

THE THEORY AND PRACTICE OF *A*-MODES IN GLAREAN'S
DODECACHORDON (1547)

by

TETIANA LADA SENYSHYN

B.Mus., The University of Western Ontario, 2000

A THESIS SUBMITTED IN PARTIAL FULFILMENT OF
THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARTS

in

THE FACULTY OF GRADUATE STUDIES

(School of Music)

We accept this thesis as conforming
to the required standard

THE UNIVERSITY OF BRITISH COLUMBIA

April 2003

© Tetiana Lada Senyshyn, 2003

In presenting this thesis in partial fulfilment of the requirements for an advanced degree at the University of British Columbia, I agree that the Library shall make it freely available for reference and study. I further agree that permission for extensive copying of this thesis for scholarly purposes may be granted by the head of my department or by his or her representatives. It is understood that copying or publication of this thesis for financial gain shall not be allowed without my written permission.

Department of Music

The University of British Columbia
Vancouver, Canada

Date April 23, 2003

ABSTRACT

The number of compositions with finals on *A*, possible modal interpretations of *A*-cadences and the potential pitch space available in the gamut (specifically *G-mi*) had increased substantially by the early sixteenth century. Lacking the tools and a vocabulary sufficient to describe these phenomena, theoretical attempts to relate polyphony characterized by ambiguous relationships facilitated by *A la mi re* to traditional expositions of the monophonic octenary modal system were often contradictory or summary at best. By means of the introduction of an Aeolian mode and its plagal counterpart in his *Dodecachordon* of 1547, Heinrich Glarean hoped to systematically describe and to settle the difficulties theorists before him had encountered in trying to account for a repertory that was increasingly focused on *A la mi re*. By invoking the established musical repertoire of the Roman liturgy and famous contemporaneous composers who employed pieces in which *A la mi re* proved so much of a focal point as to be considered a modal final, and by addressing his audience in an experiential manner as educated listeners who have the ability to derive rhetorical meaning from a given passage, Glarean not only managed to bring theory in closer alignment with practice but ensured that a potentially disruptive thesis in which the octenary tradition was supplanted by a dodecaphonic structure would fall on relatively uncritical ears.

Glarean's *A*-modes did not only account for a rapidly growing repertoire in which finals on *A* figured prominently, however, but served to strip the modal mutation between *D*- and *E*-final modes (i.e., *ab Dorian ad Phrygian*) of its disturbing character by theoretically sanctioning Dorian to Phrygian mutation through its affinity to *A*. Despite its assimilation into the evolving style, this once jarring mutation still had the potential to disturb in certain contexts, but this was largely owing to its historical references (first described by Erasmus in 1513 as the combination of incongruous elements) rather than its actual modal character. This thesis attempts to describe

the relationship between Dorian and Phrygian modalities through Glarean's understanding of the *A*-modes by examining late fifteenth- and early sixteenth-century changes in tonal focus, solmization practices and the expansion of the gamut.

TABLE OF CONTENTS

Abstract	ii
Table of Contents	iv
List of Examples	vi
Acknowledgements	vii
CHAPTER I	
INTRODUCTION.	1
CHAPTER II THE THEORETICAL BACKGROUND FOR GLAREAN'S DESCRIPTION OF AN <i>A</i> -MODE	
	8
2.1 The expansion of the gamut.	14
2.2 Aron's and Glarean's treatment of <i>A</i> -final compositions.	20
2.3 The affinity of <i>A</i> to Dorian and Phrygian modalities.	26
2.4 <i>Memor esto verbi tui</i> : Songs that "play about in the <i>phrasis</i> of many modes".	35
2.5 Dorian and Phrygian modalities as a means by which to legitimize Aeolian and its corresponding plagal.	39
CHAPTER III THE PRACTICAL EVIDENCE FOR GLAREAN'S DESCRIPTION OF AN <i>A</i> -MODE	
	49
3.1 The <i>Credo</i> from Josquin's <i>Missa L'homme armé super voces musicales</i>	49
3.2 The increase in <i>A</i> -final compositions and Okeghem's <i>Ma bouche rit</i>	61
3.3 La Rue's setting of <i>Ma bouche rit</i>	69
3.4 Settings of <i>Ma bouche rit</i> attributed to Josquin and Obrecht	78
3.5 Isaac's setting of <i>Ma bouche rit</i>	84

3.6 Conclusion.	89
CHAPTER IV MODE AS RHETORIC: HEARING MULTIPLE MODAL CENTRES WITHIN A SINGLE COMPOSITION.	94
4.1 Glarean and modal commixture.	98
4.2 Dorian ad Phrygian.	99
4.3 In conclusion: the expressive potential of mutation from Dorian ad Phrygian.	102
BIBLIOGRAPHY	108

LIST OF EXAMPLES

1.	Josquin: <i>Pleni sunt</i> from <i>Missa Pange lingua</i>	29
2.	Pater noster.	43
3.	Nicene Creed.	44
4.1.	Josquin: <i>Credo</i> from <i>Missa L'homme armé super voces musicales</i>	51
4.2.	<i>Credo</i> I, "Patrem omnipotentem" to "descendit de caelis".	57
5.	Josquin: <i>Credo</i> from <i>Missa L'homme armé super voces musicales</i> (tenor line).	60
6.1.	Okeghem: <i>Ma bouche rit</i>	64
6.2.	Okeghem: Text and translation for <i>Ma bouche rit</i>	66
7.	La Rue: <i>Ma bouche rit</i>	70
8.	Obrecht: <i>Ma bouche rit</i>	80
9.	Isaac: <i>La mi la sol</i>	85

ACKNOWLEDGEMENTS

I would like to thank the members of my supervisory committee, Dr. J. Evan Kreider and Dr. Alexander Fisher for offering me their wide range of knowledge and experience and for their hours spent reading and revising my work. In particular, I should like to acknowledge Dr. J. Evan Kreider for the patience, encouragement and endless support he generously gave throughout my stay at UBC. His acquaintance alone has made the last three years a wonderful learning and growing experience.

For my family, I am forever grateful. Their unflinching support and unconditional love has assisted me in innumerable ways. I am also indebted to Joel DeStefano, whose patience, kindness and generosity largely contributed to the completion of this degree. I am constantly inspired by your devotion, intelligence and good humour.

CHAPTER I

INTRODUCTION

Writing in Freiburg im Breisgau during the first half of the sixteenth century, Heinrich Glarean (1488-1563), a Catholic, confers the dedication of his *Dodecachordon* on the powerful Cardinal Otto Truchsess von Waldburg,¹ one of the most active proponents of reform in social and religious issues as well as in church music,² on behalf of whom he requests an examination undergone by the “moderators of all church law.”

I submit this work to you, most honourable Father, together with the most Reverend College of Cardinals, for examination by the moderators of all church law. I have undertaken this work entirely in the praise of Christ. Therefore let the judges be those to whom the Church of Christ has been intrusted.³

Because Gregorian chant and the Roman Liturgy had been subjected to severe criticism in recent decades by German and Swiss reformers, Glarean was undoubtedly aware that a seeming attack on orthodox music theory, such as that implied by the dislodging of the octenary system in favour of the twelve-mode system, could very well be subject to accusations of subversion by Roman church officials. Writing to the cardinal in his dedicatory preface, Glarean anticipates a negative reaction to his treatise and requests that his audience bear an open mind.

But indeed, most Reverend Father, since before an impartial judge no one has ever been condemned without a trial, I bid all to be of good hope who wish me well and who wish the accused in no wise to yield his case . . . Frequently I have implored Christ to make successful a work undertaken in His honour;

¹ On Cardinal Otto Truchsess von Waldburg's Catholic authority and influence in Germany, see Hubert Jedin, *A History of the Council of Trent*, vol. 1, *The Struggle for the Council*, trans. by Dom Ernest Graf (New York: Thomas Nelson and Sons, 1957), 462, 472 and 475; and the same publication, vol. 2, *The First Sessions at Trent (1545-1547)*, 406.

² Clement A. Miller, foreword to *Dodecachordon* (Basel 1547), by Heinrich Loritus Glareanus, *Musicological Studies and Documents* 20, trans. Clement A. Miller (American Institute of Musicology, 1968), 10. All subsequent citations from the *Dodecachordon* will be taken from this translation.

³ Glarean, *Dodecachordon*, 40.

from Him alone I have begged assistance, from Him alone I hope for a reward, for I may expect mostly abuse from men, and this for any trivial reason at all . . . For my part, I trust that I have treated this subject in such a way that all impartial judges may feel that I have sincerely wished to be mindful of Christian piety and the dignity of the Church.⁴

Comparing his situation to that of Timotheus of Miletus, who was censured by the Lacedaemonians for having corrupted ancient music by using more strings than did the *magadis*, Glarean anticipates potential accusations brought on by his unorthodox understanding of mode. Not only does this allusion to antiquity serve to ally himself with a venerable musical tradition, but it garners empathy for the thanklessness and inevitable difficulties encountered when one attempts to introduce change within an established system from the very individuals who uphold and regulate that system. By arguing the existence of twelve modes rather than that of the established eight in the wake of the Catholic and Reform split, it was necessary that his views be presented not from the stance of a revisionist, but from that of an empirical querant concerned with the nature of mode, owing to its importance within the context of the established repertoire of the Roman liturgy.

Invoking this well-respected musical repertoire as a means to discern a *true* modal practice results in an approach that conceives of the modal system as a living, breathing organism, subject to alteration in the wake of historical/cultural circumstance despite its Platonic ideal (as understood by Glarean); implicit to this methodology is an understanding that theory and practice may differ without materially affecting one another. Glarean, however, wishes to bring theory and practice into a closer agreement. Hence, Glarean may have argued that the Church fathers of ages past had not misunderstood the “true” workings of mode, nor had they even failed to notice its existence; they *were* aware of it, but up until now had not believed its use as a descriptive tool to be of necessity. The humble submission of Glarean’s *Dodecachordon*

⁴ Glarean, *Dodecachordon*, 37-40.

would illustrate that the four additional modes were crucial to understanding contemporaneous compositional and performance practice.⁵ Glarean achieves this end by addressing his musical repertoire in an experiential manner, as a humanistically-educated listener, bent on discovering the real nature of mode through the rhetorical realization of a given passage.

It is in this vein of inquiry that I will attempt to assess the impetus for the style in which Glarean's *Dodecachordon* is written and the concomitant historical/theoretical implications of his seemingly revisionist perception of mode, in which its theoretical validity is no longer primarily grounded in historical witnesses but is rather described as a 'natural' constitution of the diatonic system. The following section will be limited to Glarean's conception of *E*- and *A*-mode pieces and his reasoning for developing the Aeolian system in the wake of contemporaneous composition and performance practice. Although I will not consider the actual theory and compositions which, for Glarean, may have suggested the Ionian mode as a separate entity rather than as an accepted performance practice occurring in Lydian, I will consider the strategy in which he approaches his discussion of the latter in order to elucidate the skilful rhetoric and unique presentation of musical sources by which he buttresses his argument.

In her article "Defending the *Dodecachordon*: Ideological Currents in Glarean's Modal Theory," Sarah Fuller argues that Glarean invokes three ideological strands as a means of defending his unorthodox perception of mode. A "rational essentialist strand" conceives of modes as universal, unchanging pitch collections derived from algorithms which are construed as immutable constitutions of the diatonic system. This scientific approach is substantiated by the authoritative practices of the Roman Catholic Church and a "humanist strand that locates the

⁵ It is here that Glarean's political aims are clear: He explains that these additional four modes were first acknowledged by the "early church fathers" as the logical outcome of systematized arithmetic and harmonic divisions of the octave species, first implied by the inversion of Dorian and its subsequent arithmetic division as a means to create Hypomixolydian. See Sarah Fuller, "Defending the *Dodecachordon*: Ideological Currents in Glarean's Modal Theory," *Journal of the American Musicological Society* 49 (1996): 197 and 201.

foundations of contemporary knowledge in ancient Greek and Roman learning.” The religious and humanist approaches employed are necessary to rationalize a scientific enquiry into mode as a natural, self-contained constitution of the diatonic system; without the aid of religious authority in particular, the legitimacy of Glarean’s theoretical conclusions would be irrelevant to the outside musical world. Likewise, if a modal system could exist as a “demonstrable, scientific fact, then both ancient Greek and traditional Christian practices, when rightly understood, [would] necessarily converge on *the* single, true modal system.”⁶ If confirmed through impartial and rigorous mathematical application, the modal system would emerge not as a new invention but as a revival of a system subjected to distortion over the centuries that had finally been restored to its authentic form.

Those who cry out that we have introduced a new explanation concerning twelve modes show that they have read very superficially the writings of the ancient authors, indeed, that they have applied themselves to the usage of these few centuries, in which eight or nine modes have sufficed for the singing of Psalms . . . This declaration of ours concerning twelve modes is not a new statement, but a proper renewal of antiquity. But the reader may not believe this until with strong proof I have shown the matter through mathematical calculations and have demonstrated its principles through the clearest examples.⁷

Glarean’s empirical approach to mode is strengthened by his sense of historicity, which attempts to explain why generations of musicians have conceived of composition in eight modes. Stefano Mengozzi argues that Glarean’s concern with “understanding contemporaneous musical practice is at the centre of the *Dodecachordon*, and that [he] engages musical practice both in rational and experiential terms.”⁸ Glarean presents himself as an educated listener who wishes to derive something meaningful from musical syntax and compositional technique in order to understand its rhetorical potential; this end may be achieved through the systematic inquiry of the

⁶ Fuller, “Defending the *Dodecachordon*,” 196.

⁷ Glarean, *Dodecachordon*, 38.

⁸ Stefano Mengozzi, “Between Rational Theory and Historical Change in Glareanus’s *Dodecachordon*” (Ph.D. diss., University of Chicago, 1998), 13.

origins of that syntax and its initial purpose. By assuming the role of listener, he maintains the privileged position of describing the rules of systematic modal theory while making allowances for the realities of musical practice. Turning to Chapter 7 of Book 2 of the *Dodecachordon*, Mengozzi offers a quotation that illustrates Glarean's belief that musical composition and theoretical discourse are shaped by culture and history. Following an historical account of how the "early church fathers" created the Hypomixolydian mode by inverting the Dorian species and dividing the *scala* arithmetically, Glarean writes that:

When they saw that this turned out successfully, they also considered the arithmetical and harmonic interchange of the other modes. Thus, after these eight modes, they invented four besides, which still remained in the same system, namely, just as the Dorian remains in the eighth mode, so also the Hypodorian system remains in the ninth [forming Aeolian], the Phrygian in the tenth [forming Hypoaeolian], the Hypolydian in the eleventh [forming Ionian], and the Mixolydian in the twelfth [forming Hypoionian] . . . Nevertheless, although these last four modes, formed from the inversion of systems, were no less true modes than is the eighth mode, yet in general they have been less an object of attention and seem to have been neglected, either because they were not known to all or because the first eight seemed enough, especially since even now we have commonly only three modes in frequent use.⁹

In his statement that the additional four modes "seem to have been neglected, either because they were not known or because the first eight seemed enough," Glarean makes a distinction between theory as a self-contained system that exists outside of culture, and theory as it relates to actual musical practice. His acknowledgement that performers rarely employ more than three modes¹⁰ seems to undermine his upcoming explanation of twelve-mode theory, but actually proposes a

⁹ My parentheses. Glarean, *Dodecachordon*, 115; quoted in Mengozzi, "Between Rational Theory and Historical Change in Glareanus's *Dodecachordon*," 10-11.

¹⁰ For a detailed discussion of passages in which Glarean suggests that musicians generally perform pieces in either an *ut*, *re* or *mi* "tonality" and the modal implications of such statements, see Cristle Collins Judd, "Aspects of Tonal Coherence in the Motets of Josquin" (Ph.D. diss., University of London, King's College, 1994); and idem, "Modal Types and *Ut*, *Re*, *Mi* Tonalities: Tonal Coherence in Sacred Vocal Polyphony from about 1500," *Journal of the American Musicological Society* 45 (1992): 437-438. See Frans Wiering, "The Language of the Modes" (Ph. D. diss., University of Amsterdam, 1995), 61-62 on the *Cerberus*, a three-necked instrument designed by Giovanni Battista Doni (1640) that was intended for only three modes (Hypolydian, Dorian and Phrygian) as possible practical evidence for Judd's hypothesis.

reason as to why theory and practice have failed to co-exist historically:

By arguing in such terms, and quite regardless of whether his historical analysis is accurate or not, [he] offers a view of the eight-mode system as the result of the particular concerns and interests of the culture in which it originated, rather than of abstract rational considerations . . . it is the task of the historian, not of the systematic thinker, to answer the question, 'why were eight modes enough?' which is implicitly raised by Glareanus's observations.¹¹

By approaching the problem in this manner, Glarean ensures not only an historical explanation for the existence of the problematic octenary system and the incongruous relationship between modal theory and practice, but actually ensures greater likelihood that the plea initially placed before the cardinal will be met: to judge the treatise with an open mind and to hear it from start to finish.

The painstaking way in which Glarean requests an examination by the "moderators of church law" in his dedicatory preface to a powerful cardinal plausibly indicates that he anticipated accusations of subversion from the Roman Church.¹² Owing to the religious conflict

¹¹ Mengozzi, "Between Rational Theory and Historical Change in Glareanus's *Dodecachordon*," 12.

¹² Although one might argue that Glarean's dedication to Cardinal Otto Truchsess von Waldburg is not so much indicative of the former's anticipation of a negative reaction to his unorthodox modal theory as it is of the usual complimentary rhetoric permeating sixteenth-century dedications, a comparison to the dedicatory page of his *Isagoge in Musicen* (1516) suggests otherwise:

In this undertaking, indeed, I trust that I shall be as lucid as I am brief. For there will be opportunity at another time to put this same material on the anvil, and turn it out in a more finished form. Meanwhile, it is my pleasure to present to my friend Falk . . . this little book, such as it is, fresh in thought rather than exhaustive in treatment. Its composition has been urged upon me by my friends . . . whom I delight to gratify because of their great and exceptional gifts. Farewell.

Translated in Frances Berry Turrell, "The *Isagoge in Musicen* of Henry Glarean," *Journal of Music Theory* 3 (1959): 109.

Glarean's dedication to Peter Falk (1468-1519), a central figure of the humanist movement in Freiburg who studied under Sebastian Murr, in his *Isagoge* is far less insistent than that in his *Dodecachordon*. He merely hopes that this publication, having been "urged upon [him] by [his] friends" and presented to his friend Falk, should be "as lucid as [it] is brief." On Glarean's friendship with Falk, see Jurg Stenzl, "Peter Falk und die Musik in Freiburg," *Schweizerische Musikzeitung. Revue musicale suisse* 121/5 (1981): 289-295. In comparison, the *Dodecachordon* is presented to the powerful Cardinal Otto Truchsess von Waldburg of whom Glarean requests a fair and thorough examination of his humble treatise by the "moderators of church law . . . since before an impartial judge no one has ever been condemned without a trial" except musicians of the past (such as Timotheus) who suffered unjustly for re-examining an

consuming southern Germany and Switzerland during the first half of the sixteenth century, Glarean had to present his unorthodox views of modal theory as a systematic inquiry into the 'true' nature of mode as a means to derive some rhetorical meaning from its musical syntax within the context of the long-established repertory of Gregorian chant. His impetus for writing was largely grounded in a desire to bridge the gap between theory and practice in order to understand the modal system not as an abstract theoretical framework, but as a continuously evolving syntax existing within culture, and hence burgeoning with rhetorical potential. The following chapter will consider why Glarean felt a need to forge a greater connection between theory and practice through a discussion of contemporaneous theoretical treatises and their various conclusions concerning and rhetorical means of deriving modal classification. I will limit this attempt to Glarean's reasoning for describing the Aeolian species as an immutable constitution of diatonic space and will make some hypotheses concerning the musical repertory that may have informed Glarean's characterization of Aeolian.

established system. Similar rhetoric is employed throughout the *Dodecachordon*. See footnote 70 on an established performance practice discussed in both the *Isagoge* and the *Dodecachordon*; Glarean's tone in the latter treatise is substantially different owing to his audience and his changed perception of modal theory.

CHAPTER II

THE THEORETICAL BACKGROUND FOR GLAREAN'S DESCRIPTION OF AN *A*-MODE

Pietro Aron's (c. 1480 - d. after 1545) *Trattato della natura e cognitione di tutti gli tuoni di canto figurato* of 1525 is the first extant systematic attempt to apply theories of medieval monophonic modality to a polyphonic repertory.¹³ In the past few decades, most musicologists concerned with mode in relation to polyphony have discussed his treatise in various contexts. At present, I would like to use Aron's work as a means by which to place Glarean's understanding of the Aeolian mode (and its corresponding plagal) in relief. An evaluation of the work of Aron and that of other modal theorists who followed him will aid in defining the issues with which these theorists grappled and those which they glossed over; in particular, their treatment of cadences can give modern musicologists a glimpse of how fifteenth- and sixteenth-century musicians understood *E*- and *A*-mode pieces. It is my hope that this will facilitate a discussion as to why Glarean felt it necessary to describe Aeolian as a natural constitution of diatonic space.

An examination of Aron's derivation of the governing mode of a polyphonic composition

¹³ Aron's understanding of modality is essentially derived from Marchetto of Padova's *Lucidarium in arte musicae planae* of 1318. See Jan Herlinger, "Marchetto's Influence: The Manuscript Evidence," in *Music Theory and Its Sources*, ed. André Barbera (Notre Dame, Indiana: University of Notre Dame Press, 1990), 235-258, on the influence that Marchetto's *Lucidarium* had on his contemporaries and subsequent generations, as discerned by considering large-scale treatises, smaller unpublished writings and extant copies of the treatise as a whole or in part. On works written prior to Aron's *Trattato* that contain modal discussions that are implicitly or explicitly pertinent to polyphonic practice, see Cristle Collins Judd, "Josquin des Prez: *Salve regina* (à 5)," in *Music Before 1600*, ed. Mark Everest, Models of Musical Analysis Series, ed. Jonathan Dunsby (Cambridge: Basil Blackwell, 1992), 114-115; Jeffrey Dean, "Okeghem's Attitude Towards Modality: Three-Mode and Eight-Mode Typologies," in *Modality in the Music of the Fourteenth and Fifteenth Centuries*, Musicological Studies and Documents 49, ed. Ursula Günther, et. al., (Hänssler-Verlag: American Institute of Musicology, 1996), 205-209; Reinhard Strohm, "Modal Sounds as a Stylistic Tendency of the Mid-Fifteenth Century," in *ibid.*, 151-154; Wiering, "The Language of the Modes," 83-100. For another view, see Harold S. Powers, "Tonal Types and Modal Categories in Renaissance Polyphony," *Journal of the American Musicological Society* 34:3 (1981): 429-432.

wherein *A la mi re* figures structurally is essential to the stated objective.

The ways in which Aron derives the modality of a polyphonic piece might be described as the result of a hierarchy of possibilities, proceeding from a consideration of the mode of a pre-existing plainsong (or the tenor line of the newly-composed piece), followed by an analysis of the final, species, and *differentiae*, all of which may be somewhat dependent on the *processo* of a given composition.¹⁴ Deriving a composition's *processo* (or even knowing what that really signifies in the context of many pieces), however, can be difficult owing to the ambiguity of the term and its potential for highlighting diverse pitch collections or perhaps types of melodic movement not described by theorists as a means to illustrate mode. The question of modal presentation is further confounded in the passage below, in which Aron attempts to explain how one might modally classify a composition with an irregular or psalm tone ending, namely *A la mi re*, *B fa 4 mi*, or *C sol fa ut*:

Here we shall consider [a composition in which the final is irregular] in two ways: first, with respect to confinality [the pitches a fifth or a fourth below the regular finals, D, E, F and G]; second, with respect to the differences of the Saeculorum [*differentiae*]. Thus, if a composition ends in the position called *A la mi re* and there is no flat in the signature, the final will be common to the first and second tones with respect to confinality and also to the third with respect to difference, provided . . . that the *processo* in the composition be suited and appropriate to confinality or difference. But if the composition has a flat in the signature, the final will be in my opinion neither necessary nor rational with respect to confinality, for it is clear that the form will differ from its previous state. For this reason, such compositions are to be judged by their species. The same will obviously apply to compositions ending on *B fa 4 mi*, *C sol fa ut*, and all other steps on which the species may

¹⁴ Oliver Strunk and Leo Treitler, eds., *Source Readings in Music History* (New York: Norton, 1998) 419, footnote 3 explains that Aron's understanding of '*processo*' rests largely "on the proper steps for medial cadences . . . but it also connotes less quantifiable elements: the way the melody moves through its range, the pitch areas it emphasizes, the medial cadential points it gravitates toward, and others." Compare Aron, Chapters 5 and 9. For a detailed analysis of the first seven chapters of Aron's *Trattato*, see Harold Powers, "Is Mode Real? Pietro Aron, the Octenary System, and Polyphony," *Basler Jahrbuch für historische Musikpraxis* 16 (1992): 9-52 (see pages 30-31 for further discussion concerning Aron's understanding of *processo*) and Cristle Collins Judd, "Reading Aron Reading Petrucci: The Music Examples of the *Trattato della natura et cognitione di tutti gli tuoni* (1525)," *Early Music History* 14 (1995): 121-152.

occur.¹⁵

A composition ending on *A la mi re* may signify modes 1, 2 or 3, depending on whether or not *A* functions as a confinal or a difference tone, as well as a careful consideration of the composition's *processo*. An *A*-final piece with a *B^b* signature will be representative of mode 3 owing to its governing species.¹⁶ Aron seems entirely certain of the latter point, yet he provides no musical example of it in his *Trattato*. It is also uncertain as to what criteria determine why a species argument may be invoked in particular modal contexts with *A la mi re* terminations, whereas other instances of modal classification are identified by *processo* and/or cadences. One might also ask why a species argument can even exist, since the very notion of an "irregular final" presupposes a lack of transposition: it is implied that an *A la mi re* termination in *cantus mollis* serves to "transpose" the Phrygian species (the characteristic *mi-fa* interval E-F having been supplanted by A-B^b), yet we are told that *A la mi re* cannot exist as a final because D, E, F and G constitute the only finals.¹⁷ I will explain the significance of this problem in relation to

¹⁵ My parentheses. Strunk and Treitler, *Source Readings in Music History*, 418-419.

¹⁶ For Aron, an *A*-final piece in *cantus mollis* would be considered irregular, whereas Glarean would call it transposed *if* both agreed that the piece was representative of deuterus. I use the term "deuterus" in order to simplify the questionable differences existing between modes 3 and 4. Numerous theorists attest to the similarities between the deuterus authentic-plagal pair. See Harold S. Powers, "Modal Representation in Polyphonic Offertories," *Early Music History* 2 (1982): 59-63; idem, "Tonal Types and Modal Categories in Renaissance Polyphony," 448-449; and Bernhard Meier, *The Modes of Classical Vocal Polyphony Described According to the Sources*, trans. by Ellen S. Beebe (New York: Broude Brothers, 1988), 147-148, 165-169 and 230. Modally-ordered chansonniers compiled by Attaignant and Du Chemin do not seem to attempt authentic and plagal differentiation between *A*-final deuterus pieces (usually notated in *cantus durus*). See Jean-Pierre Ouvrard, "Modality and Text Expression in Sixteenth-Century French Chansons: Remarks Concerning the *E* Mode," *Basler Jahrbuch für Historische Musikpraxis* 16 (1992): 91-93. Glarean states that modes 3 and 4 are most likely to be mixed: "It is true what some musicians say, that indeed no two modes are more closely joined than the Hypophrygian and the Phrygian, for when they are connected they frequently remain within an octave, ninth, and tenth, while the others exceed even an eleventh, that is, an octave and a fourth." Glarean, *Dodecachordon*, 254.

¹⁷ Both Powers, "Is Mode Real?" and Collins Judd "Reading Aron Reading Petrucci" have persuasively argued that both the sources used and the way in which they are presented in the *Trattato* portray its author as visually oriented and disconnected from his audience. It is possible that Aron's understanding of a *B^b* signature in the context of an irregular ending on *A* as representative of mode 3 is indicative of that visual orientation and the aural disconnection that might arise if one were to leaf through the *Odhecaton* (Collins Judd suggests that he may have been thinking of Busnoys's *J'ay pris amours tout au rebours*) and survey each composition's signature and tenor final/termination.

Glarean's avocation of the Aeolian mode; his adamant argument for its existence serves to create a cohesive formal means of grouping all problematic *A*-mode pieces under one theoretical umbrella. At the same time, although the Aeolian mode abstractly ratifies problematic aspects and ambiguities existing within and between protus and deuterus modes, these seemingly incongruous aspects of the two modes are inherently linked to and characteristic of the systems from which they are derived; thus, their removal would effectively dismantle the system. Glarean's intent is not to remove these elements but to provide a fluid means of discourse by which the difficulties encountered in describing purely non-linguistic phenomena might be described linguistically.

