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ILLUMINATO AIGUINO AND THE PERSISTENCE OF COMMIXTURE IN LATE SIXTEENTH- CENTURY ITALIAN MUSIC THEORY

ABSTRACT

Questo studio si propone di illustrare l'approccio peculiare alla commistione modale, adottato da Illuminato Aiguino nei suoi due trattati, *La Illuminata di Tutti i Tuoni di Canto Fermo* (Venezia 1562) e *Il Tesoro Illuminato di Tutti i Tuoni di Canto Figurato* (Venezia 1581), che offre una prospettiva alternativa rispetto alle codificazioni teoriche promosse dal sistema zarliniano dei dodici modi sulla scorta di Glareano. La persistenza di una proposta modale allargata fondata sulla tradizione degli otto modi anche dopo Zarlino, può costituire una possibilità per la definizione dello spazio sonoro di alcuni brani polifonici, che presentano caratteristiche 'incoerenti' alla luce della dottrina degli otto modi tradizionali. In questa prospettiva, nella parte finale di questo studio, saranno esaminati due mottetti classificati da Zarlino come appartenenti al nono e decimo modo (rispettivamente *Sancta et immaculata Virginitas* di Morales, e *Flete oculi* di Willaert) nell'ottica della teoria proposta da Aiguino, rendendo così possibile un confronto diretto tra i due sistemi modal, che ne metta in luce somiglianze e differenze.

PAROLE CHIAVE storia della teoria musicale, teoria modale, Illuminato Aiguino, commistione modale, analisi musicale

SUMMARY

This study aims to demonstrate the detailed treatment of modal commixture adopted by Illuminato Aiguino in his two treatises, namely *La Illuminata of Tutti i Tuoni di Canto Fermo* (Venice, 1562) and *Il Tesoro Illuminato di Tutti i Tuoni di Canto Figurato* (Venice, 1581), from an alternative perspective compared to the theoretical codification approach that underpins Zarlino's twelvefold system (after Glarean). The persistence of an expanded modal proposal of the octonary tradition post-Zarlino can also denote an option for the codification of sound spaces of polyphonic pieces with characteristics that are understood to be modally inconsistent in view of the eight-mode system. Therefore, in the final part of this study, two motets cited by Zarlino as belonging to Mode 9 and 10 (*Sancta et immaculata Virginitas* by Morales and *Flete oculi* by Willaert, respectively) will be observed from the prism of Aiguino's theory making it possible to compare and contrast from a perspective of both modal systems identifying their differences and similarities.

KEYWORDS history of music theory, modal theory, Illuminato Aiguino, modal commixture, music analysis



1. The prelude between polyphony and modal organicism: convergences and consequences to the octonary tradition

Hii autem sunt octo toni, quibus non tantum in cantu gregoriano qui simplex est et planus; verum et in omni alio cantu figurato et composito utimur. Circa quos hoc in libello versari nostra fert intentio.

(J. Tinctoris, *Liber de natura et proprietate tonorum*)

The continuous development of modal consciousness related to musical expression in the late fifteenth century probably encouraged Johannes Tinctoris to write about his concerns on the subject. At a stage known as the «general acceptance» of polyphonic modality,¹ Tinctoris' pedagogical sensitivity and erudition corroborates his detailed observation of the music from his time, leading him to formulate what is known as the starting point of convergence between modal tradition and the instrumental necessity for the description and classification of polyphonic music from a compositional perspective. Thus, with *Liber de natura and proprietate tonorum* (Naples, 1476) Tinctoris introduces a remarkable prelude on the subject, presenting a discussion that could be divided into two spheres as reflected in the title of the treatise: «non-technical aspects», i.e., the affects and cosmological relationship of the modes, and, principally, «technical attributes» that were widely related to the «specific set of pitches and their manipulation», to use two terms by Wiering.² Similarly, we could say that Tinctoris' title of the treatise could also be subtly associated to the terms '*poetica*' (in its Aristotelian form) and '*ars*' (in the sense of 'craft' and 'skill') and their fruitful interaction. This relationship may be interesting as it associates the imminence of the next step related to modal theory, characterized by an increasing observance of expressiveness inherent in its use in polyphony.

While affections do not have a single consensus – as Tinctoris already noted³ – the increasing rediscovery of ancient Greek writings on harmony will bring into discussion the foundational aspects of the octonary modal tradition. In this way, the difference and ambiguity between those who seek to elucidate the arcana related to modes is greatly heightened, establishing a plurality of doctrines that pursue, in speculative terms, several modal nuances within the polyphonic repertoire.

¹ Preceded by «uncertain beginnings», succeeded by stages which was labeled as «controversy», and «gradual disappearance» (WIERING, *The Language*, p. 199).

² WIERING, *The Language*, p. 203.

³ «nec earum apud omnes eadem est delectatio aut simile iudicium» (TINCTORIS, *De natura*, ed. Seay, pp. 68-69). This passage is based on the Augustinian philosophy given in *Confessiones*: «omnes affectus spiritus nostri pro sui diversitate habere proprios modos in voce atque cantu, quorum nescio qua occulta familiaritate excitentur» (AUGUSTINE, *Confessions*, pp. 164-166).

In relation to this aspect, the multiplicity of theories related to modal study throughout the sixteenth century has important contextual and topographical bases, which, from a historiographical point of view, help us to draw potential conceptual networks, both in terms of the similarities and differences that emerge from this context.

Concerning Franchino Gafurio, a theorist contemporary to Tinctoris, for example, little can be said in terms of direct contribution to polyphonic modality. Besides the doctrinal milestone of Gafurio's *Practica musice* (Milan, 1496), the exposition in his first book on modes is presented only in terms of four ecclesiastical *maneriae* without any explicit application of the *systema* within the polyphonic context—although its operation could be presumed, by indirect relationship, due to the use of modally-oriented *cantus firmus* during his discourse on counterpoint. On the other hand, a substantially different situation arising from Pietro Aron's *Trattato della natura et cognitione di tutti gli tuoni di canto figurato* (Venice, 1525). If Tinctoris's *Liber* can be understood as «a spring» in terms of a documented report, Aron's contribution establishes a clear standpoint on the subject, presenting a systematized approach to a high number of modally assigned pieces directly from Petrucci's printings.⁴

In the mid-sixteenth century, the virtuos adaptation of the octonary modal tradition into a polyphonic context reaches a new level of speculation. As part of the 'classicizing wave of musical humanism',⁵ *Dodecachordon* (Basel, 1547), written by the Swiss humanist Henrich Glarean, presents a *proba antiquitatis instauratio* that was applied to his proposal of a twelve-mode system, not only in polyphony, but also in plainchant repertoire—which certainly represents «a formidable problem» due to the long tradition of categorization, according to Sarah Fuller.⁶ In Italy, Gioseffo Zarlino also devoted his modal doctrine from *Le Istitutione harmoniche* (Venice, 1558) to the twelvefold system, the motivation of which could be described more as a 'reframing' of the repertoire than a 'proper renewal of antiquity' which was pursued by Glarean.

Thus, the formalization of the twelve-mode system represents a notable landmark in the face of certain «inconsistencies» in the system from a theoretical point of view (like modal marker ambiguities and structural disagreements manifested in the repertoire), influencing not only the modal judgment of already composed works, but also contributing to a new modal orientation of music composition.

The condition reached by this theory would not go unnoticed by those who would subsequently write about the subject, establishing a division that is usually found in later treatises between those who: (1) ignore it altogether and continue to promulgate the octonary system; (2) adopt the twelve-mode system without

⁴ See: JUDD, *Reading Aron Reading Petrucci*.

⁵ A classification proposed by Stefano Mengozzi which includes Gafurio and the Zarlino's later treatises and was preceded by the «early wave of musical humanism», distinguished by theorists such as Johannes Ciconia and Johannes Gallicus (MENGOZZI, *Renaissance Reform*, p. 148)

⁶ FULLER, *Defending the "Dodecachordon"*, p. 204.

reservation; (3) completely refute it in favor of even more profound reform (e.g., Mei, Galilei, and Doni).

However, for those theorists who insisted on the octonary tradition, there is an especially unique case involving the Brescian music theorist Illuminato Aiguino (c.1520; fl 1562-81),⁷ a Franciscan of the order *Seraphico d'Osservanza*, who provided an adaptation of the eightfold system, including an extremely detailed taxonomy on *commixtio modorum*, i.e., the presence of interval species (diatessaron and diapente) that differ from the modes related to the *finalis*. In his two treatises, *La Illuminata of Tutti i Tuoni di Canto Fermo* (Venice, 1562), dedicated to plainsong and, *Il Tesoro Illuminato di Tutti i Tuoni di Canto Figurato* (Venice, 1581) dedicated to polyphonic modal discourse, Aiguino refutes, therefore, the application of the twelve-mode system doctrine. Maybe his theoretical bias is related to the fact that Pietro Aron had more than likely been his teacher, calling him '*mio honorato maestro*' in his first treatise. Therefore, attributing the status of «Master» to Aron (who, like Tinctoris, sustained many elements of the octonary tradition primarily theorized by Marchetto) cannot go unnoticed, since Aron's *Trattato della natura* consists of the most comprehensive study of polyphonic modality during the first half of sixteenth-century Europe. Thus, the intent of this essay is to understand how the system elaborated by Illuminato Aiguino functions in terms of both interval species and the detailed classification of commixtures. Considering the context of the post-dodecachordal modal system, we will perform a collation-based comparison that considers Aiguino's doctrine, presented as an analytical approach, in contrast to two specific pieces modally assigned by Zarlino in his *Le Istitutione harmoniche* (Venice, 1558).

Considering the aforementioned points, we can therefore proceed to divide the following argumentation into three parts. First, an *excursus* of the understanding of *modus commixtus* by Italian sources, starting with the doctrine proposed by Marchetto da Padova, and later, in the retaking of this theory presented by Tinctoris and other sixteenth-century Italian theorists up until Aiguino. Second, the study of Aiguino's modal system and the function of commixture in his theory. And third, the adaptation of Aiguino's doctrine applied as an analytical approach and comparing it to two pieces modally assigned by Zarlino.

⁷ As stated by M.T. Rosa Barezzani, Aiguino had been a military man before entering the Franciscan order. And probably with such fame, he was welcomed into the society of Brescian nobles and the high clergy (ROSA BAREZZANI, *L'insegnamento della teoria musicale*).

