect (see meas. 3, 7, 10, etc. of our transcription). After long, pseudo-Schenkerian explanations, Treitler begins to analyze the notation; but instead of observing the clues furnished by the theory of the rhythmic modes Treitler employs free imagination to arrive at a rendering that satisfies his Schenkerian approach. The entire duplum can and should be read in the first mode. But in the second four-measure phrase Treitler proposes (p. 551) an impossible reading in order to enable the third ligature to start on a stressed *f* (see Fig. 12). The discussion of the next phrase speaks of a "breve-long of W2 [which] makes clear a second-mode rhythmic pattern, and the final note with plica in F and W2 in place of the binaria of W1 suggests a reversal to  instead of .

Apart from the fact that such quick changes from one mode to its contrast, here modes 1-2-1, must be rejected as alien to the style of the organa, indeed alien to the style of the entire Notre-Dame repertory, there simply is no breve-long indication in W2, nor is the *nota*

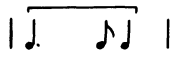


Figure 11

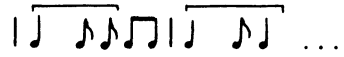


Figure 12

W1  
f.13

F  
f.65

W2  
f.47

Iu -

phrase 1

\*Only F has this bar

phrase 2

Example 4. Iudea, 01, I

(continued)

phrase 3

de -

phrase 4

phrase 5

phrase 6

\*\*W1 here repeats the preceding note and bar

Example 4 (continued)

*plicata* the final note of the phrase—indeed a *plica*, which is a passing tone, can never stand at the end of a phrase! The notation is non-mensural, and stemmed and unstemmed notes do not carry differential symbol value. (Nevertheless the two stemmed notes in W1 may, as elsewhere in this MS, indicate two longs, for instance, possibly also at the end of the preceding phrase.) The following two phrases, in fact start similarly, with a binary ligature, which here, merely because of tone repetition, is divided into two separate notes. The fact that phrase 4 ends with a *binaria* amply proves that mode 1 continues in force. As in many similar instances, the first two *binariae* in phrases 4 and 5 should therefore be read as though they constituted *quaternariae*, and the beginning of phrase 3 can then be treated analogously.

In W1 the same melody is given a different rhythm. In phrases 4 and 5 the *fractio modi*, introduced by the respective fourth notes, could not have been symbolized by *plicae*, because they might have signified descending seconds. The notator consequently could indicate his intention only in the manner shown. To be sure, in phrase 4 the *senaria* could have been easily separated into a *quaterna plus binaria*; but W1 employs such extended ligatures elsewhere as well. What has just been said—that the notator could indicate his intention only, or best, by special notational forms—can be seen again at the beginning of the final phrase, whose rhythm could have been expressed in no other way. This principle must be frequently invoked if one wants to arrive at viable transcriptions.

In connection with the second phrase of Example 4, Sanders criticizes Treitler on the ground that his transcription of the first and second *ternaria-binaria* groups differs (p. 606). Indeed, the rendering in Figure 13 would be equally satisfactory. But several interpretations of passages, all viable, are often possible and may well have been employed at different performances. In this particular instance, however, the music was reused for part of a *Benedicamus-Domino* setting extant in Hu, where it is recast in the second mode, which supports our interpretation. Nor is Sanders's proposal of an upbeat beginning for phrase 3 acceptable. Such phrases simply do not occur in Notre-Dame organa, indeed cannot be notationally expressed, although they do occur in motets, as Sanders mentions in a footnote, as well as in *conductus* and often in *trouvère* songs. Again the setting in Hu supports our interpretation.

One of the most important points regarding the transcription of Notre-Dame music is the one just made, namely that great flexibility is necessary. With extensive practice in transcribing, particularly the two-part organa, one discovers that several solutions for a particular passage are often possible and equally "correct." Indeed, there are some closing-cadence phrases that occur in many pieces and demand different

treatment according to the context. Thus in a clausula that moves throughout in a rather regular, unmodified first mode the cadence Ex. 5a would be best used, whereas the same melodic formula may be transcribed as in Ex. 5b when closing a clausula in second mode, or even as in Exx. 5c, d at the end of pieces in first or second mode with many *fractiones modi* or in sixth mode or when concluding a vivid organal section. There are a number of such cadence formulae that need to be variously interpreted. It may be well to single out one figure that concludes many phrases in discant clausulae and early motets and that also occurs within phrases—that of two notes of the same pitch plus a plica, a group that fits the term *tangendo disiunctim* used in another context by the Anon.IV. Its many possible interpretations are shown in Figure 14, and at times it may well stand for the rhythm in Figure 15. In addition, there are clausulae which may be interpreted in either the third or the sixth mode.

The music itself justifies such flexibility of interpretation. Examples 3 and 4 above prove the practice of variant performance that undoubtedly grew out of the tradition of oral transmission, which is also vividly reflected in the motet and trouvère repertoires. The practice of modal transformation, that is reading of the same music in either first or second mode, in either third or sixth mode, in fifth, first, or second mode, is well documented. The reinterpretation and shifting of ornaments in several versions of the same music also bears witness to this approach.

