THE MISSAE DE BEATA VIRGINE C. 1500-1520:
A STUDY OF TRANSFORMATION FROM MONOPHONIC TO POLYPHONIC MODALITY

DISSERTATION

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While musical sources and documents from throughout the Middle Ages reveal that mode was an enduring and consciously derived trait of monophonic chant, modality in later polyphony shares neither the historical span nor the theoretical clarity of its monophonic counterpart. Modern theorists are left with little more than circumstantial evidence of the early development of modality in polyphony.

This study attempts to shed light on the problem by detailed analysis of a select body of paraphrase masses from the early sixteenth century. First, it correlates the correspondence between the paraphrased voice and the original chant, establishing points of observation that become the basis of melodic analysis. Then, these points are correlated with known rules of counterpoint. Exceptions are identified and examined for their potential to place emphasis on individual mode-defining pitches.

A set of tools is derived for quantifying the relative strength of cadential actions. Levels of cadence are
defined, ranging from full, structural cadences to surface-level accentuations of individual pitches by sixth-to-octave dyadic motions.

These cadence levels are traced through the Missae de beata virgine repertoire from c. 1500-1520, a repertoire that includes masses of Josquin, Brumel, La Rue, Isaac, and Rener. While the Credos, based on two chant sources—one early (11th century) and one later (15th century)—showed little modal consistency, the Kyries show some suggestion of purposeful modal expression; and the Glorias show even greater implications.

Results of the study have potential application in sixteenth-century music scholarship to such important issues as musica ficta, performance practice, text underlay, and form.
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CHAPTER I

INTRODUCTION TO THE PROBLEM AND METHOD

Modality in plainchant has a well documented theoretical and historical base. Musical sources and documents from throughout the Middle Ages reveal that mode was an enduring and consciously derived trait of both musical practice and rational theory. By contrast, modality in polyphonic music shares neither the historical span nor the theoretical clarity of its monophonic counterpart. Mainstream theory shows only a partial and belated recognition of modality in polyphonic composition. Elaboration by theorists of the fusion of the ancient modal system and contrapuntal practice begins in mid-sixteenth century. Still, the resulting system flourished relatively briefly; by the end of that century the major-minor tonal system had begun to encroach upon the modes as an organizing principle for multi-voiced music.

The problem is clear but multifaceted--modern theorists are left with little more than circumstantial evidence of the early development of modality in polyphony. The use of the term "polyphonic modality" is itself problematic. Scholars who believe that modality is exclusively a property of melody would find such a term to

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A discussion of sixteenth-century theoretical trends relative to mode follows in Chapter II.
be an oxymoron. It is clear that many of the structural factors that give melody its modal identity do not transfer to multi-voiced music. Then, how can we shed new light on the subject of polyphonic modality? Is there a specific body of works or a particular time period that is well suited to such a study? Answers to both questions are found in a repertoire derived from a common technique of mass composition.

By the turn of the sixteenth century, composers had derived numerous techniques for unifying the multi-movement mass Ordinary. Cantus firmus or tenor mass, motto mass, parody mass were among popular forms. One common type from this period resulted from the presumed intent of the composer to state a pre-existing melody in one or more voices of an imitative structure. With the contrapuntal restrictions involved in combining the melody with other voices, however, not all the notes of the given melody could remain without alteration. The result was recognizably similar, but clearly different in many details of structure. The mass type based on this procedure was aptly known as "paraphrase mass."

This process of adapting a preexisting melody to polyphony required numerous decisions regarding the relative importance of certain features of that melody. Examples from this repertoire reveal an interesting conflict between two alternatives. For many composers, close adherence to
the pitch order of the original chant seems to have been paramount. Instances of this type are those masses in which the source melody was rendered virtually intact while procedures of imitative counterpoint were less regulated. In composing his paraphrase, the composer apparently found it necessary and permissible to break from certain contemporary stylistic norms in favor of safeguarding the integrity of the given melody. In contrast, other composers appear to have placed priority on elements other than the melody, such as maintaining consistent imitation, regularity of phrase length, or controlled rhythmic density. The structure of these examples bears a closer resemblance to that of contemporary masses not based on preexistent sources and shows greater deviation from the strict pitch order of the original melody. 2

A preliminary study by this author of certain paraphrase masses attempted to answer questions of compositional priority based on evidence drawn from the above mentioned contrast. 3 That study, results from which are found in Chapter V of this paper, explored the possibility of

2 Although it is premature to present such conclusions, it will be shown that, for example, the mass of Brumel tends toward the former category while that of La Rue represents the latter.

1) assessing the degree to which a paraphrase version deviates from its source;

2) determining the specific rationale for such deviation; and,

3) establishing general rules or norms applicable to most early sixteenth-century paraphrase masses.

These tasks were accomplished to a reasonable degree. Further, and more significantly, evidence gathered in consideration of the second question suggested that, among other factors, a chant source may have been altered to enable the contrapuntal setting to maintain the assigned mode. Just as mode was an important feature of plainchant, it seems plausible that the mode of the given chant was intentionally preserved in these polyphonic paraphrases.

A method for analyzing modal features in polyphony was needed. It should allow the correlation of three components of the musical structure:

1) The correspondence between the paraphrased voice and the original chant;

2) The counterpoint and resulting vertical sonorities;

3) Emphasis on primary pitches of the mode (as defined in Chapter IV).

These components prescribe a matrix of significant structural factors in paraphrase masses. While the first
and second are found to be relatively consistent in the style and period under investigation and would suffice to explain much of the structure, the third also appears to have been a significant concern. Emphasis was achieved in ways which were analogous to those in the monophonic repertoire; e.g., by frequent reiteration, recurrent placement on stressed syllables of the text, cadence structure, or similar contextual means.

Several other characteristics of sixteenth-century vocal polyphony provide a context for emphasizing individual pitches. Among them

1) regularity of meter provides the potential of placing a pitch in a stressed or unstressed position;

2) the multi-voiced structure gives the possibility of increasing emphasis by acoustical means, such as sonority doubling;

3) traditional cadence formulas borrow from a traditional reference system, part of which evokes emphasis on important pitches; and,

4) placement of significant syllables of the text tends to articulate certain pitches and give them relative prominence.

Through the investigation of common paraphrase techniques, the degree of predictability of these components will be better understood. It will be established that
location within phrases and other factors of context or position were also determinants of melodic alteration. Also, by reference to early sixteenth-century contrapuntal theory, we can assign a high degree of predictability to the succession of certain intervallic combinations. Melodic alterations which give emphasis to single pitches, but are not attributable to either of these predictable explanations will be considered in light of their potential for preserving the assigned mode.

The study proceeds as follows.

a) The repertoire to be analyzed will be defined, namely, specific paraphrase settings of the Missa de beata virgine. The place of that chant in the sixteenth-century repertory will be examined.

b) Pertinent facts concerning known versions of the plainchant melodies will be presented. The possibility of some paraphrases being based on different chant versions will be discussed.

c) Regular patterns and practices of paraphrase procedure, observable in most of the works under investigation, will be codified.

d) The significance of occasional deviations from such patterns will be examined, for example, as an indicator of the intent to preserve the modal identity of the source chant.
e) That significance will be tested and confirmed through further analysis. Analytic tools which are adequate in detecting modal features of polyphony and which are derived from sound historical and systematic principles will be created and applied.

f) The above findings on which a working hypothesis is derived (and which attempt to confirm that hypothesis) will be evaluated for their contribution to our theoretical view of polyphonic modality.

The following chapters treat each portion of the problem in the order given above. Chapter II takes up the central topic of modality as it functions within the musical period under investigation. First, theories of mode as they evolved through the Middle Ages and were received by Renaissance musicians are examined. Next, modern studies which have pinpointed instances of polyphonic modality in music from the sixteenth century are reviewed. Information from these two historical vantage points, one earlier and one later, becomes the basis for drawing inferences about views of modality within the specific time in question. Finally, there is a review of significant scholarly and analytic efforts from closely related fields that have directly influenced this study.

Chapter III turns to a discussion of the repertoire on which this study is based. That chapter presents a
discussion of the origins of the plainchant melodies and sources in which they appear. Also, composers of the polyphonic masses will be introduced, including pertinent biographical details that support a connection with particular chant sources. Thus, we will attempt to resolve issues of correlating particular variants of the chant with particular paraphrases.

The analysis begins in Chapter IV with the derivation of an analytical system for observing modal behavior at the foreground level. Chapter V contains a list of observations which describe paraphrase techniques found in representative works from the repertoire under consideration. Chapters VI, VII, and VIII present the analysis of three mass movements with comparisons of features which are significant to the questions at hand. Chapter IX concludes the study with conclusions and recommendations for future research.
CHAPTER II
BACKGROUND AND PREVIOUS RESEARCH

Modality has its origins and primary identity in chant. Early theories of plainchant make systematic classification of mode by reference to four interrelated features of the melodic structure: 1) the distribution of whole and half-steps between adjacent scale-ordered pitches; 2) the use of characteristic motives; 3) the range or ambitus of the melody or phrases within the melody; and 4) the emphasis of one or more pitches.

Boethius' transmission of the Greek musical system into medieval modal theory included eight-note scales arranged in adjacent ascending order. Each was defined by its unique succession of whole and half-steps in the two tetrachords which comprised the upper and lower portion of the central octave. This Boethian interpretation of the Greek system was made in the 4th Century A.D., but remained primarily an abstract idealization of mode and contributed relatively little to the practical task of organizing and expanding the existing chant repertoire.

1 Boethius, De Musica (Admont?, 12th Century), manuscript held at The Newberry Library, Chicago, Illinois. (The author wishes to acknowledge and express gratitude to The Newberry Foundation for their assistance in this study by awarding a Short-term Research Fellowship during the Summer of 1983 and making accessible many of the mass manuscripts and theoretical documents cited here.)
Another system of eight modes originated in the Eastern church and came to central European theory under Carolingian influence c. 8th-9th century. These okto-echoi were presented in a two-by-four array of eight-note scales which paralleled those of Boethius, but were arranged so as to relate authentic and plagal forms of four primary modes. This pairing of plagal and authentic forms emphasized their common finalis and internal structure despite differences in ambitus. Such ordering endured into the sixteenth century.

The okto-echoi were applied to the classification and regulation of chant. In doing so, adaptations were made—both of theory and practice—in an effort to resolve exceptions and ambiguities where one did not fit the other. For example, Hucbald (c. 840-930) attempted to resolve discrepancies between the Greek system—whose scales were comprised of two disjoint tetrachords—and the okto-echoi—whose scales were comprised of one pentachord and one tetrachord joined by a common tone. His synthesis recognized the importance of the pitches shared by the two scale fragments. Emphasis on these pitches helped arbitrate the difference between an authentic mode and plagal mode having the same ambitus but different adjoining pitches. For example, the Authentic Dorian, Mode I, and Plagal Mixolydian, Mode VIII, share the d-to-d ambitus, however,

\[\text{Hucbald, De harmonica institutione.}\]
they are recognized as different because of their dominant, mediant, and finalis. It is reasonable to assume that the differences were as much affective as theoretical, that Hucbald's realignment was empirically based. To wit, the practicing musician perceived a special coherence provided by a melody's affinity to these pitches and used that perception in the identification and memorization of chant.

Hermannus Contractus (1013-1054) exemplifies one who understood and presented the church modes as a set of melodic formulas. His pedagogical method encompassed both distinctions in the size of steps between adjacent tones when arranged in scale order and specific motives that were characteristic of certain modes. In the former case, it represented the nature of mode as a reference vehicle to idealized instances of certain types of chant; in the latter, it served as a means of teaching the unique intervalllic relationships and affective character of each mode to assist later performance, improvisation, and composition. Important elements of this pedagogical method, with its attention to the subjective expression of certain modes, endured through the Renaissance. This fact would support the hypothesis that composers of polyphony based on chant sources were interested in preserving this unique modal character in their settings.

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3 Hermannus Contractus, Musica, edited by Wilhelm Brambach (Leipzig, 1884).
Modal classification by reference to pitches that served as focal points of the chant has been popularized in modern views of modality because of its similarity to common practice tonal theory; tonality is, by definition, the result of one pitch systematically serving as the focal point of complex musical structures. In a modal melody, emphasis on a pitch may be accomplished by force of repetition, as in the case of the *repercussio* (sometimes called the dominant or reciting tone), and by a pitch's role as a frequent goal or boundary in the melodic structure, as the finalis or tonic. The pitch that joins the fourth/fifth species would tend to gain prominence in a modal melody for its position as a likely upper or lower limit within segments of melody. In this way, the theory of mode based on pitch emphasis and that of species overlap considerably. The pitches of a mode which served as *repercussio* and those which are the boundaries between the species are the same in all but the Phrygian and Hypophrygian modes.

It is important to remember that methods of classification were commonly applied to the practical matter of providing *differentiae* for connecting ends of Psalm recitations with following antiphons. Within the vast chant tradition, it was difficult for celebrants to memorize a unique pattern for every succession of chants which required such connection. Therefore, musicians took note of consistencies among chants in the use of prominent pitches,
consistencies serving as the basis for a classification scheme that reduced the large number of cases to a more memorable few that served the range of possible modal successions.

Contributions to modal theory in the late fifteenth century remained relatively sparse. Tinctoris offered a way of determining mode in polyphony based on a single voice only. A few years later, Pietro Aaron (1480-1545) came tantalizingly close to providing a working definition of mode in polyphony. His recommendations for determining mode relied on a combination of factors including cadences, relative ambitus of voices, and signatures.

Modern investigations of sixteenth-century vocal polyphony generally proceed from Aaron's theory and support our hypothesis that composers had a priori intentions of composing polyphony in specific modes as early as the first quarter of the century. Three studies serve as illustrations.

1) In a detailed analysis of cadences in Josquin's Missa de beata virgine (ca. 1514), Leeman Perkins has shown that their order suggests a conscious effort to preserve certain modal relationships within and among movements.


Of the many chants used in fifteenth-century monophonic B.V. cycles, Perkins concludes that Josquin selected those for his polyphonic setting based primarily on the aspect of mode. He found consistent and predictable practices at this level of the musical structure.