2. Some considerations on *tonus commixtus*: terminology and meaning in Italian music theory tradition

The development of modal theory reaches a highly significant stage with Marchetto da Padova's *Lucidarium* (1317-18) that establishes the basis for modal discourse in Italian theory for at least the next two centuries. Among his many contributions, the detailed classification of the diapente and diatessaron species is noteworthy as it is based on melodic habits within his own musical context and will be a critical resource to Aguino's modal doctrine, as we will see later.

Throughout the exposure presented in *Lucidarium*'s eleventh treatise, we may synthesize Marchetto's analytical approach into four main categories, all interrelated and derived from a fundamental core: the concatenation between diapente and diatessaron species. The order of presentation proposed by Marchetto—'*ambitus*' (Chap. 2, *De tonis quot sint et qui*), '*terminatio*', '*principio*', and finishing with the taxonomy of species (Chap. 4, *De formatione tonorum per species*)—also tells of a subtle concern for the basis for classification of his modal judgment (Figure 1).

On closer look, it is understood that *ambitus* is a fundamental aspect of the nature of the mode (hence an element '*a priori*'), while, however, the categories presented in chapter four reveal the consequence of the manifestation of species through plainsong (therefore, an element '*a posteriori*'). This difference is re-worked by Tinctoris when transferring them to the debate within the context of polyphony.⁸

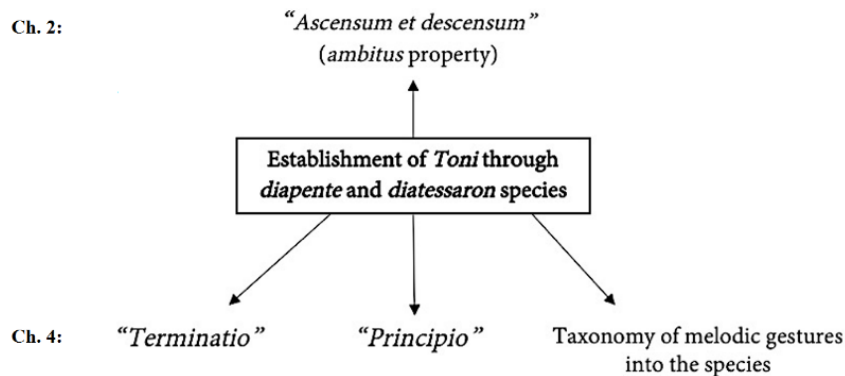


Figure 1. Inferred categories to modal judgment during the eleventh treatise (Chapters 2 and 4) in *Lucidarium*.

The first category, *ambitus* property, is divided into five subcategories, although four of them are in fact related to mode range:⁹ (1) *tonus perfectus*, when

⁸ In addition to Tinctoris having a notable contribution to modal polyphony, this matter also received important observations by Prosdocius de Beldemanis, Ugolino de Orvieto, and Johannes Ciconia, to cite a few who flourished in Italy.

⁹ In the beginning of the second chapter, Marchetto presents the features of the four *modi* or *tropi* initials (protus, deuterus, tritus, and tetrardus), and their subsequent division into

the chant fully comprises the *ambitus* related to a specific mode; (2) *tonus imperfectus*, when the chant partially comprises the *ambitus*; (3) *tonus plusquamperfectus*: when the *ambitus* is transgressed in ascension (when authentic) or in descension (when plagal); (4) *tonus mixtus*: when the *ambitus* is transgressed to the plagal pair (when authentic) or vice versa. However, the pseudo-fifth category, *tonus commixtus*, does not address the chant's range, but Marchetto presents the term again in the fourth chapter where he addresses the formation of modes through species.

In the second chapter, however (where Marchetto would presumably focus his discussion on the modal *ambitus*), he already addresses *tonus commixtus*, but in a manner that makes it appear to blend in with a different mode from its respective plagal (when authentic), and with a mode different from its respective authentic mode (when plagal).¹⁰ Thus, although the *commixta* subcategory is presented along with the other typologies on modal range, it only refers to the structural property of the modal formation, while *ambitus* transgression is a mere consequence.¹¹

The second category is related to the termination, or more precisely, to the interval species that ends the chant.¹² Marchetto establishes three subcategories, albeit not systematically: (1) *tonus regularis*, when the termination occurs at the ordinary (and ruled) *finalis*; (2) *tonus irregularis*, when the termination occurs in the *cofinalis* (a fifth above), whereas the chant consequently avoids the mode rule mainly with the presence of *propter accidens*; (3) *tonus acquisitus*, when the species «acquires» a ♭ *mollis* and ends in the improper tone for that mode, or precisely when the species contemplates certain variations between the round ♭ and square ♯ sign.¹³

authentics through 'inconvenience' (*inconveniens*) regarding the property of ascending and descending of the voice. He states the relationship of each modal pair (D, E, F and G) of the *finalis* and takes the species of diapente as a reference, invoking the scholastic tradition of «doctotibus musicis» that *cofinalis* is related to the last letter of each diapente (a, b, c and d). After the explanation, he cites five types of modes, which, by logic of the argument, lie in the property of the *ambitus*. Although the latter, as will be seen, is not related to the *ambitus* itself, but rather to the altered arrangement of the species pair.

¹⁰ «Tonus commixtus dicitur ille qui cum alio quam cum suo plagali si auctenticus est, vel cum alio quam cum suo auctentico si est plagalis, misceri videtur» (MARCHETTO, *Lucidarium*, ed. Della Sciuca *et al.*, p. 124).

¹¹ We may conjecture that if *tonus commixtus* is related to the hybrid formation of two different species (different from its pair), we could assume, therefore, that *tonus perfectus* (which makes direct mention of the completeness of the chant in relation to its *tonus*) could also inadvertently be related to the ordinary state of the relationship between species. It is interesting to note that Marchetto does not use a specific term to refer to the mode in this way, which may be related to the understanding of the "natural" state of the mode, and consequently it could be deprived of a classification by its incipient condition.

¹² It is important not to confuse the ending of the song with the structural *finalis*. To establish the appropriate dichotomy, Mangani coins the terms 'phenomenological final' and 'ontological final', respectively (MANGANI, *L'organizzazione*, p. 602)

¹³ This last subcategory refers to the quality of the species when acquiring the round ♭ sign, not necessarily the end, as in the case of the third mode communion chant, *Beatus servus*, presented by the author, which begins and ends in a, with the constant presence of the round –

The third category is related to the initial note of each chant according to each mode. In this category, Marchetto establishes the organization in a systematic manner, presenting the characteristic notes of the beginning of each mode shortly after explaining their formation from a species perspective, providing a chant from the repertoire as an example to each one.

The fourth and last category represents a type of 'taxonomy of melodic gestures'. At this point, Marchetto establishes fifteen subcategories that can be grouped as follows: the position in the chant (*principalis* and *terminalis*); the melodic relation to specific species in a certain mode (*proprie* and *communis*); the complexity reflected in the number of species used in a chant (*simplex* and *composita*); the density in the presentation of the species (*aggregata* and *disgregata*); the positioning and disposition of the species or melodic gesture smaller than a diatessaron (*appenda*, *preposita*, *supposita*); two non-groupable subcategories (*continua*, concerning the range exposition of the species, and *commixta*, which, as commented, presents a different species from that of its pair); and the last subcategory, directionality (*intensa* and *remissa*). Following the presentation of these subcategories, Marchetto systematically organizes the relationship of melodic gestures within a diapente, which may refer to other modes: a process resulted by the *interruptiones* (or 'interruptions') of the interval species.

Therefore, the description of the commixed species is placed in the last category as one of the taxonomies of the species placed in the mode. As this is the main object of our discussion, we will focus onwards for further details. In Marchetto's words, therefore, this subcategory is described as «the addition of another species of diapente, diatessaron, or other with a smaller range», and then, «if what you add belongs to a different mode than the current one, this addition comes to be called *commixta*».¹⁴

Before we proceed to the next steps regarding Marchetto's discourse on commixture, it is noteworthy to understand, even in summary form, how he numbers the diatessaron and diapente species, and, consequently, establishes the structure of each mode from them. The first aspect to emphasize is that the species are presented exclusively within a framework of tone and semitone, not by attributing them to a specific pitch (a detail that will be a very important in Aiguino's modal theory).¹⁵ Thus, the first diatessaron configuration is formed by tone, semitone,

consequently, an ending at the diatessaron species transposed a quarter above of its ordinary position. Regarding this aspect, Marchetto makes the important statement that the end can occur in «any note of [Guidonian] hand», since it can properly find the specie («et hiis rationibus dicimus quod quilibet tonus potest terminare in quolibet loco manus ubi eius species possunt proprie reperiri») (MARCHETTO, *Lucidarium*, ed. Della Sciucca et al., p. 132) – an indication of the primacy of species (and their structure) as an *a priori* element.

¹⁴ «*commixta*, cui additur alia species vel minus; secundum illud quod additur, competit proprie alteri tono et non illi cui additur, et tunc talis additio commixta dicitur...» (MARCHETTO, *Lucidarium*, ed. Della Sciucca et al., p. 160)

¹⁵ An approach very similar to those of Bern of Reichenau's *Prolugus in tonarium* and the South-German circle treatises (11th and 12th Centuries). More on this subject, see: MCCARTHY, *Music, Scholasticism and Reform*, pp. 55-108, and PESCE, *The Affinities*, pp. 14-18.

and tone (Ex. 1); the second one, by semitone, tone, and tone (Ex. 2); and the third one, by tone, tone, and semitone (Ex. 3).

Example 1. First diatessaron species (T-S-T).¹⁶



Example 2. Second diatessaron species (S-T-T).¹⁷



Example 3. Third diatessaron species (T-T-S).¹⁸



With regard to diapente species, they arise almost as an amplification by the addition of a «tone» of the diatessaron, which establishes the first, second, and fourth diapente species (Examples 4, 5, and 6); but, contrarily, with respect to the third diapente species, Marchetto states that it 'sets itself' (*ex se ipsa formetur*), because it is not derived from any of the diatessaron species (Example 7).

Example 4. First diapente species (T-T-S-T).¹⁹



Example 5. Second diapente species (S-T-T-T).²⁰



¹⁶ MARCHETTO, *Lucidarium*, ed. Della Sciuca *et al.*, p. 105.

¹⁷ *Ibid.*

¹⁸ *Ibid.*

¹⁹ *Ibid.*, p. 109.

²⁰ *Ibid.*

Example 6. Fourth diapente species (T-T-S-T).²¹



Example 7. Third diapente species (T-T-T-S).²²



Therefore, figure 2 shows how the eight modes concatenate the diapente and diatessaron species. The fifth and sixth modes, however, could sustain both with a third and fourth diapente species to avoid the tritone, mainly in descending melodies.²³

Figure 2. Modes through their diapente (Dp) and diatessaron (Dt) species.