Perhaps our Example 3 can serve a fuller explanation of this built-in flexibility of modal notation. The choices made in the transcriptions offered represent just that. Most of them were made to permit what seems the most natural flow of the music—admittedly a personal judgment based on 20th-century experiences, but also on aesthetic feeling for the Notre-Dame musical style, deriving from long years of involvement with it. The choices may also serve symmetry in phrases; they may avoid too many stops of the flow; they may parallel other versions thought to reflect variants within the same structural framework. Several alternative renderings are shown in the three transcriptions given above. Other possible rhythmic renderings are shown in Figure 16.

A second, no less important point has emerged in this discussion: theoretical statements always represent abstractions, that is generalizations. They describe what happens in music, usually recent music, particularly with respect to innovations that need to be thought through, clarified, and assimilated, so that they can be taught and passed on. The rules developed by theorists cannot be applied exhaustively and to all music; the rhythmic modes, consonances and dissonances and their treatment, the many and ambiguous ways that ligatures may be employed and interpreted, the uses of accidentals—for all of these the theorists recognize certain general approaches; but all theorists also

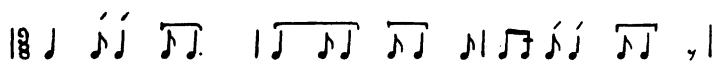


Figure 13

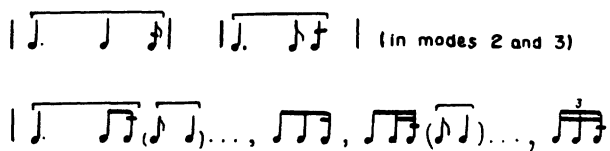
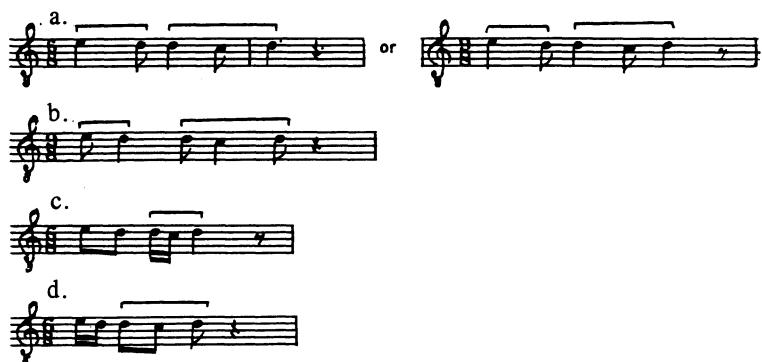


Figure 14



Figure 15



Example 5

F, W1, W2  
m. 4-5

F, W2  
m. 7-9

W1

F, W2  
m. 12

W1  
m. 11-12

Figure 16



explain exceptional and modified uses, as circumstances require. It is significant, by the way, that no 13th-century theorist writing about polyphonic music ever involves the Church modes in his discussion. On the one hand, these belong to a much earlier stratum, and it may therefore have been felt that they need not be discussed in this context, though they were certainly discussed in connection with chant; on the other hand, the problem of applying the Church modes to polyphony may have appeared either too formidable for analysis or alien and unproductive.

A third point must be stressed, however, namely that, despite all the exceptions to and modifications of theoretical rules, their general guidelines must be observed. Fanciful transcriptions, based on inapplicable concepts of a later time, such as pseudo-Schenkerian analysis, the recent idea of interlocking series of thirds as the structural basis of early 13th-century melody,<sup>6</sup> the anachronistic application of free prose rhythm from chant to metric monophony and polyphony—such ideas cannot serve to revitalize this music. A tentative, fruitful approach to this music, particularly to the organa, but also to conductus and motets, can only be gained from studying all facets of the corpus through complete and repeated transcriptions, guided by both the theorists of the period and a musical sense open to the possibilities of tempo, rhythmic complexity, phrase structure and symmetry, and other musical elements.

## NOTES

1. Leo Trietler, "Regarding Meter and Rhythm in the *Ars Antiqua*," *The Musical Quarterly* 65 (1979): 524–58. Ernest Sanders, under "Comments and Issues," *JAMS*, 23 (2980): 602–607.
2. Hans Tischler, "Perotinus Revisited" in *Aspects of Medieval and Renaissance Music* (W.W. Norton, New York 1967), pp. 803–17.
3. The following sigla will be used throughout for MSS referred to:  
F - Florence, Bibl. Med.-Laur., pl.29, 1;  
Hu - Burgos, Monasterio de Las Huelgas codex;  
W1 - Wolfenbüttel, Herzog August Bibl., 677;  
W2 - Wolfenbüttel, Herzog August Bibl., 1206.
4. Erich Reimer, *Johannes de Garlandia: De mensurabili musica*, Archiv für Musikwissenschaft, Beiheft X, (Franz Steiner: Wiesbaden, 1972), I:50, where Reimer finally supplies the correct reading of this passage, which is poorly rendered in Edmond de Coussemaker, *Scriptorum de musica medii aevi nova series*, 1864–76), I:100a.
5. William Waite, *The Rhythm of Twelfth-Century Polyphony* (New Haven: Yale University Press, 1954).
6. Cf., e.g., Finn Mathiassen, *The Style of the Early Motet* (Dan Fog, Copenhagen 1966), and Klaus Hofmann, *Untersuchungen zur Kompositionstechnik der Motette im 13. Jahrhundert* (Hänsler, Neuhausen-Stuttgart 1972).