2) Additional evidence comes from a study of the clef and key signatures which were assigned to individual voice parts in polyphonic works prior to mid-century. They indicate that distinctions of ambitus—the central octave within which a single voice would fall—and pitch content—the exact whole/half-step arrangement within this octave based on the inclusion or non-inclusion of b-flat or e-flat—were calculated for voices (or pairs of voices) and became a part of notational practice as a result of a priori modal considerations.

3) Bernhard Meier, the most prolific scholar on this subject, has contributed to a more complete understanding of certain middle ground manifestations of modality in polyphony through his analyses of a wide variety of works from the sixteenth century. For example, he has shown that the

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6 Ibid., pp. 238-9.
ambitus of individual voices within polyphony frequently follows the monophonic theory of species of fourths and fifths. The relative ranges and boundary pitches of adjacent voice parts indicate that they were paired as authentic and plagal forms of the same mode. One voice, usually the Superius or Tenor, had priority during the compositional process and served as the primary mode determining voice. There is some variation among composers and works in the degree to which this attribute is revealed; yet, the clearest instances come from those works composed around the middle of the sixteenth century.

A second portion of Meier's study investigates the role of subjective character in the selection of mode for a polyphonic composition. This again supports the notion that modal identity was a significant component in the polyphonic tradition and compositional thought. The extent to which these composers possessed the techniques to express the desired mode in polyphony did vary, of course, but it is reasonable to assume that attempts were made early in the sixteenth century.

With evidence drawn from these studies, we see a vague chronological trend within the sixteenth century of the emergence of modality as a conscious and rational feature of

\[9\]
Ibid., Part II, pp. 223-403.
polyphonic music. Further refinement of this general view depends on additional studies of a limited and precise scope.

The present study provides evidence based on one consistent and narrowly-defined genre in which modal elements are relatively clear. In the course of our analysis, the attention naturally migrates from the task of establishing that a transformation of modality from monophonic to polyphonic did, in fact, occur, to a deeper examination of the means by which it was achieved.

Several recent studies were of substantial influence in providing vital historical background on the composers and repertoire selected, in discussing seminal issues on which this study is based, or in creating and applying models of useful analytic methods.

There are many studies which discuss specific aspects of sixteenth-century style and theory, especially modality, harmony, and counterpoint. The analysis of sixteenth-century polyphony has been the source for some pointed controversy. There have been numerous studies which express diverse and competitive points of view. The issue that most divides the parties to this controversy lies in historical perspective. Certain studies, such as Edward Lowinsky's *Tonality and Atonality in Sixteenth Century Music* (Berkeley, 1978),

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1961), prefer to conceive modality in the sixteenth century as a less-than-perfect stage in development towards an ideal system, namely the tonal system of the eighteenth and nineteenth centuries. The implicit aim is to detect elements of Renaissance vocal polyphony which are interpretable as pre-tonal phenomena.

The opposing camp would believe that this teleological perspective tends to underemphasize the historical context in which sixteenth-century polyphony was created. They prefer the view that Renaissance musicians understood modality—as it had evolved in the Middle Ages and come down to them—to be an attribute of melody. Therefore, modality was transformed into multi-voiced compositions specifically in melodic terms. Thus, for those who take this more historically sensitive point of view, analyses of sixteenth-century polyphony which are based on tracing tonal features (such as chord progressions or Schenkerian structural lines) lack the historical validity of those which strive for an understanding of modality as it developed out of the Middle Ages.

In recent years there have been few developments which aim toward the resolution or potential synthesis of these

differing points of view. This suggests the need for additional, well-conceived analytical studies which can provide fresh insight to help resolve important issues in these areas.

Some early studies have established a correspondence between monophonic Ordinary chant cycles and their polyphonic counterparts. Such concordances are amply supported by documentary and biographical data and thus provide a distinct and clearly-defined genre of polyphonic B.V. masses.

A few theoretical and historical studies serve as direct logical predecessors and models for this study. Edgar Sparks has studied the use of cantus firmi in masses composed between 1420 and 1520. He was interested in two types of cantus firmus. The first, which he has termed "strict," is that which is most commonly associated with contemporary usage of the term "cantus firmus." It is that case in which a pre-existent melody appears as a foundational voice in long, mostly equal-valued notes. The second type is a melodic cantus firmus—an elaboration of a pre-existent melody (sometimes called superius cantus firmus)—which, given common practices of deployment in imitative styles, may be found in any voice. Although his is a comprehensive and thorough study in many respects, it

12 Edgar H. Sparks, Cantus Firmus in Mass and Motet, 1420-1520 (Berkeley, 1963), pp. 2-4.
does not relate to the present study as strongly as might be expected. Sparks admits to a "lack of scope" in his treatment of cantus firmus in the latter part of the fifteenth and early sixteenth centuries. He has concentrated his study of this period on a few works of Josquin and Obrecht which do not include the B.V. masses. He has thereby offered a convenient model for the further study of paraphrase masses (which use a particular type of melodic cantus firmus), without actually touching on the particular repertoire which will be presented here.

Fred Herman Denker has studied the transition from cantus firmus to parody masses. In doing so, he accepted René Lenaerts' definition of "parody mass" from his article in The Musical Quarterly (1950). This definition restricts the term "parody mass" to a form based on borrowed polyphonic material. Following Lenaerts, Denker has explicitly removed "plainsong masses" (which are based on monophonic sources) from this definition, and subsequently,

13 Ibid., p. 3.
from his study. He, like Sparks, has offered an obvious and natural model for aspects of this study (e.g. exploring the transformation of similar materials as they are used within two comparable techniques), but has not studied the paraphrase masses which are the subjects of our concern.

Several studies deserve mention for their help in locating and identifying chant sources. Melnicki and Bosse have studied the chant melodies of Kyries and Glorias, respectively, in European manuscript sources. Similarly, Bruno Stablein's articles on Kyrie and Gloria in Die Musik in Geschichte und Gegenwart have been very useful, including his thorough structural analysis of Gloria 9.

Scholars have a useful reference in Martin Joseph Burne's compilation of chant Ordinary cycles manuscripts held in American libraries.

Gustave Reese has helped establish connections between a number of chant sources and sixteenth-century polyphonic

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Margareta Melnicki, Das einstimmige Kyrie des lateinischen Mittelalters, Vol. I of Forschungsbeiträge zur Musikwissenschaft (Regensburg, n.d.).

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B.V.M. settings. This is the least complete area on which the present research depends. To explore specific instances of the transition from plainchant to polyphony, precise knowledge of the particular version of a Gregorian source which was known in a particular region by a particular composer would be required. However, the current state of research in fifteenth-century monophonic sources leaves this requirement largely unfulfilled. Knowledge of fifteenth-century chant is based on a few widely-dispersed sources that have not been adequately correlated. Those sources which include complete mass Ordinaries are rare, scribes having reserved their talents and physical resources for the promulgation of the less familiar mass Propers and chants for the Office. As a result, much of our knowledge is based on probabilistic and speculative judgements. Therefore, we must rely on well-conceived work like that of Gustave Reese, which offers strong evidence of potential connections between chant sources and polyphonic B.V. masses.


study, Josephson presents detailed discussion of the correspondence between specific phrases of chant sources and those in sixteenth-century B.V. masses. However, his discussion is more descriptive than theoretical in nature. It is wanting for an hypothesis (and the analysis to support such an hypothesis) of the means by which source chants were adapted to create polyphonic settings. Therefore, Josephson has provided an extremely valuable predecessor to the current study which, though similar in general content, differs significantly in both its aim and approach.

Studies which have concentrated on paraphrase technique and paraphrase in polyphonic masses have been few. Two early twentieth-century scholars began the modern research in this area. Jacques Handschin has outlined certain paraphrase techniques from the Middle Ages. Rudolf Ficker has traced paraphrase procedures in the masses from the Trent Codices. In the course of his study of masses from 1420-1520, Sparks has reviewed these works and offers a general criticism of Handschin's and Ficker's approach to their topics. He shows that their methods were


neither objective nor rigorous enough in establishing the
criteria for what is and what is not paraphrase. Therefore,
these authors often matched source tunes with polyphonic
settings where the connection was highly dubious. Other
than offering examples of early modern scholarship in the
repertoire and techniques studied here, these studies
provide little in the way of direct information for the
present study.

In a recent article, Irving Godt has presented a
technique for tracing pitches of a source tune within a
paraphrased setting by use of a simple numbering system.
In addition, Godt has used rhetorical models and terminology
for listing a number of specific techniques and types of
paraphrase. Godt's study illuminates the problems described
above in reference to Handshin's and Ficker's studies, that
of establishing credible and accurate correspondences
between potential source tunes and supposed paraphrase
settings. Godt also offers valuable guidance for avoiding
or solving these problems.

Two studies deal with paraphrase techniques in
specific mass repertoires. Robert Marshall discusses
Palestrina's paraphrase masses which are based on certain

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Irving Godt, "Renaissance Paraphrase Technique: A
hymn tunes. Thomas Warburton, in his edition of Josquin's Missa Pange Lingua, has included a comprehensive analytical essay which traces all occurrences in the mass of fragments from that hymn-tune source. Both Marshall and Warburton have made important contributions, but the latter is perhaps the most convincing and useful predecessor within this group. It is well-organized and systematic even within the brief scope of a preface to an edition. It points the way to more detailed efforts of this type.

Several research efforts are analogous to the present study in their comparable treatment of other genres. Alfred Krings has provided an overview of the use of chant tunes in masses in the time period from Ockeghem to Josquin. Although omitting musical examples, he has offered a thorough discussion of the chronological development of various cantus firmus techniques in works by a group of important composers. His conclusions, though often limited to generalized descriptions, are compelling and very helpful in establishing a conceptual framework for the present study.

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Two recent studies closely parallel the intended study. Klaus Hofmann has studied specific aspects of compositional technique in thirteenth-century motets in which at least one voice was a pre-existent tune. He discusses how composers altered melodic notes to accommodate the contrapuntal context. His systematic approach is effective in revealing the priority of certain compositional parameters as employed by composers of this ancient style. He has found implied limits in the extent to which source tunes were altered, indicating a conscious effort to preserve the recognition of these sources. Similar limits are evident in the masses of the present study.

Alexander Brinkman has made a systematic study of Bach's use of chorale tunes in the Chorale Preludes from Book I of Orgelbüchlein. He has found pervasive use of certain short motives from the chorale—in the four standard contrapuntal forms (original, inverted, retrograde, and inversion of retrograde)—in all voices. In his analysis, Brinkman has raised an important question of the significance of the motives which have been found; i.e., are they particular and exclusive to the chorale at hand or are

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they common (and less significant) paradigms of the style? Certain motives can be made to fit an inordinate number of musical circumstances and therefore lose any claim to being significant in the development of particular compositions. Convincing conclusions regarding the significance of certain motives can be achieved only through careful filtering of Brinkman's data.

Also, although his study is extremely comprehensive in its treatment of melodic content, Brinkman omits the potentially interesting discussion of the counterpoint which occurs in other voices as accompaniment for the recurrent motives. Such a discussion might prove relevant as an index of Bach's tonal consciousness at strategic points within his compositions.

Finally, there are a small number of analytical studies that have been aided by computers. Brinkman used the considerable power of a large computer and a high-level pattern-oriented programming language (SNOBOL4) in arriving at his results. Howard Patrick has done a more directed and smaller-scale study which attempts to program a computer to recognize cadences in Josquin's masses by detecting certain suspension formulae. His study follows earlier trends in the field of artificial intelligence in attempting to

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provide the computer program with the means to arbitrate very subtle differences and model human value judgements. Patrick's study did not attempt to be a full thesis and, although it contributes significantly to the evolution of computer applications to musical analysis, it contributes little to our understanding of sixteenth-century style.

Jerry Lee Curry and Don L. Peterson have conducted computer-aided analyses of Renaissance vocal polyphony. Curry developed programs which count intervallic qualities between voices in the masses of Johannes Ockeghem. His results offer a statistical basis for defining common contrapuntal practices. He has charted the frequency of specific intervallic successions. Among results of particular interest to the present study are those which provide data on the harmonic interval of the sixth and its most common successors.

Peterson has maintained a chordal orientation in his study. He studied triad formations and their "roots" (based on Hindemith's classification system) found in the L'homme armé masses of the late fifteenth and early sixteenth centuries. He has drawn conclusions which

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attempt to show the tonal orientation of this repertoire. Since the present study would attempt to avoid such a perspective, Peterson's results are of little direct value.

In summary, although there is a general consensus regarding the classification of certain masses as "paraphrase masses," previous studies have not adequately codified paraphrase technique. Furthermore, no individual study has isolated and fully analyzed a representative group of paraphrase masses with particular interest in how the monophonic sources, with their modal attributes, were adapted to the necessities of multi-voiced settings.
CHAPTER III

THE REPERTOIRE

The central goal of this study is to contribute to an understanding of the origins of polyphonic modality. The selection of repertoire was made in an effort to illuminate this trait based on three general criteria: 1) it should be a consistent and well-defined genre about which adequate background is known; 2) it should be represented in the works of mainstream composers within a relatively narrow time span; and 3) there should be extra-musical evidence of the intent to preserve the modal identity so that discovery of modality within the music would be probable and easily corroborated. One such genre, the type of paraphrase mass called "plainsong mass" of the early sixteenth century, seems well-qualified according to these criteria.

Many dramatic theoretical and stylistic developments were occurring in the late fifteenth and early sixteenth centuries. During this period a few composers were creating polyphonic music for the mass derived by a comparatively conservative technique. The music was based on pre-existent monophonic sources and, although the idea of composing polyphony around a cantus prius factus was well-established, the melodies in these polyphonic works were presented in a novel manner—that of "paraphrase." The plainchant was rendered as an element of the foreground texture rather than
the middle or background. Given the apparent intent to preserve the content and character of the source melodies in several dimensions, such as phrase structure, motivic usage, and cadence order, it follows that other more subtle dimensions were also preserved either purposely or inadvertently. Therefore, these polyphonic masses offer some potential for discovering other manifestations of modality.