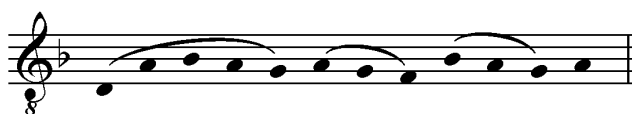
After this brief summary, let us return our attention to the details of commixture. As we will see in the next examples, the commixture process is characterized by the presence of species that are different from those that originally establish the structure of the predominant mode. In Example 8, we see a melody that manifests the first ascending diapente species (D *sol re – a la mi re*) and the third ascending diatessaron species (F *fa ut – b fa*) that results in a first mode commixed with the sixth, since the diapente species is primarily related to authentic modes and the diatessaron to plagals. Likewise, in Example 9, a melody manifests the same first diapente species and the second diatessaron species (E *la mi – a la mi re*), which results in a first mode mingled with the fourth.

²¹ *Ibid.*, p. 109.

²² *Ibid.*

²³ «in descenso vero ex eadem specie dyatessaron et ex quarta dyapente...» (*ibid.*, p. 144).

Example 8. «The first mode commixed with the sixth».²⁴



Example 9. «The first mode commixed with the fourth».²⁵



As can be seen, the term '*commixta*' is applied by Marchetto as an adjective in reference to 'foreign' modal species that can either be diatessaron or a diapente (although the examples only introduce the diatessaron). Thus, the mode which presents this operation is called *tonus commixtus*.

In the late fifteenth century, the Marchettian tradition is significantly expanded by Johannes Tinctoris. In *Liber de natura and proprietate tonorum* (1476), Tinctoris presents his version concerning modal commixture essentially between Chapters 13 and 18. However, besides its applicability to the polyphonic context, his doctrine presents some distinctions when compared to Marchetto, even in chapters concerning mode formation.

The clear relationship between species and hexachords defined by Tinctoris, becomes useful in the commixture process. In this perspective, the most critical modes are the seventh and eighth, since the fifth and sixth modes also carry the fourth diapente species besides the third diapente, because of a «double need», as he calls it, that results from the necessity to maintain perfect concords and avoid tritones within a polyphony context.²⁶ Hence, the similarity is individualized by virtue of solmization: while the fifth/sixth modes use a *mollis* hexachord, ending in F *fa ut*, the seventh/eighth modes use a *durum* hexachord ending in G *sol re ut*. Regarding the latter modes, another relationship is obtained because the first diatessaron is proper to the first and second modes. Thus, the distinction sustained by Tinctoris in these cases lie essentially on the finales: while the first/second modes end in D *sol re*, the seventh/eighth modes end in G *sol re ut*; consequently, there is a certain emphasis on the *naturalis* and *durum* hexachords respectively, although not the determining factor (because of the possibility of mutation between them).

Next, after exposing the mode features by species formation, Tinctoris provides a slightly larger and more systematized version of the modal commixture

²⁴ *Ibid.*, p. 161.

²⁵ *Ibid.*

²⁶ As explained by Tinctoris: «the necessity which causes these to be formed in this manner is duple, that is, either by reason of perfect concords, which can happen in composed song, or the need to avoid the triton» («Necessitas autem quae eos ita formari cogit duplex est, videlicet aut ratione concordantiarum perfectarum quae cantui composito incidere possunt, aut ratione tritoni evitandi») (TINCTORIS, *Opera theoretica*, ed. Seay, p. 73).

when compared to Marchetto, applying them in a polyphony context. In Chapter 13, the first section to discuss commixture in the treatise, Tinctoris describes it as follows:

Si vero aliquis octo tonorum praedictorum a principio usque ad finem ex speciebus diapente ac diatessaron sibi modo quo diximus attributis non fuerit format, immo speciebus unius alterius aut plurium commisceatur, huiusmodi tonus commixtus vocabitur.²⁷

If any of the eight modes mentioned above has not been formed from its beginning up to its end from the species of diapente and diatessaron attributed to itself in the way we have described, if, on the contrary, it has been mingled with species of another one or many, a tone of this kind will be called *commixtus*.²⁸

Immediately after the definition, Tinctoris provides two examples which demonstrate the commixture process between two diapentes (first and fourth) that generates a first mode commixed with the seventh and then, between two diatessaron (first and third species in *G sol re ut*) that generates a second commixed mode with the eighth.²⁹

Chapter 14 (*A quo tonus commixtus sit denominandus, ab authentic à plagali?*) demonstrates a terminological concern regarding the difficulty, in certain cases, to understand which species is predominant. In these cases, two factors are observed: (1) the species comprises the *finalis*; and (2) the priority of the diapente species are mingled with the diatessaron. The last example presented in the chapter brings an unusual situation: the commixture of three species (Example 10). The same situation occurs in the following chapter (*A quibus tonus commixtus diversis speciebus diapente aut diatessaron diversorum tonorum denominabitur?*), where the information on the *finalis* appears explicitly in reference to the Aristotelian principle: «a fine denominatur res»³⁰ (or ‘a thing is named from

²⁷ TINCTORIS, *Opera theoretica*, ed. Seay, p. 78.

²⁸ Based on Albert Seay’s translation (TINCTORIS, *De natura*, ed. Seay, p. 16).

²⁹ In this way, it differs from the example presented by Marchetto, which presents the diapente and diatessaron species.

³⁰ The source to this well-know concept from Aristotle, which was transliterated by Tinctoris, occurs in the sixth part of *Poetics* (1450a, 22-23), when the primacy of plot over character in Tragedy is under discussion. The passage is translated by George Whalley as: «...they embrace their characters for the sake of the actions [they are to do] And so the [course of] events – the plot – is the end of tragedy, and *the end is what matters most of all*» (ARISTOTLE, *Poetics*, trans. Whalley, p. 73, my emphasis). On the other hand, Stephen Halliwell’s translation brings a slight change in the understanding of the phrase: «Thus, the events and the plot are the goal of tragedy, and *the goal is the most important thing of all*» (ARISTOTLE, *Poetics*, trans. Halliwell, p. 51, my emphasis). According to Whalley, the term τέλος (*telos*), «there is no precise English equivalent» – which corroborated with Halliwell’s interpretation. Nevertheless, Whalley says the word ‘end’, «canonised by long use in Aristotelian translation, is probably the least misleading» (ARISTOTLE, *Poetics*, transl. Whalley, p. 72). The Italian tradition of the Aristotelian oeuvre promoted by the translations of Giorgio Valla, applies the same understanding to the passage, which was translated as: «sed propter actiones mores complectunt: et perindes res et fabula sunt tragedie finis: *at finis omnium quiddam maximum*» (ARISTOTELIS, *Rhetorica...addita eiusdem Aristotelis poetica*, f. 3r, my emphasis).

its end³¹), as evidenced by the example provided by Tinctoris himself (Example 11).

Example 10. «Seventh mode commixed with the fifth and sixth»,³² that is, by use of a fourth diapente, third diapente and third diatessaron species.



Example 11. «Eighth mode commixed with fifth and third»,³³ by use of a first diatessaron, second diatessaron and third diatessaron species.



After presenting some terminologically difficult situations, Tinctoris in Chapter 18 realizes a twofold category that interests us—moreover, it is the only chapter on the subject to offer an example of two voices. As stated in the title («*Quod commixtio toni interdum fit necessitate ac interdum voluntate*») the commixture is performed both by necessity and choice. The need arises from the evasion of *fa* against *mi* in perfect consonance,³⁴ as shown in the author's example (Ex. 12). Tinctoris only describes the mode of the counterpoint part that is judged as the second mode commixed with the fourth (due to the presence of the first diapente species of and the second diatessaron species), while the tenor remains clearly in the first mode. The other possibility, which lies in the choice of the composer, is presented in such a way as to warn the composer to introduce it cautiously. On this, Tinctoris states: «there is nothing that makes a displeasing chant (*cantus distonitus*) than this commixture if it is disordered». ³⁵ This statement is made primarily to maintain the *magna legis* on the importance of modal coherence that appears in *Dialogus de musica* (which is repeated literally by Guido in *Micrologus*: «*Igitur octo sunt modi, per quos omnis cantilena discurrens octo dissimilibus qualatibus variatur*»). Tinctoris presents this principle in Chapter one providing a general definition of the mode's role in a chant: «a mode,

³¹ TINCTORIS, *De natura*, ed. Seay, p. 18.

³² *Ibid.*, p. 17.

³³ *Ibid.*

³⁴ In Chapter II of the first book *Practica musice* (1496), Gafurio presents the same possibility, although starting from the explanation of the tetrachords in *gamut* through hexachords. When presenting the *mollis* hexachord (*exacordum* ♭, *molle*)—or *coniunctum*—he adds that by «the roughness of the tritone becomes softer, and the formation of some can proceed in a *commixta* and *acquisita* manner, due to the varied species of consonances» («*vt et trittoni asperitas fiat in modulatione suauior: et nonnullorum tonorum compositio possit per variatas consonantiarum species commixte atque item acquisite procedere*») (GAFFURIUS, *Practica musice*, f. aiiijr).

³⁵ «*Nihil enim est quod cantus distonitos efficiat quam commixtio ipsa si fuerit inordinata*» (TINCTORIS, *Opera theoretica*, ed. Seay, p. 81.)

therefore, is nothing other than the manner by which its beginning, middle, and end of any melody is governed«. ³⁶

Example 12. Second mode commixed with the fourth³⁷, the asterisks pointed to the presence of *molle* alteration and, consequently, the change of the first diatessaron to second diatessaron species 'by necessity'.

The presence of different modes in the same chant (as in the example above) is shown in a brief explanation in Chapter 24 (*Quod commixtio et mixtio tonorum non solum in cantu simpli, sed etiam in composito fiant*). In this important chapter that contains Dufay's *Le serviteur* modal judgment, Tinctoris explains how modes are operated in polyphony. As can be seen from the following quote, the features of the Tenor that usually carry the *cantus prius factus* of the work³⁸ produce the characteristics that act as the foundation of all vocal relationships in the chant with the possibility that each voice has its own mode, though guided by the Tenor.