The ways in which theorists accounted for cadences on *A* and the modes that they could possibly signify may have been instrumental in Glarean's recognition of an Aeolian mode. Following the passage cited above, Aron modifies his stance concerning the possible connection between *A la mi re* endings and modes 1, 2 or 3 by stating that tenors terminating on *A la mi re* may signify modes 1, 2, 3 or 4, "because modes 3 and 4 have the same place for the psalm-tone difference."¹⁸ The modal potential of an *A*-termination is further expanded in his chapter on cadences, in which he argues that it could signify modes 1, 2, 3, 4, 5 or 6.¹⁹ Stephen Charles Krantz states that Aron invokes cadences on *A* in every mode but mode eight.²⁰ It is in these discrepancies that Aron's classifications seem somewhat arbitrary, owing to a lack of conclusive statements concerning hierarchical arrangements of cadences in a modal context. Krantz's research, however, indirectly suggests that Aron was not the only theorist to have difficulty explaining cadences on *A*; *A*, furthermore, was by no means the only pitch centre on which

¹⁸ Strunk and Treitler, *Source Readings in Music History*, 424.

¹⁹ Cristle Collins Judd, "Josquin's Gospel Motets and Chant-Based Tonality," in *Tonal Structures in Early Music*, ed. Cristle Collins Judd, *Criticism and Analysis of Early Music Series*, ed. Jessie Ann Owens (New York and London: Garland Publishing, 1998), 124.

²⁰ Steven Charles Krantz, "Rhetorical and Structural Functions of Mode in Selected Motets of Josquin des Prez" (Ph.D. diss., University of Minnesota, 1989, text-fiche), 117.

theorists disagreed with each other in terms of mode.

Krantz argues that Aron (1525), Stephanus Vanneus (1533), and Angelo da Picitono (1547) have similar opinions concerning the hierarchical pitches on which cadences may be formed in each mode.²¹ This conclusion stems from the fact that Angelo's cadential commentary is, for the most part, a translation of the work of Vanneus, and that Vanneus appears to have modelled his work after that of Aron.²² Each discussion is placed in a polyphonic context, either explicitly or implicitly suggested by the ways in which the respective treatises are formatted, for example, following a polyphonic musical example. All three theorists indicate that cadences on *A* may occur in any mode but mode eight; coupled with the fact that none of the treatises supply adequate explanations or musical examples as a means to justify their conclusions concerning cadences, the unmistakable similarities between them suggest that Vanneus and Angelo were as confused as Aron on the subject, in that they chose to follow the earlier theorist's precedent nearly verbatim.²³ Uncertain as to how to classify *A*-cadences in certain contexts, Vanneus and

²¹ See Krantz, "Rhetorical and Structural Functions of Mode in Selected Motets of Josquin des Prez," 117-124. His sources include Aron's *Trattato* (1525), chaps. 9-12, fols. dv-[diir]; Stephanus Vanneus, *Recanetum de musica aurea* (Rome, 1533), chap. 35, fol. 89v, and Angelo da Picitono, *Fior angelico di musica* (Venice, 1547), chap. 39, fols. iiv-[iiir]. Krantz's argument necessitates relative agreement among theorists insofar as modal presentation in order to prove his theory of modal rhetoric (which largely rests on the work of Bernhard Meier).

²² Stanley Sadie and John Tyrrell, eds., *The New Grove Dictionary of Music and Musicians*, 2nd edition (London: Macmillan Publishers Limited), vol. 26, s.v. "Vanneus, Stephanus" by Peter Bergquist and Bonnie J. Blackburn, 262.

²³ Howard Mayer Brown's study of Attaignant's chansonniers (dating from 1528), which were clearly ordered according to modal classification by 1536 at the latest, indicates that pieces with what Glarean would have described as an *A*-final were most likely to appear "out of place" or to be treated in a fashion representative of their modal ambiguity in various reprints (sometimes even being placed between pieces exemplary of tritus and tetrardus). Brown argues that these collections indicate that some French composers/editors did conceive of polyphonic modality and viewed it as a structural/formal device. Most important to the present discussion, Brown concludes that Attaignant's system, although clear and consistent, differs widely from Aron's, particularly in its treatment of *A*-final works. Glarean, aware of divergent theoretical and practical views of polyphonic modality co-existing during the sixteenth century, arguably wished to articulate an all-encompassing structure capable of describing mode in any polyphonic context; sources such as the Attaignant chansonniers suggest why he may have considered an *A*-mode to be a necessary addition to contemporaneous modal theory. See Howard Mayer Brown, "Theory and Practice in the Sixteenth Century: Notes on Attaignant's Modally Ordered Chansonniers," in *Essays in Musicology: A Tribute to Alvin Johnson*, (American Musicological Society, 1990): 77-78, 84 and 94-97; and Courtney

Angelo may have chosen to ally themselves with Aron as historical witness (Angelo did so indirectly by aligning himself to Vanneus), whose explanations were subsequently unchallengeable; questioning the views expounded by an earlier authority of mode would not only constitute wasted time, but could potentially be considered subversive.

The consensus reached by Aron, Angelo and Vanneus (i.e., that an *A*-cadence may occur in any mode but mode 8) may also be explained as a product of the prescriptions of earlier theorists (beginning with Guido) against accidental permutation of the Mixolydian species into that of the Dorian by employing *B-fa* excessively. A species transformation of this sort would be most apparent in mode 8, which shares the modal octave of mode 1.²⁴

Mode 1	D	E	F	G	A		A	B	C	D
Mode 7	G	A	B	C	D		D	E	F	G
	(B ^b transforms the species of mode 7 into that of mode 1)									
Mode 8	D	E	F	G		G	A	B	C	D

Incidentally, Glarean's explanation of mode 8 as an arithmetically-divided octave further differentiates it from mode 1 and the confinal on *A* shared by modes 1 and 3. Whatever the relationship between the work of Vanneus and Angelo in regards to Aron, it is clear that cadences on *A* were theoretically problematic.

S. Adams, "The Early Chanson Anthologies Published by Pierre Attaingnant (1528-1530)," *Journal of Musicology* 4 (1987): 526-548.

²⁴ Cadences on *A* in mode 8 could confuse the mode's characteristic fourth and fifth species (D - G and G - D respectively) with the species that constitute mode 1 (D - A and A - D).

The expansion of the gamut

The fact that Aron, Vanneus and Angelo felt it necessary to account for *A*-cadences and that Glarean readily accepted and explained *A*-cadences as a natural condition of an *A*-mode may reflect the expanding perception of potential diatonic space within the gamut that had evolved since the latter half of the fifteenth century. Karol Berger has shown that theorists of the late fifteenth century often disagreed as to which leading tone to choose when inflecting *A*-cadences. This may have resulted from conflicting modal interpretations of *A*-cadences as representing protus (in which case, G# sufficed as a means to illustrate *A* as an alternate or transposed final) or deuterus (which required a B^b in order to accentuate its characteristic *mi-fa* interval) as well as the conceptual difficulties encountered by theorists who did not recognize G# as a potential step within the gamut.

The twelve-step gamut, which seemed sufficient to the majority of theorists writing in the fifteenth century, included B^b, E^b, F#, a^b, c#, e^b, f# and aa^b in addition to the steps of *musica vera*. The feigned steps employed in the twelve-step gamut are to be explained as the result of producing whole tones of the natural gamut's semitones and the reverse; in other words, *mi* could be placed in the gamut wherever there was *fa*, and vice versa. "An early description of this gamut appears in an anonymous Italian treatise of ca 1400, but it is only in the texts from the second half of the fifteenth century that the gamut begins to appear regularly and that explanations for this particular choice of the five black-key steps can be found."²⁵ For the present discussion, it is necessary to determine at what time and for whom a potential locus on G# was significant owing to its importance as a means to inflect *A*-cadences. Although not all theorists were comfortable with the potential pitch space engendered in a sixteen- or seventeen-

²⁵ Karol Berger, "The Common and the Unusual Steps of *Musica ficta*: A Background for the Gamut of Orlando di Lasso's *Prophetiae Sibyllarum*," *Revue Belge de Musicologie* 39 (1985): 63. The Italian treatise to which Berger refers is the [*Libellus*] *Ex Codice Vaticano* Lat. 5129, ed. A. Seay, *Corpus Scriptorum de Musica* 9 (Rome: American Institute of Musicology, 1964), pp. 46f.

step gamut, even conservative attitudes indicate that the G# inflection was becoming (if it had not yet already become) a reality in performance practice. Several theorists will be consulted below in order to establish the theoretical basis concerning diatonic pitch space which may have indirectly assisted (even if only to have ended conjecture) in Glarean's decision to articulate an *A*-mode.²⁶

In contrast to the relatively conservative twelve-step gamut, *La Caliopea legale* by John Hothby (before c. 1430-1487), whose writings have been tentatively dated around 1467-1486, proposed a seventeen-step gamut in which either sharps or flats could accompany every available pitch except hard B and e, and c and f respectively.²⁷ He considered B \sharp and the regular steps of the gamut to constitute what he called the "first order" of the gamut, and relegated all flat steps to the "second order" and all sharp steps to the "third". Berger points out that Hothby did not conceive of the gamut primarily in terms of the hand and its corresponding solmization syllables, as indicated by his hierarchy of "orders" and treatment of "princes" and "counts",²⁸ but asserts that his understanding of diatonic space was rooted in the keyboard. Hothby's conceptualization of the gamut was by no means the norm during the late fifteenth century, but his example indicates a new perception of pitch space that was to influence other theorists. In contrast, the equally influential Bartolomeo Ramis de Pareia, Hothby's contemporary and fellow expatriate in Italy, still discussed fictive emendations in terms of the solmization system in his *Musica Practica* of 1480.²⁹ Although Ramis theoretically allows for the inclusion of G# within the gamut

²⁶ It is important to remember that the publication of Glarean's *Dodecachordon* occurred roughly eight years following its completion (see Miller's introduction to *Dodecachordon*, 9) and had been a long-term project of his which may have begun as early as 1516 (implied by him in the *Isagoge in musicen* of 1516).

²⁷ See Karol Berger, "The Expanding Universe of *Musica Ficta* in Theory from 1300 to 1550," *Journal of Musicology* 4 (1986): 421-422, on Hothby's conception of the gamut in comparison to Johannes Boen of Paris (1357) and Bartolomeo Ramis de Pareia (1482). See idem, *Musica ficta: Theories of accidental inflections in vocal polyphony from Marchetto da Padova to Gioseffo Zarlino* (Cambridge: Cambridge University Press, 1987), 36-39, on the differing opinions of Hothby, Ramis, Aron and Spataro.

²⁸ See Berger, *Musica ficta*, 36.

²⁹ *Ibid.*, 37.

by stating that "less discerning" musical practitioners will use it cadentially in order to provide a major sixth in the discant against the tenor progression B-A leading to the octave (on A),³⁰ he betrays the difficulty he has with it later on by failing to place it in a musical example despite his earlier discussion of it.³¹ His preference for B^b as a means to inflect an *A*-cadence is stated below:

And if someone wished to say that there [at a] the protus was reborn, and the conditions which D had should obtain also at a, and [that] since D was shown to have a whole tone below and above itself, in the same way also a [should have a whole tone below and above], we shall respond by saying that the argument does not succeed, since that [whole tone below and above] has G which assumes for itself complete similarity below and above in the synemmenon tetrachord [that is, a-b-c-d], but not a which has two whole tones below . . . Therefore, that step [a] is deuterus, authentic as well as plagal, in the conjunct [that is, in the system with the soft b].³²

It is clear that Ramis understood *A*-cadences to normally signify deuterus, but the above citation indicates that he conceptualized this instance only within the context of *cantus mollis*. I will argue below that this is problematic simply because very few deuterus pieces transposed to *A* were notated in *cantus mollis*. Within the present context, this quotation is insufficient since it only accounts for *A*-final compositions that are notated with flat signatures; perhaps it is owing to Ramis's inability to account for *A*-final pieces in *cantus durus* that he makes an allowance for "less discerning musical practitioners" who employ G[#] cadentially in the above citation. This conservatism was uncharacteristic of Ramis, and indeed was one of the few matters in which

³⁰ Bartolomeo Ramis de Pareia, *Musica practica* (Bologna: Baltasar de Hiriberia, 1482), Musicological Studies and Documents 44, trans. Clement A. Miller (Hänssler-Verlag: American Institute of Musicology, 1993), 121.

³¹ Ramis de Pareia, *Musica practica*, 168.

³² Ramis, *Musica practica*, ed. Johannes Wolf, Publikationen der Internationalen Musikgesellschaft 2 (Leipzig: Breitkopf und Härtel, 1901), 101 quoted in Berger, *Musica ficta*, 143. See Berger, pp. 141-150, for various theorists' discussions of *A*-cadences. Like Ramis, Ugolino of Orvieto and Prosdocius make arguments for B-*fa* as the ideal cadential leading tone at *A*-cadences, while they argue the superiority of subsemitonal inflections at other cadences. Also see Lewis Lockwood, "A Dispute on Accidentals in Sixteenth-Century Rome," *Analecta Musicologica* 2 (1965): 24-40, on an episode in Rome (c. 1540) in which a bass and tenor disagree as to whether or not an untransposed mode 2 piece may be notated in *cantus mollis*.

Ramis's devoted student Giovanni Spataro (1458-1541) openly disagreed with his teacher and sided with Hothby.

Spataro's opinion concerning the gamut is illustrated through his letters to Giovanni del Lago (ca 1490- d. after 1545) and Aron, following the latter's *Trattato* of 1525, which contained the most systematic exposition of the entire conceivable gamut to date.³³ Although Aron echoed statements made by earlier theorists that suggested a sixteen-step gamut (that would have included a G#), Spataro criticized the ambiguity of the gamut described in the *Trattato* because Aron had espoused one in which all accidental steps were flat (that is, a^b, d^b, e^b and g^b). On October 30, 1527, Spataro wrote a letter to del Lago in which he berated Aron for having produced a gamut that in its exposition of flats had failed to account for sharps.³⁴

In his [Aron's] treatise on the modes, when he tries to derive two different sets of hexachords from one single d-flat, he strays from the simple truth . . . Aaron could not treat the matter properly because he thought that there was only one *coniuncta*, operating with flats; but certainly there are two, one with flats, the other with sharps . . . Remember me to Pietro Aaron, to whom I have not written for some time, since he complained that there was no letter in which I did not give him a caning. But my canings do him more good than does the praise of those of small knowledge . . . Since he called me 'father' and 'teacher', I did my duty accordingly, moved by compassion for his blindness.³⁵

Critiques of this sort reoccurred in Spataro's letters to both del Lago and Aron, until Aron revised his exposition of the gamut in a separately published supplement to the *Trattato*, published anonymously in Venice in 1531 under the imprint of the *Trattato*'s publisher, Bernardino de Vitali.³⁶ Spataro greeted the supplement warmly in a letter written to Aron on October 24, 1531:

³³ Berger, *Musica ficta*, 37.

³⁴ See Bonnie J. Blackburn, Edward E. Lowinsky and Clement A. Miller, eds., *A Correspondence of Renaissance Musicians* (Oxford: Clarendon Press, 1991) and Berger, *Musica ficta*, 37-42, on the correspondence between Spataro, del Lago and Aron.

³⁵ Blackburn and others, eds., *A Correspondence of Renaissance Musicians*, 328-329. Note the allusion to Hothby suggested by Spataro's distinction between two *coniunctae*, one which encompasses flats and the other sharps.

³⁶ Berger, *Musica ficta*, 37-38.

Many days have already passed since I received a letter from Your Excellency with which was included a most learned, subtle, and worthy newly printed little treatise which demonstrated elegantly and with best and true proofs how in each of the places of the Guidonian hand may be found each of the six official names . . . Bartolomeo [Ramis] aimed only at producing so many places of the Guidonian hand signed [with the accidentals] as was useful for the division of the whole tones into two semitones of the monochord and organ used in his time and . . . Your Excellency thought more profoundly and subtly since you wanted every whole tone of the said instruments to be divided in such a manner that below and above appear the major and the minor semitone with the difference of the comma falling between them . . . In no way . . . has Your Excellency left the order of the truth demonstrated by Brother Johannes Hothby, but . . . you have written much better and more clearly than he.³⁷

Despite the fact that Aron eventually accepted Spataro's criticism, it is clear that he had problems accounting for sharps in certain instances. His preference for A^b (to the detriment of G[#]) in his publication of 1525 may explain why he did not entertain the notion of transposing finals. G[#], the essential *pulchritudinis* step to cadences on A (at least in protus), strengthens not only an argument for an A-mode, but an understanding of pitch class A as a transposing final, which Aron fails to do. It is equally possible that Aron wished to maintain a theoretical distinction between the protus and deuterus modalities that potentially could be signified by cadences on A with G[#] and B^b respectively. By emphasizing the role of deuterus in his consideration of an A-final in *cantus mollis* (despite the infrequent occurrence of this configuration in contemporaneous compositions and its complete exclusion in the musical examples of his *Trattato*), and by indirectly invoking the superiority of B^b (as opposed to G[#]) in

³⁷ Quoted in Berger, *Musica ficta*, 38. See Blackburn and others, eds., *A Correspondence of Renaissance Musicians*, 438-439, on the uncharacteristically complimentary tone permeating Spataro's letter. In his letter to Aron written on February 8, 1531 (pp. 428-429), Spataro offered to create and send the younger theorist a chart that would explain the theory of mutation with both flat and sharp signs, which he would allow Aron to publish as his own without crediting Spataro; with this in mind it becomes clear that Spataro is praising his own work in the letter to Aron cited above. In his letter of March 1531, Spataro sent his treatise on *sesquialtera* to Aron, pleading the latter to have it published if he felt it to be worthy. On October 8th of that year Spataro's treatise came off the press of Bernardino de Vitali, the same man who had published Aron's Supplement, the *Trattato* and the *Toscanello*. Edward E. Lowinsky cites an Italian proverb: "One gives an egg hoping to receive a chicken in return" (p. 439).

his exposition of a gamut solely consisting of flat *coniunctae*, Aron achieves an abstract distance between Dorian and Phrygian modalities in his attempt to avoid the potential ambiguity signified by *A*-cadences. Had this been his intention, a desire to illustrate salient inflections characteristic of the two modalities would have been substantiated by his disinterest in the potential of transposing finals. In his *Lucidario in musica* of 1545, however, Aron expressly states that the lower leading tone ought to be employed when inflecting an *A*-cadence. Criticizing the progression g-g#-aa moving against c-+a, Aron suggests that the upper voice be changed to aa-g#-aa, yet it does not occur to him that B^b could also be employed in the lower voice rather than G# in the upper one,³⁸ contrary to his contentions of 1525. This change in opinion may reflect the evolution over the past few decades in contemporaneous conceptions of the gamut. The question as to why a G# leading tone directly preceding an *A*-cadence did not suggest a transposed final, however, and how *or if* such sharps affected how musicians understood the transformation of the modal species, is unclear.

Aron's seeming disinterest in these issues and his lack of concern for questions relating to fictive emendation suggests that his conception of mode was so visually oriented that for him it no longer existed in the aural arena in which composers had intended it to thrive. Both Harold Powers and Cristle Collins Judd have argued that the repertoire Aron chose to represent and the way in which he presented it are indicative of his visual reliance on printed sources; I would suggest that his inability to account for *A*-works is equally indicative of this visual orientation. Glarean's avocation of an *A*-mode not only serves to address the theoretical problem of the musical reality of *A*-cadences, the issue of species transformation as well as to codify the theoretical existence of G# within the gamut, but attempts to understand mode as a sonic event which can be properly understood and explained if approached with rational and unbiased ears.

³⁸ Berger, *Musica ficta*, 145.

Aron's and Glarean's treatment of *A*-final compositions

Aron's seeming discomfort with *A*-centred works in his *Trattato* of 1525 may have been the product of the actual music that he chose to represent and his attempt to account for it entirely in modal terms. Aron's introduction promises to explain how the modes are to be "recognized" in a polyphonic context,³⁹ regardless of questions concerning their relevance in a given repertory or indications that these modal designations reflect pre-compositional decisions. His chosen repertory is limited to that of Petrucci prints and the examples of modality that he cites are far more evenly distributed than the sources from which they are drawn. "Aron accepts Petrucci's authority as arbiter of repertory and simultaneously attempts to bolster his own credibility by instantiating his writing with references to printed sources, available in multiple copies with fixed notation."⁴⁰ Few of Aron's musical examples are printed, suggesting that he assumed his readers would have access to the same repertory. This is in marked difference to Glarean, who printed almost all of his musical examples.⁴¹ Likewise, Glarean referred to and

³⁹ Strunk and Treitler, *Source Readings in Music History*, 417.

⁴⁰ Collins Judd, "Reading Aron Reading Petrucci," 127. Both Powers, "Is Mode Real?" and Collins Judd "Reading Aron Reading Petrucci" have argued on different but related terms that Aron's musical examples are particularly problematic when he deals with *A la mi re* terminations. For example, his mode 2 classification of *Se mieulx* by Compère is nonsensical based on his criteria. Collins Judd has suggested that Aron looked through the *Odhecaton* and *Canti B*, found no *A*-final piece comparable to *Se mieulx* and thus ascribed it to mode 2 owing to its salient characteristics /differentiation from the three other pieces ending on *A* (all of which were undoubtedly attributable to mode 1) and the lack of a piece representative of mode 2 in the Petrucci prints from which he was working (see 132-33).

⁴¹ Josquin's *Factum est autem*, *Stabat mater* and *Miserere mei Deus* are discussed by Glarean but not printed (although the latter appears in abbreviated form). Wiering argues that Glarean did not include *Stabat mater* and *Miserere mei Deus* because they are five-voice works and he tends to only print compositions for four voices at most, since this is the greatest number of voices one's ear can follow. See Wiering, "The Language of the Modes," 186. Glarean (*Dodecachordon*, 206) writes:

Since music is the mother of pleasure, I consider much more useful that which pertains to the pleasure of many than what pertains to the pleasure of a few . . . For how many are there, even among the very highly educated, who truly understand a composition of four or more voices? Indeed, all praise it when they hear it, lest one may be considered less educated if he would disparage it.

Although he does not explain why *Factum est autem* and *Stabat mater* are missing, Glarean remarks that *Miserere mei Deus* "is in everyone's hands" and as such, its "ascent and descent [will be more easily

observed] with a single glance" (in its truncated form). Glarean, *Dodecachordon*, 259-260.

The popularity of Josquin's *Miserere mei Deus* is partially attested to by the number of sources in which it survives. Manuscripts in which the motet appears include: DresSL 1/D/3 (ca 1547-1551), SGallS 463 (ca 1540), KasL 24 (1534-1550), LonBL 19583 (ca 1535), ModE F.2.29 (ca 1535), MunBS 10 (1525-1530), MunU 327 (ca 1543), and RomeV 38 (1530-1531). Printed editions include: Grimm & Wirsung 1520/4 (edited by Ludwig Senfl), Petrucci 1519/2, Giunta 1527, Grapheus 1537/1, Montanus & Neuber 1553/4, Berg & Neuber 1559/1. See Josquin des Prés, *Werken*, eds. Albert Smijers, M. Antonowycz and W. Elders, ser. 2, vol. 8, *Motetten* (Koninklijke Vereniging voor Nederlandse Muziekgeschiedenis: Amsterdam: G. Alspach, 1942), V-VII; and *Census-Catalogue of Manuscript Sources of Polyphonic Music, 1400-1550*, compiled by the University of Illinois Musicological Archives for Renaissance Manuscript Studies, ed. Herbert Kellman and Charles Hamm, Renaissance Manuscript Studies 1, vols. 1-3 (Neuhausen: American Institute of Musicology / Hänssler-Verlag, 1979-1988).

Further evidence of the motet's fame is attested to by the Nuremberg music printer Johannes Ott (1537/1), who draws attention to the effect of the repeated entries of the ostinato. See Patrick Paul Macey, "Josquin's *Miserere mei Deus*: Context, Structure and Influence" (Ph.D. diss., University of California, Berkeley, 1985, text-fiche), 78. Helmuth Osthoff, Edward Nowacki and Patrick Macey have pointed out that a source study of the motet indicates that it generated a number of immediate successors (*ibid.*, 4), and that at least sixteen different composers based motets on its soggetto ostinato (*ibid.*, 159). Despite its wide dissemination and the fact that Psalm 50 (Josquin's text) is among the most frequently used psalms in the liturgy, Josquin's alteration of its text "seems to render the motet unsuitable for use during the Office or other liturgical occasions" (*ibid.*, 138). For discussions concerning the non-liturgical functions of sixteenth-century motets such as Josquin's *Miserere mei Deus*, see Anthony M. Cummings, "Toward an Interpretation of the Sixteenth-Century Motet," *Journal of the American Musicological Society* 34 (1981): 43-59; Jeremy Noble, "The Function of Josquin's Music," *Tijdschrift van de Koninklijke Vereniging voor Nederlandse Muziekgeschiedenis* 35 (1985): 9-22; and John Shepherd, "A Liturgico-Musical Reappraisal: Two Studies," *Current Musicology* 23 (1977): 69-79.

recopied from various sources in his *Dodecachordon*, whereas Aron invested all modal authority in the Petrucci prints. Although a comparison between the relationships of both Aron and Glarean to their respective musical sources is outside of the scope of this study, I will argue below that Glarean's presentation of his musical material not only indicates his pedagogical intention with respect to the existence of the 'A-modes', but is indicative of the amount of material with which he was familiar (largely owing to changes in print culture) and without which he would not have been able to adopt a modal system as cohesive as that suggested by his inclusion of the A-modes.⁴² In order to explore this hypothesis, I will turn to Glarean's notion of transposition and the implications his understanding of it had for pieces with both Dorian and Phrygian characteristics.

We have already briefly considered how Aron's treatment of irregular finals (such as *A la mi re*) implicitly rejects a theory of transposition. Although a species may be transformed by virtue of B^b, pitch classes D, E, F and G remain the true finals by which a composition's *ambitus* may be derived. Glarean seems to be the first theorist to invoke an explicit theory of transposition in such a systematic way,⁴³ which serves to account for a vast array of previously

⁴² Glarean's unique presentation of his sources and the significance of this ought to be considered in light of John Milson's point that there were statistically few 'scores' (in the modern sense) available for 'study' in the late fifteenth century. This would have made analysis of polyphonic music difficult if not impossible in most contexts outside of very elementary things, such as mode or its emotional affect on a listener. See John Milson, "Analysing Josquin," in *The Josquin Companion*, ed. Richard Sherr (Oxford: Oxford University Press, 2000) 431-484. Wegman also documents this change through the writings of Tinctoris, arguing that some time after 1480 listening became more self-conscious so that one could only assess a musical composition's worth if he understood it as a composer would (49-50), or based on its intrinsic worth (56), as opposed to whether or not it was suited to its societal purpose/function, as it had been previously. See Robert C. Wegman, "'Musical Understanding' in the Fifteenth Century," *Early Music* 30/1 (February 2002): 46-47. In these contexts, Glarean's presentation of the majority of his musical sources in order to provide "strong proof" and the "clearest examples" as an appeal to an educated audience is significant.

⁴³ See Strohm "Modal Sounds as a Stylistic Tendency of the Mid-Fifteenth Century," 173-174; and Leeman L. Perkins, "Modal Species and Mixtures," in *Modality in the Music of the Fourteenth and Fifteenth Centuries*, Musicological Studies and Documents 49, ed. Ursula Günther, et. al., (Hänssler-Verlag: American Institute of Musicology, 1996), 183-185. Strohm acknowledges a passage in which Tinctoris implies that an A-final could act "regularly" in certain contexts (the passage suggests mode 1 specifically) as an alternative final by removing it from his list of irregular finals. A transposition of the entire composition,

modally unaccountable compositions that employ *A la mi re* as a pivotal pitch between Dorian and Phrygian modalities. Pitch class *A* can function as the confinal or *repercusso* of mode 1, or, according to Aron (1525), Dressler (1563), Illuminato Aiguino (1581) and Pontio (1588), define the theoretical limits of *ambitus* and function as a primary cadential point in mode 2.⁴⁴ Owing to the oscillating *B-mi/fa*, pitch class *A* can function as the confinal or *repercusso* of modes 3 and 4 in practice, as well as constitute not the theoretical abstraction of *ambitus*, but the actual range within which mode 4 was often confined. “The presence within a single modal octave of such intervallic progression with potential affiliations to more than one final...gave rise to the theoretical notion of commixture.”⁴⁵ Glarean invokes commixture on numerous occasions, but manages to eliminate theoretical explanations concerning Dorian-Phrygian transformation in many compositions not only by assigning the “transposed” final to pitch class *A*, but also by asserting the Dorian and Phrygian characteristics of an “*A*-mode”. The Aeolian and Hypoaeolian modes employ the fourth species characteristic to Phrygian in practice (E-*A*) (owing to the problematic upper note of the diapente (*B*) and its potential to oscillate between *B-mi* and *B-fa*) above and below the fifth species respectively. Likewise, the *B^b* characteristic of traditional descriptions of Dorian is the salient locus of Glarean’s *A*-mode species when transposed to a *D*-final. A comparison with Aron clearly illustrates the ramifications of Glarean’s understanding of the theoretical potential of *A*-final works.