As we speculate on the circumstances in which a composer created polyphony based on chant, we can safely assert that the composer was aware of and partially bound by (at least) the following factors: 1) the rules of imitative counterpoint, including contemporary norms of consonance and dissonance; 2) melodic pitch order of the chant, if not available in actual notation, then memorized through early and frequent exposure during monastic or other liturgical training; and 3) the assigned mode of the source chant, a byproduct of several structural factors, including motivic design, range, and prominent pitches within phrases and at cadences.

In considering specific works of this type which would serve as likely candidates, the study by Leeman Perkins of Josquin's *Missa de beata virgine* (composed around 1514) seemed to suggest the most promising starting point.

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Perkin's study showed the influence of mode in the design of higher levels of structure (e.g., cadences of broad spans, such as sections and movements), but left open the provocative question of modal influence within sections at the foreground level as well. Having accepted Perkin's proof of rational control of modality at higher structural levels, it seemed logical to investigate the mode-determining elements which might be present at surface levels.

Obviously, limiting the study to works only of Josquin would be inadequate. Although he is considered the most prominent composer who flourished around the turn of the sixteenth century, we can assume that he did not develop his techniques in isolation. His contemporaries within Italy and central Europe shared many common stylistic traditions. In fact, among the complete Missae de beata virgine of the sixteenth century, several composers, countries, and individual styles are represented, all of which share the potential for revealing similar elements of modality. However, they were too numerous to treat in the kind of detail intended and they covered too broad an historical span.

During a preliminary investigation by this author of works of Josquin, an earlier Gloria based on the same
plainchant source came to light. Its date, c. 1500, helped to define a starting point for the study. Therefore, the choice of repertoire was extended to include extant B.V. masses composed within the twenty years from c. 1500 to 1520. Composers of these masses were among the most important from the Netherlander, German, and Italian spheres of influence in the period specified. In addition to Josquin, others who contributed to this genre were Antoine Brumel, Pierre de La Rue, Heinrich Isaac, and Isaac's protege, Adam Rener.

Although all but Rener were known to have taken musical training in Italy (and there is some evidence that he did), only Josquin and Brumel remained there. The careers of Isaac, La Rue, and Rener were centered in the courts of Austria. This difference of geography is reflected in the styles of the masses and will offer a basis for grouping and comparison in the analysis that follows. The repertoire from which selections are made comprises four masses of Isaac all based on the B.V.M. cycle, one full mass and the Gloria of Josquin, and one mass by each of the others.

Three movements from these polyphonic masses were selected for complete analysis.


3 Versions of these chant melodies may be found in Appendix A.
1) The first were the Kyries, all of which were based on the Gregorian Kyrie IX. The ABA form of the text is reflected in the music and offers numerous opportunities for comparing settings of similar chant phrases within works by one composer or among those of several composers.

2) Second were the Gloria movements, all of which were based on Gloria IX. Several of the Glorias include the trope, "Spiritus et alme," a conventional accretion to B.V. masses during this high period of Marian adoration. The Gloria is a through-composed chant, but exhibits motivic repetition, expansion of motives, and repetition of motives at varying pitch levels and positions within phrases.

3) The third movement selected, Credo, is mostly syllabic, as was the Gloria, and offers a compelling opportunity for comparison. The chosen polyphonic settings are based on one of two Gregorian sources, Credo I, dating from the 11th century, and Credo IV, which originated in the 15th century. With the evolution of monophonic modal theory in the four centuries which separate their origins, we see a marked contrast in the clarity of modal expression in the two Credo melodies. If, as we hypothesize, the polyphony follows the modal flavor of the monophony, similar contrast should be evident in the respective polyphonic settings. Comparison and analysis of the two Credo sources will be a fitting test of this complex hypothesis.
Having selected a repertoire for its potential to yield the desired results, we would need to know something of the time, location, and cultural/stylistic influences surrounding the origin of each mass in order to place it in proper perspective with the others. In the case of B.V. paraphrases from the early sixteenth century, such knowledge is incomplete at best. Biographical studies of each of the composers exist, from which we can glean partial information regarding musical training and exposure to the liturgy; however, these biographies present a discontinuous account of places and times that a composer may have trained or worked.

In order to fill those gaps in our knowledge, we could turn to direct observation of the musical notation. However, with the lack of original manuscripts or sketches—our sources are at best secondary, often having been recopied or printed at a later time and in a different place from their origin—even direct observation is in some doubt. Many issues regarding the provenance of sources or details of contemporary editions remain unsettled. The author acknowledges those issues, recognizing that to ignore them would deny the present study a well-reasoned foundation; yet, to attempt to answer each issue could easily become a complete study in itself. In spite of these lacunae, the B.V. paraphrases offer a fertile field for the proposed investigation. It is possible to proceed by
accepting the probabilistic or conjectural nature of some of the basic facts.

Discussion of polyphonic B.V. masses begins with the most prolific composer in this category of mass, Heinrich Isaac. Although details of Isaac's biography are typically sketchy, we know that he was Flemish by birth, migrated to Italy where he received musical training, then served some twenty years in the court of Emperor Maximilian at Vienna before returning to Florence where he died. His eclecticism as a composer is proven by the great variety of genres and styles attributed to him. His liturgical works, composed for the Austrian Emperor, include numerous motets and masses in imitative style. Among those masses are several to the Blessed Virgin, four of which are paraphrases of portions of Mass IX included in this study.

Isaac's Missae de beata virgine are for four, five (2), and six voices, hereafter designated Isaac1, Isaac2, Isaac3, and Isaac4, respectively. (Another four voice mass has been attributed to Isaac, but its authorship remains in doubt and so it is not included here.) All were composed for
alternatim performance, so all sections of the original chant have not been set polyphonically.

Pierre de La Rue shares a biography similar to Isaac. He was born in Picardy perhaps in the early 1460's and spent his musical career in the service of royalty in central Europe, first with Phillip the Handsome, then Phillip's sister Margaret of Austria. It is presumed that he there came under the influence of Isaac.

La Rue's mass on the B.V.M. cycle is labelled Missa Salve sancta parens. It was the first of this genre to appear in print, published in a collection of La Rue's masses by Petrucci in 1503, and the earliest complete mass of our set.

Adam Rener is the last of the group who was employed by the German courts. He, too, was born in the Franco-Netherland region a generation later than La Rue. He

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4. The manuscript sources of these B.V. masses are found in the Bayrische Staatsbibliothek at Munich. Isaac1 is numbered Ms. 47 and is found on folios 110v-128r. Isaac2 is in Ms. 3, folios 65v-92r. Isaac3 follows Isaac2 in Ms. 3 on folios 92v-118r. Isaac4 is in Ms. 31, folios 251v-272r.

All but the four-voice mass appear in two modern editions: the first of which is Heinrich Isaac: Opera Omnia, volume LXV of Corpus mensurabilis musicae, edited by E. R. Lerner, that has both of the five voice and the six voice masses; the second is Heinrich Isaac: Messen, which is volume VII and VIII of Musikalischer Denkmäler, edited by M. Staehelin, has all four (the B.V. masses are in volume VII).

5. The source is in the Wien, Nationalbibliothek Ms. 1783, fol 49v-60r. The modern edition is Volume VIII of Monumenta Musicae Belgicae, edited by René Lenearts and Jozef Robijns, pp. 1-22.
served in the court chapels of Maximilian I from 1498 to 1507 (where he may have encountered La Rue's B.V. mass) and the Elector of Saxony, Frederick the Wise, until his death about 1520.

He, like La Rue, has one B.V.M. setting in four voices, which is in the Jena choirbook Ms. 33, fol. 67v-88r. A critical edition of this work is in progress. A transcription appears in the German dissertation of Jürgen Kindermann, but has been unavailable during this study. The Rener Missa de beata virgine is introduced in the manuscript by a setting of Salve sancta parens and followed by a version of Beata viscera as it would appear in the Marian liturgy.

Antoine Brumel is notable for his French rather than a Netherland origin. Evidence shows that he may have been born in Brunelles about 1460. He served as a chapel musician in France and nearby Geneva until 1506, when he went to the Ferrara chapel in Italy, there to remain until that chapel disbanded in 1510. Several late works, including his B.V. mass, may have been composed in Rome.

Brumel's Missa de beata virgine, for four voices, first appeared in Antico's Liber Quindecim Missarum published in 1516, suggesting that the work was composed in

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1513 or 1514. Corroboration of this dating comes from the writings of the theorist Glareanus, who discussed and compared Brumel's mass with that of Josquin from about the same time.

Josquin is obviously the best known of the composers discussed here and, therefore, has the most extensive biographical data. He was probably born in the Northern French region of Picardy around 1440 and, after spending a brief period early in his career there, went off to Milan, Italy before 1459. He served in the Ducal chapel and then in the Papal court in Rome until the last decade of the century. He returned to France and had associations with various royal courts before going south once again to serve the Ferrara chapel sometime before 1503. In 1504 he returned north to the Netherlands court at Condé where he remained until his death in 1521.

Among Josquin's prolific liturgical output, two works are of interest to this study, a Gloria, mentioned earlier, that appeared in Petrucci's *Fragmenta Missarum* of 1505 and is contemporary with La Rue's mass, and a complete

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7 An early edition of Brumel's mass is *Les maîtres musiciens de la renaissance française*, Vol IX, No. 1, edited by Henry Expert and published in 1898. However, a more contemporary and more accurate edition is that of Barton Hudson in *Antoine Brumel: Opera Omnia*, Vol. IV, which is *Corpus Mensurabilis Musicae*, vol. 5, pp. 1-34.

Missa de beata virgine for four voices, which was published in the collection of Antico's with Brumel's mass in 1516.

With the above biographical and polyphonic source information in mind, we turn now to the chant sources. In the Introduction to Volume I of Bryden and Hughes' *An Index to Gregorian Chant*, there is a discussion regarding the place and need for that general index. A distinction is made between the type of source that serves as a reference and one for more scholarly use. The Index, being of the former category, is designed to serve general reference requirements and, as such, makes reference to many chants by their title and number in common sources such as the Liber Usualis. However, the authors state:

> It is foolish to make a detailed comparison between the cantus firmus of a Josquin motet and a chant of the same name found in the Liber Usualis; but it is just as foolish to use a twelfth-century manuscript for the purpose. What is needed in such a case is a source that Josquin himself might have consulted.

The relevance of this quotation to the present study is clear. We are concerned with precisely this

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9 The separate "Gloria" setting is found in Josquin, *Opera Omnia*, Vol. 44, edited by A. Smijers. The full mass appears in Volumes 30-31 of the same work, and also in *Das Chorwerk*, Vol. 42, edited by F. Blume. The mass also exists in numerous manuscript sources, revealing its extremely wide distribution and popularity.


issue as we try to discover the tradition of chant that Josquin and his contemporaries followed in composing a paraphrase mass. The task seems formidable at first because of the relative lack of scholarship attempting to correlate fifteenth-century chant sources by locale with composer's biographies, and because of the relative inaccessibility of the few fifteenth-century manuscript sources that contain mass Ordinaries. Given present historical knowledge in this area, it is nearly impossible to assert a direct connection between a single chant source and a particular composer. However, as we will discover, the task is greatly simplified when we see that, in fact, few variants from the contemporary versions are evident in the specific chants consulted for this study. There is a great likelihood that the composers had knowledge of nearly identical B.V.M. cycles.

For example, three important and chronologically separate fifteenth-century manuscript sources, when compared with the early twentieth-century Liber Usualis, version, reveal the similarity of the selected plainchant movements (See Appendix A, Chant Sources). The first is in the Newberry Library in Chicago, having been procured in the early twentieth century from the Henry Probasco Collection. It is an Italian graduale in two volumes of which the second contains a number of mass Ordinaries. De Ricci offers a date of 1430 for this manuscript and believes it came from
Florence. Three of the four chants needed for this study are found in this source: Kyrie IX, Gloria IX-Spiritus et alme, and Credo IV. A careful comparison proves that they correspond almost note-for-note with those of the Liber Usualis.

A second original source from Italy is that consulted by Nors S. Josephson in his study of sixteenth-century polyphonic Missae de beata virgine. In his dissertation, Josephson includes transcriptions in modern notation of Kyrie IX, Gloria IX, and Credos I and IV from a Venetian Graduale dated c. 1500. A comparison of the chants from these sources and the same chants in LU also reveals near identity (except the Marian tropes in the Gloria of the manuscript source). The single exception is the Credo IV melody from the Venetian Graduale, which resembles the one used by La Rue.

A third set of chants is found in a fifteenth-century Kyriale residing in the Pierpont Morgan Library in New York City. It was prepared in Lombardy sometime during the third quarter of the fifteenth century (possibly in 1456) for Carlo Pallavicino, Marquis of Cremona, Bishop of Lodi, a town about twenty miles from Milan, Italy. Again, when

13 Josephson, ibid., pp. 26b-c.
compared against those chants of LU, we see little significant variation.

Thus, we may tentatively assume that, save the Credo IV, which did not appear in these sources, this particular monophonic mass was not a subject for local variation, at least within the central areas of Italy in the fifteenth century. Allowing the greatest latitude in ascribing the location and year of origin of these sources, their contents would still support the above conclusion. That the fifteenth century versions remain so close to those in LU makes the evidence even more difficult to refute. Therefore, we may tentatively conclude that those Italian-based composers of Missae de beata virgine worked with nearly identical source melodies.

In an attempt to corroborate this conclusion as fully as possible, support was sought in sources not potentially associated with this study. For example, although Spanish polyphonic Missae de beata virgine will not be studied (the fine examples of this genre were composed after the 1520 limit of this study), it is interesting to note that an early sixteenth-century Spanish Graduale contains these chants and exhibits similar invariance with the LU version. The stability of these sources over wide geographic areas

14 Held at the Newberry Library and, as yet, uncatalogued.
and for several decades generates confidence that we can proceed to match plainchants to their polyphonic settings with less concern for direct historical connection.