...talique modo ut si cantus sit cum duabus, tribus, quatuor aut pluribus partibus compositus, una pars erit unius toni, altera alterius, una autentici, altera plagalis, una mixti, altera commixti. Unde quando missa aliqua vel cantilena vel quaevis alia compositio fuerit ex diversis partibus diversorum tonorum effecta, siquis peteret absolute cuius toni talis compositio esset, interrogatus debet absolute respondere secundum qualitatem tenoris, eo quod omnis compositionis sit pars principalis ut fundamentum totius relationis.³⁹

...if the song is composed with two, three, four or more parts, one part will be of one mode, another of another [mode]: one authentic, the other plagal, one mixtus [mode], the other commixtus. Hence, being a mass or cantilena or any other kind of composition, it will have been put together from different parts having different modes. If anyone, when asked, may wish to seek absolutely of what mode such a composition may be, he should absolutely reply according to the quality of the tenor, for the reason that it is the principal part of every composition as the foundation of the whole relationship.⁴⁰

To Tinctoris, polyphonic modality is expressed as a multiple manifestation that directly reflects the musical process in both the '*cantus compositus*' (*resfacta*)

³⁶ TINCTORIS, *De natura*, p. 3. «*Tonus itaque nihil aliud est quam modus per quem principium, medium et finis cuiuslibet cantus ordinatur*» (TINCTORIS, *Opera theoretica*, ed. Seay, p. 67).

³⁷ TINCTORIS, *Opera theoretica*, ed. Seay, p. 81.

³⁸ See: BLACKBURN, *On Compositional Process*.

³⁹ TINCTORIS, *Opera theoretica*, ed. Seay, pp. 85-86.

⁴⁰ Based on Albert Seay's translation (TINCTORIS, *De natura*, ed. Seay, pp. 24-25).

and the ‘*cantare super librum*’. The necessity to sing different voices with different textures, consequently, reproduces different characteristics regarding species. The finalis, therefore, becomes the only point of convergence between the elements directly linked to the Tenor, i.e., even in this case, the Aristotelian paraphrase on the superiority of the plot and the end of its Tenor before its characters (other voices), becomes quite pertinent.⁴¹

Therefore, in terms of Marchetto’s heritage, Tinctoris applied an observation of the polyphonic repertoire that comprehends its sound space exclusively from the combination of diapente and diatessaron species. Hence, we may assume, in this perspective, that the polyphonic modality of the late fifteenth century is the *effectus* of sonorous ambivalence provoked by manipulations of certain species into each voice of the complex, which could be structurally synchronized or not, i.e., caused by the incidence of different species on diatonic space governed by certain mode(s).

Contemporary to Tinctoris, other nuances on the theory of modal commixture also emerged, as in Bonaventura da Brescia’s *Breviloquium musicale* (1497), subsequently published as *Regula musice plane*. In Chapter 30 of the treatise (*De tonis commixtis autenticis*), Bonaventura divides the commixture into two categories, *ratione ascensionis* and *ratione compositionis*, which are separated by the foreign species status regarding the *diapason* of the predominant mode.⁴² The first category concerns the use of a foreign species that extrapolates the *ambitus* by ‘ascendence’ (i.e., when the melody moves above the corresponding diapason) or in ‘descendent’ motion (i.e., when the melody moves below the corresponding diapason), although Bonaventura does not provide a proper name for this particular situation (which could be something like ‘*ratione descensionis*’, as argued by Meier⁴³). Thus, despite the absence of a more rigorous and organized taxonomy, both situations in this category are analogous to the also presented ‘*tonis commixtis autenticis*’ and ‘*tonus commixtus plagalibus*’, respectively. The second category, on the other hand, concerns the manifestation of foreign species within the *ambitus* of the predominant mode.⁴⁴

In Pietro Aron’s *Tratatto della natura et cognitione* (1525), commixture is modestly presented in Chapter 3 (*Modi da cognoscere le compositioni diverse*) as an explanation to when the mode, indicated by the Tenor’s *finalis*, diverges from

⁴¹ See note 30.

⁴² Bernhard Meier carefully observes a terminological change from Marchetto’s ‘*tonus commixtus*’ to Bonaventura’s ‘*commixtio tonorum*’ (MEIER, *The Modes*, p. 288); besides the similarity, the latter comprehends the subcategories mentioned, which consequently results in the amplification of the sense, from a specific mode with a certain quality of structure to a quality in itself, assuming then, a broader sense of the term.

⁴³ MEIER, *The Modes*, p. 288.

⁴⁴ The same dichotomy is reported in the ANONYMOUS, *Quaestiones et solutiones advidendum tam mensurabilis cantus quam immensurabilis musica* (c. 1500, f. 63r) and in Fra Angelico da Picitono’s *Fior Angelico di Musica* (Venice, 1547, f. Nir). Meier established a direct parallel of both categories to Aiguino’s *comistione perfetta* and *commistione imperfetta* (MEIER, *The Modes*, p. 288), which will be discussed further in the present essay.

that observed in the species presented in the course of the composition.⁴⁵ As an example, Aron comments on a chant in which the Tenor ends in D *solre*, but there are species of modes in the beginning and middle of the chant that are different than the first and second. Thus, this incongruity between the *processo* and the finale (whether a modal *finalis* or a psalmodic *differentia*), will lead one to evaluate the mode as a *tuono commisto*.

Furthermore, in addition to the evidence of a certain ‘awareness’ that modes are agents of the organic unity of singing, there are at least two other general operative forces observed in the polyphonic modality in Italian theoretical sources: (1) the expressiveness related to the primacy of the text and as a foundation of the act of ‘*imitatione delle parole*’, which in Italy occurs as a consequence of a ‘zeitgeist’ that began in the humanist circle of Florence, probably due to the contemporary availability of the Latin translation of Aristotle’s *Poetics* by Giorgio Valla⁴⁶; and (2) the observation of certain insistences in compositional habits aligned with the octonary and psalmodic traditions. In short, both points can be understood as direct consequences of the role played by modes in this ‘new’ context. Comprehending some details of this subject is vital to proceeding to the next steps of the development of *tonus commixtus*.

The observation of the text being an absolute primary element in the compositional process seems to only have appeared in theoretical sources, at least more intensely, around 1540. Among these sources, the *Breve introduttione di musica misurata* (Venice, 1540) written by Giovanni Del Lago, may be one of the first to significantly explicit the primacy of the text as the very first element to be considered in a musical composition. This perspective is presented at the beginning of the last chapter of the treatise (*Mode, & osservatione di compore qualunque concerto*), in which he states:

<p>Primieramente e da notare, ogni volta che vorrete comporre un madrigale, o soneto, o barzaletta, o altra canzone, prima bisogna considerare nella mente, & in quella investigando ritrovare uno aire conveniente alle parole, ut cantus consonet verbis⁴⁷, cioè che convenga alla materia,</p>	<p>Firstly it is noted that every time that you want to compose a madrigal, a sonnet, a barzelletta or other canzone, it’s necessary to keep in mind, investigating to search a melody that fits the words, «<i>ut cantus consonet verbis</i>», that is, [a melody] which agrees with the subject;</p>
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⁴⁵ Furthermore, Stefano Vanneo in his *Recanentum di musica aurea* (Rome, 1533), presents an explanation that mostly reflects Bonaventura da Brescia, that the last definition of commixture (also called ‘*antimixtus*’) defined in Chapter 54 seems to be significantly aligned to Aron’s concise approach: «Diciturque commixtus vel antimixtus, quasi speciebus contrariis seu alienis mixtice compositus» (VANNEUS, *Recanentum*, f. 34v). This passage is also reported in the explanation by Fra Angelico da Picitono, also in the alternative nomenclature ‘*antemisto*’ (ANGELICO DA PICITONO, *Fior Angelico*, f. Nir).

⁴⁶ A position that directly meets Palisca’s statement, which says: «Whether music was an imitative art became a matter for debate shortly after Giorgio Valla’s Latin translation of Aristotle’s *Poetics* appeared in 1498» (PALISCA, *Music and Ideas*, pp. 55-56).

⁴⁷ The same expression is used by Antonio da Tempo in *Summa artis rithimici vulgaris dictamis* (1332), in the famous passage where he comments on madrigalistic polyphonic practice: «Sonus vero marigalis secundum modernum cantum debet esse pulcher et in cantu habere

perche quante volte, che i dotti compositori hanno da comporre una cantilena, foggiono prima diligentemente fra se stessi considerare a che fine, & a che proposito quella potissimamente instituiscono, & componghino, cioe quali affetti d'animo con quella cantilena muovere debbino, cioe di qual tuono si deve comporre, perche altri sono allegri, altri plausibili, altri gravi, & sedati, alcuni mesti, & gemibundi, di nuovo iracundi, altri impetuosi, cosi anchora la melodie de canti, perche, chi in un modo, & chi in un'altro commuovono, variamente sono distinte da musici.⁴⁸

whenever good composers undertake a composition, they first decide on what the purpose is, that is, which affects of the soul they want to portray, and therefore choose which mode to compose, for [as] some [affects] are gay, others agreeable, some solemn and sedate, others sad and plangent, some choleric, others impetuous, so melodies, since some move us in one way and some in another, are differentiated by musicians in various ways.⁴⁹

Although Del Lago's discourse on commixture is summarized,⁵⁰ his exposition on the primacy of textual poetics over music is quite significant in terms of music theory and includes reflections on commixture within this context. As suggested by Blackburn, the attention devoted by Del Lago on grammar and rhetoric (including his important explanation of grammar based on Donatus, Diomedes, and Priscian, especially in his letter to Fra Seraphin (26 August 1541)⁵¹ may be related to his patron's (the poet Girolamo Molino) great interest in this subject, as well as the literary circle around Domenico Venier.⁵² Thus, from this perspective, compositional theory and practice must fully serve the text,⁵³ which, of

aliquas partes rusticales sive mandriales, *ut cantus consonet cum verbis*. Et ad hoc, ut habeat pulchram sonoritatem, expedit ipsum cantari per duos ad minus in diversis vocibus concordantibus» (ANTONIO DA TEMPO, *Delle rime*, p. 139, my emphasis). In a translation by Elena Abramov-van Rijk: «Indeed, the sound of the madrigal, according to modern singing, must be beautiful and in [the course of] the singing must have a number of rustic or "mandrial" sections, so that [in them] the singing will be concordant with the words. To this end, and in order to produce a beautiful sonority, the singing has to be performed by at least two different, yet concordant, voices» (RIJK, *Parlar Cantando*, p. 117).

⁴⁸ DELLAGO, *Breve introduttione*, f. Eivr. As pointed out by Palisca (*Humanism*, pp. 344-347) and by Blackburn (BLACKBURN *et al.*, eds., *A Correspondence*, p. 977), this passage is very close to the undated letter written by Mattheo Nardo, which is preserved in the Biblioteca Apostolica Vaticana, MS Vat. lat. 5385, f. 57v.

⁴⁹ Based on Blackburn's translation (BLACKBURN *et al.*, eds., *A Correspondence*, p. 888).