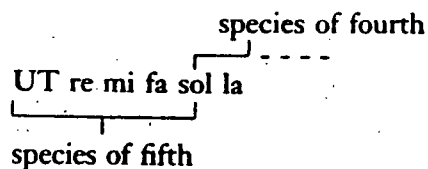
For Aron, it is precisely because *A la mi re* cannot function as a final that a real tonal

however, by which a distortion of the modal species would result, is not necessary to legitimate the *A*-final. Perkins argues that a *G*-final with a *B-fa* signature is the only relatively common transposition described by Tinctoris.

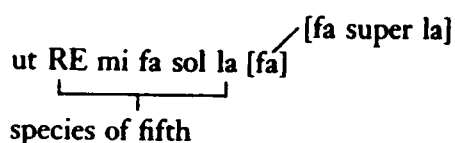
⁴⁴ See Dressler, *Praecepta* (Ms 1563), chap. 9, ed. Engelke, 239-41, Illuminato Aiguino, *Il tesoro illuminato di tutti i tuoni di canto figurato* (Venice, 1581), chap. 27, fols. 59v-60r, and Pontio, *Ragionamento* (1588), 99-121; cited in Krantz, “Rhetorical and Structural Functions of Mode in Selected Motets of Josquin des Prez,” 117-120.

⁴⁵ Leeman L. Perkins, “Modal Strategies in Okeghem’s *Missa Cuiusvis Toni*,” in *Music Theory and the Explanation of the Past*, ed. Christopher Hatch and David W. Bernstein (Chicago: University of Chicago Press, 1993), 64.

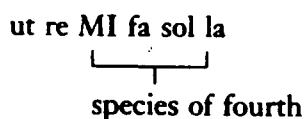
distinction is maintained between Dorian and Phrygian. Collins Judd has argued that this function is determined by its place in the hexachord (see diagram below).⁴⁶



Re: the final and upper boundary of the hexachord emphasize the species of fifth, *re-la*, and lead to frequent but not obligatory use of *fa super la*.



Mi: the final and boundary of the hexachord emphasize the *mi-la* fourth.



"The essence of that tonal distinction lies...in tonal focus: on *re* [e.g., *D*]...and on *mi* [e.g., *E*] ... That is, termination on *A* may signal tonal focus on *D re/A re* [protus, or]...be in the context of *E mi* as witnessed by the adjacent species of fourth - *mi-la* (bracketed) [i.e., *E - A*] - and the concomitant minimisation of the *mi-mi* species of fifth [i.e., *E - B*, the theoretical Phrygian diapente that rarely occurs in actual practice] . . . which unlike the *re-la* fifth [i.e., *D - A*] cannot overlap in adjacent hexachords within the same system."⁴⁷ Glarean's recognition of an Aeolian mode (i.e., theoretically permitting *A la mi re* to function as a final) subsumes pieces/passages

⁴⁶ Collins Judd, "Reading Aron Reading Petrucci," 141.

⁴⁷ My parentheses. Collins Judd, "Reading Aron Reading Petrucci," 141.

that fluctuate between Dorian and Phrygian under one modal category.

Dorian	D	E	F	G	A		A	B	C	D	
Aeolian	A	B	C	D	E		E	F	G	A	
Phrygian	E	F	G	A	(B)		A	B	C	D	E ⁴⁸

The way in which Aron and Glarean understand Josquin's *Miserere Mei Deus* illustrates this distinction.⁴⁹ Aron's view, which in procrustean terms, fits the motet to suit mode 3, rarely resorts to the explanation of commixture, possibly owing to his initially stated aim to "recognize" modes in a given polyphonic context, not to describe how they are employed compositionally. Aron tells his audience that they "will also find some others [compositions] on *A la mi re* to be of the third [mode]. Those in which there is the suitable procedure [*processo*] will be judged to be of the third mode, like *Miserere mei Deus* by Josquin."⁵⁰ Glarean, however, wishes to explain the motet's overall coherence, and avoids conflicting modal attributions by characterizing it as Hypoaeolian. He is attempting to create an all-encompassing tonal structure by which a piece may be described in and of itself, in order to provide an absolute means of comprehending a relatively quotidian musical phenomenon. This motive is partially illustrated by his choice of motet; as noted above (see footnote 41), *Miserere Mei Deus* is one of the few compositions in the *Dodecachordon* to have been purposefully omitted from Glarean's numerous musical examples "because this song is in everyone's hands." The motet is described because it is likely that his audience is familiar with it, and hence will be able to judge it for themselves.⁵¹ Glarean is

⁴⁸ Fifth and fourth species are separated by || so that Glarean's distinction between them is clear. The brackets around "B" in the Phrygian *scala* distinguish it from "A" and "E" in the Dorian and Aeolian modes, which form the upper boundary of their respective modal diapentes in both theory and practice. ("B" rarely functions as the upper pitch of the Phrygian diapente in practice.)

⁴⁹ See Collins Judd, "Aspects of Tonal Coherence in the Motets of Josquin," 61-64, for an analysis as to how Aron and Glarean understood this motet respectively.

⁵⁰ Aron *Trattato* Chapter 5 fol. CR [215]; quoted in Krantz, "Rhetorical and Structural Functions of Mode in Selected Motets of Josquin des Prez," 89.

⁵¹ See Glarean, *Dodecachordon*, 38 and 40. These passages (in Glarean's prefatory letter to Otto Truchsess von Waldburg) concur with my earlier argument concerning Glarean's desire to placate the Roman Church

clearly trying to develop a language by which not only musicians, but also educated individuals with an interest in music might express a non-linguistic medium through words.⁵²

The affinity of *A* to Dorian and Phrygian modalities

Glarean's classification of *Miserere mei Deus* as Hypoaeolian is significant in that it accounts for oscillating pitch centres on *D* and *E* that are united by *A* without having to resort to a theory of commutation, or to an attempt to stretch the relevancy of the already-eroding octenary system on a compositional phenomenon particular to polyphony. His all-encompassing modal classification serves to account for a relatively common and contemporaneous compositional procedure in which the theoretically incongruous elements of Dorian and Phrygian modalities may be described through language. This is particularly significant owing to the fact that such modal colouring was not only employed in *Miserere mei Deus* but in many fifteenth-century compositions. "The association of *a* with *d* in $\sharp g2$ -*A* and of *a* with *e* in $\sharp c1$ -*A* is a consequence of system structure as well as of compositional tradition."⁵³ Although the dual modal affinity of *A* to Dorian and Phrygian had been realized explicitly throughout Medieval and Renaissance treatises as far back as Guido's *Micrologus*⁵⁴ (c. 1026-28), Glarean was expressing a means by which to address linguistically this modal affinity in a polyphonic context by invoking the Hypoaeolian mode:

officials and convince them of the relevance of the dodecaphonic system.

⁵²In 1581, Aiguino argued another means by which to account for the theoretical issues discussed above without disposing of the traditional octenary system that had been so adamantly espoused by his teacher, Aron. Acting under the principle of the dominance of the fifth species, Aiguino was able to integrate compositions with finals on *A* into modes 1 and 2 (based on the fifth species). He referred to these *A*-works as "mixed" because their modal octaves consisted of a fourth and fifth species representative of different numbers. See Peter N. Schubert, "The Fourteen-Mode System of Illuminato Aiguino," *Journal of Music Theory* 35 (1991): 175-210, especially 180.

⁵³Harold Powers, "Tonal Types and Modal Categories in Renaissance Polyphony," 453.

⁵⁴Warren Babb, trans., *Hucbald, Guido, and John on Music: Three Medieval Treatises*, Music Theory Translation Series 3, ed. Claude V. Palisca (New Haven: Yale University Press, 1978) [Guido of Arezzo's *Micrologus*, Chapters 7 and 8], 63-65.

This mode, together with its principal mode existing in servitude for many years now, through the benignity of the heavenly powers has been brought back to its former rank, from the exile in which it was detained through iniquitous fortune, certainly through no crime that it had committed. It is the plagal of the Aeolian, in greater use among *symphonetae* [composers of polyphony] (although they do not know it) than among those who have plain song in a choir, among whom it is rare, as we said above, because its fourth below, *la mi*, has been changed arbitrarily into *sol re* below, and so it falls into the Hypodorian through the ignorance of musicians who could not distinguish such closely related modes.⁵⁵

The above quotation illustrates Glarean's stance concerning the importance of establishing the *A*-modes. Not only has Hypoaeolian been arbitrarily subjected to modal transformation into the closely related Hypodorian mode, but it is due to the ignorance of musicians that the former has gone so long unnoticed and not that of the Church officials to whom the treatise is dedicated. At the same time, by highlighting the almost inextricable relationship between Aeolian and Dorian modes through instances of performance practice, Glarean ensures a greater likelihood that his

⁵⁵ My parentheses. Glarean, *Dodecachordon*, 259. In this context, *la - mi* signifies E - A, the fourth species of Glarean's Hypoaeolian model. Substituting *sol - re* for *la - mi* implies that a tone would have to follow *sol* (i.e., *la*), effectively transforming the fourth species of Hypoaeolian into that of protus:

Hypoaeolian fourth species:	E F G A
	<i>la</i> <i>mi</i>
Hypodorian fourth species:	E F(♯) G A
	<i>sol (la)</i> <i>re</i>
	[i.e., the same intervallic relationship as D - E - F - G]

Although F-*mi* would not be directly invoked in a theoretical discussion (due to its place in the fictive hexachord on *D*), the above transformation may be expressed as follows:

Hypoaeolian:	E - F - G - A
Hypodorian:	D - E - F - G
	or
Hypoaeolian transposed:	A B ^b C D E E F G A
	<i>la</i> <i>mi</i>
Hypodorian:	A B C D E E F G A
	<i>sol (la)</i> <i>re</i>

N.B. Note the similarities to Phrygian, to be discussed below.

audience will accept a subtle differentiation between the two.⁵⁶ In the paragraph that follows the above citation, Glarean considers similarities between Hypoaeolian and Phrygian that also account for the lack of authority vested in the *A*-modes.

The close relationship between modes on *E* and modes on *A* was certainly well-known to Glarean and Zarlino, both of whom made this particularly clear in their descriptions of the Aeolian mode. This is no doubt partially due to the relatively common *voce piena* arrangement of four voices, in which the discant and tenor may be set in the Phrygian mode with the corresponding alto and bass voices in the Aeolian owing to the voices' respective *ambitus*. Zarlino, for example, acknowledges *A*-cadences that function within the context of mode 3, but believes these to constitute mixture with his ninth mode (Aeolian).⁵⁷ Similarly, Glarean invokes the *Pleni sunt caeli* of Josquin's *Missa Pange lingua* (see example 1) as an example of a movement that is "composed according to the Phrygian mode," under his chapter entitled "Concerning the Hypoaeolian mode." He follows this seemingly contradictory connection with his explanation that the discant is to be understood as "Hypoaeolian...adding a major third below and ending as a Phrygian. But the tenor has the upper fourth of the Aeolian at a single place; the remainder is Hypoaeolian with a minor third added."⁵⁸

Glarean's example illustrates the affinities between the *E*- and *A*-modes. It is clear why

⁵⁶ Glarean argues for modal differentiation by means of the species of a given mode. If constant use of *B-fa* in *G*-Mixolydian serves to transform its characteristic fifth species into that of the Dorian/Hypodorian transposed on *G*, as Guido first implied (consider the number of fifteenth-century pieces notated on final *G* in *cantus mollis* as a means of signifying Dorian), then *B-fa* in Dorian has the potential to transform its fourth species into that of the Aeolian/Hypoaeolian or deuterus, if we understand *D* as *repercusso* to the latter. [The modal octave in which the transformed species fall would partially assist Glarean's classification of mode. For example, the fourth species employed in Dorian (*A*, *B-mi/fa*, *C*, *D*) would suggest Phrygian rather than Hypophrygian, since the upper fourth suggests an authentic mode.]

⁵⁷ Gioseffo Zarlino, *Le Istitutioni Harmoniche* (Venice, 1558), vol. 4, *On The Modes*, Music Theory Translation Series, trans. Vered Cohen and ed. Claude V. Palisca (New Haven and London: Yale University Press, 1983), 63-64. Gallus Dressler also remarks on the similarities shared between modes 4 and 10 (Aeolian). See Meier, *The Modes of Classical Vocal Polyphony Described According to the Sources*, 166.

⁵⁸ Glarean, *Dodecachordon*, 260.

First Example of the Hypoaeolian, by Josquin Des Prez

Ex. 68 [321]

A musical score for the song "The Rose Tree". The score is written for a piano and voice. The piano part is in the left hand, and the voice part is in the right hand. The key signature is one flat (B-flat), and the time signature is 4/4. The score consists of two systems. The first system starts with a treble clef and a key signature of one flat. The piano part begins with a series of chords, and the voice part enters with the melody. The second system continues the piano accompaniment and the vocal melody. The score is written in a standard musical notation style, with notes, rests, and bar lines clearly visible.

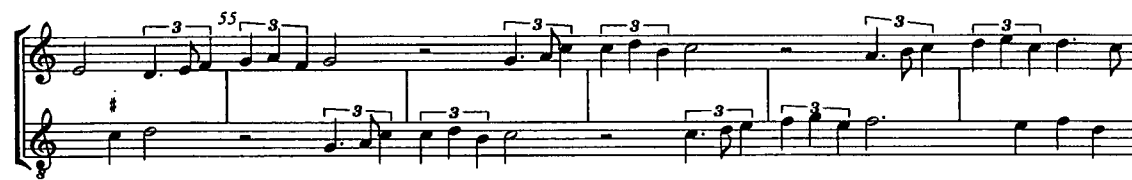
15

20

[illegible]

30 35

The musical score for 'The Rose Tree' is written for two staves. The first staff begins with a treble clef and a key signature of one flat (B-flat). The melody starts on a whole note G4, followed by a half note A4, a quarter note B-flat4, and a quarter note A4. This is followed by a quarter rest, then a quarter note G4, a quarter note F4, and a quarter note E4. The melody continues with a quarter note D4, a quarter note C4, and a quarter note B-flat3. The second staff begins with a bass clef and a key signature of one flat (B-flat). The bass line starts on a whole note G3, followed by a half note F3, a quarter note E3, and a quarter note D3. This is followed by a quarter note C3, a quarter note B-flat2, and a quarter note A2. The bass line continues with a quarter note G2, a quarter note F2, and a quarter note E2. The score is marked with measure numbers 30 and 35.



he could speak of the movement as being “composed according to the Phrygian mode” while simultaneously discussing it within the context of the Hypoaeolian mode owing to Josquin’s careful articulation of cadences on *E* and *A* and deployment of the species characteristic to *E*- and *A*-mode works. Of particular interest in the present example is the question as to how one ought to inflect the cadences articulated on *A*. If one were to understand this piece as an example of the Phrygian mode (or “composed according to the Phrygian”) it would be necessary to inflect the penultimate pitches on *B* as suprasemitonal to *A* (i.e., *B-fa*), as we have seen above, contrary to the emendations of Clement A. Miller. However, if understood as representative of Hypoaeolian, cadences on *A* might be inflected subsemitonally or suprasemitonally, since both *E* and *A* outline the mode’s characteristic species and a subsemitonal *G#* would highlight the modal final. Glarean might have argued that Josquin had purposefully outlined the *E-A* fourth at the movement’s outset in order to establish it as Hypoaeolian (although Josquin would not have described it as such since he composed within the conceptual framework of eight modes), so that an *A*-cadence approached by a *G#* could in no way be misconstrued as intrusive protus colouring. In this case, Glarean’s invocation of Hypoaeolian serves to clarify any ambiguity concerning *pulchritudinis* steps at cadences without disturbing modal *phrasis*. We might also conclude that his modal classification and its lack of ambiguity with respect to fictive emendations could explain why he invested so little interest in the question of *musica ficta*: that is, contemporary questions surrounding the issues of proper cadential articulation in Dorian/Phrygian contexts through hexachordal mutation were not at issue for Glarean, because the “choice” was clear.⁵⁹

⁵⁹ There is evidence to suggest that *pulchritudinis* inflections were generally signified by sharps (usually at cadences) by the late fifteenth century, whereas *necessitatis* steps (employed as a means to “correct” dissonances) were usually described as flats in contemporaneous treatises. See Berger, *Musica ficta*, 116-118. While the latter were most often discussed within modal contexts, *pulchritudinis* steps seem to have been understood to sometimes function outside of modality towards the end of the fifteenth century. “Since no theorist addresses the question of why flats were preferred to sharps when one wanted to correct the non-harmonic relations, I can only offer some speculations on the matter. It is likely, I think, that the modal context of the offending intervals was relevant here. Theorists frequently discuss the use of the soft *b* in

Likewise, although it is impossible to say how Josquin would have wished singers to inflect such cadences (or even if it would have mattered to him), it is reasonable to assume that Glarean, writing in the early sixteenth century, would have been comfortable with a sixteen-step gamut in which G-*mi* would have been included.

I have shown above that Glarean understood Josquin's *Pleni sunt* to possess elements of the Phrygian mode, yet that A-cadences articulated by G-*mi* would have served to emphasize his

various modes." Berger, *Musica ficta*, 82.

One of the implications of the theory that *mi*-cadences fail to detract from modal presentation is that a short-cut system of solmization may be adopted, rendering hexachordal mutation temporarily non-functional (see Stefano Mengozzi, "Josquinian Voices and Guidonian Listeners," in *Essays on Music and Culture in Honor of Herbert Kellman*, ed. Barbara Haggh (Minerve, 2001): 253-279). Dean, "Okeghem's Attitude Towards Modality: Three-Mode and Eight-Mode Typologies," 221-225, gives the testimony of Johannes de Anglia, John Tewkesbury (mid-fourteenth century), the author of the fifth treatise of the Berkeley manuscript (fourteenth century), Gaffurius (*Practica musice*) and Ramis (1482), which Dean believes to point towards a system in which a flat must be called '*fa*' within its proper hexachord, but in which # does not require a mutation and merely signifies an inflection in the modern sense. See Margaret Bent, "Diatonic Ficta" *Early Music History* 4 (1984): 12, on the breakdown of the three hexachord system (c. 1500), which made full solmization impossible and paved the way for the adoption of "a 'lazy' short-cut solmization... This means, in effect, that the entire rationale of medieval solmization, namely to identify the semitone (as *mi-fa*) and give surrounding context to it, was eroded." Although solmization surrounding sharps/*mi*-inflections seem to have eroded faster, the breakdown of the principles of solmization surrounding flats/*fa* was imminent. See Bent, "Musica Recta and Musica Ficta," *Musica Disciplina* 26 (1972): 92 on "*una nota supra la semper est canendum fa*" as an example of the "abuses of solmization which set in by the end of the fifteenth century."

Hypodorian classification, despite the fact that Josquin was composing in eight modes. His disinterest in compositional intention is particularly clear in this passage, but by no means does he doubt Josquin's skill at compositional modal presentation; he prescribes how a piece ought to be performed, but then describes how it is performed and how it might be understood by his generation.

Bernhard Meier has described Glarean as a "witness" partially due to the latter's aptitude for description and his potential as informant of past practices to the present age, whereas Powers has singled him (and Aron) out as theorists who explain "how things ought to be regarded, not how they were regarded."⁶⁰ Glarean's theoretical affinity to both description and prescription is made particularly clear by the way in which he describes the *Pleni sunt* as "composed according to the Phrygian mode." He has earlier maintained that compositions set in deuterus ought to employ its characteristic *mi-fa* interval (either by means of E-F or the transposed A-B[♭] ⁶¹), but still suggests that G[♯] be employed to the detriment of B[♭] in his invocation of Hypodorian and as suggested by Josquin's *cantus durus* scoring, probably owing to this occurrence in contemporaneous performance practice. Josquin and his audience may have heard the movement as exemplar of Phrygian, but this is inconsequential to Glarean. The point is that the musicians of the present day inflect *A*-cadences of this sort by means of *mi*, and it is therefore necessary to describe this phenomenon since older forms of classification no longer suffice. This suggests that Glarean was aware of fifteenth- and early sixteenth-century polyphonic compositional practice, in which a fair number of *A*-final pieces notated in *cantus durus* were designated specifically as

⁶⁰ Powers, "Is Mode Real?," 17-18. Wiering argues that Meier's frequent use of words like "*Lengen*" ("witnesses") "relegates the sources to the position of passive recordings of well-accepted facts while Powers see them as . . . creators of original music-theoretical systems." See Wiering, "The Language of the Modes," 49.

⁶¹ Aron had made the same argument in 1525. An irregular termination on *A la mi re*, if set in *cantus mollis*, signified the Phrygian mode, although he failed to provide a musical example of this phenomenon. See the quotation from Aron's *Trattato* above (footnote 15).

quarti toni. Leeman Perkins has argued that “such works offer some evidence that the juxtaposition of *E* and *A* as the pivotal pitches for melodic and cadential organization was enough to identify the mode even though *B* above the confinal *A* was generally sung as *mi* rather than *fa*.”⁶² Glarean states that Josquin composed the movement “according to the Phrygian mode,” as implied by the opening *phrasis*, the cantus’s final note on *E*, and a cadence on *E* (m. 31), but whether that is a result of the composer’s intention or sixteenth-century performance practice, *A*-cadences (mm. 23 and 63) are to be inflected by *G-mi*, partially owing to voice leading (which would render *B-fa* in the tenor dissonant because of the preceding *E♯* in both instances⁶³), its availability as a potential locus within the gamut, and the fact that, for Glarean, Hypoaeolian demands *mi*-cadences as a means to articulate its final on *A*, ensuring a lack of ambiguity concerning modal presentation.

Glarean’s understanding of Hypoaeolian might be described as a mixture of elements particular to Dorian or Phrygian modalities that have been placed under one convenient term that conceptually encompasses them by their affinity to *A la mi re*. This is of particular importance for a theorist interested in modal presentation and overall cohesiveness, in the wake of a compositional reality that highlights various elements of the theoretically incongruous modal

⁶² Perkins, “Modal Strategies in Okeghem’s *Missa Cuiusvis Toni*,” 68; Likewise, Howard Mayer Brown arrived at a similar conclusion by different means in his study of the 900 chansons contained in Attaignant’s modally-ordered chansonniers dating from 1528. (Although the chansonniers are not ostensibly modally-ordered, they show “unmistakeable signs” of having been arranged by the editor or publisher according to modal classification by 1536.) The ordering of the chansonniers suggests that Attaignant conceived of specific *A*-final compositions as representative of mode 3 and/or 4 owing not so much to the defining interval *E - F*, but by two voices (of the four notated) that would outline the Phrygian octave, *E - E*. If scored *voce piena*, the other two voices would most likely fill the *A*-octave range. See Brown, “Theory and Practice in the Sixteenth Century: Notes on Attaignant’s Modally Ordered Chansonniers,” 77-78 and my footnote 23 (above). Likewise, Jean-Pierre Ouyard argues that Attaignant’s chansonniers typically present deuterus in its *cantus durus* configuration with final *A*. The few instances in which deuterus pieces appear with an *E*-final (*cantus durus*) or an *A*-final in its *cantus mollis* configuration in the repertory surveyed suggest that all variations were treated similarly insofar as their modal composition. See Ouyard, “Modality and Text Expression in Sixteenth-Century French Chansons: Remarks Concerning the *E* Mode,” 89-116.

⁶³ Note the similarities between the two progressions, suggesting that they ought to be performed similarly.

pair. Consider the strong cadence on *D* in Josquin's *Pleni sunt* at measure 54, which initially appears to be preparing an *E*-cadence that ends up being evaded (mm. 53-54). This could suggest Dorian mode (serving to potentially erode the strong Phrygian colour) within the context of subsemitonally-inflected cadences on *A* (i.e., confinal to untransposed Dorian), which seem to have become a reality of performance practice around 1500. Glarean accepts this compositional reality by suggesting Hypoaeolian mode; his classification subsumes the dual modal affinity of pitch class *A* to Dorian and Phrygian modalities under one convenient term without stripping the two "traditional" modalities of their own specific characteristics.

***Memor esto verbi tui*: Songs that "play about in the phrasis of many modes"**

Although Glarean only mentions it in passing, one could argue that Josquin's motet *Memor esto verbi tui* clearly illustrates his reasoning for developing an *A*-mode and is particularly pertinent due to the amount of attention it has received by various scholars in recent years.⁶⁴ Bemoaning the ignorance of singers, Glarean describes compositional and performance practices in which modal integrity is sacrificed at a piece's end:

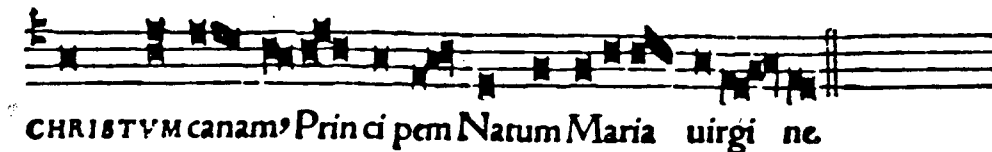
It also happens frequently that a song is deformed at the end, as we have lamented above concerning the end of the Nicene Creed in the Aeolian mode. Certain singers plainly do this for pleasure, and even consider it a fine thing to alter the finals of songs, and to turn up their noses at the listener. Josquin des Prez also has made this change in *Factum est autem* . . . After he had arranged this song according to the connection of the Phrygian and the Hypophrygian, . . . he has dared to end on *G*, just as he ended the Psalm *Memor esto*, arranged in the Dorian, on small *e*. Yet this cannot seem new, since in different churches one finds in some truly simple songs the endings now in this way, now in that way. I believe that the reason for this is that sometimes

⁶⁴ See Timothy H. Steele, "Tonal Coherence and the Cycle of Thirds in Josquin's *Memor esto verbi tui*" in *Tonal Structures in Early Music*, ed. Cristle Collins Judd, Criticism and Analysis of Early Music Series, ed. Jessie Ann Owens (New York and London: Garland Publishing, 1998), 155-182; Krantz, "Rhetorical and Structural Functions of Mode in Selected Motets of Josquin des Prez," 226-233; Collins Judd, "Aspects of Tonal Coherence in the Motets of Josquin," 158-167, 371-372 and 557-561. For the score, see Josquin des Prez, *Werken*, eds. Albert Smijers, M. Antonowycz and W. Elders, ser. 2, vol. 6, *Motetten* (Koninklijke Vereniging voor Nederlandse Muziekgeschiedenis: Amsterdam: G. Alspach, 1936), 3-11.

a song comes forth so uncertainly and plays about so in the *phrasis* of many modes, that one cannot easily decide to which of the modes the singer may be about to give the final. Let this very elegant example of the Phrygian be an illustration.



However since the movement in this song may belong no less to the Dorian than to the Phrygian, who will prevent an obstinate and affected singer from ending it as we shall subjoin it now, namely, so that the Dorian may arise?



But someone will say that nobody is so stupid not to understand that a song is corrupted in this way. Well, why then does the corruption generally occur in the Nicene Creed, also in the Lord's Prayer, and has no one at all observed this? Is the ear really more discerning in our time than formerly? But this is enough of complaining.⁶⁵

Glarean's description of *Memor esto* as a Psalm "arranged in the Dorian" may be understood in the same way in which he describes the *Pleni sunt* of Josquin's *Missa Pange lingua* as "composed according to the Phrygian mode." Josquin composed *Pleni sunt* according to Phrygian norms, since he was composing within the conceptual framework of the octenary modal tradition, but contemporaries of Glarean might classify it as Hypoaeolian. Following his discussion of *Miserere mei* and *Pleni sunt* under the chapter heading "Examples of the connection of two modes and also in passing a eulogy to Josquin des Prez," Glarean implies that

⁶⁵ Glarean, *Dodecachordon*, 196.

Josquin did not expressly acknowledge a dodecaphonic modal system, but that this did not impair his talent:

In this class of *symphonetae* [polyphonic composers] and great crowd of talented men, there stands out most particularly in talent, conscientiousness, and industry (unless I am mistaken in my affection), Jodocus a Prato, [Josquin] . . . If the knowledge of twelve modes and of a true musical system had fallen to the lot of this man, considering his natural genius and the acuteness of intellect through which he became esteemed, nature could have produced nothing more august, nothing more magnificent in this art.⁶⁶

By invoking the new modes in arguably anachronistic instances, Glarean is merely accounting for music as a theoretical construction in and of itself, as it exists outside of culture. Just as he had implied that the Church fathers of ages past had not misunderstood the “true” workings of dodecaphonic modality but up to this point had not believed their use as descriptive tools to be of necessity, he acknowledges Josquin to stand out “most particularly in talent, conscientiousness and industry”⁶⁷ despite his ignorance of Aeolian and Ionian modes. Glarean might have argued that Josquin had pushed a system to its limits, which necessarily implied a new one.