The three composers of B.V. paraphrases who worked in German/Austrian courts--Isaac, Rener, and La Rue--composed in a somewhat different style than those in Italy. However, stylistic similarities within the group indicate a consistent and shared German tradition. At the center of this tradition is the oldest and most prolific of the three, Heinrich Isaac. In an attempt to discover something about the chant tradition which Isaac may have known, the Graduale Pataviense, dated 1511, came to light. Isaac's connection with the chant tradition represented in this Graduale of the diocese of Passau is supported by a statement in the introduction to the facsimile edition:

In seiner ungedruckten Tübinger Dissertation 'Liturgische Grundlagen und handschriftlichen Überlieferung von Heinrich Isaacs, Choralis Constantinus,' weist Gerhard-Rudolf Patzig nach, dass grosse Teile von Isaaks mehrstimmigen Propriums- und Ordinariumsvertonungen in Wien enstanden sind, wahrscheinlich unter Verwendung des Passauer Graduales.16


16 Op. cit., p. v. "In his unpublished dissertation of Tübingen, 'Liturgical Background and Manuscript Sources of Heinrich Isaac's Choralis Constantinus,' Gerhard-Rudolf Patzig has pointed out that the largest part of Isaac's polyphonic mass Props and Ordinaries came from Vienna, probably under the influence of the Passauer Graduale."
Unfortunately, Patzig's dissertation was unavailable during the course of this study so evidence of this connection was not able to be corroborated.

Unadorned notes of the chants from this book conform closely to those of the Italian sources, however those notes tend to be embellished by simple neighbor-note exchanges creating a melismatic style. Polyphonic paraphrases of Isaac, LaRue and Rener show melodic characteristics that appear to have been based on similarly embellished sources. The polyphonic masses of these composers will be compared with the elaborated plainchants of Passau.
The task to be accomplished by this analysis is to understand better the interactive roles of mode and paraphrase as compositional determinants. Unfortunately, neither early sixteenth-century theory nor modern analysis has produced widely-accepted tools that suffice in this effort. This chapter discusses the derivation and application of tools used in this study.

The structure of a paraphrase mass results, in part, from the correlation of two known elements:

1) rendering of the original chant melody in one or more voices, to some degree of recognizability;

2) obedience to contemporary norms of consonance and dissonance.

Beyond that, numerous differences are evident among composers, masses, and movements—differences that, in certain cases seem to indicate greater or lesser interest in preserving the mode of the original chant. The analytical methods employed are intent on shedding light on those differences that are most expressive of mode. In an exploration such as this, there is as much interest in illuminating individual differences as drawing more general conclusions regarding polyphonic modality.
The analysis consists of two stages, the first concentrating on melodic character within paraphrase, the other on vertical structures within the counterpoint. Each attempts to organize observations in these aspects, then investigates any relationship to the expression of modality.

First, we must come to as clear an understanding as possible of the process of paraphrase in the repertoire at large. It is obvious that no chant melody would fit the requirements of serving as one voice of a multi-voiced texture without alteration. Not all alterations are significant, nor will they shed light on issues of mode. The observations in Chapter V establish some norms of paraphrase technique in order to bring to the foreground those events that are unusual and potentially significant to the subsequent discussion of modal expression.

The Gloria movements of B.V. masses by two significant composers, Josquin and Brumel, are used as examples. Techniques of melodic alteration which were successfully employed therein will serve as a foundation against which the techniques of these and other composers will be compared. The consistency of certain techniques raises and clarifies questions of priority in the compositional process.

Ways in which these two composers resolved the many irregularities that arise in setting a pre-existent, through-composed melody within the contrapuntal complexity
of a polyphonic mass are observed. From these observations are derived a set of stylistic points which serve as a base of comparison in studying the paraphrase techniques at large. The points will be presented progressively, starting with simple points and building to as complete a theory as possible. They fall into three interdependent domains:

a. Pitch--aspects of pitch selection, addition, omission, elaboration, and context;

b. Rhythm--aspects of the rhythmicization of the plainchant (which, lacking evidence to the contrary, is assumed to have been arhythmic);

c. Voice combination--the interaction of the paraphrase voice with other voices to create a complete musical texture.

Having explored techniques of paraphrase, the second area of analysis, concentrating on vertical elements more directly concerns the issue of mode in polyphony. For example, a prominent vertical feature that evokes a consciousness of mode is that of cadence. However, the inherent character of a paraphrase setting draws attention to melodic events that take place internal to phrases between identifiable cadences. How may we address the task of finding and classifying consistencies among the variety of strategies found within phrases of polyphonic textures, and, what are the rules or aims that organize them?
One approach is found in studying arrangements of consonance and dissonance between voice pairs. The theory of two-voice counterpoint was well formulated before 1500 both in musical tradition and theoretical documents. An analytical tool based on this tradition of dyadic successions offers the potential for exploring strategies and relationships implicit in fuller textures of four or more voices. The remainder of this chapter develops such a tool. Particular aspects of the interaction of two voices are defined and their effects are traced in the selected repertoire.

The groundwork for this effort is found in previous research on discant and discant treatises. Scholars such as Thrasybulos Georgiades and his more recent interpreters, Sylvia Kenney and Richard Crocker, have shown the continued influence of discant—both the term and the concept—on fourteenth and fifteenth century polyphonic styles. In their respective writings they present evidence that the theory of intervallic relations between two voices persisted as a viable basis for composition throughout

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Europe in the fifteenth century. Furthermore, Crocker suggests that the "two-part framework," a contrapuntal scaffold derived directly from the rules of discant, had priority into the sixteenth century, and was the basis for instruction in composition through the period.

The appeal of Crocker's thesis as a position from which to inspect sixteenth-century polyphony is two-fold:

1) It offers a convenient and preferable alternative to viewing Renaissance polyphony by the potentially erroneous "master plan" of tonality;

2) Crocker's view offers a useful guide in developing the aforementioned analytical tool. His ideas must be broadened somewhat, so that any pair of voices, not only the "structural pair," can have priority at a given point in the structure. Doing so in this analysis will allow a penetration of the sub-phrase structure and allow for a better understanding of non-cadential, as well as cadential vertical combinations.

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5 Crocker, op. cit., p. 15. Granted, the relation between a pedagogical system, in this instance one based on discant, and the resulting style is not as simple and direct as one might assume; take, for example, the relation between Fuxian counterpoint and the music of Haydn and Mozart; the influence of the pedagogical system is only evident at a subtle level.
In following the intent to explore the music in terms of a cadential/non-cadential dichotomy, we encounter a significant dilemma. In the complex, overlapping phrases of the repertoire in question, we find that all cadences are not created equally. How, then, do we distinguish a weak cadence from a similar but clearly non-cadential device?

Music is a temporal art. All styles and periods of music exhibit variations and interruptions of flow through time. The term cadence is a generic term for a complex set of factors which creates and fulfills—or in some cases denies—the expectation for these interruptions.

A cadence has certain acoustically as well as historically based properties. One acoustic property which has universality across time and cultures is the resolution of tension or dissonance. In the period under discussion, for example, the term and idea of cadence remained integrally associated with the intervallic progression between two voices from an imperfect to a perfect consonance in contrary step-wise motion (thus, 3rd-to-unison, 6th-to-octave, etc.). Of significance to our discussion is the fact that the pitch on which the perfect consonance occurred was acoustically reinforced, giving it some prominence relative to surrounding pitches.

Other properties, largely of a stylistic nature, have also been strongly associated with cadences. For example,
mainstream Renaissance theory distinguished formal from simple cadences. The formal cadence had a suspension (often the 7-6) on the approach to the imperfect consonance. The formality of the cadence was often reinforced by embellishment of the approach and resolution of the suspension with neighboring notes.

Factors such as these contribute to two opposing perceptions relative to the notion of flow:

1) Continuation—involving those factors which cue us to perceive or expect uninterrupted activity or motion from one moment into successive moments; and,

2) Interruption—involving those factors which are perceived as stopping the motion, however briefly.

Frequently both continuing and interrupting forces are present in varying strengths, making it necessary to weigh each and reckon their composite effect based on empirical and documentary evidence. The results of such a reckoning within the context of music of the sixteenth century, may be demonstrated by an example.
Example 1 is an excerpt from Josquin des Prez' Missa de beata virgine, specifically, a page from the Gloria. It is based on the Gregorian Gloria 9, with a Marian trope, "Spiritus et alme," which was traditionally included in sixteenth-century B.V. masses. The example, measures 98 to 122, was selected for the convenience of showing a typical variety of potential cadences based on progressions from imperfect to perfect consonances. In this case, many 6th-to-octave and 3rd-to-unison intervallic motions between two voices are marked and numbered for consideration. For example, at m. 99 there is a 3rd-to-unison between the Altus and Bassus; at m. 100 an embellished 6th-to-octave between the Altus and Tenor; and so on.

At m. 106 we recognize a clear formal cadence on D which coincides with a major division in the text. The trope "Primogenitus Mariae virginis" is inserted within the Mass Ordinary after the words "Filius patris." The cadence is formal according to contemporary sixteenth-century theory. It has a suspended and embellished cantizans in the superius, a descending stepwise tenorizans in the tenor, and a descending fifth bassizans in the bassus. It

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Example 1--Josquin des Prez, Missa de beata virgine, "Gloria," mm. 98-122.
displays the essential elements which, in one combination or another, comprise a typical cadence of the period:

1. The three characteristic voice motions—
   a. Cantizans—the voice which ascends a step to the perfect consonance;
   b. Tenorizans—the voice which descends a step to the perfect consonance;
   c. Bassizans—the voice which descends a perfect fifth (or ascends a perfect fourth);

2. The final syllable of a word or line of text in one or more voices; and,

3. Preparation by a suspension, often with embellishment, in two or more voices.

Another factor, rhythm, should be included here. The cessation of activity—that is, the prolonging of time values in all voices—obviously causes an interruption of the musical flow. Where such prolongations occur on imperfect consonances, they may create an expectation for resolution to perfect consonances. Such a case is seen in m. 104 in the example where duration of all voices is extended and the flow momentarily ceases.

Although theories of cadence occupied the writings of many late fifteenth and early sixteenth century theorists, perhaps those of Tinctoris are best formulated and reflect the most common views of that era.
In seeking to account for these factors as they are presented in various combinations and contexts, the following scale of values is useful. It is not presented as a full-scale theory, but rather, as an informal means of quantifying relative strength of cadences. With the scale we recognize and acknowledge that degrees of cadence exist and that those degrees depend on the interaction of certain structural components. The resulting values are arithmetically simple. Their validity will be shown by the usefulness and intuitive rightness of the results of their application.

**TABLE I**

VALUES OF CADENCE FACTORS

<table>
<thead>
<tr>
<th>Element</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cantizans</td>
<td>+1</td>
</tr>
<tr>
<td>Tenorizans</td>
<td>+1</td>
</tr>
<tr>
<td>Bassizans</td>
<td>+1</td>
</tr>
<tr>
<td>Text Termination</td>
<td>+1 per voice in which a word or phrase of text terminates</td>
</tr>
<tr>
<td>Suspension or Embellishment</td>
<td>+1 per usage</td>
</tr>
<tr>
<td>Rhythmic Cessation</td>
<td>+1 where the pause in all voices equals or exceeds twice the predominant pulse</td>
</tr>
</tbody>
</table>

Using this scale, the cadence at m. 106, which has embellished (+1) and suspended (+1) cantizans in the superius (+1), a tenorizans (+1), and a bassizans (+1), and
three voices in which text terminates (+3), has a total value of 8 out of a possible 9. Similar accounts may be made at other potential cadences. For example, the one at m. 112 has a value of 5, the one at m. 102 has a value of 5, and the one at m. 104 a value of 4.

Although the relative significance of the various structural components is subjective, the results can be corroborated in the interdependence of these musical elements with the text underlay. We know that the integration of text and music was a significant component in the compositional process of humanistic composers. This is supported by the fact that the number of voices in which text terminates corresponds directly with the value accrued by adding together the values of the structural components. Knowing one—the text arrangement or the musical structure—we can predict the other with a high degree of accuracy. This is true to the point that it is tempting to base our judgement of cadence/non-cadence solely on text factors. However, we see in Example 2 a situation in which the text does not terminate in any voice. We will find cases such as this that were probably as intended by the composer. However, other similar cases are more likely a result of ambiguous indications of text underlay in early manuscripts, which have been incorrectly rendered by modern editors. In either case, we must consider both text and music to insure the most accurate results.
Example 2—Josquin des Pres, Missa de beata virgine, Gloria, mm. 89-90.

Now we are left with the arbitrary decision of what numeric value is to be the threshold above which a potential structure is considered a cadence, and below which it is not. However, based on the preceding discussion, it seems evident that our original dichotomous view of cadence/non-cadence is no longer appropriate or defensible. Rather, cadence is a matter of degree. Therefore, we may define three regions along a continuation/interruption continuum, recognizing that the borders of separation must be considered somewhat arbitrary. These regions do, however, reflect different strengths and, as we hope to demonstrate, different effects on the listener.
Level I - Full Interruption

a. At least two voices have text termination;
b. The total value is 6 or greater.

This level generally corresponds to what is traditionally called a full or structural cadence that would normally end a section or movement.

Level II - Partial Interruption

a. At least one voice has text termination; and,
b. The total value is 3 or greater; or,
c. No voices have text termination; but,
d. The total value is 5 or greater.

This level corresponds to intermediate or transient cadences, somewhat weaker, but often found at ends of text phrases.

Level III - Continuation

Any of the two musical elements are present.

Limited in this study to a cantizans and tenorizans combining to create a 6th-to-octave or 3rd-to-unison dyadic progression, these devices resemble simple cadences, but, due to their intra-phrase positions, do not function as cadences. They might be termed "contrapuntal accentuations."

For purposes of studying the effect of these dyadic devices on perceptions of mode, we will concentrate on
those of Level I or II. However, those of Level III remain of interest. They serve to give slight emphasis to the pitches on which they occur while causing little disruption of the musical flow. Although their use is less regulated and may often be a byproduct of other contrapuntal techniques, their significance will be explored in the following analysis.
CHAPTER V
PARAPHRASE TECHNIQUE

It is important to distinguish between the common practices of the fifteenth century and those of the sixteenth century in using a cantus prius factus. Josquin and Brumel, whose works are the subject of this chapter, were among a generation of composers who, following newly emergent humanistic impulses, took a more progressive view in setting pre-existent liturgical melodies, moving away from the strict authority of the earlier period. However, instead of further obscuring the chant or discarding it altogether, Josquin and Brumel gave it a role that was both more utilitarian and more emancipated. It served as a source of melodic material used to weave the foreground fabric of the polyphony.