⁵⁰ «I tuoni commisti sono quegli che partecipano del ascendere et discendere, et anchor mediatione con altro tuono che non sia suo compagno com' e il primo, con il terzo, etc.» (DELLAGO, *Breve introduttione*, Diiiv).

⁵¹ BLACKBURN *et al.*, eds., *A Correspondence*, pp. 875-893.

⁵² *Ibid.*, p. 893.

⁵³ In Nicola Vicentino's fourth book, specifically in Ch. 29 of his *L'antica musica ridotta alla amoderna pratica* (Rome, 1555), also emphasizes textual primacy, saying: «la musica fatta sopra parole, non è fatta per altro se non per esprimere il concetto, et le passioni et gli effetti di quelle con l'armonia; et se le parole parleranno di modestia, nella compositione si procederà modestamente; et d'alegrezza, non si facci la musica mesta; e se di mestitia, non si componha alegra; et quando saranno d'asprezza, non si sarà dolce; quando soave, non s'accompagni in altro modo, perche pareranno disformi da suo concetto» (VICENTINO, *L'antica musica*, f. 86r). In addition, it also discusses the importance of word pronunciation, relating syllable

course, includes modes and the entire operative relationship to octonary tradition. Interestingly, from this point onwards, the discussion in other treatises related to Del Lago's circle also becomes more common. In this «new» class of treatises, the text operates as a plausible justification (i.e., *licentia*) for any transcendence of theoretical paradigms, which was usually understood as «rhetorical signs» among the theorists.⁵⁴

As argued by Bernhard Meier,⁵⁵ the main explanation given by Glarean in *Dodecachordon* (Basel, 1547) to expound certain *commutatione modorum* behaviors between the first and third modes resulted in a profoundly logical account of its elements that includes an exceptional mastery of modal doctrine: a particular operation that was consolidated under the term '*Dorio ad Phrygium*'.⁵⁶ Although it is not our aim to discuss this in detail, understanding the elements expressed by Glarean is absolutely necessary before proceeding to address the Italian counterpart on this subject.

Throughout Chapter 24 (*De binorum Modorum connexione exempla until inhibit obiter Iusquini Pratensis encomium*) of the third book, Glarean brings, among other subjects, the motet *De profundis* attributed to Josquin as an example of the rare use of the «*Dorio ad Phrygium*» approach. As Meier writes, '*raritas*' is, moreover, «the intensified use of music-rhetorical figured writing, which serves for the expression of the image or affective content of single words».⁵⁷ Thus, by means of this resource, the *ostentation ingenii* which arises from the virtuous use of modal structures is, according to Meier, a rhetorical sign based on textual hermeneutics through Josquin's reading. Moreover, Glarean makes it

construction to textural aspects of composition, leading to the use of 'madrigalism' by imitating the nature of words. Thus, at the conclusion of the same chapter, he states: «Adunque la conclusione delle belle pronuntie sarà questa; che quando dette pronuntie saranno accompagnate, dal moto, con le loro sonsonanze in proposito sarà bella pronuntia; et quando le parole parleranno di riposo, si potrà far una pausa, e quando di sospiri, far de sospiri per imitare le parole: e così il compositore operando imparerà mille altre belle fantasie, perche si caverà una da l'altra» (*ibid.*, f. 86v).

⁵⁴ On this subject, see: BURKHOLDER, *Rule-breaking*, pp. 396-389.

⁵⁵ MEIER, *The Musica Reservata*.

⁵⁶ This 'antipathetic proverbially' affirmation, as called by Meier (*The Musica reservata*, p. 89), is grounded in the sense of incongruity as adopted by Erasmus in *Adagiorum Chiliades tres, ac Centuriae fere totidem* (ROTTERDAMI, *Adagiorum*, f. 153r), and Gafurio in *De harmonia musicorum instrumentorum* (GAFFURIUS, *De harmonia*, f. 84r) (MEIER, *The Musica reservata*, p. 69).

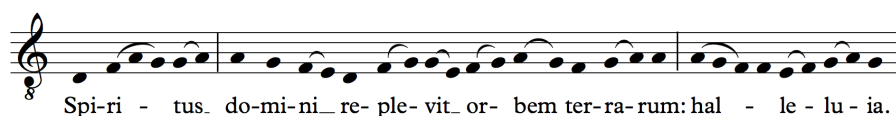
⁵⁷ GLAREAN, *Dodecachordon*, trans. Miller, p. 89. As mentioned by Meier (*The Modes*, p. 290), Vicentino in *L'antica musica ridotta alla moderna prattica* comments about the freedom the composer could take with the modal rules in the middle of the piece: «non importerà molto, a far qualche passaggio, che sarà fuore di Tono» (VICENTINO, *L'antica musica*, f. 79r) Meier also observes the Marc'Antonio Mazzone statement in the dedication of the *Primo libro di madrigal à quattro voci* (Venezia, 1569), which he express the composer's license to 'broken rules' specifically due the necessity of the text, pointing Arcadelt's madrigals as his exemplum about the procedure: «il compositore le deve molto bene considerare: e con le note meste, allegre, ò severe, come saranno convenienti, esprimere il soggetto loro, uscendo alcuna volta di tono, come fa Archadelt per imitar le parole che dicono: amor in altra farmi; talhora non osservando la regola, come il medesimo fà nel suo Madrigale» (MAZZONE, *Primo libro*, f. Aiv).

clear that the approach consists of conscious transcendence «against the ancient musicians» («olim musicis oijci solebat»), and proceeding in a gifted manner, which consequently performs «without giving offense to the ears» («absque aurium offendiculo fecerit»)⁵⁸

Thus, within Glarean's new proposal of twelve modes, he does not consider the use of commixture («connection», in his terminology), a mistake in face of tradition, but, on the contrary, uses it for transcendence (at least in Josquin's case). At the beginning of this chapter, positioned after the explanation of twelve modes, Glarean immediately clarifies this aspect, stating that: «indeed [were] not [be] commonplace examples, but weighty ones which beautifully represent the matter».⁵⁹

If we turn our attention back to the Italian counterpart, the major reception of the twelve-mode doctrine appears in Zarlino's *Le Istitutione harmoniche*⁶⁰ (Venice, 1558), although it already appears, pragmatically, in his own motet collection based on the *Canticum Canticorum* (Venice, 1549).⁶¹ Thus, the approach to this subject has two important treatments as provided in *Le Istitutione*. The first is found in Chapter 14 of the fourth book (*Delli Modi communi & delli Misti*), where the possibilities of mixture (named by Zarlino as 'modi communi', or 'imperfetti') and commixture ('modi misti') are defined as a multiple manifestation of a foreign diapente and diatessaron species in a chant.⁶² Then he comments on the example of Introit *Spiritus Domini replevit orbem terratum* (Ex. 13), sung at the Solemnity Mass of the Pentecost. According to Zarlino's judgment, the chant is composed in the eighth mode with the presence of the first diapente species (first mode) at the beginning and the third diapente species in the middle (which serves the fifth and sixth modes).⁶³ The second statement is found in the exposition of the third mode in Chapter 20 of the same book. In this case, the commixture (here under the term 'mescolanza') is presented as a reflection of the use of irregular cadences in *a*, which refers to the diapente of the ninth mode.

Example 13. Introitus *Spiritus domini*.⁶⁴



⁵⁸ GLAREANUS, *Dodecachordon*, p. 364.

⁵⁹ GLAREAN, *Dodecachordon*, trans. Miller, p. 264. «... non sane ea proletaria, sed grauia, sed negocium belle repraesentantia» (GLAREANUS, *Dodecachordon*, p. 362).

⁶⁰ Moving forward, the reference to *Le Istitutione* will always consist of that of the 1558 edition, which also includes the numbering of modes.

⁶¹ That makes the first known document of the theory of *Dodecachordon*'s doctrine in Italy.

⁶² «...replicar molte volte una diapente, o diatessaron, che seruisse ad un'altro Modo» (ZARLINO, *Le Istitutioni harmoniche*, p. 315).

⁶³ ZARLINO, *Le Istitutioni harmoniche*, p. 315.

⁶⁴ Cfr. LIECHTENSTEIN, *Antiphonarium Sacrosancte Romane*, f. 94r.

It is important to notice that to Zarlino, the commixture is merely a circumstantial behavior that does not alter the unity of mode, which is conquered (or marked) by the characteristics presented by the chant from beginning to end, or as such, conducted to the end, being the ontological final, placing great, but not exclusive importance on it⁶⁵. This is proved by the judgment made precisely by Josquin's *De profundis*, but instead of Glareanus' *Dorio ad Phrygium*, Zarlino considers it composed in the fourth mode.⁶⁶

Therefore, with the introduction of the twelve-mode doctrine, one can see the coexistence of two main modal systems: to a few theorists, the octonary system and its tradition, understood as an ideal and sufficient modal speculation, while to others, the adoption of a new system comes as a result of an operation that balances the reevaluation of doctrine directly from Greek sources and close observations of the repertoire from Josquin's generation, which sought to reconcile eventual inconsistencies between the codification of modal doctrine and its practice (mainly in a polyphonic context), which consequently corroborates a significant status of theoretical avant-garde in this matter.

3. Illuminato Aiguino and his proposal of modal commixture

From a technical perspective, Illuminato Aiguino develops his modal doctrine firmly based on the diatessaron and diapente species ascribing to them a type of '*signatura rerum*' for each of the eight modes, that are interchangeable through the commixture process, a feature that directly connects him to Marchetto's doctrine. Similarly, such structures do not consist of static objects, but are rather dependent on the fluidity of the «sound movement» of singing (also appearing in *Lucidarium*).⁶⁷

⁶⁵ «non si dè credere, che da lei [i.e., cantilena] si debba fare il giuditio: ma che noi dobbiamo aspettare tanto, che la cantilena sia condotta al fine; et iui giudicare secondo il dritto» (ZARLINO, *Le Istitutioni harmoniche*, p. 336). Nicola Vicentino in *L'antica musica ridotta alla moderna prattica* (1555) declares an interesting progressive statement concerning the circumstantiality of the foreign species. In Chapter 5 of the third book *della prattica*, Vicentino, explains the presence of genera other than the diatonic, emphatically stating that «all plainchants and measured songs have been shown to be mixtures of diatessaron and diapente species from other modes» («avenga che fin hora non s'habbia mai veduto alcun canto fermo, che sia veramente Diatonico; perche tutti i canti fermi, et figurati; hanno dimostro esser misti delle quarte et delle quinte de gl'altri Modi») (VICENTINO, *L'antica musica*, f. 44v).