Subsequently, his humble submission of the *Dodecachordon* would merely invoke the four additional modes as crucial descriptive tools if a general understanding of contemporaneous compositional and performance practice was to be reached in the wake of the theoretical disagreement concerning the modal classification of polyphonic pieces. This agenda is made particularly clear in his explanation of the theoretical existence of fourteen modes, although two of these, the Hyperphrygian and Hyperaeolian, are not in use. This statement implies that one day music theory may be altered to encompass these two modes in order to describe effectively musical practice, or maybe not.⁶⁸

⁶⁶ Ibid., 264.

⁶⁷ In another passage, Josquin is heralded as the musical equivalent of Maro (Vergil), whom Glarean considers the greatest of the poetic rhetoricians. Ibid.

⁶⁸ See Fuller, “Defending the *Dodecachordon*,” 213-216, for additional commentary. She argues that the text Glarean adopted in order to substantiate his description of the Hyperaeolian mode, *O Domine Jesu*

It is in this light that the significance of Glarean's seemingly offhand remark concerning *Memor esto* becomes relevant. Josquin may have intended *Memor esto* to be representative of Dorian, but it may be understood in other ways, especially since songs often "play about so in the *phrasis* of many modes" and the Psalm is particularly suggestive of this due to its strange ending. An untransposed Dorian modality is clearly established at its outset, but the piece unmistakably veers towards pitch centre *E*. Although Glarean's wording initially suggests that the motet merely terminates on *E* despite its Dorian setting, the context in which the statement occurs implies that he is thinking more of how a listener would perceive that pitch as a new modal final, that is to say, what musical context would allow a piece to sound as though it had ended on the

Christe, illustrates his polemical intent:

O Domine Jesu Christe fili Dei vivi, Qui dixisti: nolo mortem peccatoris sed ut magis convertatur et vivat. Miserere mei Domine. Amen.

O Lord, Jesus Christ, son of the living God, who said: I desire not the death of a sinner but rather that he might change his ways and live. Have mercy on me, O Lord. Amen.

"Whereas the texts of the Aeolian chants evoke a simple, early Christian era, the words of this motet in a 'rejected' mode resonate with contemporary religious dilemmas" (ibid., 216). Glarean's example of the Hyperaolian mode was composed by his friend Sixtus Dietrich of Constance as a three-voice motet; the evidence overwhelmingly suggests that Glarean actually commissioned the work specifically for his *Dodecachordon*. For another view, see Powers, "Is Mode Real? Pietro Aron, the Octenary System, and Polyphony," 22.

final of a different modal centre rather than simply sound as an alternate pitch terminating the Psalm.⁶⁹ The monophonic musical example he provides directly following his invocation of *Memor esto* illustrates Phrygian mode, but its potential for highlighting Dorian is described, “since the movement in this song may belong no less to the Dorian than to the Phrygian.” To me, the carefully constructed rhetorical framework of this passage suggests that Glarean believed Josquin to have composed *Memor esto* in Dorian but that the Psalm’s termination on *E* potentially sounds as a new final, and subsequently implies aspects of the Phrygian mode (largely owing to passages that, at the very least, “represent” the *E*-mode). Although Glarean complains of performance practices that serve to corrupt songs, his disdain does not signify that of a bitter old man (as he may have hoped it would be construed), but is rather another means by which he substantiates his thesis.

Dorian and Phrygian modalities as a means by which to legitimize Aeolian and its corresponding plagal

Following his description of the modal aberrations occurring in popular pieces with which his audience would have been accustomed and most likely would have respected (owing to

⁶⁹ As early as his *Micrologus* of 1048, Guido addresses the importance of the final pitch of a chant owing to its ability to inform the melody with meaning retroactively:

Though any chant is made up of all the notes and intervals, the note that ends it holds the chief place, for it sounds both longer and more lasting. The previous notes, as is evident to trained musicians only, are so adjusted to the last one that in an amazing way they seem to draw a certain semblance of color from it . . . Furthermore, when we hear someone sing, we do not know what mode his first note is in, since we do not know whether tones, semitones, or other intervals will follow. But when the chant has ended, we know clearly from the preceding notes the mode of the last one. For at the start of a chant you do not know what will follow, but at its end you realize what has gone before.

See Babb, trans., *Hucbald, Guido, and John on Music: Three Medieval Treatises* [Guido of Arezzo’s *Micrologus*, Chapter 11], 66-67.

Likewise, Mengozzi points out that Glarean’s understanding of a modal final, which invariably falls at the bottom of the diapente, “redefines the concept of final from a label that can be mechanically attached to the last note of a piece to a specific tone ‘quality’ or musical function that is defined by the musical context.” Mengozzi, “Between Rational Theory and Historical Change in Glareanus’s *Dodecachordon*,” 241-242.

veneration for the esteemed Josquin at the very least, whom Glarean lauds on numerous occasions), Glarean shifts the focus of his diatribe to a performance practice in which a Phrygian piece may be performed as Dorian if it suits the fancy of "an obstinate and affected singer."⁷⁰ An analysis of the rhetoric he employs in this passage is pertinent. Up until this point, his passionate oration has undoubtedly maintained his audience's interest, partially owing to his ability to incite them to recall pieces that suggest more than one final and instances in which they have heard a singer alter the species of a familiar chant. Finally, he sophistically invokes the Nicene Creed and The Lord's Prayer as examples in which similar corruption has occurred, chants that he has earlier described as exemplary of the first octave species, *A-a*, and more specifically, the Aeolian mode.⁷¹ The structure is subtle, but effective in that it recalls the initial exposition of the *A-*

⁷⁰ Compare the more relaxed tone employed in his *Isagoge*. The treatise of 1516 assumes the existence of the conventional eight-mode system in the tradition of Gaffurius. In Chapter 10, entitled "Concerning the Final, Expansion, Recognition and Mixture of the Modes," Glarean describes the common psalm-tone endings in use and the various ways in which these are performed. Rather than castigate singers who transform the modality of a chant, however, he writes:

Nor does it greatly concern me that many are accustomed to spread abroad a variety of different endings which some individuals or other--I know not who--have concocted with more industry than care. However, this can be as you choose, since the formulas of the modes are different in different nations. There are as many *differentiae* as there are temperamental singers, and whoever desires to write precepts to please them may as well set out to harness foxes and milk he-goats. But the intonations of the modes are varied, not only in the different regions, but also in one region, nay, sometimes in the self-same place of worship it differs according to books and customs. (Translated in Turrell, "The *Isagoge in Musicen* of Henry Glarean," 138).

The above quotation constitutes the penultimate paragraph of Glarean's *Isagoge* and resonates all the more clearly due to its careful placement. One might conclude that Glarean's comparatively relaxed description of the various ways in which singers solmize particular chants is owing to the fact that he does not have to account for a dodecaphonic modal system, but is merely explaining an accepted performance practice within the confines of traditional modal theory. His tone in the *Dodecachordon* is more argumentative, however, because he has to account for the modal system that he proposes through the numerous musical examples that characterize his treatise and the aural transmission of these physical objects. Such an undertaking is contingent upon taking issue with the varying ways in which singers interpret specific passages.

⁷¹ Fuller discusses the chants that Glarean chooses in order to substantiate his argument for the existence of an Aeolian mode. In summary, she points out that he needed to make a particularly persuasive case owing to the fact that Aeolian was the first of the four additional modes [since it belongs to the first octave species] to be espoused in Book 2 in order to assuage potential scepticism. Intending to depict the Aeolian mode not as a "casual aberration but [as] a fixed constituent in the repertory," Glarean cites an exceptional number of

modes and reiterates their importance within the liturgy.

In chapter 17 of Book 2, Glarean makes a detailed argument concerning the existence of an Aeolian mode for the first time. The care with which he expounds his theory and the pieces by which he buttresses his argument indicate that he fears the notion of an Aeolian mode will be difficult for his audience to accept.⁷² Once again, he inadvertently blames musicians for the obscurity into which this “open and pure” mode has fallen and in doing so indirectly exonerates his esteemed dedicatee. Glarean explains why the modality of The Lord’s Prayer has been misunderstood for centuries (see example 2):

examples (five), all of which are noteworthy owing to their venerable liturgical texts. The chants chosen are: The Lord’s Prayer (*Pater noster*), the Nicene Creed (*Credo in Unum Deum*), the Angelic Salutation (*Ave Maria gratia plena*), the Gospel of St. Matthew (*Liber generationis Jesu Christi*), and the antiphon *Nos qui vivimus* with its associated psalm tone, the *tonus peregrinus*. Fuller (“Defending the *Dodecachordon*,” 206-209) writes:

Beyond invoking . . . [the] technical features of Aeolian, what Glarean has done is to choose venerable texts with high standing in the Catholic tradition: the one prayer authoritatively ascribed to Christ, the words of Annunciation attributed by tradition to the angel Gabriel, the opening words of the First Gospel, and the affirmation of faith reiterated each Sunday at Mass . . . The unquestionable antiquity of the texts is to spread its aura to the melodies, thus confirming a long-standing practice of Aeolian and bolstering the impression that the church had cultivated all twelve modes for centuries.

See *ibid.*, 208 for a discussion of *Nos qui vivimus*.

⁷² See Glarean, *Dodecachordon*, 143. Here Glarean substantiates his argument by describing the ancient Romans, who “were so fond of the Aeolian mode that, when the first church musicians of Rome thought of using songs in churches for the ears of the congregation, they employed this mode first, but very moderately and temperately.” See Fuller, “Defending the *Dodecachordon*,” 207-208.

Elsewhere one frequently finds the end of this song shortened by a minor third, because some were not acquainted with this mode and were in doubt whether it should end with *sol mi* or *fa re*; accordingly, uncertain of which it was, they omitted the last note. But we who teach the art ought not disregard this, for the same fault has gained ground in many other places.⁷³

Likewise, he discusses the Nicene Creed (see example 3):

At this point I never cease to wonder at the common delusion about the end of this song, which turns the last note back into *mi*, contrary both to the nature of the mode, which places the final of the song on *re*, and the judgment of the ears, which also hears *sol* in the final *clausula*, as it is called; never *mi*, but *re*, is the final of the fifth and also of the mode.⁷⁴

Glarean's explanation of the Nicene Creed and The Lord's Prayer as "sung improperly" indicates why they have not always been understood as Aeolian and also helps to dissuade potential criticism sparked by his initial explication of Aeolian, which may not have settled well with his audience. Most importantly though, Glarean has managed to integrate this argument concerning pieces that may be understood as modally anomalous into a context with which his audience would have been entirely familiar without undue repetition: that of Josquin's strange modal termination in *Memor esto* and the performance practice in which Dorian may be mutated into Phrygian, or vice versa (see footnote 65).

Aside from an attempt to substantiate his argument for the longevity of the Aeolian mode through careful rhetoric, one might ask why modally-anomalous finals and a monophonic piece that may sound either Phrygian or Dorian are invoked alongside the Nicene Creed and The Lord's Prayer. I have discussed the potential that familiar compositions, both old (and hence venerable) and new (in this case written by the esteemed Josquin) could have insofar as convincing an audience of the legitimacy of Glarean's thesis, but the connection that he constantly makes between Dorian and/or Phrygian realizations of passages and the natural occurring affinity of *A la mi re* to both modal centres (discussed above) suggests that his agenda

⁷³ Glarean, *Dodecachordon*, 144.

⁷⁴ *Ibid.*, 145.

Aeolij Modi exempla.

P Er omnia secula seculorū. Amē, Orem⁹. Pręceptis salutarib⁹ moni

ti, & diuina iſtitutione formati audem⁹ dicere, Pater noſter, q̄ es ī cęlis, Sā

ctificet nomē tuū. Adueniat regnū tuū. Fiat uolūtas tua ſicut in cęlo &

in terra. Panē noſtrū q̄tidianū da nobis hodie. Et dimitte nobis de-

bita noſtra, ſicut & nos dimittim⁹ debitorib⁹ noſtris: Et ne nos īducas in

tentationē, Sed libera nos à ma lo. Amen.

Example 3: The Nicene Creed

Credo in unū Deū Patrē omnipotētē, factorē coeli, et terrę, uisibiliū
 ū omniū, & inuisibiliū. Et in unū Dñm IESVM Christū Filiū Dei
 unigenitum, Et ex patre natū āte oīa secula: Deū de Deo, lumē de lumīe
 Deū uerū de Deo uero. Geitū nō factū, cōsubstācialē Patri p quē oīa facta
 sūt. Qui ppter nos hoīes, et pp nostrā salutē descēdit de cēlis. Et incarnatus
 est de spiritu s̄cto ex Maria uirgine. ET HOMO Factus est. Crucif
 fix⁹ etiā, p nobis sub Pōtio Pilato. Pass⁹ et sepult⁹ est. Et resurrexit tertia die
 secū dū scripturas. Et ascēdit i cēlū, sedet ad dexterā patris, Et iterū uētur⁹ est



A men.

is more complex than it initially appears. In his seventeenth chapter, entitled "Concerning the Aeolian mode," Glarean explains the modal species of Aeolian in relation to Dorian:

The other mode [alongside Hypodorian] of the first octave [species] is called Aeolian and is divided harmonically. Thus it is the first mode in this class, old indeed, but deprived of a name for many years . . . It has a pleasant seriousness . . . which the fifth *re la*, common to the Dorian also inasmuch as it concludes both modes, does not produce so much as the fourth, *mi la*, added above to this mode, is wonderfully pleasing to the ears, while the fourth *re sol* in the Dorian is indeed neither disagreeable nor inelegant.⁷⁵

⁷⁵ Ibid., 142.

Glarean's description might be expressed as follows [(Hypo)Phrygian modes are bracketed because they are my addition]:

Species common to Dorian, Aeolian and Phrygian modes as well as their plagal counterparts

	Fifth Species				Fourth Species		
	<i>Re</i>	-	<i>la</i>		<i>mi</i>	-	<i>la</i>
(Hypo)Dorian	D	-	A				
(Hypo)Aeolian	A	-	E		E	-	A
[(Hypo)Phrygian]					[E	-	A ⁷⁶]

Potential correspondences between Dorian, Aeolian and Phrygian *scalae*⁷⁷

Dorian	D E	F G A	A B- <i>mi</i> / {B- <i>fa</i> }	C D
Aeolian	A B	C D E	E F	G A
[Phrygian]	[E F	G (A) B (A) B C		D E]
			<i>or</i>	
	[(C)	D E]
	[A B- <i>fa</i> / {B- <i>mi</i> }	C D E	E F	G A]

Glarean needs to address the similarities between Dorian and Aeolian because the latter is an effective theoretical means by which to codify the use of B-*fa* in Dorian as an immutable constitution of diatonic space. Although he is aware of the practical realities of Phrygian

⁷⁶ The Phrygian mode fifth species (E - B) is typically avoided in practical composition. The problematic upper tone of the diapente is often replaced by an A, which (when above E) sounds as the fourth species of Glarean's Aeolian mode.

⁷⁷ Fifth and fourth species are separated by || so that Glarean's distinction between them is clear. The three most common uses of the Phrygian *scala* in actual composition are included in square brackets since Glarean does not discuss them in the above passage. The potential of an oscillating B-*mi* / B-*fa* in particular *scalae* is indicated wherever necessary, although syllables in {} brackets denote those that occur least often in treatises that treat mode as a relatively static, abstract construction. Round brackets indicate pitches which, although they do not theoretically form the upper or lower boundaries of a particular mode's governing species, nevertheless often function similarly in practical music-making.

(partially consisting of the fourth species E - A analogous to Aeolian in order to avoid the problematic B-*mi* and often set as an A-final piece either in *cantus mollis* or in *cantus durus* as transposed *quarti toni*), as indicated by his discussion of it within the context of various compositions considered above, he does not express this reality here because it could potentially weaken his rationally-conceived, mathematically-based argument. If, as we have seen, both untransposed Dorian and Phrygian on A are equally susceptible to an oscillating B-*fa* / B-*mi* in practice, then establishing an Aeolian mode would be superfluous, *unless* the sole purpose of the A-mode was to theoretically sanction such mixture between the two modes. If theoretically unauthorized mixture was allowed between each mode as I have argued to be the case in fifteenth-century performance practice (predominately through fictive emendations), then not only would Aeolian and Ionian be useless as descriptive tools, but the actual modal classification of polyphonic pieces outside of the Magnificat repertory could eventually be argued as ineffective or irrelevant. If, however, Glarean convinces the Church authorities of the existence of Aeolian by carefully invoking venerable repertoire and indirectly implying its necessity as a descriptive tool⁷⁸ and in doing so accounts for modal aberrations by construing them as natural constitutions of his diatonic system under the theoretically-autonomous Aeolian, he ensures the longevity of the modal system in relation to polyphony. Aeolian and Hypoaeolian categories serve to encompass compositions that could be equally explained as representative of Dorian or Phrygian or both without undermining the relevance of traditional modal theory in relation to polyphony.

⁷⁸For example, complaining about the nasty performance practice in which singers change Phrygian to Dorian or vice versa throughout the *Dodecachordon*, arguing the *Pleni sunt* from Josquin's *Missa Pange lingua* to be Hypoaeolian despite its grounding in Phrygian--which classification, we have seen, incidentally removes any uncertainty insofar as *musica ficta*--and showing the Nicene Creed, understood as exemplary of the Phrygian to actually be representative of Aeolian.

Fuller, *Defending the Dodecachordon*, 207, fn. 39, notes that the anonymous author of the *Quatuor principalia* (1351) lists the *Credo* in his opening remarks on the fourth mode (Edmond de Coussemaker, *Scriptorum de musica medii aevi* [Paris: A. Durand et Pedone-Lauriel, 1876; reprint, Hildesheim: Georg Olms, 1963], 4:239).

Following his exposition of the Aeolian and Hypoaeolian modes, Glarean brings up the relationship of Aeolian to Phrygian in numerous instances, some of which are discussed above. The careful placement of such comments (alongside seemingly bitter reproaches) substantiates his claim that the codification of the Aeolian and Hypoaeolian modes is imperative, yet does so without reminding his audience of the irrelevance of Aeolian and Hypoaeolian if viewed as natural conduits through which Dorian and Phrygian may pass. Although the pivotal capacity of the Aeolian and Hypoaeolian modes undoubtedly informed Glarean's thesis, his argument for their existence would not have been a necessary undertaking had it not been for a late fifteenth and early sixteenth-century compositional reality in which the number of modally-ambiguous *A*-final compositions had increased substantially. The steadily growing number of compositions showcasing *A*-finals would have certainly highlighted the affinity to *A la mi re* engendered in both Dorian and Phrygian modalities and arguably forced theorists such as Glarean to reconsider compositions in which the Aeolian mode mediated Dorian and Phrygian sonorities. In the following chapter, I will consider both the capacity of Aeolian as a means to facilitate a relationship between Dorian and Phrygian, and then consider selected *A*-final pieces of the late fifteenth-century in order to arrive at Glarean's reasoning for establishing the Aeolian and Hypoaeolian modes.

CHAPTER III

THE PRACTICAL EVIDENCE FOR GLAREAN'S DESCRIPTION OF AN A-MODE

The Credo from Josquin's Missa L'homme armé super voces musicales

The potential of a pivotal Aeolian sonority between Dorian and Phrygian modes can be illustrated in selected movements of Josquin's *Missa L'homme armé super voces musicales*, a work in which the original chanson (functioning as *cantus firmus*) has been transformed into a catholicon (i.e., a composition that can be performed in all possible modal combinations). Certainly among the most famous of his masses, Josquin's *L'homme armé super voces musicales* survives today in eighteen manuscripts and four printed editions, with excerpts appearing in at least ten theoretical works dating from 1537 to 1571.⁷⁹ Although the origin of the *L'homme armé* tune on which Josquin's tenor is built is uncertain, Busnoys's Mass of the same title arguably transmits the original version in its tenor,⁸⁰ and it is indeed this version that Josquin uses as his *cantus firmus*. The modal restlessness of the Mass's *cantus firmus*--a result of the Mass having been broken off into sections with corresponding finals (derived from the ascending

⁷⁹ Bonnie J. Blackburn, "Masses Based on Popular Songs and Solmization Syllables," in *The Josquin Companion*, ed. Richard Sherr (Oxford: Oxford University Press, 2000), 53. She lists a series of sources that discuss the Mass.

⁸⁰ See Ibid., 54; Judith Cohen, *The Six Anonymous L'homme armé Masses in Naples, Biblioteca Nazionale, MS VI E40*, Musicological Studies and Documents 21 (American Institute of Musicology, 1968); Richard Taruskin, introduction to the Commentary volume of *Antoine Busnoys, Collected Works: The Latin-Texted Works*, Masters and Monuments of the Renaissance (New York: Broude Trust, 1990 -), 35. On the origins of the *L'homme armé* Mass tradition as it relates to Busnoys, see Michael Long, "Arma virumque cano: Echoes of a Golden Age," in *Antoine Busnoys: Method, Meaning and Context in Late Medieval Music*, ed. Paula Higgins (Oxford: Clarendon Press, 1999), 133-154; Flynn Warmington, "The Ceremony of the Armed Man: The Sword, the Altar, and the *L'homme armé* Mass," in *ibid.*, 89-130; Robert Wegman, "Mensural Intertextuality in the Sacred Music of Antoine Busnoys," in *ibid.*, 193-199. In Alejandro Enrique Planchart, "The Origins and Early History of *L'homme armé*," a paper given at the University of British Columbia, Vancouver BC, March 21 2003, it was argued that the original *L'homme armé* melody was a composed piece by Guillaume Dufay.

order of the hexachord *naturalis*) applied according to section--is counterbalanced by a solid exposition of modes one and two throughout,⁸¹ which are juxtaposed with the *E*-final and subsequent Phrygian colour of the *Credo*.

Glarean lauds Josquin's ability to move between modes seamlessly on several occasions, and the *Credo* of this Mass is a clear indication of such passages of modal transformation/mixture. Josquin chose to set the Mass on successive syllables of the hexachord ("super voces musicales") so that it could potentially showcase all possible modal combinations. Although Glarean chiefly admired the technical dexterity with which Josquin handled the Mass's complex mensuration, he also remarked on its modal potential:

But undoubtedly for the display of his skill, he composed the two Masses, *L'homme armé super voces musicales* and *L'homme armé ad VI tonum*, (for he names the Hypoionian in this way) . . . Josquin loved to produce many voices from one voice, a practise which many after him emulated. But before him Johannes Okeghem . . . had become famous in this practice . . . From the first Mass, in which he [Josquin] has often changed modes, here are three very short examples in the Hypodorian.⁸²

Glarean selects three sections (*Benedictus*, *Qui venit*, *In nomine*⁸³) from the Mass, all of which exemplify Hypodorian, the mode which, alongside its authentic counterpart, is most clearly present throughout the Mass. The *Credo* (see example 4.1⁸⁴), however, has a strong Phrygian colour, partially owing to Josquin's quotation of the chant *Credo I*⁸⁵ (see example 4.2) and his decision to deploy the third statement of the *cantus firmus* (on *E*) throughout the tenor line of the

⁸¹ See Mengozzi, "Josquinian Voices and Guidonian Listeners," 273. Mengozzi argues that the Mass is predominantly set in mode one. Blackburn, "Masses Based on Popular Songs and Solmization Syllables," 59, classifies it as "Dorian", but does not indicate whether or not this encompasses its plagal counterpart.

⁸² Glarean, *Dodecachordon*, 272.

⁸³ It is significant that Glarean's three examples are all duets (the only ones in the Mass), each of which is scored for two voices in the same range (bassus, altus and superius respectively). Duets scored for one voice type may have been easier to classify than their three- or four-voice counterparts.

⁸⁴ Example 4.1 is based on Smijer's edition, which I have reproduced so that cleffing is easier to read. Josquin des Prés *Werken*, eds. Albert Smijers, M. Antonowycz and W. Elders, ser. 1, vol. 1, *Missa L'homme armé super voces musicales* (Koninklijke Vereniging voor Nederlandse Muziekgeschiedenis: Amsterdam: G. Alspach, 1925-1931), 10-17. Only pages 10-12 are reproduced here.

⁸⁵ Blackburn, "Masses Based on Popular Songs and Solmization Syllables," 62.

Ex. 4.1

Credo

Transposed Credo I

(From Missa L'homme armé super voces musicales)

Josquin

D

C

T

B

(E)

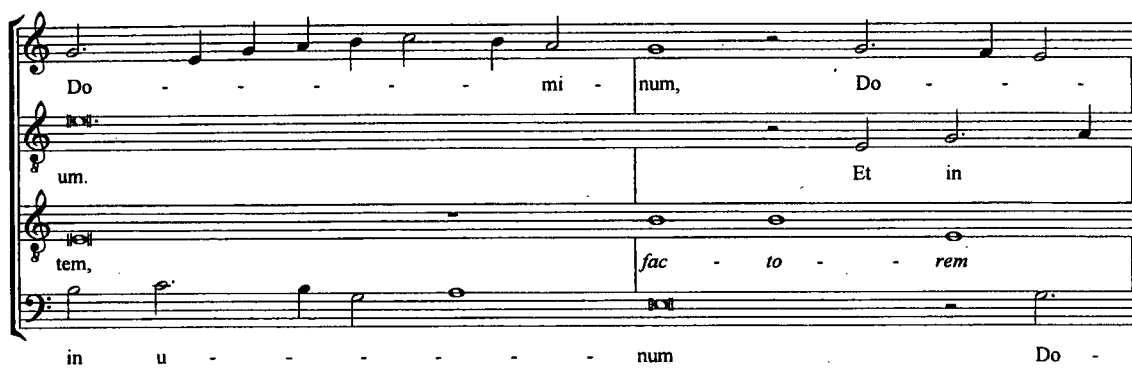
3 (D)⁵ #

Vi - - - si -

bi - li - - - um om - ni - um et

(E D C) # 10

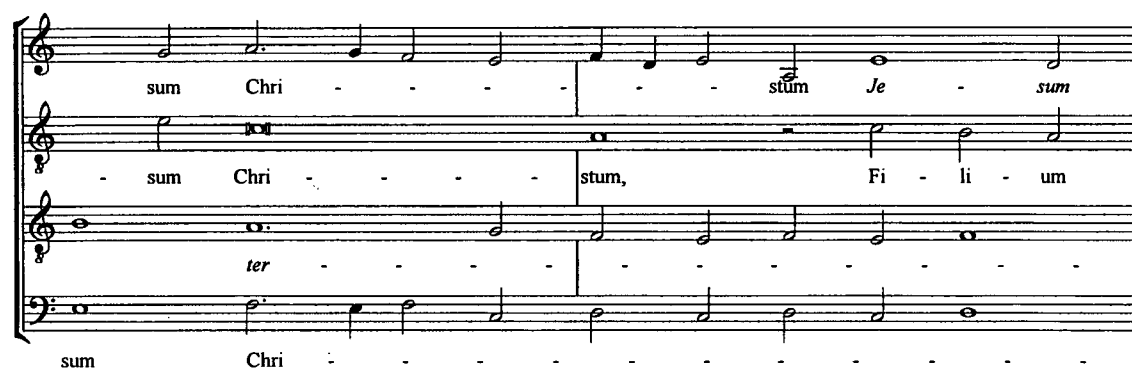
in - vi - si - bi - - - li - um Et



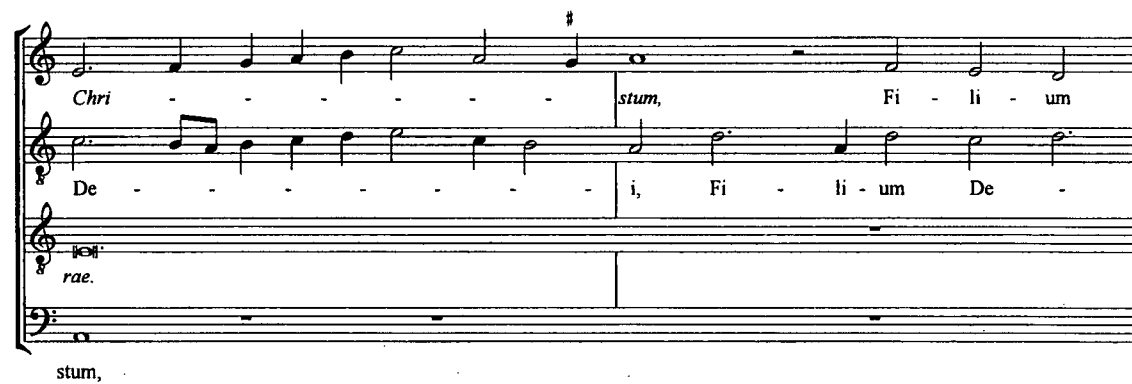
Do - - - mi - num, Do - - -
 um. Et in
 tem, fac - to - - - rem
 in u - - - - - num Do -



15
 -mi - num, Je - - - sum Chri - stum, Je -
 u - num Do - mi - num, Je -
 coe - - - li et
 - - - mi - num, Je - - -



sum Chri - - - stum Je - sum
 - sum Chri - - - stum, Fi - li - um
 ter - - -
 sum Chri - - -



Chri - - - stum, Fi - li - um
 De - - - i, Fi - li - um De -
 rae.
 stum,

20

De - i u - ni - ge - ni - u - ni - ge - ni - ge - ni -

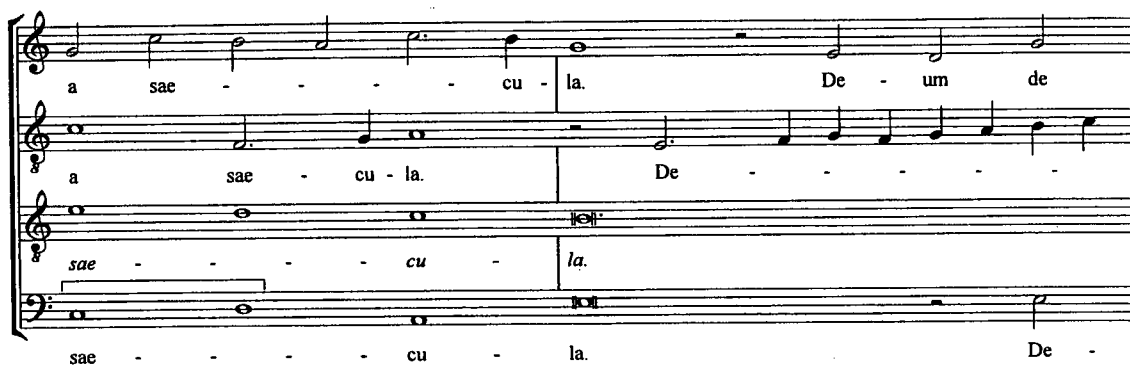
25

ni - tum. Et ex Pa - tre na - Pa - tre na - tum, tum.