We will observe that the design (e.g., phraseology, cadence pitches, text underlay) of the paraphrase versions conforms closely to that of the original. As a result, the order of complexity of paraphrasing is relatively low; that is, few liberties were taken which would disguise the identity of the source and its derivation. This is in contrast to earlier mass cycles based on chant, in which the source tune usually appeared in a foundational (tenor) voice in long note values. This foundational voice controlled the progress of the music at a background level, but was
obscured to the listener by the more prominent activity of the other voices. Its presence was required by canonic authority, but that presence was only apparent to the most informed listeners.

The Gloria on which Josquin's and Brumel's settings (and those of other composers treated in Chapter VII) are based is from the Gregorian Mass IX, "In festis virginis," commonly known as "Missa cum jubilo." This Gloria is well known for its inclusion of the Marian trope "Spiritus et alme."

The original chant is classified in LU as being Mode VII, Mixolydian. An analysis of the chant by traditional criteria confirms this classification. (Appendix A contains examples of the chants used in this study.) Its ambitus is generally g to g', with a single descent to e below on the word "Deo" in the first phrase, and an ascent to a' above on the words "Tu solus altissimus" later in the chant. Cadences occur exclusively on g and d', with those on d' being greater in number (twelve on d' versus six on g). The final cadence occurs on g as would be expected within this classification.

The form of the monophonic Gloria is through-composed. In his analysis of Gloria 9 Bruno Stäblein has found that

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motivic recurrences or parallelisms are rare throughout the movement. A wide variety of phrase opening and closing formulas are used. In its variety of motives, this Gloria reflects the eclectic and improvisational process that is characteristic of chant composition.

These Gloria settings by two prominent and centrally-placed composers offer a fertile ground for establishing certain stylistic norms. After thorough comparative analysis, certain stylistic norms were recognized and presented here as points of observation. Although falling short of a formal theory, their statements assist in clarifying and organizing analytic observations. We begin with the most general points.

POINT 1: All notes of the chant tend to be used in order and within one voice.

In the course of analysis, occasional problems arise in matching a given pitch from the chant with its counterpart in the paraphrase. Therefore, where two or more pitches can be correlated to one note of the chant, even when they are not successive, the first will be selected, except in two cases:

a. If the second of the two notes receives greater metric or agogic accent; or,

b. The second of the two possible notes is the penultimate pitch of a phrase in the model. This
allows the two notes which comprise the cadence to be matched.

POINT 2a: Notes not in the original tend to be inserted toward the latter parts of phrases.

This point follows from the hypothesis that the source chant was intended to be recognizable. The identity of a phrase is more clearly established near its beginning, after which deviations are possible. Also, in a contrapuntal exposition, maintaining vertical relationships would become more complex as following voices enter. Points 2b and 2c further clarify this practice:

POINT 2b: When notes not in the chant are inserted nearer the beginning of a phrase, they tend to be single and embellishing in function; e.g., neighbor notes or passing notes.

POINT 2c: When notes not in the chant are inserted nearer the end of a phrase, they tend to be in groups of two or more and deviate further from the original contour. (See Examples 1 and 2 on the next page.)
Example 1—Phrase 1 of "Gloria 9-Spiritus et alme" from LU and from settings of Josquin and Brumel.

Example 2—Phrase 2 of "Gloria 9-Spiritus et alme" from LU and from settings of Josquin and Brumel.
The next point accounts for the insertion of notes near the ends of phrases. This point arises from the common method of approaching a cadence with a 2-3 suspension.

POINT 2d: The cadence pitch will occur in a phrase at least once prior to the cadence even when not given as such in the original. (This is also shown in Examples 1 and 2 on the previous page.)

Having stated the preceding points which account for inserted notes, we turn to those which concern omissions from the original.

POINT 3: Repeated notes of the chant model may be reduced to one note in the paraphrase. (See Example 3, below.)

Example 3--Phrase 3 of "Gloria 9-Spiritus et alme" from LU and from settings of Josquin and Brumel.

It is a general feature of sixteenth-century polyphony that step-wise motion in single voices is the most preferred
melodic motion, short leaps less so, repeated notes still less. The melodic unison does not seem to satisfy the need for continuous and flowing motion.

The next point explains insertions and omissions of notes due to the melodic structure:

**POINT 4:** Pitches are inserted or omitted from the source chant in order to:

a. Continue a melodic line;
b. Balance the melodic contour;
c. Equalize phrase lengths.

Notes are not only inserted or omitted, as above, but given notes may be altered.

**POINT 5a:** A note of the model may be altered by no more than one scale step.

There is a problem of interdependent criteria here because of the fact that an alteration greater than one step would tend to destroy the perceived correspondence between the note in the source and the one in the paraphrase. Therefore, an alternative statement of this point might read:

**POINT 5b:** If a note of the paraphrase falls more than one step from the corresponding note in the model, it no longer retains its identity with the original—
and consequently, its status as a simple alteration—and is explained in some other way.

Points 5a and b cover those situations in which the paraphrase note has clearly substituted for the given note in a way that preserves the contour of the melody. Example 2, shown above, has a clear example where Josquin has substituted B for the A given as the second note of the phrase.

POINT 6: Notes may be inserted, omitted, or altered in order to accommodate the activity of a more prominent voice.

A simple example would be that of adding or subtracting notes so that a point of cadence is achieved. Also, of course, consonant vertical intervals would need to be maintained.

Another area of observation is that of rhythm:

POINT 7: The paraphrase is rhythmicized so as to give emphasis to individual notes, groups of notes, or phrases of the original.

This emphasis is accomplished in several ways:

POINT 7a: Boundary notes (first and last notes) of the text phrases are emphasized by agogic stress;
POINT 7b: First notes of phrases are frequently preceded by rests and commence in strong metric positions;

POINT 7c: Final notes commence on strong beats, having been approached by formal cadences.

Another aspect of rhythm concerns the time span within which the paraphrased melody is presented:

POINT 8: In the paraphrase, the original notes near the end of each phrase tend to be separated by greater spans of time than those near the beginning.

Point 8 is a corollary to Point 2a since it results from the insertion of notes. It is distinct, however, because where Point 2a merely states that notes are inserted, Point 8 shows that there may be an increase in activity despite slower pacing of the original notes. Example 4 shows a clear example by both composers.

Example 4--Phrase 5 of "Gloria 9-Spiritus et alme" from LU and settings of Josquin and Brumel
POINT 9: The chant and added notes, which comprise a single voice, may be rhythmicized to cause emphasis counter to the prevailing meter, especially as the phrase nears its cadence.

A particular and frequent example is that rhythmic grouping beginning with a dotted-breve and comprising a three-beat grouping (perfection) within a four beat context with more semi-minim (half-beat) motion. Point 9, in its implication of greater rhythmic complexity as the phrase approaches its cadence, describes an aspect of musical structure that is common to a broad historical period spanning that under discussion. It is an important component of musical style from Ockeghem to Bach, and is termed "drive to cadence." If composers of paraphrase were interested in this kind of preparation for cadences, then we have a partial explanation for the increased use of non-original pitches in these pre-cadential positions.

The form of these polyphonic paraphrase settings is determined by the original and follows Point 1.

POINT 10a: Each phrase of the chant movement is the subject of a distinct imitative exposition (however brief) that commonly overlaps preceding and following phrases.
POINT 10b: A group of such expositions may combine to form a section or whole movement.

Here again, the points are obvious to one who is conversant with the literature on sixteenth-century style. However, these points are significant in distinguishing this paraphrase technique from a tenor mass technique where a single source phrase often supports multiple phrases in the polyphonic setting.

In Points 11a-d, we explore techniques of voice combination:

POINT 11a: The voice carrying the chant paraphrase tends to have a dominant role in the musical structure;

POINT 11b: The Superius and Tenor voices tend to be the controlling voices (in four and five-voice textures);

POINT 11c: At least one voice other than the Superius or Tenor will imitate the lead voice in imitative procedure;

POINT 11d: A second voice may enter with the leading voice and provide non-imitative accompanying material.

We will see that in the resulting texture the voices are presented in common polyphonic arrangements. Among
them are strict canon or less strict points of imitation between two or four voices (seldom three) occasionally set apart by brief homophonic passages.

Now we turn to Points relating to the expression of mode:

POINT 12a: Important pitches of the mode receive emphasis through techniques of voice combination.

The pitches G and D have been significant in the individual voices of this mixolydian setting, but were not given special mention because that was largely pre-ordained by the given chant. However, as these voices are combined with other voices, the composer could exercise control over which pitches were emphasized.

Emphasis could be accomplished by:

POINT 12b: The order and level of imitative entrances;

POINT 12c: Frequency and duration of specific pitches in all voices;

POINT 12d: The ambitus and range of adjacent voices;

POINT 12e: Cadence pitches.

When designing a paraphrase setting, many of these parameters were given in the chant model; however, composers could also exercise such control by less evident
means, such as the discant formulae described in the preceding chapter.

Such formulae result in doubled pitches, approached by step, which tend to create contrapuntal accents. Those doubled pitches thereby gain an undeniable acoustical prominence. Also, such emphases do not relate directly to concepts of harmony or harmonic progression. The pitches emphasized by these techniques are not necessarily the roots of 5-3 sonorities (root-position triads).

Support for this comes from the observation that there is a conspicuous absence of these dyadic emphases, and subsequent lack of emphasis on modally important pitches, in broad sections of the polyphonic "Glorías." It is seen most clearly in the setting of the "Amen" by both composers, (seen as Examples 5a and 5b on the next page) where numerous opportunities for synchronous octave doublings occur but seem to be purposely denied.

It is interesting to speculate as to the means by which composers were able to influence the listener's perception of musical motion. Step-wise, contrary approaches to octaves and unisons in varying pairs of voices may have been used as subtle anchoring points relative to both phrase rhythm and mode, serving to articulate and stabilize the music. Throughout a piece, these motions would fulfill the need for such stability without interrupting the sense of continuous flow within phrases. When the composer sought to
generate momentum and create a less-anchored preparation for the final cadence of the movement, these motions seem to have been purposely evaded. Clearly, such speculation leads to some interesting hypotheses regarding the definition and
comparison of mode within polyphony. These hypotheses are tested in the chapters that follow.

POINT 13: As a phrase proceeds, the composite density of rhythmic activity and accent increases through increased activity in more than one voice.

This follows Point 9. When several voices are superimposed, each having a different place of accent with respect to the perceived meter, greater complexity naturally follows.

POINT 14: Similarity and contrast of textures is a form-giving technique.

This is another statement that seems obvious at first, however, it implies significant compositional control. As suggested in the commentary following Points 11a - d, when treating a plainchant source so literally, the potential for contrast from phrase to phrase is limited. Given our premise that the composer chose not to deviate substantially from what was given, he had the difficult task of creating dissimilar but unified material over an extensive structure in such a way as to create interesting and effective formal articulations. Josquin, for example, has presented a wide variety of relationships among voices, e.g., paired imitation, extended duet passages, and phrases in familiar style, all within a consistent and unified
mood. By contrast (and potentially as an indication of his lesser technical gifts), Brumel tended to rely on a constant four-voice texture presented exclusively in points of imitation.

In conclusion, we can assert that Josquin and Brumel achieved coherence and unity in their works by factors partially dependent on consistent techniques of paraphrase. Further, such techniques constitute a clear and identifiable style. Reference to the original chant was preserved within a relatively strict form. Yet, with the interpolation of free material, both composers created consistently sonorous and powerful polyphonic renditions.

We see that variants on the original chant were numerous and frequent. We have considered some plausible explanations for those variants. It now remains to explore them more fully, particularly those that seem to participate in the expression of mode.
The Kyrie 9 plainchant is both leaner in melodic content and simpler in structure than Gloria 9 or either Credo. Thus, it serves as an appropriate starting point for our modal analysis.

The nine-part musical form consists of three sections of three two-phrase periods as does the text. The text underlay in LU separates each period into two phrases, one for each word, the first, "Kyrie" or "Christe," the second "eleison." The musical form may be represented by the formal diagram:

\[ A \quad B \quad A' \]
\[ "Kyrie" \quad "Christe" \quad "Kyrie" \]
\[ ab \quad cb \quad ab \quad de \quad fb \quad de \quad ge \quad fb \quad g'g'fb \]

The two g' sections, which extend the last "Kyrie," differ from g only at the cadence where the original ends on the pitch g and the variant ends on the pitch a. The modal significance of this alteration will be explored below.

The Kyrie melody is Mode I, Dorian. There is a clear exposition of fifth and fourth species. Phrases a, b, and f are clearly within the d-a fifth, while phrases c, g, and g' are within the a-dd fourth. Of twenty cadences, twelve are on D, five are on A, and three are on G. The cadences on G each occur on the first phrase of a phrase pair and are
followed by one on A. This creates a two-phrase period similar to an antecedent-consequent pair within the mode I category.

A comparison of all monophonic sources consulted for this study, as shown in Appendix A, reveals only small variation. The melodic motion is mostly scalar with leaps generally within the finalis, mediant, and dominant of the mode. This tends to organize and solidify the aural perception of the modal assignment.

Certain melodic patterns are reflected or reused at various pitch levels. For example, the opening motive of d-f-g-a is used frequently to open phrases. It also occurs at the pitches a-c-d-e.

The polyphonic paraphrase settings vary significantly, reflecting diverse stylistic origins. Those of Isaac and La Rue show comparatively little reliance on the original for their melodic content, while those of Josquin and Brumel show the scope and phrase structure of the original more clearly. It seems that the simple and repetitive chant offered insufficient opportunities for evoking the florid and complex Austrian style, and greater liberties were taken by the former two composers. The Italian/Netherlanders display a more conservative view of the art of paraphrase and kept the melodic content of their settings closer to the original.
The first polyphonic example for discussion is La Rue's Kyrie (See Appendix B for xerographic reproductions of the polyphonic settings). The distribution of voices is "ad aequales," with the two middle voices sharing the same range and the outer voices an octave apart. In general the Tenor carries the mode.