⁶⁶ However, it is conjectured that Zarlino may have considered the commixture with the tenth mode—although he does not mention this connection—since in this piece he is characterized by the constant presence of cadence in *a* (irregular cadence), what would affirm this relationship, as suggested during the explanation of his own statement about the fourth mode (cfr. ZARLINO, *Le Istitutioni harmoniche*, p. 324).

⁶⁷ As argued by Marchetto: «Propter enim motum habetur cantus, et sine motu cantus non est» (*Lucidarium*, ed. Della Sciuca *et al.*, p. 106).

The taxonomy proposed by Aiguino in both of his treatises is divided into three main categories: (1) *tuoni regolati*,⁶⁸ modes governed by ordinary rules of the conjunction of species, which establish the *diapason*; (2) *tuoni irregolari*, mode's whose termination does not find regular endings, but instead, irregular ones, meaning a fifth higher (like Marchetto); and (3) *tuoni con il ♭ molle* (or just «*per ♭ molle*»), in which the entire transposition is a fourth higher or a fifth below.⁶⁹

As already mentioned, the species is the main reference to a particular mode. Therefore, as the entire doctrine is erected from these structures, a detailed understanding of them becomes an essential step in comprehending Aiguino's modal theory, and particularly, the function of commixture in the system.

Species and Modal Structure

Although Aiguino does not systematize the presentation of the species as showed in Figure 3, his doctrine will be more easily understood if we establish the interval species equivalence between them. Thus, both diapente and diatessaron species are settled by their unique interval configuration (as argued by Marchetto), in which the semitone acts as the main distinguishing element. If we identified this set by the syllables of solmization, it will result in four possibilities of diapente and three diatessaron for each hexachord (*naturalis, durum, mollis*). By the unfolding speculative process of such structures, we observe the inevitable presence of f-sharps in two of the *durum* diapente species, which are not part of *musica vera*, although it is common in cadential situations via *musica ficta per subsemitonum modi* in the cantus melodic *clausulae*. Thus, even for such species, the other notes remain available to be used accordingly.

⁶⁸ Also includes the possibility of terminating with '*secondo gli seculorum*': tones having the same structures as those of the *regolati*, but assumes the status of the psalm-tone *differentiae* as a true *finalis*. Harold S. Powers (*Tonal Types*, p. 458) traces the dependence of this feature in Aiguino's system with that promulgated by his master, Pietro Aron in *Trattato della natura et cognitione* (Venice, 1525).

⁶⁹ It is also important to say that, in terms of the applicability of the second treatise (devoted to *canto figurato*), Aiguino does not explicitly mention the suitability of the doctrine to either secular or instrumental works. However, due to the nature of discourse applied, we believe that the scope of his theory is primarily related to sacred vocal pieces.

	First Diapente	Second Diapente	Third Diapente	Fourth Diapente
<i>(naturalis)</i>	D E F G A	E F G A B	F G A B C	C D E F G
<i>(durum)</i>	A B C D E	B C D E (F \sharp)	C D E (F \sharp) G	G A B C D
<i>(mollis)</i>	G A B \flat C D	A B \flat C D E	B \flat C D E F	F G A B \flat C
	<i>re mi fa sol la</i>	<i>mi fa sol re mi</i>	<i>fa sol re mi fa</i>	<i>ut re mi fa sol</i>
	First Diatessaron	Second Diatessaron	Third Diatessaron	
<i>(naturalis)</i>	D E F G	E F G A	C D E F	
<i>(durum)</i>	A B C D	B C D E	G A B C	
<i>(mollis)</i>	G A B \flat C	A B \flat C D	F G A B \flat	
	<i>re mi fa sol</i>	<i>mi fa sol la</i>	<i>ut re mi fa</i>	

Figure 3. Synthesis of speculative diapente and diatessaron species disposition as practiced in Aiguino’s theory. The pitches are only illustrative; they could be applied to any corresponding position of the gamut.

Therefore, based on the mutation process between hexachords, it is possible to establish the equivalence between species and *naturalis* and *durum* hexachords, and the same occurs in a *cantus mollis* (or *per \flat molle*) system with *naturalis* and *mollis* hexachords. When used in a practical and simultaneous context, we also consider them in a regular and irregular position (Figure 4) established from their respective finales.

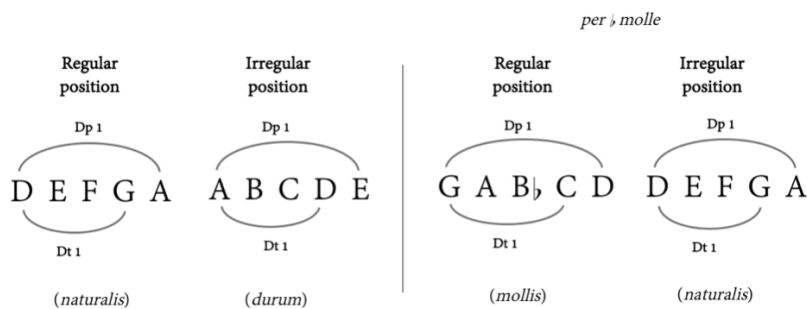


Figure 4. Example of species equivalence at the regular and irregular position based on the coincidence of *naturalis* and *durum* hexachords (left), and *mollis* and *naturalis* hexachords (right). As presented before, the sigla ‘Dp 1’ refers to the first diapente, ‘Dt 1’ refers to the first diatessaron.

The next two examples illustrate this principle. Both species usually act together in a polyphonic complex, often in adjacent voices (Cantus/Altus and Tenor/Bassus), especially in situations of high-level imitative accuracy, such as an *exordium*, for instance. Combinations like a diapente plus diatessaron will reveal the diapason species of a particular mode, although others, like two diapente species, do not.

Also, it is important to emphasize that, according to Aiguino (after Marchetto, Tinctoris, Aron, and others), the diatessaron species has no property that will change the nature or basis of the mode, which consequently leads us to believe in the greater predominance assigned to the diapente species, although the diatessaron species may constitute the modal judgment, even as an important indication to commixture.⁷⁰

Accordingly, in the first example (Ex.14), an extract of the high voices from the *exordium* of Palestrina's motet *Surge, propera* (*Motecta festorum*, Rome, 1563), shows the first irregularly ascending diatessaron species (hexachord *durum*) on Cantus and the first diapente species in the regular position (hexachord *naturalis*) on Altus. It is observed that the combination of both voices exposes the complete *ambitus* referring to the first mode.⁷¹

Example 14. Palestrina, *Surge, propera* (*Motecta festorum*, Rome, 1563), *cantus* and *altus* (extract), beginning of *exordium*. The transcription is based on Filippi's edition.⁷² The slurs in a round parenthesis reveals the first diapente (Dp) and first diatessaron (Dt) species in a regular (r) or irregular (i) position, with the respective solmization syllables as well.

In the second example (Ex. 15), an extract of the high voices of Palestrina's motet *Nos autem gloriari* (*Motecta festorum*, Rome, 1563), we observe an ascendent first diapente species at the entrance of both voices: Cantus, in an irregular position (*naturalis* hexachord), and Altus, in a regular position (*mollis* hexachord). In this case, unlike the previous example, both diapente species evidently do not establish the octave *ambitus* for mode 1 ('*per* ♭, *molle*').

Therefore, considering the priority of the species, it is important to further explore more details about Aiguino's system concerning the modal formation properly speaking. Thus, Aiguino establishes the foundation of eight modes from the four 'regular finalis' (D, E, F, G), while also considering the formation of three modes of the 'regular cofinalis', thereby called 'irregular finalis' (A, B, C⁷³).

⁷⁰ For this reason, we chose to use the term «predominance of the fifth» rather than the «dominance of fifth» as presented by Peter Schubert (*The Fourteen-Mode*, p. 179).

⁷¹ Although this type of reasoning is not adopted by Aiguino, this fact is noteworthy precisely for the comparison of the behavior of the voice entrances of the following example.

⁷² PALESTRINA, *Motecta festorum*, ed. Filippi, p. 138.

⁷³ In his doctrine, Aiguino discards irregular finals (D) due to the duplication with the first regular one. On the impossibility of considering the seventh and eighth modes as irregular, he says: «it would need to be another letter, different from the above (D)» (AIGUINO, *La Illuminata*, f. 43v).

Example 15. Palestrina, *Nos autem gloriari* (*Motecta festorum*, Rome, 1563), *cantus* and *altus* (extract), beginning of *exordium*. The transcription is based on Filippi's edition.⁷⁴ Example of species equivalence in *cantus mollis*

For each finales (regular and irregular), two modes are assigned (authentic and plagal), thus totaling fourteen 'pseudo' modes, since the six additional modes coming from an irregular finalis do not have the structural autonomy to be considered, in fact, 'new modes':⁷⁵ the species, in structural terms, are strictly the same, but in a different 'action zone' that allocates them to a fifth higher, which includes the finales (that is, assuming, in fact, a finalis status of the irregular mode.) It is also important to emphasize that the species are presented in inverted order: authentic irregular modes are constituted by the concatenation between the species of diatessaron plus diapente, while plagal modes, diapente plus diatessaron, as presented in Figure 5. For this reason, these modes are not considered a true transposition of regular modes.

Figure 5. Comparison between regular and irregular mode formation. The figure shows the diapason species and its respective diapente and diatessaron (detached slurs).

To clarify this aspect, Figures 6 and 7 present the structures of all regular and irregular modes, respectively. The regular plagal modes are originally presented in a descending manner since Aiguino considers the descending movement the true nature of these modes, while the opposite ascending motion is related to authentic modes. Here, however, both are presented as ascending to facilitate their comparison.

⁷⁴ PALESTRINA, *Motecta festorum*, ed. Filippi, p.178.

⁷⁵ Although Aiguino himself in *Il tesoro illuminato* treatise, in a kind of 'peroratio' (*Conclusioni in Musica*) that involves a series of rhetorical statements, he wrote in the very last line that the true number of modes, in fact, are fourteen: «Contra alla conclusione di sopra detta...hora dico, che gli Tuoni sono quattordeci» (AIGUINO, *Il Tesoro*, f. 88v).