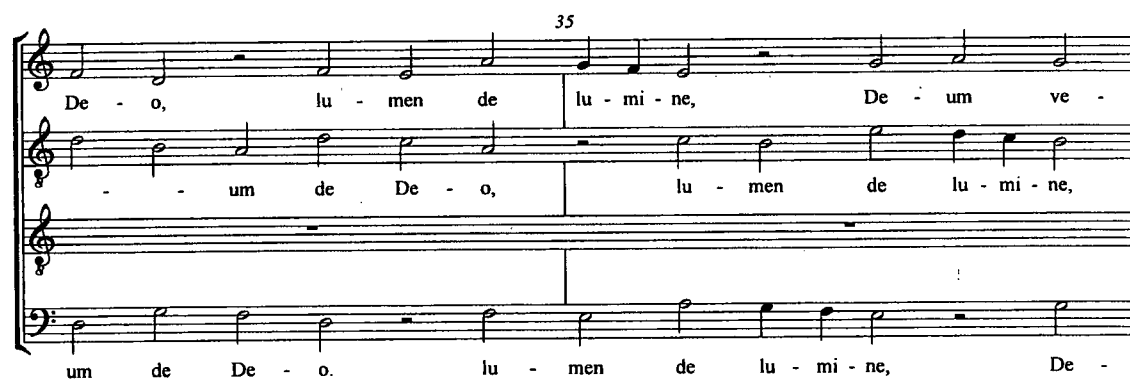
Et ex Pa - tre na - tum, an - te om - ni - te, an - te om - ni - tum, an - te

30

na - tum, an - te om - ni - te, an - te om - ni - tum, an - te



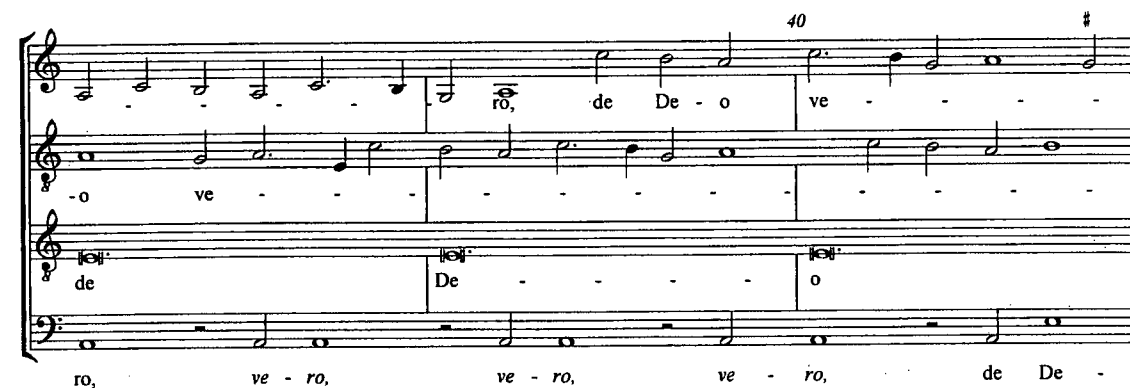
First system of a musical score. It consists of four staves: two vocal staves (Soprano and Alto) and two piano accompaniment staves (Right and Left Hand). The lyrics are: "a sae - - - cu - la. De - um de". The music is in a common time signature and features a simple harmonic structure with sustained notes.



Second system of the musical score, starting at measure 35. The lyrics are: "De - o, lu - men de lu - mi - ne, De - um ve -". The vocal parts continue with the melody, and the piano accompaniment provides a steady harmonic foundation.



Third system of the musical score. The lyrics are: "rum de De - o ve -". The vocal parts have a melodic line with some grace notes, and the piano accompaniment continues with sustained chords.



Fourth system of the musical score, starting at measure 40. The lyrics are: "ro, de De - o ve -". The vocal parts end with a sustained note, and the piano accompaniment features a more active melodic line in the right hand.

-ro. Ge - ni-tum non fac -

-ro, de De - o ve - -ro.

ve - -ro.

45

tum, con - sub - stan - ti - a - lem Pa - tri,

Ge - ni-tum non fac - tum, con -

-ro. Ge - - - -

Ge - ni-tum non fac - tum, con - sub - stan - ti -

per quem om - ni - a

sub - stan - ti - a - lem Pa - tri, per quem

ni - tum.

a - - - - lem Pa - tri,

50

untransposed Credo I (AG)

fac - ta sunt. Qui prop - ter nos

om - ni - a fac - ta sunt.

De - - - -

Qui prop - ter nos

-nes, | et prop- (F)

ho - mi - nes et prop - ter no - stram sa - lu -

sa - lu - - - - tem

scen - - - - - dit

ho - mi - nes et prop - ter no - stram sa - lu -

tem de - - - - - scen - - - - -

de - - - - - scen - - - - -

de - - - - - coe - - - - -

tem de - - - - - scen - - - - -

55

- - - - - dit de - - - - - coe - - - - -

- - - - - dit de coe - - - - -

- - - - - lis. - - - - -

- - - - - dit de

- - - - - lis. - - - - -

- - - - - lis. - - - - -

- - - - -

coe - - - - - lis.

Example 4.2: *Credo I*, "Patrem omnipotentem" to "descendit de caelis."⁸⁶

KYRIALE

CREDO

I

IV XI. 2.

C Re-do in unum De-um, Patrem omni-pot-éntem, fa-
 ctó-rem 'cae-li et terrae, vi-si-bí-li-um ómni-um, et in-
 vi-si-bí-li-um. Et in unum Dómi-num Ie-sum Christum,
 Fí-li-um De-i u-ni-gé-ni-tum. Et ex Patre na-tum ante
 ómni-a saécu-la. De-um de De-o, lumen de lúmine,
 De-um ve-rum de De-o ve-ro. Gé-ni-tum, non factum, consub-
 stanti-á-lem Patri : per quem ómni-a facta sunt. Qui pro-
 pter nos hómi-nes, et propter nostram sa-lú-tem descéndit de
 cae-lis.

⁸⁶ Catholic Church, *Graduale Triplex: seu Graduale Romanum Pauli PP. VI cura recognitum & rhythmicis signis a Solesmensibus monachis ornatum* (Solesmes: Abbaye Saint-Pierre de Solesmes, c. 1998), 769-771. Only pages 769-770 have been reproduced here.

Mass section. Two related points pertinent to the discussion below arise from Glarean's observations: First, we have seen that in his attempt to provide a theory of compositional coherence, modality as abstraction exists as a static theoretical structure subject to transformation by means of the alteration of a single semitone. The implications of this view in relation to a rhetorical understanding of mode will be discussed in the fourth chapter of this thesis, but at present, it is clear that mode as it exists in practice becomes unprecedentedly flexible for Glarean, contrary to categorical notions of mode discussed above. It can change constantly or remain stagnant owing to compositional discretion and/or vocal performance; the role of the latter is particularly clear in the tirades he directs at singers, who often blur a potential modal centre (e.g., his frequent allusions to "ut, re, mi" modalities). As for composers, consider the fact that although Glarean complains about modal impurity brought upon by stylistic bravura within the work of various composers (including Josquin), these works nevertheless constitute the musical examples in the *Dodecachordon*, not those of composers who bow to convention as dictated by Glarean's notion of mode as formal abstraction. Second, Glarean's implicit Hypodorian classification of the Mass (while making allowances for places wherein Josquin has "often changed modes") is apt, owing to the frequent use of sonorities built on and cadential formulas driving towards *A la mi re*, which serve to negotiate the boundaries between Dorian and Phrygian.

The initial three-note motive (*mi-fa-mi*) characteristic of the Phrygian *Credo I* first appears in the contratenor and then in unison imitation in the discant (m. 2). Josquin chooses to transpose the A - B^b - A *Credo I* opening up a fifth to E - F - E, most likely in order to correspond with the transposition of the Mass's *cantus firmus* to E, commencing in measure 7 in the tenor. The E - F - E motive characteristic to *Credo I* is interpolated in the deployment of the *L'homme armé* tune and serves to reinforce the former melody in the tenor line (mm. 10-12) even after Josquin ceases its quotation. The addition suggests that Josquin wished to re-stress the Phrygian

semitone (*mi-fa-mi*) after having abandoned *Credo I* (momentarily) as a unifying device, which had been associated with the Phrygian mode at least as early as 1351.⁸⁷ The chant is carefully deployed throughout the discant until measure 10, with imitations in the contratenor. Deviations from the chant in the discant are marked, either with the letter name enclosed in brackets (transposed to the pitch that would have appeared in Josquin's setting had he chosen to incorporate it) above the corresponding staff or in brackets around interpolated notes on the staff, depending respectively on whether Josquin has avoided using a particular pitch or has added a pitch. Cadences on *D* are quite frequent, (e.g. mm. 3-4, 9-10), largely owing to the many *distinctiones*/pauses on *G* (transposed to *D* in Josquin's setting) employed in *Credo I*. A close in which all voices are centred on *A* occurs in measure 7-8, but once again, is dictated by the chant.

Josquin no longer uses the plainsong quotation following measure 10 and it is at this point that his musical punctuation becomes more varied. Sonorities merely suggestive of cadences abound, either because a voice has failed to resolve in the two-voice structure expected of strong closures (e.g., *E*-sonority in m. 13), or because a voice has disappeared at a crucial moment, such as the *A*-sonority in measure 30 and the *E*-sonority in measure 33. Cadences on both *D* and *A* are particularly frequent, and one of the strongest of the former appears in the contratenor and bass at measure 43 (corresponding to the clausula on *G* in the chant). Phrygian modality reasserts itself quasi-cadentially in measures 44 and 46, but the focus shifts again to a strong closure on *A* in the contratenor and bass at measure 48. The cadence on *G* in measure 50 (discant and contratenor), however, is the strongest yet, owing to the corresponding textual close: it is significant not only because it is the first time that pitch class *G* is highlighted, but because it indicates Josquin's return to the *Credo I* melody, only this time untransposed. The melody that appears in the discant (mm. 50-52) is taken over by the bass (mm. 51-52) and, once again,

⁸⁷ See footnote 78.

Josquin averts expectations with a strong rhetorical closure in measure 53 on *A* (in the tenor and bass voices), contrary to the chant, which ends on *G*. The Mass section ends on *D* (as it began), plausibly explaining why Glarean described it as exemplary of Hypodorian with some modal mixture. Despite the preponderance of *D*-cadences, many others fall on *A*, and *E* is often suggested although not emphasized cadentially. The *E*-mode is particularly clear not so much in the cadences, but in the characteristic *mi-fa-mi* motive of *Credo I*, which Josquin exploits as a structural device in relation to the Phrygian modal species emphasized in the *cantus firmus*:

Ex. 5.

Credo
(Tenor line from *Missa L'homme armé super voces musicales*)

Josquin

Pa - trem om - ni - po - ten - tem,
fac - to - rem coe - li et ter -
rae. Et ex
Pa - tre na - tum, et ex Pa - tre na -
tum, an - te sae - cu - la.
de De - o ve - ro.
Ge - ni - tum. De - scen - dit
de coe - lis.

Late fifteenth-century polyphonic renditions of the monophonic *Credo I* (traditionally described/understood as Phrygian) such as that in Josquin's *Missa L'homme armé super voces*

musicales, in which Dorian and Phrygian mixture is facilitated by Aeolian, could have very well informed Glarean's hypothesis concerning the existence of an *A*-mode and its corresponding plagal. If one were to understand this movement entirely outside of an Aeolian context, then the frequent mixture between Dorian and Phrygian (what had increasingly become the norm in late fifteenth-century performance/compositional practice) would eventually be viewed as inconsequential, potentially rendering a modal understanding of polyphony irrelevant. Glarean's thesis concerning the *A*-modes, however, was not only based in frequent mutation between Dorian and Phrygian modes and vice versa, but was symptomatic of a late fifteenth and early sixteenth-century compositional reality in which the number of modally-ambiguous *A*-final compositions had already increased substantially.⁸⁸ This increase in *A*-final works may be illustrated by a tendency of late fifteenth-century composers to modally reinterpret the expressive potential of *E*-final chansons explored in Okeghem's generation in what Glarean would have described as Aeolian.

The increase in *A*-final compositions and Okeghem's *Ma bouche rit*

The mid fifteenth-century French chanson repertoire, especially that of Gilles Binchois (c. 1400-1460) and Johannes Okeghem (c. 1410-1497), indicates a trend towards introducing *A*-final works in a Phrygian and/or Dorian context. *A*-centred works became increasingly common

⁸⁸ See Reinhard Strohm, "Modal Sounds as a Stylistic Tendency of the Mid-Fifteenth Century," 155 and 168-170 on the gradual increase of *E*-final compositions in the French song repertoire of the mid-fifteenth century. He describes Aeolian as characterized by "the balance of a Dorian fifth and a Phrygian fourth...the particular uses made of *E*-final and Phrygian sounds in French song of the period provide evidence for an expressive intention: at least some of these pieces draw attention to their unusual sound structures by very mournful or otherwise striking texts" (168). In "Okeghem's Attitude Towards Modality: Three-Mode and Eight-Mode Typologies," 228-229, Dean contends that commixture was most often pointed out historically as a result of combining the fourth and fifth species of different modes. Tinctoris suggests that such commixture was quite common - an idea that was touched upon by many late fifteenth- and sixteenth-century theorists and was finally expounded upon in great detail by Aiguino (1561). See footnote 52. Ouvrard makes an argument similar to that of Strohm insofar as "expressive intention" in "Modality and Text Expression in Sixteenth-Century French Chansons," 96-99 and 102.

throughout the 1440s up until the turn of the century, arguably coinciding with the conceptual expansion of the available steps within the gamut, specifically G#. In Phrygian pieces centred on *A*, which we have seen to be notated in both *cantus mollis* and *cantus durus*, the emphasis placed on *A* as well as the potential locus on B-*fa* in Dorian and the resultant compositional commixture between protus and deuterus modes may have aided in establishing an Aeolian mode on two levels for Glarean: that of an *A*-final set in *cantus durus* and a *D*-final set in *cantus mollis*. I believe that Aron's difficulty accounting for and differentiating between *A*-cadence and *A*-final irregular endings, Tinctoris's vacillating opinion on the structural significance of *A* as regular or irregular, as well as other theorists who avoided or dealt with the issue in a seemingly arbitrary fashion and the divergent practices of modal classification suggested by Attaignant's modally-ordered chansonniers, are symptomatic of a musical reality in transition which theorists were not yet equipped to discuss. Glarean's treatment of "Aeolian" works and arithmetic divisions of *scalae* is largely indicative of an attempt to both clarify the theory of mode in polyphony and to methodically explain the steadily increasing emergence of *A*-centred works.

In "Genre, Final and Range: Unique Sorting Procedures in a Fifteenth-Century Chansonnier," Dennis Slavin indirectly sheds light on why a theorist like Tinctoris would have had problems accounting for *A*-final works. In his discussion concerning the pieces that are extant in M902,⁸⁹ a fragmentary chansonnier from around 1440 that consists solely of Binchois' songs and is arranged first by genre and second according to final and range,⁹⁰ Slavin shows that of the surviving songs, only one has an *A*-final. He concludes that

songs ending on *A* are so rare in contemporary chansonniers that there are no other specimens among the anonymous songs in the manuscripts that share pieces with M902...Of the sixteen anonymous rondeaux in EscB [EscSL IV.a.24 (c. 1460-1474) in the Escorial Library], none have finals on *A*. Even

⁸⁹ MunBS Gall. 902, in the Bayerische Staatsbibliothek.

⁹⁰ Although there are thirteenth- and fourteenth-century precedents for this insofar as organization, it is unique to a fifteenth-century chansonnier.

in an extensive collection such as 0213 [OxfBC 213 in the Bodleian Library (copied c. 1420-1436)], only one of the fifty-six anonymous songs (a ballade) has that final.⁹¹

Like Binchois and other composers of the generation, Okeghem's Phrygian mode pieces are typically centred on *E*, but some pieces, such as the four-voice motet *Ave Maria*, seem to suggest a Phrygian mode transposed to *A*, but are hardly unambiguous in their presentation.⁹² However, unlike the generation that followed, Okeghem was more likely to set a piece in untransposed Phrygian, such as the three-voice bergerette *Ma bouche rit*.⁹³ In order to assess some of the stylistic changes that occurred in Phrygian contexts in the generation following Okeghem, I will look at various settings of the well-known chanson,⁹⁴ including Jacob Obrecht's and Pierre de La Rue's four-voice settings, the six-voice setting attributed to Josquin⁹⁵ and Heinrich Isaac's four-voice motet that employs the opening *soggetto* of Okeghem's *Ma bouche rit* as its basis: *la-mi-la-sol*.

⁹¹ My parentheses. Dennis Slavin, "Genre, Final and Range: Unique Sorting Procedures in a Fifteenth-Century Chansonnier," *Musica Disciplina* 43 (1989): 134 and his footnote 48. Compare this to a later manuscript, such as Margaret of Austria's *Album de Chansons* (Brussels, Bibliothèque Royale, ms. 228), in which 19 of the 58 chansons listed use an *A*- or an *E*-final. See Ouvrard, "Modality and Text Expression in Sixteenth-Century French Chansons: Remarks Concerning the *E* Mode," 99.

⁹² See Lawrence F. Bernstein, "Okeghem's *Ave Maria*: Evidence of Structural Cogency," in *From Ciconia to Sweelinck: donum natalicium Willem Elders*, ed. Albert Clement and Eric Jas (Amsterdam, Atlanta GA: Rodopi, 1994), 75-90.

⁹³ Okeghem's *Ma bouche rit* has been copied from the Collected Works edition. Johannes Okeghem, *Collected Works*, Musicological Studies and Documents 7, ed. Richard Wexler and Dragan Plamenac, vol. 3, *Motets and Chansons* (New York: American Musicological Society, 1992), 73-74. For notes to this edition, see LXXVIII-LXXXII.

⁹⁴ The popularity of Okeghem's bergerette is partially affirmed by the number of sources in which it survives: 15 manuscript sources and 2 printed editions (including Petrucci's *Harmonice Musices Odhecaton A* (1501, reprints in 1503 and 1507). For details, see Jacob Obrecht, *New Obrecht Edition*, ed. Leon Kessels and Eric Jas, vol. 17, *Secular Works and Textless Compositions* (Koninklijke Vereniging voor Nederlandse Muziekgeschiedenis, 1997), LXIX.

⁹⁵ The recent discovery of Uppsala 76b (c. 1515-1535) indicates that the setting *a 6* attributed to Josquin was initially composed *a 5* (i.e., without the line designated as *sexta pars* or *quinta pars* in the printed sources). It is unlikely that either of these settings were composed by Josquin. See Lawrence F. Bernstein, "*Ma bouche rit et mon coeur pleure*: A Chanson *a 5* Attributed to Josquin," *Journal of Musicology* 12 (1994): 253-286 and idem, "Chansons for Five and Six Voices," in *The Josquin Companion*, ed. Richard Sherr (Oxford: Oxford University Press, 2000), 407 and 411-412.

Ex. 6.

Ma bouche rit

Johannes Okeghem

5

D 1.5. Ma bou - che rit et ma pen - se - e

T Ma bouche rit

C Ma bouche rit

10

pleu - re, Mon oeil s'es joye et

15

mon cuer maul - dit l'eu - re Qu'il eut le bien

20 25 #

qui sa san - te des - chas -

30

-se Et le plai - sir que la

35

mort me pour-chas se

40

Sans res - con - fort qui m'ai - de ne.

45

se - queu - re.

50

2. Ha, cuer pervers
3. Puis qu'en ce point

Ha, cuer pervers
Puis qu'en ce point

55

vers, faul - saire et men - son ger, Dic - - tes com -
point vous vous vou - lez ven - ger, Pen - - sez bien -

60

ment a - vez o - se son - ger, Que de faul -
tost de ma vie a - bre - ger, Vi - vre ne.

65

ser puis ce au que point m'a vez pro mis.

vez mis.

Example 6.2. Text of *Ma bouche rit* with translation.⁹⁶

Ma bouche rit et ma pensée pleure,
 Mon oeil s'esjoye et mon
 cœur maudit l'eure
 Qu'il eut le bien qui sa
 santé deschasse
 Et le plaisir que la mort me pourchasse
 Sans resconfort qui m'aide ne sequeure.

My mouth laughs, and my thoughts weep,
 My eye looks merry, and my
 heart curses the hour
 When it acquired the benefit
 that dissipates its health
 And the pleasure for which death pursues me
 Without comfort to aid or console me.

Ha, cuer pervers, faulsaire et mensonger,
 Dictes comment avez osé songer
 Que de faulser ce que m'avez promis.

Ah, perverse, false, and deceitful heart,
 Tell me how you dared to dream
 Of lying about what you promised me.

Puis qu'en ce point vous vous voulez venger,
 Pensez bien tost de ma vie abreger;
 Vivre ne puis au point ou
 m'avez mis.

Since in that respect you wish to avenge
 yourself,
 Think soon of shortening my life;
 I cannot live in the situation in which
 you have placed me.

⁹⁶ The text and translation presented here have been taken from: Ockeghem, *Collected Works*, vol. 3, *Motets and Chansons*, LXXIX.

Vostre rigueur veult doncques que je meure,
Mais Pitié veult que vivant je demeure;
Ainsi meurs vif et en vivant trespasse,
Mais pour celer le mal qui ne se passe
Et pour couvrir le dueil ou je labeure,

Ma bouche rit . . .

Your hardness, then, wills that I die,
But Pity wishes that I remain alive;
Thus alive I die and in living perish,
But to hide the pain that will not go away
And to conceal the sorrow under which I labour,

My mouth laughs . . .

Okeghem's three-voice *bergerette* clearly falls into the boundaries of Phrygian mode classification. The ranges of the tenor and contratenor are relegated to C - f, exceeding the upper boundaries of the Phrygian diapente by a semitone and the lower boundaries by a third in accordance to ranges indicative of the Phrygian described by contemporaneous theoretical treatises and various modern musicologists (discussed above). The discant's range is confined by A - d so that imitation between it and the lower voices at the fifth will be possible. The ranges suggest Glarean's and Zarlino's statements concerning modal mixture between voices, in that a line composed in the Phrygian mode will often be accompanied by one representative of the Aeolian or Hypoaeolian. Strong two-voice cadences in the discant and tenor voices fall on *A* in measures 36 and 72 (the final cadence), and on *E* in measure 69 (the piece's first ending). Both *A*-cadences ought to be inflected subsemitonally due to the *mi contra fa* dissonance that would occur if *B* was to be called *fa*, but this does not detract from a Phrygian interpretation owing to what we have learned concerning performance practice and the fact that G-*mi* serves to accentuate *A* - a pitch that functions *representatively* of the upper fifth diapente in mode 3. Other cadences deemed less strong in both the research of Bernhard Meier and Karol Berger because of voices that drop out of the texture or improper resolutions/preparations (either in the structural voices or not),⁹⁷ occur on the above pitches as well as *C* (m. 19 in the discant and contratenor)

⁹⁷ For an overview, see Michèle Fromson, "Cadential Structure in the Mid-Sixteenth Century: The Analytical Approaches of Bernhard Meier and Karol Berger Compared," *Theory and Practice* 16 (1991): 179-213. While Meier limits himself (for the most part) to sixteenth-century articulations, Berger looks at

and *G* (m. 26 in the discant and tenor, and m. 54 in the discant and contratenor). Structural cadences all fall on the pitches implied in the *la-mi-la-sol soggetto* (and the following note *C* in the cantus) to which subsequent composers were drawn in their respective renditions of the song.

For Okeghem, cadence structure is plausibly a large-scale means by which he organizes his piece and refers to the opening *soggetto*. Evaded and weak cadences on *C* might be explained as representative of deuterus, particularly if we are to believe the theorists (including Glarean) and contemporary scholars who argue that modes 3 and 4 are indistinguishable in polyphony, since *C*-cadences are common in monophonic songs cited by theorists as exemplary of mode 4.⁹⁸ Although cadences on *G* may not seem consistent to a Phrygian classification, we have already seen their appearance in other pieces that employ deuterus colouring, such as Josquin's *Credo* from the *Missa L'homme armé super voces musicales*, and even in the *distinctiones* of the monophonic *Credo I*. Likewise, *G* is integral to the *la-mi-la-sol soggetto* and could serve a structural function. Despite the strong cadence on *A* in measure 72, the first and final definitive closures musically and textually occur on *E* (m. 46, in the discant and tenor voices), so that the *A*-cadence may be reinterpreted as representative of the deuterus *repercusso*. The bergerette's ranges are equally suggestive of the untransposed Phrygian mode as well as contrapuntal emphasis on *E* that coincides with grammatical articulations of the text (mm. 8, 32-33, 58-65).

In hindsight, Glarean may have described this piece as Hypoaeolian, but such a classification would not have been necessary at the time in which Okeghem wrote due to the chanson's obvious Phrygian colour and the relative lack of compositions around 1440 set on an *A*-final. Strohm points out, however, that the generation after Okeghem "seems to have heard

theories of *clausulae* as far back as Marchetto da Padova.

⁹⁸ See footnote 16.

soggetti such as the *la-mi-la-sol* of *Ma bouche rit* . . . primarily as Aeolian. . . . Transpositions of famous opening *soggetti* (as distinct from whole pieces) became frequent in the later fifteenth century.”⁹⁹

La Rue’s setting of *Ma bouche rit*

The four-voice *Ma bouche rit* by Pierre de La Rue (c. 1452-1518), which uses Okeghem’s tenor as a *cantus firmus* in a different mensuration, clearly construes the song as representative of an *A*-mode (see example 7).¹⁰⁰

Despite the fact that a cadential analysis of the chanson is difficult since it survives *unicum* in the Basevi codex with just a three-word incipit (so no *forme fixe* may be established), we can assume that certain musical divisions coincide with Okeghem’s version since the *bergerette*’s tenor is quoted exactly.¹⁰¹ Cadences on *A* abound, but those that are particularly noteworthy, since they suggest structural divisions or the establishment of an *A*-mode, occur on measures 8, 20, 55, 92, 96 and 149 (the chanson’s final measure). The opening *la-mi-la-sol* *soggetto* is dispersed in imitation throughout the voices, particularly in the bass of the opening few measures. Two sonorities suggestive of an *A*-cadence (m. 8) and *C*-cadence (m. 14) hint at an *E*- or *A*-modality, but the cadence in measure 20 points towards an *A*-mode, largely due to the fact that the *A*-*G*-*A* discant requires a *mi*-cadence (which Kreider has inflected editorially) if we are to believe contemporaneous theoretical treatises,¹⁰² the fact that solmizing the bass *B* as *fa*

⁹⁹ Strohm, “Modal Sounds as a Stylistic Tendency of the Mid-Fifteenth Century,” 169-170.

¹⁰⁰ Pierre de La Rue, *Opera Omnia*, Corpus mensurabilis musicae 97, ed. J. Evan Kreider, *Chansons* American Institute of Musicology, (publication forthcoming).

¹⁰¹ Although La Rue’s composition was most likely intended for vocal performance, it appears textless in the Basevi codex. Prepared at the scriptorium connected with the Habsburg-Burgundian court for an unknown member of the Agostini Ciardi family of Siena by the court scribe B (=Martin Bougeois?), the text may have been less of a concern than the music since the collection was presumably copied for individuals not fluent in French. See University of Illinois at Urbana-Champaign, *Census-Catalogue of Manuscript Sources of Polyphonic Music, 1400-1550*, vol. 1, 233; and Honey Meconi, introduction to *Basevi Codex. Florence, Biblioteca del Conservatorio, MS 2439*, Facsimile Editions of Prints and Manuscripts, ed. Eugen Schreurs (Peer, Belgium: Alamire, 1990), 5-8.