La Rue's Kyrie is in three compact sections delimited according to the normal textual divisions. Each is based on a different contrapuntal principle. The first "Kyrie," in its compactness, appears to be a hybrid of a traditional cantus firmus and paraphrase techniques. The paraphrased chant fragment, stated at the interval of a fifth above the original, is held in the Tenor voice. The other voices enter with it in free counterpoint and are later joined by the Tenor in a complex drive to the section close. Although motives and contours comprising this melody bear a vague relationship to the original chant, neither a clear paraphrase nor consistent imitative principal is evident in the thirteen measures of this section.

The mode centers on A with the section's only Level I cadence also on A. Three Level II cadences are on A (m. 4), E (m. 7), and A (m. 10), respectively. The small number of Level III cadences within the complex counterpoint suggests that they were avoided in order to avoid cadence-like emphases on pitches outside the intended mode, or, perhaps, to achieve a prevailing sense of sonority filled
with imperfect consonances and only coincidentally containing some perfect consonances. In either case, imperfect-to-perfect interval successions are markedly lacking.

The "Christe" begins with more obvious points of imitation using the opening fragment of the original chant. The Tenor again takes on the role of primary structural voice. It often works in duet with the Bass, especially in the third statement of "Christe eleison" where those voices move in extremely long note values while the upper voices continue in free counterpoint. The pitch center is E, the fifth above A, with significant Level I and II cadences emphasizing D (m. 25), G (m. 35), and E (m. 44), the final cadence.

The last "Kyrie" is based on a conservative cantus firmus technique. The Tenor takes on a foundational role and supports Level I and II cadences on D (m. 47) and three, including the final, on A (mm. 50, 53, and 59).

Isaac's first B.V. mass in four voices is structurally similar to La Rue's mass. In the first "Kyrie" section Isaac has sculpted a contrapuntal line that preserves the contour and many of the pitches of the second phrase of the original chant. Like La Rue's, each section is brief and proceeds from an imitative exposition to freer counterpoint that leads to the section cadence.
The modal intent is extremely clear. The mode on G with one flat in the key signature expresses mode I, a fourth above the original. In the first "Kyrie," Level II cadences are on G (mm. 4, 5, and 9), with frequent Level III progressions on D and G. The final Level I is on G.

The "Christe" is also similar to La Rue's in its use of a traditional cantus firmus procedure. In this case, the Superius voice carries a simplification of the chant, while the lower voices are in free counterpoint with entrances based on motives from the previous section.

Again, the mode centers a fourth above that of the original chant; however, there are some interesting and contradictory variations in the use of Level I and II cadences. They center on the pitches C (mm. 18 and 24) and G (mm. 20 and 26). A fully-prepared Phrygian cadence with the Superius and Tenor closing on D in measure 29 is accompanied by a descending fourth movement to G in the Bass. The section ends weakly with a non-formal plagal cadence on D in two voices, setting up a continuation to the following "Kyrie."

The second "Kyrie" continues those motives derived from the first section in successive duets that increasingly overlap, creating free counterpoint leading to the section close. Cadences are on G (mm. 35, 42, and 46), B-flat (m. 48), and D (m. 39). The final Level I cadence is on G as expected. The cadence on D would seem to require a ficta
C-sharp or E-flat so that the octave would be approached by 1 major sixth; however, Isaac's editor has provided neither (although C-sharp would seem the more appropriate).

The Kyrie of Brumel's B.V. mass shows the clearest example of paraphrase technique discussed so far (See Appendix B). It, like the others, is in three contrasting sections based on the "Kyrie-Christe-Kyrie" textual division.

The first Kyrie begins with imitative entrances based on the chant melody in all voices. Notes of the chant appear first in long values, but undergo rhythmic compression and gradually more elaborate embellishment, contributing to a well-controlled and progressive drive toward the section cadence. This development negatively affects the clarity of the chant as more and more embellishing notes, shorter fragments from the original, and motives not from the chant dominate the surface-level fabric.

The movement is in Mode I, as is the original chant, transposed up a fourth with a finalis on G and one flat in the signature. Despite the complexity of the counterpoint and the rigors imposed in maintaining melodic relationship with the source chant, Brumel has exerted intricate control

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of pitch emphasis and thus of modal implication through a variety of well-conceived Level II cadences.

There are eleven Level I and II cadences, all receiving metric stress. To fully understand Brumel's modal craft, it is interesting to look at these cadences one at a time. The first cadence on G (m. 8) is borderline between Level II and III. It lacks a ficta F-sharp in the cantizans and has no text termination. One might interpret Brumel's use of the 7-6 suspension here as a device for enriching the thin, two-voice texture, rather than as a cadential implication. Certainly the text underlay confirms this view. By comparison, the Level I cadence on G (m. 11) is clearly more significant in its position as the closing figure of the first "Kyrie eleison" statement.

The Level II cadence on D (m. 14) has an editorial flat creating a phrygian approach. The use of the flat is carried over from a point earlier in the phrase where the ficta E-flat avoids a tritone with the accompanying B-flat. A suspended fourth goes unresolved as the "discant pair" progresses to the octave.

The next several cadences are distinctive in a number of ways. The Level II cadence on F (m. 21) is approached by double 7-6 suspensions a third apart. (A 9-8 suspension is also created as a byproduct of this structure.) The primary emphasis on F is weakened somewhat by a prominent A in the Superius.
An interesting approach to D occurs in the next measure. An embellished 4-3 suspension in the Altus that would ordinarily ascend step-wise to D leaps to F, a third above, while the Tenor and Bassus carry the tenorizans and bassizans formulae. The Altus, at this point, articulates the final syllable of "e-lei-son."

The next cadence structure is slightly more formal and supports a voice entry in measure 25. The Altus and Bassus emphasize D by 6-8va progression as both sing the final "Kyrie" syllable. Two cadences, one Level II and one Level I, emphasizing B-flat follow (mm. 27 and 29). Both use four voices to create progressive sonorities, including full triads and the equivalent of a dominant seventh structure, a true and unusual four pitch-class structure. Additional emphasis derives from the text where there are word endings in one or more voices.

The Level II cadence on G (m. 32) has a fugita leap in the Superius voice. However, no ficta sharp is provided and again the mid-phrase position in the text is reinforced by the musical structure.

Two Level II cadences on F and B-flat follow (m. 35). The B-flat cadence supports the entrance of the word "eleison" in the lower two voices. Emphasis on the B-flat is momentary as the section ends with a Level I cadence on G. This ultimately reinforces the intended Mode I.
A review of these cadences reveals that those on G carry the greatest strength based on position, frequency, structural formality, and text underlay. Those on B-flat rank second, giving rise to thoughts of the close relationship of these pitch centers in tonality. The anticipated strength of the pitch D as a cadence pitch is weakened by the mid-phrase position and lack of textual support. The single cadence structure on F cannot be ignored. It has a high level of structural formality in the preparation by multiple suspensions, it lies at the end of the first "Kyrie eleison" statement in the Superius, and it has greater relative strength than preceding and following cadences.

Perhaps most interesting of all is the duality exhibited by these cadence structures. Each in some way incorporates opposing forces. For example, when the text ends, the formality of the cadence is somehow broken. Or when the cadences achieve great formality and might be expected to evoke a strong sense of resolution, the rhythm carries forward. This, then, hints at the artistic significance of this movement and this composer. There is a fine balance between anchoring and motivating forces leading to points of high interest within a very controlled style. It seems doubtful that Brumel was unaware of the effects of these structures or their modal implications.

The "Christe" section begins in a contrasting texture and character. The voices are paired, two upper and two
lower. The upper pair enters as a duet with dotted rhythms and complex counterpoint. The Superius generally outlines the contours and pitches of the chant source, while the Altus provides accompaniment. The two lower voices enter with the Tenor taking the traditional role of stating the chant as a cantus firmus, while the Bassus enters imitating the countermelody of the Altus, then continues a supporting role in the long note values of the Tenor. As they approach the conclusion of the first "Christe eleison" statement, the Bassus and Tenor anticipate the more imitative technique of the second statement. The third "Christe" statement proceeds with the four voices more equal, moving in a four-part texture, varied by continued dotted-rhythm embellishments.

The modal nature of this section is rather conservative and controlled in spite of the variety and originality of contrapuntal devices explored. In particular, the portion of the section involving voice pairings (mm. 38-54) has seven Level II cadences, all prepared by 7-6 suspensions moving in eighth-notes. A variant of these seven occurs in measure 52 where the lower voice of the imitating pair is transposed down a fifth creating a 4-3 preparation to a perfect fifth resolution. Rather than repetitious renderings of traditional formula, Brumel has created an unique setting for each. Of the seven cases, four close on D with phrygian approaches. This is consistent with the
position of D as the repercussio in a mi-fa (half-step) relationship to its upper neighbor in the transposed Mode I. Here the ficta E-flat preserves that common relationship. The emphasis placed on D is in contrast to the G emphases of the preceding and (as we shall see) following "Kyries." This same contrast is found in the original chant.

The third "Christe" statement has fewer identifiable cadences, a fact which is remarkable in itself considering the probability that in writing four voices in near homophony, some sixth-to-octave progressions are likely to appear. Limiting our search to those of Levels I and II, we see two on G (mm. 58 and 60), one on C (m. 60), and one on G again (m. 63). This last one serves as the section close even though the tenorizans ascends to the third to create a full triad sonority and the lower voices continue with a plagal approach to a major triad on G.

The Level II cadence on G in measure 60 takes on extra significance as it directly follows the C emphasis. Perhaps it is intended to erase from the ear the importance of a pitch that would otherwise contradict the Mode I intent.

The second "Kyrie" section is constructed in three thematic expositions based on excerpts from the original chant. The first exposition is comprised of four statements of a phrase heard first in the Bass. Each statement is accompanied by a consistent counter melody in the adjacent voice of the upper or lower pair. The second exposition
returns again to the ancient cantus firmus technique, with the melody in the Tenor, first in similar rhythm with the other voices, then in long and double-long values, and then moving with the metric ictus. All four voices remain active with the upper pair weaving a duet in free imitation. The last exposition is thoroughly imitative at the distance of a half-beat, providing a consistent, march-like drive to the final cadence.

Again, Brumel clearly stays within the modal focus while exploring every possible variation of historically derived cadence formulae. The first four present a micro-cosm of his craftsmanship in this area. Each is presented by two voices in a discant style. All are prepared by 2-3 suspensions and seem to aim toward a resolution on G; however, the first two never achieve consistency. The first evades the normal cantizans resolution with a bassizans leap of a fourth to a B-flat pitch center. The second never actually resolves, as the musical line is taken by two voices entering on D. The third takes a more normal two-voice resolution, and the fourth one is supported by bassizans and a filling voice. The carefully crafted variety and progress of these phrases toward the fourth cadence is evident.

The middle exposition of this "Kyrie" has Level II cadences on B-flat (m. 74) and G (m. 75), both with deceptive moves to G and E-flat, respectively, in the
Bassus. Two others, a Level II on C in measure 81, and a Level I on G (m. 84) conclude that exposition. The last exposition is constructed to avoid clausulae by its melodic motions in thirds and fourths with few steps to serve as of a two-voice 6-8va progression. The final Level I cadence, however, is fully prepared by a 7-6 suspension and confirms G as the modal center.

In comparing these three "Kyrie" settings, certain consistencies arise. Subject to the particular variances and to a possible bias of analysis and interpretation, there is little doubt of modal control within the polyphony.
CHAPTER VII

GLORIA 9

In this chapter we will concentrate on the Gloria movements from three complete Missae de beata virgine, plus a single Gloria, which has been found isolated from a complete mass cycle. The three are from Pierre de la Rue, Antoine Brumel, and Josquin des Pres. The Gloria is Josquin's mass fragment introduced in Chapter III.

We see little variation in this chant among the sources consulted. Appendix A shows a comparison of the first phrases of the source chants, then all of the Gloria from the Graduale Romanum II cited in Josephson's dissertation.  

The Gloria 9 was exclusively used for settings of the Gloria in polyphonic Missae de beata virgine through the end of the sixteenth century. The popularity of Gloria 9—"Spiritus et alme" was evidently based on three factors.

1. The Marian tropes—mention was made earlier of the strong tradition of Marian worship and adoration which culminated in the early sixteenth century.

2. The integration of text and music—which, though present in all movements studied, is more pronounced in this richer and more varied text.

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It would certainly have had great appeal to Humanistic composers.

3. Its concise and unified phrase structure—which, if not evident from a quick scan of the chant melody, will be demonstrated to some extent in the following analysis.

Gloria 9 is in the seventh mode, Mixolydian, with its finalis on g and repercussio on d. The ambitus of the melody generally falls within the g to g' octave.

With the through-composed form of Gloria 9, we are confronted with more melodic variety and, subsequently, a more complex analytical task. In order to reduce that complexity, we begin with a diagram of the cadence types as defined in Chapter V.

Figure 1 shows the location and pitch level of each of the three cadence types. Level I cadences are in square white notes; Level II cadences are in round white notes; and Level III contrapuntal accents are in round black notes. Each section, as delimited by bar lines, represents a unit of text. The relative position of cadences is shown proportionally within each section. However, sections are aligned to aid visual comparison of the four works studied; thus, the number and meter of actual measures within each section is variable and not proportionally represented. To correct for this variance, an index of the relative density of
Figure 1--Diagram of Cadences found in Gloria movements of La Rue, Brumel, Josquin (mass), and Josquin (fragment)
all cadences per-four-beats is included in a box at the end of each section.

An index of cadence density for the entire movement appears at the end in a double box. This is further broken down to show the percentage of each of the three types of cadence for that movement.

Two further markings are of interest—the long square brackets indicate passages in homophonic texture; and the double horizontal V's (looking like French quotations) indicate duet passages. These marks prevent inadvertently comparing dissimilar textures where contrapuntal rules are applied differently. All passages outside those marks may be assumed to be similar, that is, four-voice, imitative or canonic polyphony.

One fundamental issue raised earlier is the significance of the Level III dyads. Is there evidence to show that their position and pitch level had precedence in the design of the music? And, are there indications that control of these devices was conscious and intentional? In these Glorias, unlike the preceding Kyrie, there are a sufficient number of Level III devices to draw some meaningful conclusions.