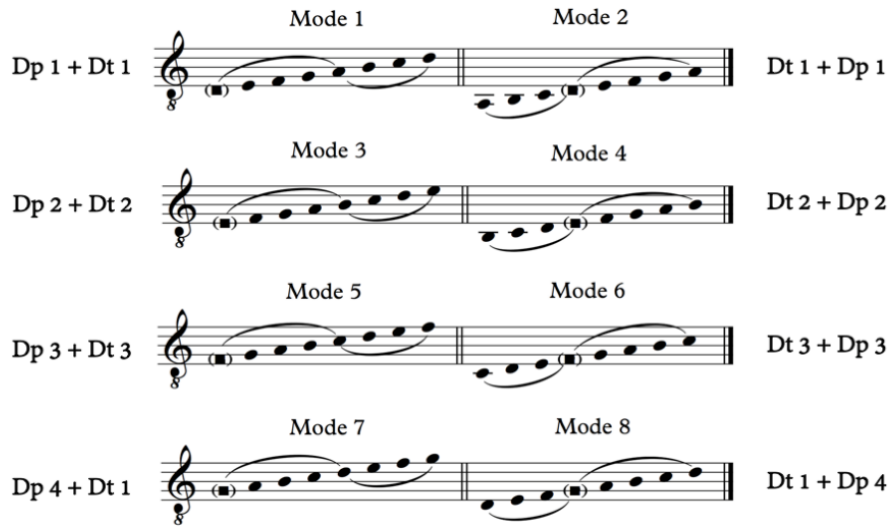


Figure 6. Regular modes or *tuoni regolati*.⁷⁶ In the treatises, the plagal modes are presented descending.

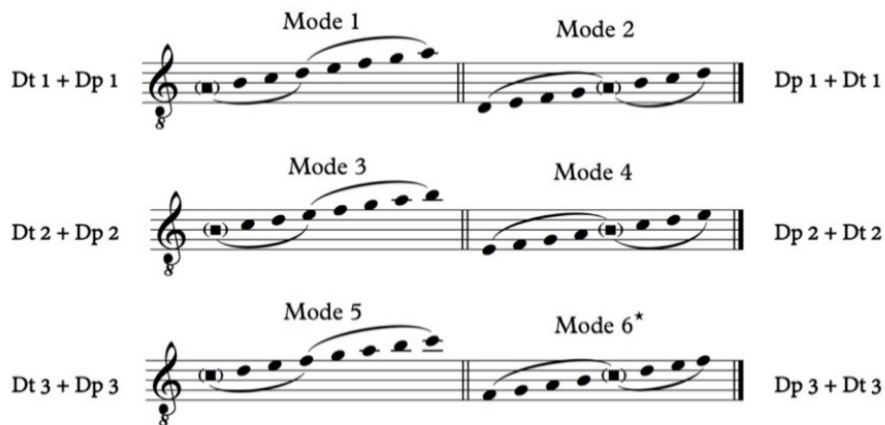


Figure 7. Irregular modes or *tuoni irregolati*.⁷⁷

In the case of irregular mode 6, an issue arises from Aiguino's musical examples. From a structural perspective, irregular mode 6 is presented in the 1581 treatise in a way⁷⁸ that leads us to represent it with an F-f diapason *ambitus* (like in the figure below). However, the musical examples in both treatises clearly establish the G-g diapason *ambitus* with a *finalis* in C, that is, in terms of interval species,

⁷⁶ Cfr. AIGUINO, *La Illuminata*, f. 12v-15r, and *Il Tesoro*, f. 7r-8v.

⁷⁷ Cfr. AIGUINO, *La Illuminata*, f. 43r, and *Il Tesoro*, ff. 29r-30v.

⁷⁸ Specifically cadential ones: «Et le cadenze ordinarie del sesto Tuono [irregolare perfetto] saranno C sol fa ut, et F fa ut acuto, con l'ottave et derivate loro» (AIGUINO, *Il Tesoro*, f. 30r).

using the fourth instead of the third diapente. The change of these species applied in the examples (that emulates actual practice) could be explained, whether convincingly or not, by avoiding the tritone of the third diapente eliminating the need for a \flat *molle* (that would transform it, anyway, into a fourth diapente species). However, from Aiguino's theoretical perspective, maintaining this fourth diapente species in this circumstance cannot be sustained as a proper diapente of the irregular mode 6, since this transmutation will result in a regular mode 7 with a *finalis* in C.

With the so-called 'modes with b-flat' (*tuoni con il \flat molle*), we observe a strict transposition of the diapente species (modes 1-6) and diatessaron ones (modes 5-8). Thus, as can be seen in Figure 8, the constitution of modes always takes on a \flat *molle* by one of the species (except modes 5 and 6, where both species are transposed), which will result in 'mixed' modes (*tuoni misti*) in virtue of including in the species composition an 'accidental and natural species' (Figure 8).⁷⁹

Thus, if we compare Aiguino's pseudo-fourteen modal system with the twelvefold system presented by Zarlino, some important issues arise. In light of octonary tradition, the nucleus of the comparison remains between the four added modes by Zarlino (i.e., mode 9, 10, 11, and 12 according to the first edition of *Le Istitutione harmoniche*) and those four from Aiguino's irregular modes (Figure 9), since the harmonic diapason division between B *mi* to \sharp *mi* is rejected by Zarlino (and Glarean) due to the imperfection resulted by B *mi* and F *faut*.⁸⁰

⁷⁹ According to Aiguino, some modes would have both species transposed (only possible, however, with the presence of e-flat), which would also be included in the mixed mode category: «Ma ben dicovi, che la maggior parte di loro saranno chiamati Tuoni misti, per essere composti d'una specie accidentale, et una naturale, et per contrario, et alcuna volta tutte dua le specie accidentali» (AIGUINO, *Il Tesoro*, f. 22r). However, the presence of the two accidental species will cause an important disturbance in the speculative construction of the schemes provided by the author himself. Therefore, we conjecture that this statement was made to establish an implicit reference to musical practice that often alters the e to e-flat (by *causa necessitatis*, *pulchritudinis*, or *fa super la*), which would, in fact, result in an incidental (not structural) transposition of both species.

⁸⁰ On this topic, it is interesting to notice a particular passage by Vincenzo Galilei presented in the first part of the manuscript of his counterpoint treatise written between 1588-1591. In the *Il primo libro...intorno all'uso delle consonanze*, Galilei affirms that he explicits the possibility of using the termination in \sharp *mi*, which consequently demands the regulamentation of the F-sharp as *musica vera* –just as it occurs with the per \flat *molle* system by reason of the termination in F. According to Galilei: «... io non so neanco vedere, che m'impedisca di non potere dar fine alla Cantilena nella corda \sharp *mi*, come nelle altre; et particolarmente nella F... Et replicandomi si che la F si fa capace della divisione harmonica con l'aiuto del b: gli responderei che la \sharp si fa capace dell'aritmica con l'aiuto del diesis» (REMPP, *Die Kontrapunkttraktate*, p. 70).

Figure 8. Modes with b-flat positioned at high \natural *mi* (*tuoni con il ♭ molle* posto in \natural *mi acuto*).⁸¹ The T indicates those species that are transposed. In the treatise, the plagal modes are presented descendently.

Figure 9. A comparison between the four added modes by Zarlino (above), with those corresponding to Aiguino (below).

⁸¹ AIGUINO, *Il Tesoro*, ff. 22r-25r.

As observed in Figure 9, fundamental similarities between both authors can be drawn concerning the finales (A and C) and, apparently, between the diapason and authentic species. On the other hand, the differences are even more important from a structural perspective. If we pay close attention, we realize that these authentic diapasons can only be superficially compared, since the divisions of the diapente and diatessaron species are different. Consequently, the resulting plagal modes are completely disparate.

For this reason, we may assume that the main difference between these modes remains with species disposition (excepting authentic ranges and finales similarities). Consequently, we assume that the genesis of the distinction may be summarized by the position of the cofinalis: while Zarlino's modes maintain a cofinalis at a fifth higher on authentic modes; in Aiguino's proposal, the cofinales could be considered, at least by conjecture, at a fourth higher (since he did not explicitly mention the cofinalis status within irregular modes but may be assumed from Aiguino's discussion on irregular modal cadences).⁸²

If we allow ourselves to project these speculative considerations into musical polyphonic practice, these systems could be differentiated by certain features, such as: the behavior of the melodic countour according to species distinction; the relationship of cadential points between the finalis and the cofinalis; and the discrepant plagal *ambitus* despite the A and C terminations. These aspects will be explored in the last part of this essay, where we will have the opportunity to compare them more appropriately.

Species ambiguities in modes that share the same finalis

Turning back to Aiguino's discourse, we realize that even in a modal judgment that is conceived exclusively by species, certain levels of ambiguity can be observed, as for example, in paired modes, where they have the exact same diapente and diatessaron species, as well as the same finalis.

On this specific matter, Aiguino comments on three important aspects that may be considered to differentiate these modes: (1) the predominance of the orientation species (if ascending, it is related to the authentic, and if descending, to the plagal, as mentioned earlier); (2) the manifested *ambitus* or the range of the voice that is in the '*principato del tuono*' (if applied in the polyphonic context); and (3) the list of affections that appears in the text. Although they also carry some level of ambiguity themselves, these markers help to offer a certain level of orientation for modal assignment whether authentic or plagal.

Regarding the first parameter, Aiguino comments on the ascending and descending quality of the authentic and plagal modes following the tradition already manifested by Marchetto and Aron.⁸³ However, this argument is uncertain and

⁸² Cfr. AIGUINO, *Il Tesoro*, f. 29r.

⁸³ Cfr. MARCHETTO, *Lucidarium*, pp. 124-126; ARON, *De Institutione harmonica*, f. 16v. Aiguino influenced by both writers cites the *responsorium*, *Sint lumbi vestri praecincti* as an example of the descendent motion that relates it to the second mode. Aron also cites the *responsorium*, *Duo seraphim*, which is also repeated by Aiguino.

significantly inaccurate, even in a monophonic context, as can be observed in the example provided by Aiguino himself concerning modes 1 and 2 in his first treatise (Ex. 16a and 16b). Thus, the most clarifying parameter seems to be related to the melodic *ambitus* (the second parameter), which will be discussed below. It is noteworthy that by *tuono perfetto*, as Aiguino referenced in the examples, it is understood to be the full appearance of the modal range that resulted from the concatenation of the diatessaron and diapente species of that mode, allowing no transgression, not even by a tone.⁸⁴

Example 16a. Demonstration in the first perfect mode⁸⁵



Example 16b: Demonstration in the second perfect second mode⁸⁶



The second parameter of Aiguino's doctrine is concerned with the manifested *ambitus* of the chant, be it in a monophonic or polyphonic context. As presented in the previous examples, the gauging of this parameter in plainchants is far from being problematic since it only consists of the examination of high and low extremes of the chant. On the other hand, in the polyphonic context, this task can bring some difficulties, which Aiguino solves through the idea of the *principato del Tuono*. As all voices of the polyphonic complex, according to Aiguino, the species regarding the current mode must manifest⁸⁷ one of the voices and be assigned as the «main modal» voice of the chant, usually the Tenor for authentic modes and the Bass for plagals.