¹⁰² See Berger, *Musica ficta*, 73-74 and 76.

Ex. 7.

Ma bouche rit

Pierre de La Rue

5

D

C

T

B

10

15

20 #

25 30

This system contains measures 25 through 30. It features four staves: a vocal line in treble clef and three piano accompaniment staves (treble, middle, and bass clefs). The key signature has one sharp (F#). The music includes various note values such as eighth, quarter, and half notes, along with rests.

35

This system contains measures 35 through 40. It continues the musical composition with the same four-staff structure. The notation includes a variety of rhythmic patterns and rests.

40

This system contains measures 40 through 45. The musical notation shows a continuation of the piece, with the vocal line and piano accompaniment staves.

45

This system contains measures 45 through 50. It concludes the page with the same four-staff musical arrangement.

50 55

60

65

70

75 80

This system contains measures 75 through 80. It features four staves: a vocal line in treble clef, and piano accompaniment in treble and bass clefs. The key signature has one sharp (F#). Measure 75 begins with a vocal entry. The piano accompaniment provides harmonic support with chords and moving lines. Measure 80 shows the vocal line continuing with a melodic phrase.

85

This system contains measures 85 through 90. A key signature change to two sharps (F# and C#) occurs at the beginning of measure 85, indicated by a sharp sign. The vocal line and piano accompaniment continue with their respective parts. Measure 90 shows the vocal line with a melodic phrase.

90 #

This system contains measures 90 through 95. The key signature change to two sharps (F# and C#) is maintained. The vocal line and piano accompaniment continue with their respective parts. Measure 95 shows the vocal line with a melodic phrase.

95 100

This system contains measures 95 through 100. The vocal line and piano accompaniment continue with their respective parts. Measure 100 shows the vocal line with a melodic phrase.

105

This system contains measures 105 through 110. It features four staves: two treble clefs and two bass clefs. The music is written in a key with one flat (B-flat). Measure 105 has a bracket above it. The notation includes various note values, rests, and ties across the staves.

110

This system contains measures 110 through 115. It continues the four-staff arrangement. Measure 110 has a bracket above it. The musical notation shows a continuation of the melodic and harmonic lines from the previous system.

115 120

This system contains measures 115 through 125. It features the same four-staff layout. Measure 115 has a bracket above it, and measure 120 also has a bracket above it. The notation includes some accidentals, such as a B-flat in measure 120.

125

This system contains measures 125 through 130. It maintains the four-staff structure. Measure 125 has a bracket above it. The system concludes with a double bar line at the end of measure 130.

130 135

This system contains measures 130 through 135. It features four staves: two treble clefs and two bass clefs. The music is written in a common time signature. Measures 130 and 131 show a melodic line in the first treble staff and a supporting bass line. Measures 132 and 133 continue the melodic development with some rests. Measures 134 and 135 conclude the system with a final melodic phrase and a sustained bass note.

140

This system contains measures 140 through 145. It features four staves. Measure 140 begins with a sharp sign on the first staff. The melody in the first treble staff moves through several notes, while the bass line provides a steady accompaniment. Measures 141 and 142 show further melodic progression. Measures 143 and 144 continue the pattern. Measure 145 ends the system with a final melodic note and a sustained bass note.

145

This system contains measures 145 through 150. It features four staves. Measure 145 starts with a sharp sign on the first staff. The melody in the first treble staff is active, while the bass line remains relatively simple. Measures 146 and 147 show the melody continuing. Measures 148 and 149 continue the melodic line. Measure 150 ends the system with a final melodic note and a sustained bass note.

3

This system contains measures 150 through 155. It features four staves. Measure 150 begins with a sharp sign on the first staff. The melody in the first treble staff is active, while the bass line remains relatively simple. Measures 151 and 152 show the melody continuing. Measures 153 and 154 continue the melodic line. Measure 155 ends the system with a final melodic note and a sustained bass note.

would result in a *mi contra fa* dissonance with the contratenor, and the fact that both the discant and bass voices span the *A*-octave (mm. 17-20). The clear exposition of the *soggetto* up to this point, and the definitive cadential close on *A* in measure 20, suggests the rules governing modality and opening *soggetti* discussed by Zarlino in 1558, insofar as a *soggetto*'s role in establishing modality:¹⁰³ that is, it is necessary that the governing modality be established, through cadential manoeuvre, following the exposition of the *soggetto*.

Pitch class G is emphasized in a relatively strong (three-voice) cadence (m. 26) that conforms to the sonority in Okeghem's version (m. 14-15), although it is not strengthened by a textual close. Two relatively stronger cadences reaffirm an *A*-mode in measures 55 (between the discant and contratenor) and 72 (discant and tenor), and the final note of the *cantus firmus* ends on *E* (m. 91); an *A*-cadence (m. 92) follows (reinterpreting the tenor *longa* on *E* as its fifth

¹⁰³ In *Le Istitutioni Harmoniche* of 1558, Zarlino writes:

[Part 3, chap. 26] Before beginning [a composition], it is necessary to establish what are the essentials of every good composition, those features whose omission would result in an imperfection. The first is the *soggetto*, without which nothing can be made . . . The poet's *soggetto* is [an incident of] history or a tale . . . The musician . . . also has a *soggetto* upon which to construct his composition, which he adorns with various movements and harmonies.

(part 3, chap. 28) When I speak of *soggetto*, I mean the part that is the principal one and leader of all others accommodated to it in consequence. It is not necessarily the first part to sound but that which sets and maintains the mode and to which the other parts are adapted, whatever their distance from the *soggetto*.

(part 3, chap. 58) Therefore, any time one wishes to write a piece upon a given *soggetto*, whether a *cantus firmus* or *figuratus* or to write a canzone, madrigal, or motet, in which case the composer must invent the *soggetto* [i.e., unless it is derived from a *cantus firmus* or *figuratus*], he must first consider in what mode the *soggetto* should be or in what mode he wishes to compose his work. In this way he will know the pitches on which the cadences should fall and can arrange the harmonies in a manner that will keep the end from being discordant with the middle and beginning. Having considered these things, he may begin to write any part he wishes, always beginning on a regular pitch of the chosen mode and observing all the rules given above.

Gioseffo Zarlino, *Le Istitutioni Harmoniche* (Venice, 1558), vol. 3, *The Art of Counterpoint*, trans. Guy A. Marco and Claude V. Palisca, Music Theory Translation Series 2 (New Haven and London: Yale University Press, 1968), quoted in Benito V. Rivera, "Finding the *Soggetto* in Willaert's Free Imitative Counterpoint: A Step in Modal Analysis," in *Music Theory and the Explanation of the Past*, ed. Christopher Hatch and David W. Bernstein (Chicago: University of Chicago Press, 1993), 74, 100 and 101 respectively.

degree), contrary to the strong Phrygian cadence on *E* in Okeghem's *bergerette*. Although the first section of La Rue's composition closes on a *C*-sonority (m. 96), the two-voice structure that defines a cadential close is notably absent. As a result, the cadence on *A* in measure 92 may be understood as the concluding cadence of the composition's first section, serving to confirm an *A*-mode as opposed to an *E*-mode.

Lack of a modal focus on *E* owing to the reinterpretation of Okeghem's *soggetto* becomes particularly clear in the second section (m. 97 - end) of La Rue's setting, not only at the level of Aeolian in *cantus durus*, but now at that of *cantus mollis* with a *D*-final. The latter modal centre is foreshadowed by a *D*-cadence in the chanson's first section (m. 84). It is the first of its kind in the piece, but seems to prefigure the importance of *D* and the conflict between its governing species and that of an *A*-mode within La Rue's setting (see mm. 105, 114-115, and 137). The discant line (mm. 82-84) *D-C-D* requires a subsemitonal cadence as the tonal focus seemingly settles on *D*, yet the bass (mm. 83-84) moves from *A - B*, coinciding with the strong two-voice cadential structure (between discant and tenor) that settles on *D*, and is therefore editorially emended as *mi-fa* in order to avoid the potential *mi contra fa* incited by pitch class *F* in the contratenor (m. 84). The section is significant: not only has La Rue managed to avoid the structural emphasis on *E* engendered in the tenor of Okeghem's *bergerette*, but he has emphasized pitch class *D* (not one cadence of this sort occurs in Okeghem's setting) both through an implied *C-mi* (m. 83) and *B-fa* (m. 84), of which the latter serves to suggest a *D*-mode with *B-fa*, which we have seen above to be equivalent to Glarean's notion of an *A*-mode species (*cantus mollis* on *D*) owing to the incorporation of the Phrygian fourth alongside the Dorian fifth. The significance of Kreider's *B-fa* emendation (m. 84) is reconfirmed in measures 114-118, in which the scribe of the Basevi codex clearly marked a *B^b* in the contratenor (mm. 114-116), bass (mm. 114-118) and the discant (m. 118). The rhythmic and tonal fluctuation of this passage slows down perceptively, and the section is tonally ambivalent in that it is equally suggestive of a *D*, *F*

or B^b sonority. Although measure 122 arguably modally reinterprets the passage within the context of pitch class F owing to the two-voice cadential structure in the discant and contratenor, it is reinterpreted again in imitation on D and A between the same voices in measure 137. The bass line in the piece's concluding measures (144-149) carefully outlines what Glarean would have construed as the Aeolian species prior to the chanson's close on *A*. La Rue has clearly reinterpreted Okeghem's Phrygian *bergerette* into an *A*-mode at the levels of both *cantus durus* (as notated) and *cantus mollis* (as implied by the frequent use of *B-fa* within passages suggestive of a *D*-mode and the explicit flats marked by the scribe of the Basevi codex in mm. 114-118).

Settings of *Ma bouche rit* attributed to Josquin and Obrecht

Whereas La Rue's setting of *Ma bouche rit* clearly explores an Aeolian modality at the level of *cantus durus* and *cantus mollis*, the settings attributed to both Josquin and Obrecht (1457/8-1505) remain more faithful to Okeghem's version, on which their respective discant and tenor lines are built. However, while the six-voice setting attributed to Josquin¹⁰⁴ may be understood as exemplary of the Phrygian mode in strict modal imitation of Okeghem's chanson,

¹⁰⁴ Bernstein ("Chansons for Five and Six Voices," 411-412) contends that this setting of *Ma bouche rit* (surviving in separate versions for five- and six- voices)

surely is not by Josquin. The setting *a 6* (attributed to Josquin in the Attaignant and Susato anthologies) adds a stylistically anomalous part to what was surely a pre-existent version for five voices. Even the version *a 5*, however, can hardly have been Josquin's work. The composer of this work takes over the superius of Okeghem's famous *bergerette* as his own, but he fails to recognize structural implications inherent in that melody that require closure at the medial cadence in the traditional manner of a *bergerette*. . . The harmonic context of the chanson, moreover, is terribly bland: every one of twelve cadences is on E or A. Every other work in the Phrygian mode reliably attributed to Josquin offers a more heterogeneous array of cadential tones. The poem set in this multi-voice setting is not that of Okeghem's *bergerette*; it consists entirely, rather, of the first line of another poem-'*Ma bouche rit et mon cuer pleure*'-repeated over and over again.

For the six-voice setting, see Josquin des Prés, *Werken*, eds. Albert Smijers, M. Antonowycz and W. Elders, ser. 3, vol. 2, *Wereldlijke Werken* (Koninklijke Vereniging voor Nederlandse Muziekgeschiedenis: Amsterdam: G. Alspach, 1925-1969), 47-51 and XI (for notes).

Obrecht exploits aspects of an *A*-mode within the context of Okeghem's Phrygian *bergerette* that will be discussed below.

E-cadences and sonorities suggestive of the latter abound in the chanson attributed to Josquin,¹⁰⁵ most of which showcase the Phrygian cadence (*fa-mi* bass) that Okeghem so carefully exploited in his *bergerette*. Insofar as its modal colouring, the six-voice setting attributed to Josquin is particularly similar to its model. I believe that this was a self-conscious compositional decision, largely owing to the facts that the *cantus firmus* appears in the discant and that structural pitches of the *cantus firmus*, such as *la-mi-la* (A-E-A) and *fa-mi* (F-E), keep reappearing in the bass; as a result, the Phrygian colour dominating Okeghem's *bergerette* is clearly conveyed in the highest and lowest of the voices, which inform the modality of this setting.

Obrecht's version (see example 8¹⁰⁶), however, strongly suggests Aeolian owing to frequent cadences on *A* and only the occasional reference to *G*-sonorities (with the exception of m. 21, in which *G* is strongly articulated in the contratenor and tenor voices rather than the *E*-sonority in Okeghem's *bergerette* with which Obrecht's passage coincides). *A* is cadentially articulated at the piece's outset by means of *mi*-cadences (mm. 5 and 14) that suggest an *A*-mode, if we are to apply Zarlino's rules concerning opening *soggetti* as a means to establish governing modality. This interpretation of an *A*-mode is not challenged by B-*fa* (which may have suggested

¹⁰⁵ See footnote 104.

¹⁰⁶ Obrecht's *Ma bouche rit* only sets the tenor of the first half of Okeghem's *bergerette* and it has been argued that it was not conceived of as a secular work, but rather as part of a larger composition from which this is all that remains. This reasoning is partially justified by Obrecht's discant, which is "confined to a single note [*A*] and gives the impression of being a recitation formula." Jacob Obrecht, *New Obrecht Edition*, vol. 17, *Secular Works and Textless Compositions*, LXIX. The piece only survives in German organ tablature attributed to Hans Sicher [SGallS 530 fol. 64r, a manuscript copied by Fridolin Sicher (1490-1546) entirely consisting of keyboard arrangements of vocal pieces], however, and thus the repeated *A* may simply be a pedal tone. All fictive emendations in this edition are based on Sicher's intabulation that was copied around 1512-1531, so the performer/analyst ought to exercise caution. For Sicher's intabulation, see Obrecht, *New Obrecht Edition*, ed. Eric Jas, vol. 18, *Supplement* (Koninklijke Vereniging voor Nederlandse Muziekgeschiedenis, 1999), 67-68. For additional commentary on the manuscript, see the same volume, XXVI; for the editor's notes on Sicher's intabulation of *Ma bouche rit*, see LXX.

Ex. 8.

Ma bouche rit

Jacob Obrecht

5

D

C

T

B

10

15

20

25 30

This system contains measures 25 through 30. It features four staves: a vocal line in treble clef with a key signature of one sharp (F#) and a common time signature, and three piano accompaniment staves (treble, middle, and bass clefs). The music is in a 4/4 time signature. Measures 25-30 show a vocal melody with various note values and rests, accompanied by piano chords and moving lines.

35

This system contains measures 35 through 40. It continues the musical piece with the same four-staff structure. Measures 35-40 show the vocal line and piano accompaniment continuing their respective parts, with some changes in harmony and melody.

40

This system contains measures 40 through 45. The musical notation continues across the four staves. Measures 40-45 show the vocal line and piano accompaniment continuing their respective parts, with some changes in harmony and melody.

45

This system contains measures 45 through 50. It concludes the musical piece with the same four-staff structure. Measures 45-50 show the vocal line and piano accompaniment continuing their respective parts, with some changes in harmony and melody.

a transposed Phrygian modality on *A* to Glarean), in that *B-fa* is never implied (with the exception of the contratenor line in m. 23 in which a linear tritone might be avoided by means of calling *B-fa*, although I do not believe this fictive emendation to be necessary¹⁰⁷) and the voice leading has been carefully constructed so as to ensure *mi*-cadences on both *A* and *D* that establish the two pitches as potential modal centres devoid of intrusive Phrygian colouring. In fact, cadential articulations on *E* are entirely avoided until the piece's concluding measures, the *cantus firmus* of which coincides with the *E*-cadence in measure 23 of Okeghem's setting (i.e., the opening and closing section of his *bergerette*), possibly as a conventional gesture to the governing modality of the latter. This final cadence on *E* seems modally problematic, due to the implied inflections on *mi* that precede cadences and articulations on *D*, particularly those that occur in its proximity (e.g., those in the contratenor and tenor at m. 35 and the discant and tenor at m. 42).

I have discussed above the dual affinity of *A* to both *D*- and *E*-modalities and Glarean's

¹⁰⁷ This edition is based on Hans Slicher's keyboard intabulation c. 1512-1531 (SGallIS 530 fol. 64r). See footnote 106. As a result, I would argue that many of the editorial inflections here would not have been applied by the average singer. Although the application of *B-fa* would serve to alleviate a potential tritone with pitch class F (m. 23, b. 3), it would create a diminished fifth with the E that follows F (m. 23) and the E in measure 22. Likewise, the metrical and contrapuntal placement of E (repeated for emphasis in m. 24, b. 1-2 and first appearing in m. 22, b. 1 at the beginning of a largely stepwise-descent of an octave E-E) suggests its relative structural importance (as opposed to that of pitch F), rendering the latter a passing tone. I would argue that some of these inflections (such as the *B-fa* discussed above) appearing in stepwise, linear progressions are applied far too liberally if understood within a vocal context. Generally, sixteenth-century sources suggest that intabulators were far more generous in their inflections, largely because of the freedom one could exercise as a soloist (i.e., one did not need to worry about creating an unexpected and/or accidental dissonance with another individual) and the tradition of *imitatio*, in which a composer might compliment the esteemed work of another by borrowing a tune or form etc., and elaborating on that in order to make it his own (as we have seen, for example, in the modal reinterpretations of *Ma bouche rit* in the generation after Okeghem). See Howard Mayer Brown, "Emulation, Competition, and Homage: Imitation and Theories of Imitation in the Renaissance," *Journal of the American Musicological Society* 35 (1982): 1-48; and Milson "Analysing Josquin," 435-436 and 442-443.

Although vocal performances of Obrecht's setting may have varied widely, theoretical testimony (and practical hexachordal application) indicates that a *B-fa* would be unlikely in a vocal rendition of this passage. For commentary on similar linear progressions in stepwise motion in which fifteenth- and sixteenth-century theorists indirectly substantiate the argument above, see Berger, *Musica ficta*, 72-79; and Robert Toft, *Aural Images of Lost Traditions: Sharps and Flats in the Sixteenth-Century* (Toronto: University of Toronto, 1992), 36-38.

desire to theoretically codify an *A*-mode in order to describe the point at which commixture between protus and deuterus is negotiated. Obrecht's version of *Ma bouche rit*, clearly exemplary of the Aeolian mode, refers to such commixture by juxtaposing D (with its customary *mi*-cadence) alongside the suprasemitonally-inflected *E*-cadence. His decision to employ an *E*-cadence (the only articulation in the piece that is approached suprasemitonally as one would expect in a Phrygian context) suggests that he is reacknowledging the model of his composition by reminding his audience of its modal foundation on *E*. Whether Obrecht understood an *A*-mode to function as a pivotal means by which to negotiate the relationship between Dorian and Phrygian modalities as the opening of his setting of *Ma bouche rit* suggests (a conclusion formed retroactively due to the piece's overall cadential and contrapuntal scheme), or whether he purposefully juxtaposed *D*- and *E*-modalities (outside of the context of an *A*-mode) with the strict rhetorical intent of creating a stylistic transgression of conventional diction that would serve to redirect his audience's attention, or whether he even had conceptual difficulties with placing cadential formulas suggestive of protus and deuterus alongside one another, is subject to conjecture. One may conclude, however, that passages such as this would have informed Glarean's Aeolian hypothesis as a theoretical means by which to justify the compositional reality of *Dorian ad Phrygian* (initially referring to something that is jarring to the ear or simply in bad taste) in a positive light.

The various ways in which the settings discussed above appropriate and then transform the Phrygian modality of Okeghem's *Ma bouche rit* are highly individual and representative of a few of the compositional changes that occurred in the modescape within one generation. Just as a sixteenth-century intabulator made reference to a venerable composer or tradition by borrowing a vocal model on which he would elaborate in order to make it his own, the *cantus firmus* that informs the Phrygian sound in Obrecht's setting of *Ma bouche rit*, for example, is at least partially a result of the reverence he accorded Okeghem in keeping with the tradition of *imitatio*,

while the implied mutation between Dorian and Phrygian is representative of his own individuality as a composer. Similarly, Isaac's (c. 1450-1455 - 1517) motet *La mi la sol*, also inspired by Okeghem's *Ma bouche rit* (although appropriated with greater freedom than those versions discussed above), demonstrates this sort of formal veneration for musical authority. In contrast to Obrecht's setting, however, one may conclude definitively that Isaac, like La Rue, reinterprets his composition in the Aeolian mode.

Isaac's setting of *Ma bouche rit*

Isaac's motet *La mi la sol* (see example 9)¹⁰⁸ makes explicit reference to the opening tenor *soggetti* of both Okeghem's bergerette *Ma bouche rit* (*la-mi-la-sol*) and to the anonymous Phrygian song *J'ay pris amours a ma devise* (*la-sol-la-mi*).¹⁰⁹ Both *soggetti* are quoted in Isaac's *cantus firmus*; the former makes up the tenor's first (mm. 7-22) and third (mm. 47-54) statements, and the latter that of its second (mm. 27-42) and fourth (mm. 57-64) statements. Following the bass's exposition of both *la-mi-la-sol* and *la-sol-la-mi* (mm. 3-6), a strong two-voice cadence between discant and contratenor voices occurs (m. 7), emphasized by 5-1 voice leading in the bass as a means to establish the motet in an *A*-mode immediately prior to the tenor's opening statement of the *cantus firmus*. The editorially-inflected G# in measure 4 indicates that the editor felt this to be suggestive of an *A*-cadence due to the voice leading and contrapuntal activity. Despite the relatively weak metrical placement of the cadence and the fact

¹⁰⁸ See Guido Adler, ed., *Denkmäler der Tonkunst in Österreich*, vol. 28, *Heinrich Isaac: Weltliche Werke* (Graz: Akademische Druck und Verlagsanstalt, 1959), 87-88 for the entire motet *La mi la sol*, the *prima pars* of which is copied here. Incipits are not given, so I have copied these from one of the motet's sources, the *Basevi codex*, MS 2439, xxxviiiiv-xxxix.

¹⁰⁹ Strohm notes that Johannes Stokem's *Ha traistre amours*, the anonymous *Tout* and Caron's *Vive Charlois* also mix ideas from the two models, all of which, like Isaac's *La mi la sol*, employ an *A*-final. Strohm, "Modal Sounds as a Stylistic Tendency of the Mid-Fifteenth Century," 170. This interest in the anonymous *J'ay pris amours a ma devise* may be explained by its relatively wide dissemination (13 sources in total). See Perkins' discussion of the *Chansonier Nivelle de la Chaussée*, the oldest collection in which the chanson survives. Perkins, "Modal Species and Mixtures," 178 and 181, Table 10.2.

Ex. 9.

La mi la sol

Prima pars

Heinrich Isaac

First system of musical notation, measures 1-5. The system includes four staves labeled D, C, T, and B. The key signature is one sharp (F#) and the time signature is 3/2. The notation shows the beginning of the piece with various rhythmic values and accidentals.

Second system of musical notation, measures 6-10. The system includes four staves. The notation continues with various rhythmic values and accidentals, including a sharp sign (#) above the first staff.

Third system of musical notation, measures 11-15. The system includes four staves. The notation continues with various rhythmic values and accidentals, including a sharp sign (#) above the first staff.

Fourth system of musical notation, measures 16-20. The system includes four staves. The notation continues with various rhythmic values and accidentals, including a sharp sign (#) above the first staff.

25 30

This system contains measures 25 through 30. It features four staves: a vocal line in treble clef and three piano accompaniment staves (treble, middle, and bass clefs). The music is in 4/4 time. Measures 25-26 show the vocal line with rests, while the piano accompaniment plays a steady eighth-note pattern. Measures 27-30 introduce a more complex piano accompaniment with sixteenth-note runs in the right hand and eighth-note patterns in the left hand. The vocal line enters in measure 29 with a half note.

35

This system contains measures 35 through 40. The vocal line continues with half notes and quarter notes. The piano accompaniment features a consistent eighth-note bass line and a treble line with eighth and sixteenth notes. Measure 35 has a whole rest for the vocal line. Measures 36-37 show the vocal line with eighth notes. Measures 38-40 show the vocal line with quarter notes and a half note, with the piano accompaniment providing harmonic support.

40

This system contains measures 40 through 45. The vocal line has a half rest in measure 40. Measures 41-42 show the vocal line with quarter notes. Measures 43-45 show the vocal line with eighth notes and a half note. The piano accompaniment continues with its characteristic eighth-note patterns, with some syncopation in the right hand in measures 43-44.

45

This system contains measures 45 through 50. The vocal line features a melodic line with eighth and quarter notes, including a sharp sign in measure 46. Measures 47-48 show the vocal line with quarter notes and a half note. Measures 49-50 show the vocal line with eighth notes and a half note. The piano accompaniment provides a steady harmonic foundation with eighth-note patterns.

50 55

This system contains measures 50 through 55. It features a four-staff arrangement with a treble clef on the first staff and a bass clef on the fourth. A key signature of one sharp (F#) is indicated at the beginning. The music includes various note values such as eighth and sixteenth notes, as well as rests. Measure 55 ends with a double bar line.

60

This system contains measures 60 through 65. It continues the four-staff arrangement with a treble and bass clef. The notation includes eighth and sixteenth notes and rests. Measure 65 ends with a double bar line.

This system contains measures 66 through 71. It continues the four-staff arrangement with a treble and bass clef. The notation includes eighth and sixteenth notes and rests. Measure 71 ends with a double bar line.

65

This system contains measures 72 through 77. It continues the four-staff arrangement with a treble and bass clef. A key signature change to one sharp (F#) is indicated at the beginning of the system. The notation includes eighth and sixteenth notes and rests. Measure 77 ends with a double bar line.

that neither *soggetto* has yet been deployed in its entirety, the upper voices at the very least imply the prevalent modality to be stated explicitly in measure 7. With the exception of two cadences (a strong articulation on *G* in measure 21 in the discant and contratenor that coincides with the *G sol* of Okeghem's opening *soggetto* deployed in Isaac's tenor and one on *C--m.* 35, in the contratenor and bass--in which the discant remains silent), every strong cadence in the motet clearly emphasizes an *A*-final, subsequently reinterpreting *la-mi-la-sol* as *fa-ut-fa-mi*.¹¹⁰

Isaac's decision to use the *soggetti* from both the Phrygian *Ma bouche rit* and *J'ay pris amours* suggests that he was entirely aware of the way in which he reinterpreted their respective modal sounds by focusing on the common pitches *A-G-A* to the detriment of *A-E-A* (as opposed to Okeghem who emphasized the latter in order to provide a strong Phrygian colour). This becomes particularly clear in the concluding two measures of the *prima pars*, in which Isaac symbolically acknowledges the Phrygian mode pieces on which his tenor is based: the tenor's final statement (*la-sol-la-mi*) concludes in measure 64 and is immediately followed by two full measures of rest. In measure 67, Isaac notates a *longa* on *E*, the first pitch of the tenor to be freely composed (i.e., not a complete statement of one of the respective *soggetti*). The *longa* on *E* coincides with a clear cadence on *A* (negotiated by the upper voices and accompanied by 5-1 motion in the bass) that serves to reaffirm the Aeolian modality, yet following this cadence, all voices reconvene to form an *E*-sonority (m. 68). While this final measure implies an *E*-cadence (note the editorially-inflected *tierce de picardie*), the voice leading does not proceed in the two-voice contrapuntal structure that sounds as a cadence, and as a result, the *E*-sonority may be understood as a symbolic gesture to the models on which the motet is fashioned. The concluding measure of the *secunda pars* clearly constitutes an *A*-cadence, most likely because Okeghem's

¹¹⁰ This is partially due to the ostinato effect in the *cantus firmus* that is repeated 4 times in the *prima pars*, increasingly in diminution.

bergerette, if considered as it appears visually outside its *forme fixe* (i.e., without repetition), ends on *A*. Like the *prima pars*, *G*- and *E*-sonorities are suggested (mm. 22 and 41, and 43 respectively), but all strong closures are located on *A*.

Conclusion

Although compositions such as Josquin's six-voice setting of *Ma bouche rit* indicate that not every composer of the late fifteenth century reinterpreted this Phrygian mode *soggetto* as representative of what Glarean would call Aeolian, it is clear that a growing number of *A*-final compositions had emerged that would have required theorists to revisit earlier expositions of polyphonic modality. Because *A*-centred works were only gradually becoming increasingly common throughout the 1440s and up until the turn of the century, it is reasonable to assume that theorists were not yet equipped with the tools necessary to describe the phenomenon.