One answer lies in noting the distribution of these devices throughout the structure. A random occurrence would suggest that they were of little import to composers and were a by-product of other higher-priority compositional
decisions. In fact, the opposite is true. We can see marked contrasts in the degree of usage among various sections, suggesting that these devices probably were under conscious control and not a result of chance. It is as if the composers would elect to use or not use these contrapuntal accents for specific effects, such as expression of text or articulation of form.

Support for this possibility is found in both of Josquin's movements at their respective "Gratias" sections (Figure 1). There is a marked increase (virtually double) in the density of cadences—from an index of .63 to 1.25 (cadences-per-four-beats) in the fragment, and (nearly tripled) from .32 to .87 in the movement from the complete mass. It is improbable that these similar results were the result of anything but a conscious effort, an effort whose purpose we admittedly do not yet completely understand.

Both of the earlier circa-1500 masses show similar contrast at the "Qui sedes" sections. La Rue's mass and Josquin's Gloria show markedly similar drops in the density of cadences from indexes of .43 and .41 to .14 and .15, respectively. This reduction is caused, to a large extent, by the elimination of all Level III actions hinting again that some expressive purpose was fulfilled.

We recall another interesting contrast from our study of paraphrase technique in Chapter V. At the ends of Brumel's and Josquin's Glorias, specifically the "Amen"
sections, there is a conspicuous lack of Level III devices in spite of the highly complex activity in all voices and many octave doublings. It is as if all step-wise approaches to octaves had been purposely avoided in order to create less stability and heightened anticipation of the final cadence.

The overall density indexes show interesting differences among the three composers (Figure 1). There is a wide variation between La Rue's index of .43 and Brumel's .79, while both of Josquin's fall between and are generally consistent with each other. We imagine that La Rue's movement would seem less coherent and anchored, Brumel's might be too stable and plodding, while Josquin's works are carefully balanced (at least according to our criteria), avoiding either extreme.

A comparison of the percentage of each type of cadence used by the three composers shows greater conformity. All used Level III cadences about half the time. There is some variation in the use of Level I cadences between La Rue and Josquin's later work, on the one hand (about one-third of all cadences), and Brumel and Josquin's early work, on the other (about one-fifth). Again, we may speculate that the greater number of Level I cadences in the first two works reflects a greater concern for providing "anchoring" points in the structure, and reflects a more conservative use of discant technique.
Such contrast in frequency and density of cadences is provocative, but does not lead to a level of abstract formality from which more general assertions may safely be made. Perhaps the aforementioned differences in usage were a result of some other as yet unrecognized feature of the given melody. It would help clear these doubts, then, if we would identify similar or identical melodic units and compare their respective polyphonic settings.

Exact repetition of melodic material is, of course, quite rare in the chant; however, several text phrases are melodically unified in terms of opening and closing motives, range, and contour. Two examples are extracted for further exploration.

One is from the four successive acclamations to God, "Laudamus te, Benedictimus te, Adoramus te, Glorificamus te." Of these the first, second, and fourth are melodically parallel. The third, "Adoramus te," cadences on G rather than D, as do the others, and is removed from consideration.

In La Rue's setting (Example 1), a noticeable difference in position and emphasized pitch exists between the first two, where D is emphasized by Level II cadences, and the last phrase, where the Superius and Altus close from a third to a unison by step on the pitch A (in measure 17). This is near the end of an important text grouping and is rhythmicized to fall at a strong metric position. It is a curious and unexpected emphasis on A within the strong G-D
Example 1—Gloria from Missa de beata virgine of Pierre de La Rue, mm. 9-13, 15-18.

orientation of the movement overall, especially as one looks ahead to the weaker and less convincing arrival on D in the same measure. A possible way of understanding this case is that La Rue meant to connect this last of four acclamations with the following phrase, "Gratias agimus," and therefore sought to avoid the sense of closure that a strong cadence would have caused (analogous, perhaps, to the role of a deceptive cadence in tonal practice).

Josquin's earlier setting is similar. Level III cadences on E and A, and a Level II cadence, also on A, precede the structural cadence on D. This is also a significant departure from the G and D scaffold of the Mixolydian modal structure presented by the original chant.

A second example of repeated melodic material occurs in the chant at "Tu solus altissimus" and the following trope, "Mariam coronans." These parallel text phrases use exactly the same pitches from the original chant with both cadencing on D. Josquin's later setting contains an element of
interest (Example 2). For the phrase at "Coronans" the chant is in the tenor and ends predictably on D, but the phrase is extended in the Superius and Bassus at measure 217 to produce a Level I cadence on A, which, again, is an unexpected contrast with the conspicuous D-G emphasis of the preceding similar phrase. Subsequent to the cadence on A are Level III cadences on G and C (which are at a lesser level) and an important structural cadence on D, so that, at Level II, the A cadence precedes and prepares D.

Example 2—Gloria from Missa de beata virgine by Josquin des Prez, mm. 211-222.

We see that the perfect Fourth/Fifth interval between successive cadences is somehow important. This notion is confirmed by going back through Figure 1, from which the frequencies of intervallic distances between adjacent cadences within phrases have been computed and are shown in Table I.
TABLE II
FREQUENCY OF INTERVALLIC DISTANCES BETWEEN SUCCESSIVE CADENCES

<table>
<thead>
<tr>
<th></th>
<th>La Rue (1500)</th>
<th>Josquin (1500)</th>
<th>Brumel (1513)</th>
<th>Josquin (1513)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unison</td>
<td>27%</td>
<td>18%</td>
<td>28%</td>
<td>26%</td>
</tr>
<tr>
<td>2nds</td>
<td>29%</td>
<td>28%</td>
<td>23%</td>
<td>17%</td>
</tr>
<tr>
<td>3rds</td>
<td>12%</td>
<td>11%</td>
<td>13%</td>
<td>10%</td>
</tr>
<tr>
<td>4ths</td>
<td>31%</td>
<td>43%</td>
<td>35%</td>
<td>47%</td>
</tr>
</tbody>
</table>

There is an interesting, nearly chronological trend towards greater use of fourths, and fewer seconds and thirds, culminating in Josquin's complete mass. Less than one-third of all successive cadences are other than a unison or fourth apart. Although, on this evidence we are tempted to assert that the composer was driven by tonal objectives, it seems that similar objectives may have been recognized in these purely modal movements.

There still remains the question of pitch levels. Do these fourth/fifth intervals in some way function around certain central, modally important pitches? If we discover a sense of randomness as to which pitches were emphasized, particularly those within phrases, it would undermine any argument for the modal significance of these devices.
In general, we see little of the required consistency beyond what might accidently occur from the structure of the given chant melody. Certainly, D's and G's are emphasized most frequently, but other pitches receive emphasis as well. The single exception is Josquin's later example (from the complete mass) where we see devices being centered around modally important pitches in what could be construed as conscious ways. At "Domini fili," a two-part passage, the Level III cadences on D and A (shown in black notes) clearly conform to and prepare the following cadences. Similarly, at "Qui tollis II" there is an evident strategy of repeatedly emphasizing D in anticipation of a Level I cadence on D.

We are inevitably drawn by this evidence to the difficult issue of the very existence of modality in early sixteenth-century polyphony. While it is true that the contemporary theory of the late fifteenth and early sixteenth centuries claimed no relation between counterpoint and modality, we seem to detect regions within this movement by Josquin where modally important pitches, namely the repercussio and finalis, are being systematically emphasized through contrapuntal procedure. Taking Tinctoris' fifth rule, which has been translated:
"Above no note . . . should a perfection be taken by which (distonatio) can happen,"\(^1\)

we see a plausible rationale emerge. Only if we interpret Tinctoris to mean not only notes at the ends of phrases, as this rule has been widely applied, but also those within phrases; and, if the term "perfectio" can be taken in its intervallic sense to mean the emphasis of a particular note by the progression from an imperfection to a perfection; only then do we see why composers would attempt to bring such progressions under control. By doing so, they could make the intended modality of their polyphony less ambiguous.

In Josquin's case, we see that of his two settings, the latter is more controlled in this way than the earlier. It tends to confirm a development in his style and exhibits, from yet a different perspective, his superior craftsmanship and another source of coherence and unity. Thus, this study complements Leeman Perkin's analysis of the large-scale design of this same mass by showing similar consistencies of modal treatment at this microcosmic level.

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Both Credo 1 and 4 chants are paraphrased in the polyphonic cycles under investigation. Credo 1 is from the 11th and Credo 4 from the fifteenth century. With the evolution of monophonic modal theory in the four centuries which separate their origins, we would expect a marked contrast in the clarity of modal expression in the two Credo melodies. It can be presumed that the composer of the earlier Credo had fewer well-established modal principles to follow than the fifteenth century composer. If, according to this line of thought, the polyphonic settings under study owe their modal expression to the mode of the chant on which they are based, it follows that similar contrast should be evident in the respective polyphonic settings. Comparison and analysis of the two Credo sources will be a fitting test of this hypothesis.

Credo 1 is assigned Mode IV, Hypophrygian, in the contemporary source, Liber Usualis. The ambitus of the melody is unusually narrow, using only the sixth, D to B-flat. Since there is no clear use of the fourth species above or below the fifth species, the authentic or plagal identity cannot be determined by ambitus. The melodic

\[\text{See Appendix A for common versions of both Credos.}\]
prominence of two pitches, G and A, gives better evidence of the modal assignment. According to modal theory, the reciting tone or dominant in authentic modes (I, V, and VII) is the fifth above the final, while in plagal forms it is the third below the dominant of the authentic version. Both the plagal and authentic forms of Phrygian mode are exceptional. Mode III uses C, the sixth above, as the dominant, and Mode IV uses the third below the dominant of the authentic form, A.

Melodic cadences throughout the plainchant are not predominantly on the E final of the Phrygian mode. Of forty-six phrases, twenty-five end on G, ten each on E (including the final cadence, thus again confirming the modal assignment) and A, and three on D.

With the melody's narrow range, its intervallic content is rather confined. Melodic intervals are mostly unison or seconds, with a few thirds and just one fourth (at "saeculi" in the penultimate phrase). The frequent use of a reciting tone and the use of consistent phrase openings with e-f-g (used eighteen times) or a-b-a (used fourteen times) suggests the origins of Credo I as a Psalm-like intonation.

In the LU version, phrases with A as the reciting tone consistently use a flatted B in order to avoid the tritone B-F outline. Phrases using the G dominant never ascend to B, so this outline is avoided. It is also interesting that phrases centering on A cadence on G, while phrases that
center on G cadence on A, suggesting an antecedent-consequent order. This confirms yet again the evident sensitivity composers showed toward the effect of these pitch emphases.

When we compare the fifteenth-century Credo 4 to Credo 1, we see in it more consistent organization, melodic variety, and expressiveness. The Mode is I, Dorian. Of forty-eight cadences, twenty are on A and fourteen on D, these two pitches comprising the overwhelming majority of cadences. Although phrases sometimes extend beyond the usual boundaries of the fifth/fourth species, they tend to be within one or the other. This indicates a more progressive consciousness of mode than that shown in Credo 1.

Credo 1 serves as the basis for polyphonic B.V.M. settings by Brumel and Josquin. Josquin's is for five voices, making direct comparison of voice combination techniques problematic. However, the strong historical connection between these two composers, discussed in Chapter V, makes stylistic comparisons highly appropriate.

Of the polyphonic settings, we first consider that of Antoine Brumel (See Appendix B). The disposition of voices is "ad aequales" (the two inner voices occupy the same range) with no voice predominantly carrying the modal assignment. In fact, the order and relative strength of cadences also does not prove decisive. Of twenty-five Level
I cadences, all are on D and G except three on A. Twelve of sixteen Level II cadences are on A and D. Level III cadences are far more diverse, but still retain nearly the same ratio of the more frequently used pitches. Of 165, 117 are on D, A, and G. At all three levels, those on D are in a slight majority. This prominence of D cadences is not, of course, consistent with the assigned Hypophrygian mode.

The individual voices clearly paraphrase the original chant in an imitative structure. However, cadences that would confirm the Hypophrygian assignment are not used. When we compare the content and technique of this movement with Brumel's Gloria, for example, we see far less control of the mode-giving elements. This is unusual for Brumel, who has previously shown clear awareness of modal assignment and demonstrated adequate technique for expressing that assignment.

Given our conclusion from the previous chapters that Josquin was superior in his techniques of modal expression within polyphony, it would be useful to explore his Credo 1 setting to see if he achieved clearer results than Brumel. Josquin's Credo 1, in five voices, presents an interesting arrangement (also in Appendix B). The voices are given (top to bottom) Superius, Tenor, Altus, Countertenor, and Bassus. The Tenor and Countertenor, probably composed first as the "structural pair," closely paraphrase the original and are in strict imitation throughout. Appropriately, the
Countertenor uses the D to B-flat range of the original, while the Tenor is a fifth higher, A to F. Other voices, especially the Superius, show points of imitation with this structural pair. The range of the four voices not including the Countertenor is ad aequales, with the Countertenor occupying a narrow range that overlaps with the Bassus and unusually low Altus.

Apart from regularity in paraphrasing the original, there is an obvious lack of modal identity in other aspects of the structure. For example, the three cadence levels show little expression of mode IV. Of twenty-six Level I cadences, there are none on E. (One, discussed below, has simultaneous approaches to C and E.) In cases where a phrase of the original chant ended on E, no attempt was made to strengthen or formalize that approach to E by use of suspension, significant doublings, or strict clausula technique. Twelve (nearly half) the Level I cadences are on G. The remainder of Level I cadences, in order of quantity, are C (five), D (four), A (three), and B-flat and F (with one each).

Level II cadences potentially carry significant influence on mid-phrase acoustical emphasis of given pitches. However, only four of the seventy Level II cadences are on the pitch E. Nearly two-thirds are on G and D (eighteen and twenty-six, respectively).
A significant number of the seventy-seven Level III cadences are on G and D (twenty-one and fifteen, respectively), however there are also eighteen on C. Level III cadences are also found on B-flat, A, and F, with only three on the finalis E.

Assuming priority of the framework provided by the Tenor and Countertenor pair, another approach would be to see if Josquin provided clues to the mode of the movement through specific interactions of these voices. Since historical evidence shows that the structural pair was probably laid out first, after which the other voices were added, we might expect some significant and well-controlled modal expression in these voices. However, that expectation goes largely unfulfilled.

There are just two weak Level II cadences between the Tenor and Countertenor at measures 68 ("... consubstantialem Patri") and 90 ("... de Spiritu Sancto"). It is at the end of the movement that we see the most significant use of E. At "... in vitam venturi saeculi," the final text before the "Amen," both Tenor and Countertenor arrive at E simultaneously. However, the strength of the E cadence is dissipated by a simultaneous sixth-to-octave expansion to C in two other voices. The acoustical effect (perhaps owing to modern tertian perceptions) gives primacy to the lower pitch of the C-E third.
A more hidden clue to Josquin's modal intent is at the "Amen" in the Countertenor where the Tenor completes the discant motion to E. Again, the other voices, undoubtedly added later, obscure this motion.

We may conclude, then, that the mode of Credo 1 is not as easily expressed in polyphony as that of other movements by the same composers. This could, of course, be explained by unacknowledged difficulties particular to Mode IV. The obvious difference between Phrygian and authentic cadences in two-voice discant (the expansion by whole step in the ascending voice and half step in the descending voice) may have precluded writing multi-voiced cadences that sounded convincing to the composer of polyphony. Or, there may have been restrictions inherent in the relatively conservative and uneventful melodic structure. Nonetheless, the variety of approaches to melodic cadences in the original would surely have offered some opportunity for constructing mode-giving formulae had they been desired.

The Credo 4 movement of La Rue shows, in general, a leaner, more terse writing style. His shorter phrases and less elaborate construction offer fewer opportunities to discover significant mode-bearing structures. Yet, with the melodic interest of Credo 4, noted earlier, some may be forthcoming.

The four voices of La Rue's Credo are a voce piena, with the Superius/Tenor and Altus/Bassus pairs each an
octave apart. The counterpoint is freely imitative. The original chant can always be traced through the polyphony in at least one voice. In the first half of the movement, it is most often found in the Superius or Tenor. Later, it can be found in the Altus, displaced an octave, or Bassus. La Rue keeps great consistency with the original chant, especially in the use of cadence pitches.

An analysis of the polyphonic cadences confirms the priority of the Mode I finalis. As usual, Level III cadences show the most diversity, with over half of the total (forty-two) on A (twelve) and D (ten). The majority of Level II cadences are on A (seven of eighteen); however, there are only three on D. Eight of fourteen Level I cadences are on D. These fall predominantly at the ends of major sections, showing the probable effort by La Rue to stay within the given parameters of the Mode I assignment.

From this set of three Credo movements, we see the predicted difference in modal expression between Credos 1 and 4. However, the reasons are not conclusive. That the mode of Credo 1 is more clearly expressed in La Rue's polyphony cannot be explained solely in terms of the clarity of mode in the original; however, from the evidence seen here, there is ample cause to seek corroboration in Credo 1 and 4 settings in paraphrase cycles of non B.V. masses for comparison.
CHAPTER IX

CONCLUSIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

The desired goal of this study was to provide evidence of mode as a primary determinant in early sixteenth-century paraphrase masses. Melodic and contrapuntal structure have been methodically approached, revealing specific practices that are otherwise difficult to explain. Perhaps the most persuasive result of our inquiry is that in applying analytic tools to works of different composers, regions, and times, gradations of modal influence along chronological and geographic lines have been revealed. Measuring modal effect establishes a quantitative continuum that mirrors our intuitive notion of modal influence.

Even without quantified results, if the final proof were by intuitive notions alone, the idea of modal expression in this body of masses could still be established to some degree. What would be more natural than for a composer of a polyphonic paraphrase to seek to express the modal assignment of the original? Certainly, extra-musical evidence confirms this intuition: we have a well organized, very popular monophonic mass cycle; we have composers immersed in a modal tradition; we have documentary evidence of modal consciousness, at least at cadences and in individual voices; and we have an emerging humanistic philosophy that allows the composer to seek expression
within his own values and inspirations. All that remains is to apply appropriate analytic tools that expose modal expression within the musical structure.

Late fifteenth and early sixteenth-century theorists, such as Tinctoris, Aaron, Zarlino, and others, give the modern analyst little direct help in selecting analytic tools. Their concerns, among others, were for the correct identification of modal scales, the understanding of consonance and dissonance, the use of proper intervals among voices, and the formality of cadences. Taken together, these concerns give hints of modal consciousness, which only become explicit in discussions of cadences or activity of single voices. These discussions and examples tend to be idealizations that must be stretched and compromised to fit real musical structures, providing us little of analytic use.

Later sixteenth and seventeenth century theorists bring new light to mode in multi-voiced music, but these concerns never achieved systematic coherence in a way that was applicable to our study. Certainly, Bernhard Meier's modern attempts are singular in their meaningful application of these theoretical precepts to music, but limited to that of the last half of the sixteenth century.

Applying tools borrowed from eighteenth-century tonal theory is philosophically objectionable. Several modern analysts have found meaning in notions of chord
progression, key center, modulation, dominant-tonic relationships, and even Schenkerian "Urlinie." However, studies that rely on tools and concepts of tonality generally neglect sixteenth-century polyphony as a unique and complete system that grew out of the chant tradition. Rather, they consider it a brief diversion on the way to the major-minor tonal system. (The present study borders on this only in the discussion of Brumel's Kyrie.)

We are left with the necessity of creating analytical tools that fulfill pragmatic notions of what is useful and appropriate to the repertoire at hand. The decision to derive tools based on discant technique has been discussed earlier and does not need to be restated here. The heavy reliance on these tools throughout the analysis tends to limit us to a single dimension. With them we concentrate almost exclusively on the emphasis of individual pitches (out of the diatonic set of seven) through contrapuntal techniques. The benefit of our one-dimensional attack has been to see that, at least for certain composers in certain contexts, the accenting of pitches was accomplished consistently and effectively. Further, with the statistical results made possible by the exceptional richness and variety of the Gloria, we see tendencies emerge, tendencies that seem to exhibit modal intent.

The melodic portion of the analysis, that portion concerning paraphrase technique, raises and clarifies
important questions of mode. It offers the reader a chance to become oriented to the basic character of the repertoire and the technique from which it derived. Also, it raises the necessary questions of the priority of certain structural features. It seems clear that the process of expressing mode in polyphony was significant among the many factors that entered into the compositional matrix.

The effort to raise sufficient and broadly-based statistical results is hampered by the fact that all composers did not contribute all movements. Still, we have adequate representation among the different composers and stylistic groups in the three movements treated. It should be clear from the discussion that these paraphrase masses fulfilled the anticipated expectation of revealing definitive aspects of modality.

Unfortunately, there is no other repertoire of paraphrase masses of comparable consistency in the early sixteenth century. However, follow-up studies of non-paraphrase works by the same group of composers using the same analytic techniques would offer a valuable and broader base of comparison for this study.

Finally, this study has attempted to contribute to the general understanding of sixteenth-century music at large. Scholarly integration of analytical results with historical insights is a significant process in any period of any art; in the style period studied here, the process has only
begun. This study incorporates a general view of extra-
musical factors, such as the emergence of humanistic
philosophy and the meaning of certain precepts set forth by
contemporary theorists. Each year accurate translations of
important treatises become available. A more complete view
of music in this early sixteenth-century period can
eventually be formed from a detailed comparison of the
precepts of the era's theorists with the craft of its
composers.
APPENDIX A--CHANT MELODIES
Cantus Romanus I

Gurra 9

Ab Mar-a-um gen-ere-am, Dom in-ho-ne-ban-Atho, ne-ne-ro-ne nim-pas.

Gaud-re-am tu soli-lus san-sus-pleni, Mar-a-um gna-te-re gna-te.

Tu so-lus de-ne-ans, Mar-a-um gu-de-ans.

Tu so-lus Ad-ter-sus-pleni, Mar-a-um ca-ro-mans.

Se-ri, Chris-tus, qui sug-ti epi-re-te, in eu-re-a de-e pa-teres.

A —

Ab.
Gaudium, Ita M.—
Nunquam Labam
No. 74 a.2

Carbo I

ET NUN FAC-TUS EST, C.ACTIONS S-TE-AM PRO NO-BO-DO.

SEB PRAE-CO PLEA-TO PRA-AUS OR SE-NE-TRA EST. ET RE-SON-RE-XER.

TER-TE-A RE-SE SE-CON-DUM SE-CACTUS. ET NO-CON-A LAM D-CA-CA.

SE-DEP AD DEX-TE-AR PA-TRIS. ET SE-TE-ARM VEN-TRUS EST Cum CO-CRD.

SE-CA-RE VE-VOS ET PAT-ER-AR. VEN-CA-SALES. ET E-BOY P-CARDS.

ET EN SPI-RE-TUM FAC-TEM SE-NA-MUS. ET VE-VE-SE-CAN-TEM.

QUE SE PAT-RES FE-LE-AG. QUE PAT-ER. QUE PAT-RES ET FE-LE-O.

SE-HAS A-DO-RA-TER. ET CARM GE-RE-CE-CA-TER.

QUE SE-CA-RUS EST. SE-PER-PHE-TER. ET E-NAM SING-TEM CA-TE-RE-LAC.

ET A-POX SE-CA-RE-SE-AM.
CREDO I

Credo in unum Deum, sanctum Deum, salutare nostrum.

Et unam sanctam catholicae et apostolicae Ecclesiam.

Et eos, quos Iesu Christus suae passione reddidit.

Et sedem相通et Deus in caelo.

Et corpus Christi, frumentum vivum.

Et in Spiritum Sanctum.

Et in unum sanctam Apostolicae Ecclesiae.

Et in resurrectionem mortuorum.

Et in vitam aeternam. Amen.
CREDO IV.

PA - TREM O.M. - PO - TRAU - (m) - TEM FAC - TREM CE - LE ET TER - RE

VE - SE - BE - UM OM - NE - UM ET SAI - VE - SE - BE - LE - UM.

ET SAI - LUM DE - MS - LUM SE - SUM CRES - CTUM

CE - LE - UM DE - LUM GE - NE - TAM ET SAI PAR - TE NA - TAM

ANTE ONS - M SE - GU - NA DE - UM SE - DE - O

LU - NEN SE LAM - NEN DE - UM VER - NA DE - O VE - RO

GE - NE - TAM MAN FAC - TAM CON - SUB - STAN - TE - A - TEM. PA - TRA.

PER BISM OM - NA FAC - TA SAIN. QUE PRO - TER LOS MOL - NES ET

MO - TREM SAI - LE TEM DE - SEP - NA DE - CER - LIS.

ET SAI - CAR - NA - TIUS SAIN DE SPE - RE - TH SAIN - TO
Casus IV

 Qui cujus pars est fidelis et sanctus, nunc ad aeternam

Et in unam sanctam, caelestem et apoftolicam ecclesiam

Et exspecto resurrectionem mortuorum

Et vitam venturam seculorum aeternum.
APPENDIX B—POLYPHONIC EDITIONS
FRAGMENTA MISSARUM

1. Gloria de beata Virgine

- Josquin
Missa de Beata Virgine

KYRIE

Joachim

Superius

Altus

Tenor

Bassus

Kyrie

Kyrie

Kyrie
GLORIA

Superius

Et in terra pax

Altus

Et in terra pax

Tenor

Et in terra pax

Bassus

Et in terra pax
Al'tis - si - mas, Al - si - mus.

Ma - ri - am co - ro -

Ma - ri - am
tis - si - mus. Ma - ri - am co -

Ma - ri - am co -

Je - sa Chri - ste.
co - ro - nans. Je - sa Chri - ste.
ro - nans. Je - su Chri - ste.

Cum sanc - to Spi - ri - tu,
Et in natu est

Et incarnatus est de Spiritu sancto,
ex Maria Virgine,
et homo factus est.
Et ascendit in caelo. Et descendit in caelum, sedet ad dexteram Patris. et ille verum est."
cum gloria judicaret

vivos et

cum gloria judicaret

vivos et mortuos, cu jus

vivos et mortuos, cu jus

vivos et mortuos, cu jus
Le devant va derrière.

Sæçtum, Dom̧num et

Et in Spiri-tum Sæçtum.

Sæçtum, Dom̧num

Et in Spiri-tum Sæçtum, Dom̧num

Ex Pat're Fil'-io-que pro-ce-dit.

et vi-vi-fi-can-tem, qui ex Pa-

Dom̧num et vi-vi-fi-can-tem, qui

Ex Pat're Fil'-io-que pro-ce-

dit.
tam, ca-tho-li-cam et a-po-sto-li-cam ec-cle-si-am.

Con-fi-te-or u-num bap-tis-ma, in rem-i-sio-nem.

pec-ca-to-rum, pec-ca-to-rum. Et

in rem-i-sio-nem pec-ca-to-rum. Et

pec-ca-to-rum, pec-ca-to-rum. Et ex-spec-ti

pec-ca-to-rum, pec-ca-to-rum. Et ex-spec-ti
Missa de Beata Virgine

Kyrie

A. Brumel
Credo
sub stant turn, non factum.

Ge - ni - turn, non fac - tum.

per quern alem. Pa - tri.

con - sub - stan - ti - a - Leonis Pa - tri.

o - moni - a

qui o - man - a fa - cta sunt.

qui o - man - a fa - cta sunt.

per quern o - man - a fa - cta sunt.

sunt.

sunt.

Qui pro - pte - nor ho - man - er pro - pte a - suam

Et pro - pte - nor - nos - nos - er pro - pte - nor - suam

De - suen - dit de car - lis. Et in - car - man - tus

De - suen - dit de car - lis. Et in - car - man - tus

De - suen - dit de car - lis. Et in - car - man - tus
El aem sunt cam ex ino

Et u - nam san - cam cas - tho li - cam

Et u - nam san - cam ex ino

Et u - nam san - cam cas - tho li - cam
Sanctus
GLORIA

Et in terra pax.
Et in terra pax, hominibus bonae voluntatis. Bene di ci eas te.
Laudas eum, sanctum dei patrem.
SANCTUS
Missa De beata virgine, IV vocum (I)

Kyrie

Heinrich Isaac
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