Compositions such as Obrecht's *Ma bouche rit*, for example, arguably served to confound the issue to a greater degree from a theoretical point of view, by consciously employing older modal traditions alongside the new. Viewed in this light, one might understand why fifteenth- and early sixteenth-century theoretical testimonies tend to contradict themselves or each other, and/or offer incomplete explanations where *A*-cadences, and subsequently, *A*-finals are concerned. Glarean's theorizing on "Aeolian" works and arithmetic divisions of *scalae* is symptomatic of both an attempt to clarify the theory of mode in polyphony and to explain methodically the steadily increasing emergence of *A*-centred works that was no doubt fashioned by the repertoire with which he was most familiar:

The Germanic, or Central European, slant of these repertoires, the great authority of the relevant contributions by Isaac, and the instrumental ingredient in these [e.g., an intabulation of Obrecht's *Ma bouche rit* by Sicher] huge anthologies favoured new modal perceptions. All three components were of significance for Glareanus, who descended from the Isaac/Senfl school. His acknowledgement of the Aeolian mode was an inevitable outcome of these style traditions...[However, the practical

justification of the Ionian mode] cannot be shown on the basis of the same repertory. And, theoretically, transposing the Lydian to C did not create a new sound where the flattened fourth degree had long been canonized. Glareanus had a better practical motivation for the conceptualization of the Aeolian than the Ionian mode. And a better theoretical one as well, if theory is to explain what practice makes heard.¹¹¹

It is in order to explain and support the existence of Aeolian that Ionian is described as modally autonomous rather than as a casual performance practice occurring in Lydian. Ionian is invoked precisely because the reality of Lydian (usually notated untransposed in *cantus mollis*) cannot be understood as a mere performance practice if one is to identify an Aeolian mode as autonomous from Dorian and/or Phrygian. Fuller writes that Glarean "neatly reverses the status of old and new categories, so that Ionian and Hypoionian - pieces ending on C or on F with B-flats - are recognized as the common practice, while true Lydian and Hypolydian - melodies actually sung with three whole steps above the final - are acknowledged to be relatively rare."¹¹²

Glarean writes that:

This mode [Lydian] is not used in our time by singers, who turn all its songs into the Ionian by substituting *fa* for *mi* on the *b* key. This custom has prevailed so much that now one rarely finds a pure Lydian in which *fa* has not been introduced somewhere, in a conspiracy as it were, formed against it and with its banishment decided on openly. Yet I would not deny that this change can sometimes be made appropriately, and sometimes through urgent necessity.¹¹³

Fuller suggests that Glarean's recognition of Ionian is a means by which he reinstates Lydian to its "original purity" as he understood it to be conceived by the early churchmen. As I have suggested, however, one may argue that Glarean's distinction between Lydian and Ionian is merely another means by which he substantiates his claim for an Aeolian mode (in keeping with

¹¹¹ My parentheses. Strohm, "Modal Sounds as a Stylistic Tendency of the Mid-Fifteenth Century," 175.

¹¹² Fuller, "Defending the *Dodecachordon*," 213. This argument for a reversal of status between Ionian and Hypoionian, and Lydian and Hypolydian modalities is strengthened by the fact that Glarean does not actually give an example of Ionian, saying that it is so well-known in the chant repertory that an example would be superfluous. See Mengozzi, "Between Rational Theory and Historical Change in Glareanus's *Dodecachordon*," 109.

¹¹³ Glarean, *Dodecachordon*, 166.

his rationally-conceived theory for which the harmonic and arithmetic divisions of each octave species must be supplied for every pitch in the octave), especially when one considers the large repertory of *A*-final works with which he was familiar (in contrast to *C*-final works) and the fact, as Strohm suggests above (see footnote 111), that no new modal sound was produced of the long canonized flattened fourth degree of Lydian. In fact, all of Glarean's "pure" Lydian musical examples are monophonic (presumably so that the avoidance of *mi contra fa* will not be at issue) and are distinct from their Ionian counterparts merely by virtue of what they lack and what may thus be implied, that is, the omission of *B-mi* or *B-fa*.

Lydian	F	G	A	B- <i>fa</i>	C		D	E	F
Ionian	C	D	E	F	G		A	B	C
[Mixolydian]	G	A	B	C	D		E	F- <i>fa</i> / F- <i>mi</i>	G]

Just as Ionian might be described as a result of Lydian in performance practice, Aeolian is an actual result of Dorian and Phrygian mixture but is more difficult a concept for which to account. Whereas Ionian is easily described because the theoretical existence of the Lydian mode (in polyphony) in which *F-fa* and *B-mi* collide is practically non-existent by the early sixteenth century, it is due to the acceptance of an oscillating *B-mi/fa* pitch class in both Dorian and Phrygian modalities that Aeolian is difficult to pinpoint and/or accept. Glarean achieves this end by juxtaposing the structure of his argument for *A*- and *C*-modes with that of Dorian/Phrygian and Lydian modalities respectively; a rationally-conceived argument that refutes the existence of an Aeolian mode would have to refute the Lydian mode, and failure to acknowledge the existence of the Ionian mode would be tantamount to disbelief in the Dorian and Phrygian modes. Glarean's description of Lydian continues:

Yet I would not deny that this change can sometimes be made appropriately [substituting *B-fa* for *B-mi* in the "pure Lydian"], and sometimes through urgent necessity; it occurs appropriately through one or another note which still does not change the mode, but by necessity in order to avoid the tritone in

the diatonic genus...I do not know why it is that with a certain satisfaction we find more pleasure in the Ionian, and why *fa* rings more sweetly in our ears than *mi*; but I believe that either habit in every lifetime is responsible for the submission to the Ionian or what is really more likely, that the Ionian is more natural than the Lydian, but that the Lydian is more dignified. But let us present an example of this mode, which can be sung in two ways.¹¹⁴

In his discussion of the Nicene Creed and The Lord's Prayer, Glarean bemoaned the "obstinate and affected singer[s]" who would arbitrarily "deform" the "open and pure" Aeolian into Dorian by substituting one syllable for another,¹¹⁵ just as here he concedes (in a relatively graceful manner) the transformation of Lydian into that of the Ionian. There is no need to be adamant in the latter instance: As Strohm has pointed out, the modal sound represented by the term Ionian (what Glarean meant by an "ut" mode when he spoke of the only three modes--"ut, re and mi"--in general currency amongst sixteenth-century musicians) was by no means a new sound, and as a result, there was less of a need to implore his audience of its existence, especially in the context of Glarean's aurally-based theory of mode. Compare Glarean's discussion of the transformation of Phrygian into Dorian and certain performances of Aeolian plainsong melodies (The Nicene Creed and The Lord's Prayer) in which singers arbitrarily transform the Aeolian species into Dorian or Phrygian modalities.¹¹⁶

Glarean's description of the Ionian mode as a natural result of solmizing the "true" Lydian that exists autonomously and is actually in greater currency than the original church mode from which it is derived, indirectly bolsters his claim for the existence and individuality of an Aeolian mode that negotiates the boundaries between Dorian and Phrygian modalities. Likewise, Aeolian is just as likely to result of a Dorian melody (for example), or vice versa, as Dorian is to result from Phrygian. His logic brings one to the conclusion that it is impossible to properly understand mode without accounting for Aeolian and Ionian repertoires.

¹¹⁴ My parentheses. Glarean, *Dodecachordon*, 166-167.

¹¹⁵ Ibid., 144 and 145.

¹¹⁶ See footnote 65 above and relevant commentary (pp. 34-38).

The number of compositions with finals on *A*, possible modal interpretations of *A*-cadences and the potential pitch space available in the gamut (specifically *G-mi*) had increased substantially by the sixteenth century and Glarean wished to systematically settle the difficulties that theorists who espoused the octenary modal tradition had encountered in accounting for these works. By invoking the established musical repertoire of the Roman liturgy and famous contemporary composers who employed pieces in which *A la mi re* proved so much of a focal point as to be considered a modal final, Glarean managed to bring theory in closer alignment with practice. By alluding to these highly-revered repertoires representative of both the past and the present, by dedicating his treatise to a powerful cardinal, allying himself to a potentially subversive musician of Antiquity (whom hindsight deemed to have been censured unjustly), and by imploring his audience in an experiential manner as educated listeners who have the ability to derive rhetorical meaning from a given passage, Glarean ensured that a potentially disruptive thesis in which the octenary tradition was supplanted by a dodecaphonic structure would fall on relatively uncritical ears. The rational and experiential way in which Glarean approached his thesis as well as his constant references to “obstinate singer[s]” (who indirectly buttress his aural descriptions of mode), served to exonerate his esteemed dedicatee and colleagues (both past and present) for not having codified an *A*-mode at an earlier date. Having avoided potential conflict with Roman Church officials owing to his unorthodox perception of mode in the midst of outbreaks of Catholic and Reform hostility, Glarean ensured that he could safely describe a musical phenomenon that he encapsulated in his description of an Aeolian mode. By invoking an *A*-mode, however, Glarean was not just accounting for the rapidly growing repertoire in which *A*-finals figured prominently, but for the rhetorical normalization of a modal mutation that was initially considered to be jarring to the ear: *ab Dorian ad Phrygian*. The following section will discuss Glarean’s understanding of an *A*-mode as a result of the standardization of rhetorical rule-breaking.

CHAPTER IV

MODE AS RHETORIC: HEARING MULTIPLE MODAL CENTRES WITHIN A SINGLE COMPOSITION

In *L'antica musica ridotta alla moderna prattica* of 1555, Nicola Vicentino likens architectural construction to musical composition:

The broadest foundation which the composer ought to have is to consider on what he wants to construct his composition, according to the words, whether ecclesiastic, or another subject. The foundation of this structure is to choose a tone, or mode, that will suit the argument of the words, or another musical theme, as the case may be, and on that good foundation he will measure well with his judgment and he will draw the lines of the fourths and of the fifths of this tone and of their limits, which will be the columns that will keep the structure of the composition standing. Although the fourths and fifths of other modes may be placed between these [fundamental] fourths and fifths, they [the interjected fourths and fifths] will not damage this structure when put in a few places and well accompanied in the middle of the composition.¹¹⁷ With the variety of architecture, they will rather embellish the structure of the composition, as good architects do who skilfully exploiting the lines of the triangle dazzle the sight of men and by their means achieve that a façade of some beautiful palace, which in a picture is painted very close to the sight of the onlooker, will appear to him very far without being distant at all. This illusion results from knowing how to accompany colors with lines. Often architects accompany diverse manners of orders of construction in one structure, as one sees in the celebrated Vitruvius: the Doric order¹¹⁸ will be accompanied by the Attic one, and the Corinthian by the Ionic; and they are so well connected and united that even though the manners are diverse, the practical artist using his judgment composes the structure proportioned with various ornaments. So it happens that the composer of music can with art make various mixtures of fourths and fifths of other modes, and he can embellish the composition with various intervals, proportioned according to the effects of the consonance applied to the words; and he should observe closely the tone or the mode.¹¹⁹

¹¹⁷ Compare to Zarlino's description of an opening *soggetto*, in which modal deviations may occur in the middle of the composition once the primary mode has been established. See footnote 103.

¹¹⁸ Berger notes that Vicentino strengthens his analogy by using the term mode (*modo*) to refer to both the architectural orders and the musical modes. See Karol Berger, "Tonality and Atonality in the Prologue to Orlando di Lasso's *Prophetiae Sibyllarum*: Some Methodological Problems in Analysis of Sixteenth-Century Music," *Musical Quarterly* 66 (1980): 489.

¹¹⁹ See Nicola Vicentino, *L'antica musica ridotta alla moderna prattica*, fols. 47v-48r; quoted in Berger,

For Vicentino, a well-constructed work ought to be based on a single *modo*, on which others might be layered so long as they “embellish the structure of the composition” without detracting from the primary mode on which the composition is structured. The quotation is particularly interesting owing to the fact that Vicentino clearly acknowledges, like other musicians of his generation, that modal scaffolding would be unintelligible without a clear sense of a governing modal centre at the outset of a given composition. To put it another way: How could one possibly hear particular modal species as foreign colouring in the context of a primary modal centre without the composer having clearly defined the primary mode from which the former deviates? Vicentino assumes that a composition of intrinsic worth will establish a modal foundation subject to expressive modal transgressions (“embellishment” of the “structure”) and as a result, assumes that a listener will be able to understand these secondary modal areas as deliberate departures from or embellishments on the normative structure. The crux of his statement, then, is the *a priori* assumption that the modality of a given composition is communicative when it engenders a listener’s ability to predict what is forthcoming; a listener’s expectations, however, need not be met by the composer once he has engaged that anticipation. In fact, Vicentino might have argued that a composition is most sound if it forces its audience to interpret and respond to a construction that calls conventional modal logic (such as the abstract descriptions of the octenary modal system to be found in treatises) into question.¹²⁰

In an analysis of Okeghem’s *Ave Maria*, Lawrence F. Bernstein argues that the motet “depends for its vitality and coherence on its capacity to project various musical events to the listener” so that she might engage in *active cognition*.¹²¹ “In the course of perceiving the work actively, the listener is able to identify certain musical procedures as destabilizing in a manner

¹²⁰ Interpretation and response are crucial to rhetorical understanding and analysis. Consider the above in light of Guido’s discussion of a chant’s final, in which it informs a composition’s modality retroactively (see footnote 69). Compare to Glarean’s aesthetic evaluation of *Memor esto verbi tui* in relation to *Bonitatem fecisti cum servo tuo Domine* (see footnote 138 below).

¹²¹ Bernstein, “Okeghem’s *Ave Maria*: Evidence of Structural Cogency,” 88, and his footnote 18 (p. 87).

that implies the need for a return to more stable ground.”¹²² Despite the fact that he describes this piece as it relates to discourse rather than to architecture, Bernstein’s reference to a composition’s “stable ground” as a unifying, basic foundation from which *audible* transgressions may occur, echoes Vicentino’s notion of a singular mode that forms the basis of a given composition on which various hierarchies may be established. What cannot be emphasized enough is the fact that both Vicentino’s description of modal scaffolding and Bernstein’s suggestion (that a piece’s internal coherence is dictated by a composer’s ability to engender a listener’s expectations as the work unfolds) are contingent on an aural transmission of the work.

As we have seen above, John Milson has provided evidence attesting to the existence of relatively few ‘scores’ (in the modern sense) that would have been available for ‘study’ in the late fifteenth and early sixteenth centuries,¹²³ indirectly implying the futility of score-based analyses of this music brought on by certain anachronistic modern perceptions of the score ‘as artefact.’ Likewise, contemporary scholarship points to numerous treatises of the period that indirectly attest to the importance of an aural perception of a work through rhetorical and poetical concepts.

In “Preachers, *Pronunciatio*, and Music: Hearing Rhetoric in Renaissance Sacred Polyphony,” Todd Borgerding argues that systems of musical rhetoric, such as that proposed by Joachim Burmeister at the end of the sixteenth century, have been “enthusiastically embraced by many musical scholars as a theoretical foundation for the understanding of late Renaissance music . . . [because they provide] a concrete link between musical works and the rhetorical divisions of *dispositio* . . . and *elocutio*.”¹²⁴ Although the limitations of pairing such affective devices to musical figures have been suggested by both Claude Palisca and Brian Vickers, the

¹²² Ibid., 88.

¹²³ See footnote 42.

¹²⁴ My parentheses. Todd Borgerding, “Preachers, *Pronunciatio*, and Music: Hearing Rhetoric in Renaissance Sacred Polyphony,” *The Musical Quarterly* 82 (1998): 586.

latter's point that musical rhetoric "has transposed the concept [of rhetoric] into its own [musical] terms, which are more restricted than those of rhetoric and has inevitably substituted formal properties for semantic ones"¹²⁵ indicates precisely why it remains a popular form of analysis; substituting codified musical figures for elusive, intangible formal procedures allows for a functional system of musical language that operates in and of itself despite the fact that its supposed primary goal (to sway the hearts of its listeners) is averted. The resulting system can only operate self-referentially, and subsequently, will only manoeuvre within its predetermined sphere of identifiable figures, serving to avoid the problems encountered in describing non-linguistic phenomena through language.

Borgerding argues that this circumlocution might be avoided if sixteenth-century vocal polyphony were to be understood as

an affective rhetorical phenomenon . . . [under] the concept of *pronunciatio*, the division of rhetoric where Renaissance rhetors conceptualized and heard language as a musical phenomenon . . . [*Pronunciatio*] dealt with the less tangible matter of pronunciation and gesture, the audible and visual elements of rhetoric, and so it is not surprising that few sixteenth century rhetoric books address this area.¹²⁶

This final point touches upon the quandary faced by contemporary musicologists intent on describing modal shifts from pre-established primary modal centres as affective devices: Extant fifteenth- and sixteenth-century discussions of the subject are scant for precisely the same reasons that there are comparatively few contemporary rhetorical descriptions of this music that are not anchored in textual and/or figurative analysis; analysis that does not rely at least partially on extra-musical or formulaic metaphor is next to impossible.

In the passage above, Vicentino attempts to explain compositions that deviate from their modal foundation through architectural analogy, resulting in a poetical and *visual* understanding

¹²⁵ Borgerding, "Preachers, *Pronunciatio*, and Music," 587.

¹²⁶ Ibid., 586.

of commixture that in purely musical/aural terms is almost equally elusive as the actual physical score, and hence, not as conclusive or as objective an explanation as some academics might prefer. Reliance on extra-musical analogy in such discussions, however, is not uncommon in sixteenth-century literature, as the proverb "from Dorian to Phrygian" indicates, first described by Erasmus in 1513 (so far as I am aware) and later invoked by Glarean and Zarlino (among others) as the combination of two incongruous things.¹²⁷ As we shall see below, this adage took on a special meaning for Glarean.

Glarean and modal commixture

Leeman Perkins's argument for the rise in modal commixture stems from Marchetto's pioneering exposition of the subject that was later revisited by Tinctoris, Glarean and Zarlino. In "Modal Strategies in Okeghem's *Missa Cuiusvis Toni*," Perkins states that "it was undoubtedly the presence within a single modal octave of such intervallic progressions with potential affiliations to more than one final that gave rise to the theoretical notion of modal commixture."¹²⁸ Assuming that the average fifteenth-century listener would not have had access to a score from which to judge such modal transformations visually, the potential affinity of a

¹²⁷ For commentary on Erasmus and the proverb "from Dorian to Phrygian," see Wiering, "The Language of the Modes," 111; and Krantz, "Rhetorical and Structural Functions of Mode in Selected Motets of Josquin des Prez," 49-50. Glarean (*Dodecachordon*, 129) writes:

Modes are also changed from one into another but not with equal success. For in some cases the change is scarcely clear even to a perceptive ear, indeed, often with great pleasure to the listener, a fact which we have frequently declared is very common today in changing from the Lydian to the Ionian. . . But in other cases the changing seems rough, and scarcely ever without a grave offense to the ears, as changing from the Dorian to the Phrygian. And so whenever present day organists encounter this difficulty in changing church songs in such a way, if they are not well trained and quick, they often incur the derision of experienced listeners. From this I believe the adage arose: "From Dorian to Phrygian," from natural to less natural, or from well-ordered to irrational, or from mild to harsh; briefly, from whatever, as they commonly say, does not keep to its course and falls from this into a different one.

¹²⁸ Perkins, "Modal Strategies in Okeghem's *Missa Cuiusvis Toni*," 64.

single modal octave to a number of finals corroborates the importance of the rhetorical concept of *pronunciatio*, and the fact that contemporary analyses of digressions from established primary modal centres ought to be restricted to the aural arena. Perkins's comment also implies that the fifteenth- and sixteenth-century acceptance of commixture within the confines of traditional modal theory indicates a desire to express what was happening musically through language, despite the realities of an inconsistent grammar and the lack of scores available for "analysis" in the modern sense.

Glarean is unique in that he is one of the few theorists to attempt to clearly describe modality as it plays itself out in composition for the purpose of giving his audience the tools (vocabulary and methods of analysis) necessary to educate themselves on the matter. Whereas a fair number of fifteenth- and sixteenth-century theorists invoke commixture at a general level, Glarean tries to account for commixture and commutation through specific examples, such as the moment at which one mode is coloured by or mutates into another.

Glarean's analysis of a modal mutation from Dorian to Phrygian in Josquin's *De profundis* illustrates his program for music education quite clearly and, as I have illustrated in the previous chapter, the mutation of which he speaks was by no means a rare compositional excursion, but a steadily growing late fifteenth-century musical reality. Glarean's understanding of the adage *Dorian ad Phrygian* will be discussed in the following section, as it is directly related to his understanding of the *A*-modes.

Dorian ad Phrygian

Glarean's oft-cited description of the modal mutation between Dorian and Phrygian systems occurring in Josquin's *De Profundis* appears in Chapter 24 of Book 3:

[In *De Profundis*, Josquin] has included the systems of both modes [Dorian and Hypodorian], although he has greatly obscured the *phrasis* by a

wonderful and intentionally selected freedom of texture, using now the leap of the Lydian, now the leap of the Ionian, until finally by means of those very beautiful artifices, he moves gradually, slipping unnoticed and without aural offense, from the Dorian to the Phrygian. We have shown above that this is difficult to do, especially in these two modes, the Dorian and Phrygian. And thus, contrary to the nature of the modes, he has ended the connected system of the two modes, the Dorian and Hypodorian, on *E*, which is the tonic of the Phrygian. Yet he has done this in other songs also, nor is he alone in a clearly immoderate love of novelty and an excessive zeal to snatch a little glory by being unusual, a failing with which the more talented professors of disciplines are almost always afflicted, so that however much this failing may be characteristic of *symphonetae* [polyphonic composers], they still have it in common with many others. . . Although he has sought nothing else through this unusualness, he has at least made it plain that through the vigor of his talent, he could cause the reproach "from Dorian to Phrygian", usually brought against early musicians, to be brought in vain against himself, since he has accomplished it learnedly and without giving the slightest offense to the ears.¹²⁹

Despite the fact that Glarean clearly understood *De profundis* to undergo a transformation from Dorian to Phrygian, it is interesting to note that his overall modal classification of the motet is Dorian mixed with Hypodorian,¹³⁰ like his analysis of the motet that precedes it, *Victimae paschali laudes*. Although one might argue that Glarean's protus classification contradicts his description of the Dorian to Phrygian mutation in *De Profundis*, this seems unlikely due to the fact that this motet serves as his only example of modal mutation between traditionally unrelated octave species in the section entitled "Examples of the connection of two modes and also in passing, a eulogy of Josquin des Prez." Also, as we shall see below, the motet's mutation is indirectly related to Glarean's carefully constructed argument for the existence of an *A*-mode and its plagal. But first, the different ways in which *De Profundis* (as a piece representative of protus

¹²⁹ Glarean, *Dodecachordon*, 266-267. Also see Zarlino, *Le Istitutioni Harmoniche*, vol. 4, *On The Modes*, 21.

¹³⁰ Glarean's choice of terminology is pertinent. He identifies *De profundis* as a *commixtio* of Dorian and Hypodorian, whereas *commutatio* from Dorian to Phrygian occurs in the midst of the motet. Krantz argues that Glarean uses the former in an essentially descriptive manner. *Commixtio*, however, is "considerably more subtle and meaningful" for Glarean: "A mixture is simply a state of affairs, while a mutation is a process." See Krantz, "Rhetorical and Structural Functions of Mode in Selected Motets of Josquin des Prez," 44.

and as a piece exemplifying Dorian to Phrygian mutation) is approached should be considered. Glarean's respective observations are placed in contexts reminiscent of Wiering's "internal" and "external" views of modality, or Powers's emic and/or etic assessments of sixteenth-century music theorists.¹³¹ This is significant in that either description of the motet's modality is valid, depending on how it is contextualized.

Glarean's seeming contradiction concerning the modality of *De Profundis* recalls a passage discussed above in which he invokes *Memor esto verbi tui* as a piece representative of Dorian, but states that it may still be understood in other ways, since songs often "play about so in the *phrasis* of many modes." The motet is particularly suggestive of this due to its strange ending, in which the Dorian modality established at its outset is potentially undermined by its termination on *E*. (One is reminded of Vicentino's description of the modal foundation provided by the composer as architect on which other modal centres may be formed or merely alluded to, but which will always be secondary or foreign in relation to the governing mode.) The passage suggests that Glarean aurally perceived *E* as foreign modal colouring within a Dorian context rather than simply as an alternate pitch terminating the Psalm. This argument is substantiated by the monophonic musical example illustrating the Phrygian mode that follows, invoked for its potential to highlight Dorian as an example of a piece that belongs "no less to the Dorian than to

¹³¹ See Frans Wiering, "Internal and External Views of the Modes" in *Tonal Structures in Early Music*, ed. Cristle Collins Judd, Criticism and Analysis of Early Music Series, ed. Jessie Ann Owens (New York and London: Garland Publishing, 1998), 87-108; Wiering, "The Language of the Modes," 194-195; and Powers, "Tonal Types and Modal Categories in Renaissance Polyphony," 428-270. The terms employed may be simplified by a quotation from Zarlino's *Le istituzioni harmoniche*, in which he concludes that the mode of a composition may be judged in two ways: "first by the form of the entire composition, and second, by its final note." Wiering's "internal view" sees mode as an outcome of musical development in which its 'construction' is formed retroactively (i.e., "by the form of the entire composition")--cf. Vicentino's view. An "external view" understands the final as the sole criterion for modal determination. See Wiering, "Internal and External Views of the Modes," 89-90. Similarly, Powers's emic and etic views might be simplified as the approach an "insider" or initiate might take in order to understand a piece's modality and that which an "outsider" or uninitiated might take (often manifested in classificatory impulse).

the Phrygian," *depending on its performance*.¹³² Glarean can describe *De Profundis* or *Memor esto verbi tui* either as representative of protus or as examples of Dorian to Phrygian commutation simply because, by assuming the role of an educated listener, he maintains the privileged position of describing the rules of systematic modal theory while making allowances for the realities of musical practice.¹³³ In other words, by appreciating the Dorian to Phrygian mutation occurring in *De Profundis* or by following his discussion of Phrygian nuances in the Dorian *Memor esto verbi tui* with a monophonic Phrygian melody which is often transferred to the Dorian mode in performance, Glarean is speaking as a listener engaged in the rhetorical art of *pronunciatio* that may be described as essentially "internal" or "emic". Equally valid are his "external" or "etic" classifications of *Memor esto* and *De Profundis* (as protus compositions), but these assessments are not grounded in *pronunciatio*.

In conclusion: the expressive potential of mutation from Dorian to Phrygian

The curious adage "from Dorian to Phrygian" has formed the basis of a number of relatively recent inquiries into the potential of modal expressivity. Among others, Clemens Goldberg, Steven Charles Krantz, Bernhard Meier and Jean-Pierre Ouvrard have explored the structural and rhetorical functions of modal mixture/mutation as a means to delineate the grammatical or poetic structure of a given text.¹³⁴ Such rhetorical realizations of pitch structure are almost consistently substantiated by late fifteenth- and sixteenth-century compositional

¹³² See pp. 34-38 above.

¹³³ Although the formal organization of Krantz's analysis seems to contradict my argument (he understands *De Profundis* as an example of Dorian to Phrygian commutation, whereas *Memor esto verbi tui* appears under the chapter devoted strictly to Josquin's protus motets), its content illustrates my position. See Krantz, "Rhetorical and Structural Functions of Mode in Selected Motets of Josquin des Prez," 129-139 and 226-232 for analyses of *De Profundis* and *Memor esto verbi tui* respectively.

¹³⁴ See Ouvrard, "Modality and Text Expression in Sixteenth-Century French Chansons," Meier, *The Modes of Classical Vocal Polyphony Described According to the Sources*, Krantz, "Rhetorical and Structural Functions of Mode in Selected Motets of Josquin des Prez," and Clemens Goldberg, "Text, Music, and Liturgy in Johannes Ockeghem's Masses," *Musica Disciplina* 44 (1990): 185-232.

treatment of the Phrygian mode or works in which the semitone step E-F/A-B^b and the problematic *diapente* E-B/B^b theoretically characteristic to the Phrygian mode are transferred to seemingly foreign modal structures. While it is likely that a number of composers chose to set certain texts in the characteristically unstable Phrygian mode in order to accentuate specific affects, it is important that contemporary musicians make a distinction between modal characteristics that are dictated by compositional decision and those that are a result of Phrygian system structure.¹³⁵ This distinction is exemplified in contemporary discussions of the curious termination on E in the Dorian motet *Memor esto verbi tui*.¹³⁶ Although it has been argued that the motet's ending conveys "unfulfilled expectation"¹³⁷ (as suggested by an [apocryphal?] anecdote from Glarean concerning Josquin's motivation for writing the work¹³⁸), Steele has pointed out that pitch class D forms a foundation for a structure of conjunct fifths, in which imitation continually realigns D / A with A / E. Though E is theoretically remote from D, they are linked together through the ambiguous stance of pitch class A and its constant

¹³⁵ As a review, anomalous aspects of the Phrygian mode include the semitone above its final, the relationship between E / F and the oscillating B-*fa* / B-*mi*, the confinal on the fourth degree, A *la mi re* (and hence its naturally occurring affinity to pitch class D through A), and its theoretical ambiguity around 1500.

¹³⁶ See footnote 64.

¹³⁷ Krantz, "Rhetorical and Structural Functions of Mode in Selected Motets of Josquin des Prez," 232. Compare Steele's comment: "Considered from the point of view of oratory, the reprise technique Josquin employed in this motet works to heighten the expectation of closure and thus render more emphatic its denial." See Steele, "Tonal Coherence and the Cycle of Thirds in Josquin's *Memor esto verbi tui*," 162.

¹³⁸ Glarean (*Dodecachordon*, 271-272) writes:

Louis XII, the French king, had promised him [Josquin] some benefice, but when the promises remained unfulfilled, as is wont to happen in courts of kings, Josquin was thereupon aroused and composed the Psalm *Memor esto verbi tui servo tuo* with such majesty and elegance that, when it was brought to the college of singers and then examined with strict justice, it was admired by everyone. The king, filled with shame, did not dare to defer the promise any longer . . . But then Josquin . . . immediately began, as an act of gratitude, another Psalm, *Bonitatem fecisti cum servo tuo Domine*. Yet between these two harmonies one can see how much more of a stimulus is the uncertain hope of a reward than is a securely established benefice. For in my opinion, if one considers the affections, the first composition is much more beautiful than the second.

reinterpretation.¹³⁹

As we have seen above, modal ambiguity of this sort is not so much a consequence of compositional intent, but of Phrygian-mode system structure. Although Josquin may have intended *Memor esto verbi tui* to have a sense of open-endedness in relation to its text, as Krantz has argued, it is dangerous to assume that this compositional decision was strictly a result of textual considerations.¹⁴⁰ Consider, for example, Josquin's *A- / E-centred* masses, which, while they are clearly not as textually distinct as a motet or chanson, reveal similar and sometimes analogous treatments of mode to those in the motets that are identified as "rhetorically significant" owing to their capabilities of text expression.¹⁴¹ The sheer number of pieces that highlight the potential affinity to Dorian and Phrygian through Aeolian (or any configuration of these modes for that matter) illustrate how normative the supposedly aberrant mutation from Dorian to Phrygian had become by the end of the fifteenth century. In describing an *A-mode*, Glarean only wished to bring music theory into a closer alignment with musical practice. Consisting of the *re - la* fifth species (shared by Dorian) and the *mi - la* fourth species (shared by Phrygian), the Aeolian mode served as a linguistic means by which to theoretically negotiate the

¹³⁹ Steele, "Tonal Coherence and the Cycle of Thirds in Josquin's *Memor esto verbi tui*," 155-182, especially 156.

¹⁴⁰ Collins Judd ("Aspects of Tonal Coherence in the Motets of Josquin," 158-159) writes:

Although numerous writers have at times described the tonal conventions of these psalm motets [e.g., *Memor esto verbi tui*], namely their 'wrong endings', as 'text-expressive' devices, I wish to suggest here that they reflect more broadly the associations of these texts with psalmody than any particular affective connotation. There is no doubt that these works are motets, not functional psalm settings, but it is arguable that Josquin treated these texts (and others associated with a reciting tone) in a way that reflects a resonance of their plainchant conventions, just as he respected the chant associations of other texts related to more melodic chant models.

Also see idem, "Josquin's Gospel Motets and Chant-Based Tonality," 109-154.

¹⁴¹ Although a comparative analysis of Josquin's *A- / E-centred* masses to his *A- / E-centred* motets are outside the scope of this study, Glarean himself invokes the *Agnus Dei II* from Josquin's *Missa Malheur me bat* as an example of a piece consisting of the "*phrasis* and system of the Phrygian and Dorian" (Glarean, *Dodecachordon*, 276 and 528) and the *Pleni sunt* from Josquin's *Missa Mater patris* as an example of the "connection of Dorian and Hypodorian, ending as Phrygian" (ibid., 276 and 526). Both examples are scored for two voices.

blurred boundaries that often separated the two traditional modalities in polyphonic composition.

The identification of an Aeolian mode, however, did not become a theoretical necessity until the number of compositions with *A*-finals had increased, making modal classification increasingly difficult. It is no coincidence that the increasing number of works with tonal focus on *A* paralleled the standardization of Dorian to Phrygian mutation as a conventional modal technique in composition. It is owing to this frequency in modal commixture (inherent in *A*-final works) that although a mutation from Dorian to Phrygian may have been harsh sounding to earlier generations, it had become relatively inoffensive for Glarean. He accentuates the mutation's rhetorically benign quality by pointing out its relative frequency in the modal vocabulary of Josquin and his contemporaries, but still manages to maintain his ties to tradition (and to his revered teacher Erasmus) by acknowledging the proverb's initial meaning.¹⁴²

The theoretically unreconcilable mixture of Dorian and Phrygian modes is sanctioned by the existence of an Aeolian mode through which the traditional modalities may converge. Glarean's advocacy of the *A*-modes legitimizes the theoretically impermissible and subsequently strips the "Dorian to Phrygian" mutation of its disturbing quality. It is this final consequence that makes Glarean conclude that Josquin had no particular affective reason for employing the Dorian to Phrygian device: "He [Josquin] has sought nothing else through this unusualness." In doing so, Glarean concedes that the once jarring mutation has the potential to exist outside of textual expression as an affective device or merely as compositional artifice.

The rhetorical significance of transferral of modal *phrases* to various foreign modal structures (whether jarring or not) may be illustrated by the mid-fifteenth-century rediscovery of Quintilian's *Institutio oratoria*, in which a figure of rhetoric is presented as a "stylistic

¹⁴² See footnotes 125 and 127. Also see Zarlino, *Le Istitutioni Harmoniche*, vol. 4, *On The Modes*, 21.

transgression departing from normal diction.”¹⁴³ The unsettling mutation between Dorian and Phrygian and/or the *mi contra fa* dissonance characterizing the latter were arguably invoked initially so that listeners could experience a composition not necessarily as a pleasing succession of tones, but as a means to direct their attention towards a rhetorical message. By Glarean’s time, however, attempts to theoretically codify such modal mixture/mutation into affective/rhetorically persuasive terms (e.g., “from Dorian to Phrygian”) were arguably indicative of the discomfort theorists felt with “permitting the theoretically impermissible and even prizing it as expressive.”¹⁴⁴ That is to say, a theorist like Glarean may have felt compelled to describe aberrant modal behaviour in order to assimilate it into current theory, and as a corollary, indirectly attest to its normality. The fact that he could describe it through numerous musical examples indicates that it was a compositional reality, albeit a reality with which theorists were not yet accustomed. Paradoxically, by describing Dorian to Phrygian mutation facilitated by pitch class A as a compositional/theoretical convention, it had been stripped of its initial expressive meaning. Whereas Erasmus had described “Dorian to Phrygian” as a combination of incongruous elements in 1513, Glarean would describe it as an “immoderate love of novelty and an excessive zeal to snatch a little glory by being unusual, a failing with which the more talented professors of disciplines are almost always afflicted, so that however much this failing may be characteristic of *symphonetae* [polyphonic composers], they still have it in common with many others.”¹⁴⁵

Despite his dislike for the practice, Glarean affirms its existence in the musical repertoire in order to bring theory in closer alignment with practice. Nonetheless, he still invokes the transformation as a jarring mutation even though its potential to offend the ears has long since

¹⁴³ Ouvrard, “Modality and Text Expression in Sixteenth-Century French Chansons,” 102.

¹⁴⁴ J. Peter Burkholder, “Rule-breaking as a Rhetorical Sign,” in *Festa Musicologica: Essays in Honor of George J. Buelow*, ed. Thomas J. Mathiesen and Benito V. Rivera (New York: Pendragon Press, 1995), 376.

¹⁴⁵ My parentheses. Glarean, *Dodecachordon*, 266. For the full citation, see footnote 129.

diminished.¹⁴⁶ Although the mutation still has the potential to disturb in certain contexts, this is largely through its historical references and not to its actual modal character. Peter Burkholder argues that this is largely the fate of rhetorical gestures that began as transgressions: “they are assimilated into the evolving style, often acquiring meanings that hearken back to their once forbidden status,”¹⁴⁷ although the unsettling quality by which they were initially defined has long since receded.

The gradual change documented in theorists’ descriptions of Dorian to Phrygian mutation indicates their awareness and (perhaps indirect) acceptance of its existence in practical music-making. For Glarean, acknowledging the existence of the *A*-modes could potentially legitimize modal flux between Dorian and Phrygian centres. Although the *A*-modes were new to music theory, it is clear that they had long since been codified in compositional and performance practice owing to solmization practices, changes in tonal focus (epitomized in the relationship between D and E through *A la mi re*) and the expansion of the gamut. By invoking Aeolian and its plagal, Glarean hoped to bridge the gap between polyphonic modal theory and practice by illustrating their mutual dependence. Intended as an instruction manual for musicians and humanists alike, the *Dodecachordon* had the potential to direct an individual’s voice and ear consciously to the Aeolian mode, thereby transforming music theory back into performance practice.

¹⁴⁶ See footnote 127.

¹⁴⁷ Burkholder, “Rule-breaking as a Rhetorical Sign,” 374.

BIBLIOGRAPHY

- Adams, Courtney S. "The Early Chanson Anthologies Published by Pierre Attaingnant (1528-1530)." *Journal of Musicology* 4 (1987): 526-548.
- Adler, Guido, ed. *Denkmäler der Tonkunst in Österreich*. Vol. 28, *Heinrich Isaac: Weltliche Werke*. Graz: Akademische Druck und Verlagsanstalt.
- Allaire, Gaston G. *The Theory of Hexachords, Solmization and the Modal System: A Practical Application*. Musicological Studies and Documents 24. American Institute of Musicology, 1972.
- Aron, Pietro. *Trattato della natura et cognitione di tutti gli tuoni di canto figurato*. Venice, 1525. Chapters 1-7 translated by Oliver Strunk. *Source Readings in Music History*, 205-18. New York, 1950.
- Babb, Warren, trans., *Hucbald, Guido, and John on Music: Three Medieval Treatises*. Music Theory Translation Series, ed. Claude V. Palisca, no. 3. New Haven: Yale University Press, 1978.
- Bent, Margaret. "Accidentals, Counterpoint and Notation in Aaron's *Aggiunta* to the *Toscanello in Musica*." *Journal of Musicology* 12 (1994): 306-344.
- _____. "Diatonic Ficta." *Early Music History* 4 (1984): 1-48.
- _____. "Musica Recta and Musica Ficta." *Musica Disciplina* 26 (1972): 73-100.
- Berger, Karol. "The Common and the Unusual Steps of *Musica Ficta*: A Background for the Gamut of Orlando di Lasso's *Prophetiae Sibyllarum*." *Revue Belge de Musicologie* 39 (1985): 61-73.
- _____. "The Expanding Universe of *Musica Ficta* in Theory from 1300-1550." *Journal of Musicology* 4 (1986): 410-430.
- _____. "The Hand and the Art of Memory." *Musica Disciplina* 35 (1981): 87-120.
- _____. *Musica Ficta: Theories of Accidental Inflections in Vocal Polyphony from Marchetto da Padova to Gioseffo Zarlino*. Cambridge: Cambridge University Press, 1987.
- _____. "Tonality and Atonality in the Prologue to Orlando di Lasso's *Prophetiae Sibyllarum*: Some Methodological Problems in Analysis of Sixteenth-Century Music." *Musical Quarterly* 66 (1980): 484-504.
- Bernstein, Lawrence F. "Chansons for Five and Six Voices." In *The Josquin Companion*, edited by Richard Sherr, 393-422. Oxford: Oxford University Press, 2000.

- Bernstein, Lawrence F. "Ma bouche rit et mon coeur pleure: A Chanson a 5 Attributed to Josquin." *Journal of Musicology* 12 (1994): 253-286.
- _____. "Ockeghem's Ave Maria: Evidence of Structural Cogency." *From Ciconia to Sweelinck: donum natalicium Willem Elders*, edited by Albert Clement and Eric Jas, 75-90. Amsterdam, Atlanta GA: Rodopi, 1994.
- Blackburn, Bonnie J. "Masses Based on Popular Songs and Solmization Syllables." In *The Josquin Companion*, edited by Richard Sherr, 51-88. Oxford: Oxford University Press, 2000.
- _____. "On Compositional Process in the Fifteenth Century." *Journal of the American Musicological Society* 40 (1987): 210-284.
- _____, Edward E. Lowinsky and Clement A. Miller, eds. *A Correspondence of Renaissance Musicians*. Oxford: Clarendon Press, 1991.
- Borgerding, Todd. "Preachers, Pronunciatio, and Music: Hearing Rhetoric in Renaissance Sacred Polyphony." *The Musical Quarterly* 82 (1998): 586-598.
- Brown, Howard Mayer. "Emulation, Competition, and Homage: Imitation and Theories of Imitation in the Renaissance." *Journal of the American Musicological Society* 35 (1982): 1-48.
- _____. "Theory and Practice in the Sixteenth Century: Preliminary Notes on Attaignant's Modally Ordered Chansonniers." In *Essays in Musicology: A Tribute to Alvin Johnson*, edited by Lewis Lockwood and Edward Roesner, 75-100. American Musicological Society, 1990.
- Burkholder, J. Peter. "Rule-breaking as a Rhetorical Sign." In *Festa Musicologica: Essays in Honor of George J. Buelow*, edited by Thomas J. Mathiesen and Benito V. Rivera, 341-368. New York: Pendragon Press, 1995.
- Burstyn, Shai. "The Modescape of Medieval Europe." In *Modality in the Music of the Fourteenth and Fifteenth Centuries*. Musicological Studies and Documents 49. Edited by Ursula Günther, et. al., 1-10. Hänssler-Verlag: American Institute of Musicology, 1996.
- Catholic Church. *Graduale Triplex: seu Graduale Romanum Pauli PP. VI cura recognitum & rhythmicis signis a Solesmensibus monachis ornatum*. Solesmes: Abbaye Saint-Pierre de Solesmes, c. 1998.
- Census-Catalogue of Manuscript Sources of Polyphonic Music, 1400-1550*. Compiled by the University of Illinois Musicological Archives for Renaissance Manuscript Studies, edited by Herbert Kellman and Charles Hamm. Renaissance Manuscript Studies 1. 5 Vols. Neuhausen: American Institute of Musicology / Hänssler-Verlag, 1979-1988.
- Cohen, Judith. *The Six Anonymous L'homme armé Masses in Naples, Biblioteca Nazionale, MS VI E40*. Musicological Studies and Documents 21. American Institute of Musicology, 1968.

- Collins Judd, Cristle. "Aspects of Tonal Coherence in the Motets of Josquin." Ph.D. diss., University of London, King's College, 1994.
- _____. "Josquin des Prez: Salve Regina (à 5)." In *Music Before 1600*, edited by Mark Everist, 114-153. Models of Musical Analysis Series, edited by Jonathan Dunsby. Cambridge: Basil Blackwell, 1992.
- _____. "Josquin's Gospel Motets and Chant-Based Tonality." In *Tonal Structures in Early Music*, edited by Cristle Collins Judd, 109-154. Criticism and Analysis of Early Music Series, edited by Jessie Ann Owens. New York and London: Garland Publishing, 1998.
- _____. "Modal Types and Ut, Re, Mi Tonalities: Tonal Coherence in Sacred Vocal Polyphony from about 1500." *Journal of the American Musicological Society* 45 (1992): 428-467.
- _____. "Reading Aron Reading Petrucci: The Musical Examples of the *Trattato della Natura et Cognitione di Tutti gli Tuoni* (1525)." *Early Music History* 14 (1995): 208-46.
- Cummings, Anthony M. "Toward an Interpretation of the Sixteenth-Century Motet." *Journal of the American Musicological Society* 34 (1981): 43-59.
- Dean, Jeffrey. "Okeghem's Attitude Towards Modality: Three-Mode and Eight-Mode Typologies." In *Modality in the Music of the Fourteenth and Fifteenth Centuries*. Musicological Studies and Documents 49. Edited by Ursula Günther, et. al., 203-246. Hänssler-Verlag: American Institute of Musicology, 1996.
- Fromson, Michèle. "Cadential Structure in the Mid-Sixteenth Century: The Analytical Approaches of Bernhard Meier and Karol Berger Compared." *Theory & Practice* 16 (1991): 179-213.
- Fuller, Sarah. "Defending the *Dodecachordon*: Ideological Currents in Glarean's Modal Theory." *Journal of the American Musicological Society* 49 (1996): 191-224.
- Gaffurius, Franchinus. *Practica Musicae*. Milan, 1496. Musicological Studies and Documents 20. Translated by Clement A. Miller. American Institute of Musicology, 1968.
- _____. *Theorica Musice*. Milan, 1492. Translated by Walter Kurt Kreysig. New Haven: Yale University Press, 1993.
- Glareanus, Heinrich Loritus. *Dodecachordon*. Basel, 1547. Musicological Studies and Documents 6. 2 vols. Translation and Transcription by Clement A. Miller. American Institute of Musicology, 1965.
- Goldberg, Clemens. "Text, Music, and Liturgy in Johannes Ockeghem's Masses." *Musica Disciplina* 44 (1990): 185-232.
- Haar, James. *The Science and Art of Renaissance Music*. Edited by Paul Corneilson. Princeton: Princeton University Press, 1998.

- Herlinger, Jan. "Marchetto's Influence: The Manuscript Evidence." In *Music Theory and Its Sources*, edited by André Barbera, 235-258. Notre Dame, Indiana: University of Notre Dame Press, 1990.
- Horsley, Imogene. "Fugue and Mode in Sixteenth-Century Vocal Polyphony." In *Aspects of Medieval and Renaissance Music: A Birthday Offering to Gustave Reese*, edited by Jan LaRue, 406-422. New York: W. W. Norton and Company, 1966; reprint New York: Pendragon Press, 1978.
- Jedin, Hubert. *A History of the Council of Trent*. 2 vols. Translated by Dom Ernest Graf. New York: Thomas Nelson and Sons, 1957.
- Josquin des Prés. *Werken*. Koninklijke Vereniging voor Nederlandse Muziekgeschiedenis. Edited by Albert Smijers, M. Antonowycz and W. Elders. Amsterdam: G. Alspach, 1925-1969.
- Krantz, Steven Charles. "Rhetorical and Structural Functions of Mode in Selected Motets of Josquin des Prez." Ph.D. diss., University of Minnesota, 1989. Text-fiche.
- Kurtzman, Jeffrey G. "Tones, Modes, Clefs and Pitch in Roman Cyclic Magnificats of the 16th Century." *Early Music* 22 (1994): 641-664.
- La Rue, Pierre de. *Opera Omnia*. Corpus mensurabilis musicae 97. Edited by J. Evan Kreider. *Chansons*. American Institute of Musicology, (publication forthcoming).
- Lockwood, Lewis. "A Dispute on Accidentals in Sixteenth-Century Rome." *Analecta Musicologica* 2 (1965): 24-40.
- Long, Michael. "Arma virumque cano: Echoes of a Golden Age." In *Antoine Busnoys: Method, Meaning and Context in Late Medieval Music*, edited by Paula Higgins, 133-154. Oxford: Clarendon Press, 1999.
- Macey, Patrick Paul. "Josquin's *Miserere mei Deus*: Context, Structure and Influence." Ph.D. diss., University of California, Berkeley, 1985. Text-fiche.
- Meconi, Honey. Introduction to *Basevi Codex*. Florence, Biblioteca del Conservatorio, MS 2439. Facsimile Editions of Prints and Manuscripts, edited by Eugene Schreurs. Peer, Belgium: Alamire, 1990.
- _____. "Does *Imitatio* Exist?" *Journal of Musicology* 12 (1994): 152-78.
- Meier, Bernhard. *The Modes of Classical Vocal Polyphony Described According to the Sources*. Translated by Ellen S. Beebe. New York: Broude Brothers, 1988.
- Mengozi, Stefano. "Between Rational Theory and Historical Change in Glareanus's Dodecachordon." Ph.D. diss., University of Chicago, 1998.
- _____. "Josquinian Voices and Guidonian Listeners." In *Essays on Music and Culture in Honor of Herbert Kellman*, edited by Barbara Haggh, 253-279. Paris: Minerve, 2001.

- Miller, Clement A. "The *Dodecachordon*: Its Origins and Influence on Renaissance Musical Thought." *Musica Disciplina* 15 (1961): 156-166.
- _____. "Gaffurius's *Practica Musicae*: Origin and Contents." *Musica Disciplina* 22 (1968): 105-28.
- Milson, John. "Analysing Josquin." In *The Josquin Companion*, edited by Richard Sherr, 431-484. Oxford: Oxford University Press, 2000.
- Noble, Jeremy. "The Function of Josquin's Music." *Tijdschrift van de Koninklijke Vereniging voor Nederlandse Muziekgeschiedenis* 35 (1985): 9-22.
- Novack, Saul. "The History of the Phrygian Mode in the History of Tonality." *Miscellanea Musicologica* 9 (1977): 82-127.
- Obrecht, Jacob. *New Obrecht Edition*. Edited by Leon Kessels and Eric Jas. Vol. 17, *Secular Works and Textless Compositions*. Koninklijke Vereniging voor Nederlandse Muziekgeschiedenis, 1997.
- _____. *New Obrecht Edition*. Edited by Eric Jas. Vol. 18, *Supplement*. Koninklijke Vereniging voor Nederlandse Muziekgeschiedenis, 1999.
- Ockeghem, Johannes. *Collected Works*. Musicological Studies and Documents 7. Edited by Richard Wexler and Dragan Plamenac. Vol. 3, *Motets and Chansons*. New York: American Musicological Society, 1992.
- Ouvrard, Jean-Pierre. "Modality and Text Expression in Sixteenth-Century French Chansons: Remarks Concerning the *E* Mode." *Basler Jahrbuch für Historische Musikpraxis* 16 (1992): 89-116.
- Owens, Jessie Ann. "Mode in the Madrigals of Cipriano de Rore." In *Altro Polo: Essays on Italian Music in the Cinquecento*, edited by Richard Charteris, 1-15. Frederick May Foundation for Italian Studies: Sydney, 1990.
- Perkins, Leeman L. "Modal Species and Mixtures." In *Modality in the Music of the Fourteenth and Fifteenth Centuries*. Musicological Studies and Documents 49. Edited by Ursula Günther, et. al., 177-201. Hänssler-Verlag: American Institute of Musicology, 1996.
- _____. "Modal Strategies in Ockeghem's *Missa Cuiusvis Toni*." In *Music Theory and the Explanation of the Past*, edited by Christopher Hatch and David W. Bernstein, 59-72. Chicago: University of Chicago Press, 1993.
- _____. "Mode and Structure in the Masses of Josquin." *Journal of the American Musicological Society* 26 (1973): 189-239.
- Pike, Lionel. *Hexachords in Late-Renaissance Music*. Brookfield, Vermont: Ashgate Publishing, 1998.
- Planchart, Alejandro Enrique. "Masses on Plainsong *Cantus Firmi*." In *The Josquin Companion*, edited by Richard Sherr, 89-150. Oxford: Oxford University Press, 2000.

- Planchart, Alejandro Enrique. "The Origins and Early History of *L'homme armé*." Paper presented at the University of British Columbia, Vancouver, BC, March 21, 2003.
- Powers, Harold S. "Is Mode Real? Pietro Aron, the Octenary System and Polyphony." *Basler Jahrbuch für Historische Musikpraxis* 16 (1992): 9-52.
- _____. "Modal Representation in Polyphonic Offertories." *Early Music History* 2 (1982): 43-86.
- _____. "Tonal Types and Modal Categories in Renaissance Polyphony." *Journal of the American Musicological Society* 34 (1981): 428-70.
- Ramis de Pareia, Bartolomeo. *Musica Practica*. Bologna: Baltasar de Hiriberia, 1482. Musicological Studies and Documents 44. Translated by Clement A. Miller. Hänssler-Verlag: American Institute of Musicology, 1993.
- Rivera, Benito V. "Finding the Soggetto in Willaert's Free Imitative Counterpoint: A Step in Modal Analysis." *Music Theory and the Explanation of the Past*, edited by Christopher Hatch and David W. Bernstein, 73-102. Chicago: University of Chicago Press, 1993.
- Sadie, Stanley and John Tyrrell, eds. *The New Grove Dictionary of Music and Musicians*, 2nd ed. London: Macmillan Publishers Limited, 2001. Vol. 26. S.v. "Vanneus, Stephanus" by Peter Bergquist and Bonnie J. Blackburn, 262.
- Schubert, Peter N. "The Fourteen-Mode System of Illuminato Aiguino." *Journal of Music Theory* 35 (1991): 175-210.
- _____. "Mode and Counterpoint." In *Music Theory and the Explanation of the Past*, edited by Christopher Hatch and David W. Bernstein, 103-136. Chicago: University of Chicago Press, 1993.
- Shepherd, John. "A Liturgico-Musical Reappraisal: Two Studies." *Current Musicology* 23 (1977): 69-79.
- Slavin, Dennis. "Genre, Final and Range: Unique Sorting Procedures in a Fifteenth-Century Chansonnier." *Musica Disciplina* 43 (1989): 115-140.
- Steele, Timothy H. "Tonal Coherence and the Cycle of Thirds in Josquin's *Memor esto verbi tui*." In *Tonal Structures in Early Music*, edited by Cristle Collins Judd, 155-182. Criticism and Analysis of Early Music Series, edited by Jessie Ann Owens. New York and London: Garland Publishing, 1998.
- Stenzl, Jurg. "Peter Falk und die Musik in Freiburg." *Schweizerische Musikzeitung. Revue musicale suisse* 121/5 (1981): 289-295.
- Strohm, Reinhard. "Modal Sounds as a Stylistic Tendency of the Mid-Fifteenth Century." In *Modality in the Music of the Fourteenth and Fifteenth Centuries*. Musicological Studies and Documents 49. Edited by Ursula Günther, et. al., 149-175. Hänssler-Verlag: American Institute of Musicology, 1996.

- Strunk, Oliver and Leo Treitler, eds. *Source Readings in Music History*. New York: Norton, 1998.
- Taruskin, Richard. Introduction to *Antoine Busnoys, Collected Works*. Masters and Monuments of the Renaissance. Vol. 3, *The Latin-Texted Works*. New York: Broude Trust, 1990 - .
- Tinctoris, Johannes. *Liber de arte contrapuncti*. Translated by Albert Seay. Musicological Studies and Documents 5. Rome: American Institute of Musicology, 1961.
- Toft, Robert. *Aural Images of Lost Traditions: Sharps and Flats in the Sixteenth-Century*. Toronto: University of Toronto, 1992.
- Turrell, Frances Berry. "The *Isagoge in Musicen* of Henry Glarean." *Journal of Music Theory* 3 (1959): 97-139.
- Urquhart, Peter. "An Accidental Flat in Josquin's *Sine nomine* Mass." In *From Ciconia to Sweelinck: donum natalicium Willem Elders*, edited by Albert Clement and Eric Jas, 125-144. Amsterdam, Atlanta GA: Rodopi, 1994.
- _____. "Cross-relations by Franco-Flemish Composers after Josquin." *Tijdschrift van de Koninklijke Vereniging voor Nederlandse Muziekgeschiedenis* 43 (1993): 3-41.
- Warmington, Flynn. "The Ceremony of the Armed Man: The Sword, the Altar, and the *L'homme armé* Mass." In *Antoine Busnoys: Method, Meaning and Context in Late Medieval Music*, edited by Paula Higgins, 89-130. Oxford: Clarendon Press, 1999.
- Wegman, Rob C. "Another 'Imitation' of Busnoys's *Missa L'Homme armé* - and Some Observations on *Imitatio* in Renaissance Music." *Journal of the Royal Musical Association* 114 (1989): 189-202.
- _____. "Mensural Intertextuality in the Sacred Music of Antoine Busnoys." In *Antoine Busnoys: Method, Meaning and Context in Late Medieval Music*, edited by Paula Higgins, 175-214. Oxford: Clarendon Press, 1999.
- _____. "'Musical Understanding' in the Fifteenth Century." *Early Music* 30 (2002): 46-67.
- Wiering, Frans. "Internal and External Views of the Modes." In *Tonal Structures in Early Music*, edited by Cristle Collins Judd, 87-107. Criticism and Analysis of Early Music Series, edited by Jessie Ann Owens. New York and London: Garland Publishing, 1998.
- _____. "The Language of the Modes." Ph.D. diss., University of Amsterdam, 1995.
- Wilson, Blake McDowell. "*Ut oratoria musica* in the Writings of Renaissance Music Theorists." In *Festa Musicologica: Essays in Honor of George J. Buelow*, edited by Thomas J. Mathiesen and Benito V. Rivera, 341-368. New York: Pendragon Press, 1995.

Zarlino, Gioseffo. *Le Istitutioni Harmoniche*. Venice, 1558. Vol. 3, *The Art of Counterpoint*, translated by Guy A. Marco and Claude V. Palisca. Music Theory Translation Series 2. New Haven and London: Yale University Press, 1968.

_____. *Le Istitutioni Harmoniche*. Venice, 1558. Vol. 4, *On The Modes*, translated by Vered Cohen. Edited by Claude V. Palisca. Music Theory Translation Series. New Haven and London: Yale University Press, 1983.