In this regard, Aiguino in Chapter 31 of *Il Tesoro Illuminato* (*Qual parte debbe tenere il principato del Tuono, cosi nelli Tuoni autentici, come ancora nelli suiuggali*), clarifies some interesting aspects of polyphonic modal judgment. Positioning himself from the composer's perspective, he says:

⁸⁴ Unlike Marchetto who allows that possibility, as presented in *Lucidarium* (Ch. 3).

⁸⁵ AIGUINO, *La Illuminata*, f.16r.

⁸⁶ *Ibid.*, f. 17r.

⁸⁷ «il Compositore debbe sempre procedere in tutte le parti, con le specie pertinenti al Tuono» (AIGUINO, *Il Tesoro*, f. 10v).

...volendo il Compositore comporre uno concerto, è necessaria cosa havere nell'intelletto quello che lui vuol fare, cioè un duo, o terzo, overo quarto, & ancor di più, dil che bisogna havere sempre una parte, quale habbia da procedere, come se il fosse uno canto fermo, & procedere con le spetie pertinenti al Tuono, & facendo incontrario, sarebbe un infilciare note, & non renderebbe soavità à quelli che l'ascoltano;... servando la natura del Tuono, con le specie maggiori & minori, cioè con gli *Diapente*, gli *Diatessaron*, gli *Dittoni* & *Semidittoni* pertinenti al Tuono, renderà soavità à tutti quelli che l'ascoltano, per la diversità delli Tuoni, overo modi, & di qui nasce che la variazione delle cose fanno parere bello il Mondo... Hora molte disputationi si potrebbero fare, dimostrando qual parte debbe tenere il principato del Tuono... Dico adunque che la parte del Tenore nelli Tuoni autentici è più commoda ch'ogn'altra parte, perche rappresenta il canto fermo, il quale è la madre nostra, & procede con i processi naturali, & è più propinqua al Basso, ch'ogn'altra parte, nel che il se chiama Tenor, à tenendo, idest, tenere il principato del Tuono. Et nelli Tuoni Suiuggali, overo placati, vogliamo che la parte del primo basso tenga il principato del Tuono, per cagione della remissione loro, la qual procede con i processi naturali senza discomodo loro, per essere la sua natural forma, & rappresenta il canto piano.⁸⁸

[When] the composer wants to compose a certain piece, it is necessary that he has in the intellect what he wants to do; that is [a piece intends to have] two, three, four, or more [voices]. It is necessary that always one of the voices proceed as if it were a *canto fermo*, setting then the species concerned with the mode; [if the composer] does the opposite, it would be an arbitrariness with the notes, and it would not make sweetness to those who listen them;... [when the composer] observes the mode's nature, with major and minor species - that is, with the diapente, diatessaron, the major third, and the minor third pertinent to that mode -, this will make sweetness to all those who listen them, because from the diversity of the *tuoni* or *modi*, emerges the variety of things, which makes the world appear more beautiful... So, a lot of doubt could be had showing what voice could have the *principato del Tuono*... I say, however, that the Tenor voice, in the Authentic modes is more convenient rather than any other voices, because it represents the *canto fermo*, which is the 'our mother', and proceeds by natural processes, and is closer to the Bass rather than any other voice, calling the Tenor, «to keeping», that is, to keep the *principato del Tuono*. And in Plagal modes, we intend that the first Bass voice has the *principato del Tuono*, by reason of its descendent design, which proceed with natural processes without discomfort, for being in its natural form and [also] represents the *canto piano*.

Besides relating the principle of *varietas* to the diversity of modes, this passage reveals an important part of the dialectic behind Aiguino's modal discourse. In this case, the author points out the necessity—at least in an idealistic situation—that one of the parts of a given polyphonic complex be entirely responsible for consistently presenting the species concerning a particular mode, which is

⁸⁸ AIGUINO, *Il Tesoro*, ff. 9v-10r.

reflected by the other voices. In addition to the species themselves, he also commented on the modal markers concerning major and minor thirds.⁸⁹

Also, as observed at the end of the quotation, the author is categorical when he states the presence of the '*principato del tuono*' in the Tenor when authentic, and in the Bass when plagal, especially with respect to the *ambitus* feature that involves both voices. In this idealized scenario, these voices would manifest a melody that would act similarly to a *cantus firmus* (if not itself), which is considered '*madre nostra*' from a structural point of view. The privilege conferred upon the *cantus firmus*, when present, is also extended to the other voices, and by this the manner shall be judged.

The next parameter, concerning the text, may also bring some clarification in cases of modal ambiguity. At the beginning of the first part of the 1581 treatise, Aiguino refers to the qualities regarding the nature of each mode, drawing adjectives concerning each one's affection (as reproduced in the the Table 1). Although he presents a short and condensed list, this is the passage that provides the most attention to the subject in this treatise as the discussion is absent in the earlier treatise.

Table 1. *Modes and their affects, according to Aiguino*⁹⁰

MODE 1	«reaches joy, hilarity of spirit, and moves all the affections of the soul» ⁹¹
MODE 2	«is constituted in the tears, in the lamentation, and lull the afflicted languid spirit» ⁹²
MODE 3	«it increases animosity and irascibility, scares the enemy, inflames and ignites the anger's spirit» ⁹³
MODE 4	«pleasant, because admirably accommodates itself to rest and tranquility» ⁹⁴
MODE 5	«being people weary and full of suffering, it leads to melancholy» ⁹⁵
MODE 6	«it produces tears & pity to men by compassion» ⁹⁶
MODE 7	«want the lascivious [affect], a part of modesty and playfulness, and marriage» ⁹⁷
MODE 8	«it suits to the cheerful and playful, like approbated people, who want to be pleasant, but not the lascivious one» ⁹⁸

⁸⁹ However, without the presence of at least a diatessaron species in the part of the '*principato del tuono*', Aiguino cannot even consider the piece will properly reflect any mode: «Ma avvertiscovi, ch'il Tuono non può essere di manco di una quarta minore, et se la parte qual tiene il principato del Tuono, non haverà di estremo à estremo la compositione della quarta, dicovi che non sarà Tuono» (AIGUINO, *Il Tesoro*, ff. 18v-19r).

⁹¹ «perviene alegrezza, hillarità d'animo, et comove tutti gl'affetti dell'anima» (AIGUINO, *Il Tesoro*, f. 9v).

⁹² «è costituito nelle lacrime, e le lamentationi, et acquetare l'afflitto languente spirito» (*ibid.*, f. 9v).

⁹³ «accesce animosità, et iracondia, spaventa l'inimici, infiamma et accende il spirito all'ira» (*ibid.*, f. 9v).

⁹⁴ «per appiaceri, perche si accomoda mirabilmente al riposo, et tranquillitate» (*ibid.*, f. 9v).

⁹⁵ «essendo le persone fastidiate, et piene d'affani, leva la malenconia» (*ibid.*, f. 9v).

⁹⁶ «produce lacrime, et pietà ali huomini per compassione» (*ibid.*, f. 9v).

⁹⁷ «desidera la lascivie, parte di modestia et giocondità, e nozze» (*ibid.*, f. 9v).

⁹⁸ «conviene ali allegri, et giocondi convivi, come persone approbate ma non lascivi» (*ibid.*, f. 9v).

Accordingly, to put these modal considerations into practice, we propose to consider an example that includes some graphical indications that will assign the elements discussed up until now.

In the bicinia *Oculus non vidit* by Orlando di Lassus, for example, one observes that the first ascending diapente species presented in the *exordium* (Example 17) is related to mode 1, according to the Aiguino doctrine. At the end of the piece, the cadence provides its confirmation, which terminates on the finalis D (Example 18). In our judgment, the voice that possesses the ‘*principato del tuono*’ is the Altus, because it reveals more directly the species and elements concerning the mode. The organization of the voice entries occurs in a manner similar to Palestrina’s aforementioned *Nos autem gloriari*; moreover, in the case of *Oculus non vidit*, the *exordium* voices manifest the species related to mode 1 in *cantus durus*. As observed, the final part of the motet appears with the predominance of the first diapente species in both voices.

Regarding the text, the motet addresses the biblical passage 1 Corinthians, 2:9, which states that God’s love and care for those who love him transcend any sensory experience (sight and hearing) even when conceived by imaginary means since the term ‘heart’ (in Greek, καρδιά, as well as in latin, ‘*cor*’), possibly serves as the center of intellect and will, and not of emotions. Therefore, if we include this reading in confronting Aiguino’s list of affections, we will see a possible relationship with the first mode.

<p>Oculus non vidit, nec auris audivit, nec in cor hominis ascendit, quae preparavit Deus his, qui diligunt illum.</p>	<p>Eye hath not seen, nor ear heard, neither have entered into the heart of man, the things which God hath prepared for them that love him.⁹⁹</p>
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Example 17. Lassus, *Oculus non vidit*, opening. The transcription is based on Bergquist’s edition of the *Novae aliquot, ad duas voces cantiones* (Munich, 1577)¹⁰⁰

⁹⁸ «conviene ali allegri, et giocondi convivi, come persone approbate ma non lascivi» (*ibid.*, f. 9v).

⁹⁹ 1 Corinthians, 2:9 (*The Bible*, p. 207).

¹⁰⁰ LASSO, *The Complete Motets*, ed. Bergquist, p. 75.

Example 18. Lasso, ending of *Oculus non vidit*. The transcription is based on Bergquist's edition.¹⁰¹

The image displays a musical score for the ending of 'Oculus non vidit' by Lasso. It features four staves of music. The top two staves are for the Cantus and Altus voices, and the bottom two are for the lower vocal parts. The lyrics are: 'his qui di-li-gunt il-lum, qui sol-re-la-re la-re sol-lum.' The score is annotated with interval species markings: Dt 1(r), Dt 1(i), Dp 1(i), and Dp 1(r). These markings are placed above the notes to indicate the interval species used in the composition. The notation includes various note values and rests, typical of a polyphonic setting.

Classes referring to interval species

From these aforementioned ingredients –species, motion, and action zones–Aiguino put great effort into offering an approach to systematize the process of observation and manipulation of species, classifying them into three main categories: (1) *Ambitus*¹⁰², which may be perfect or imperfect; (2) *Mistione*, which also may be perfect or imperfect; (3) *Commistione*, which may be, in general terms, perfect, an imperfect major, an imperfect minor, or mixed, the latter only appearing in the *La Illuminata* (1562) treatise. Figure 10 illustrates a comparison between the categories that appear in both treatises. They are grouped according to two factors: the manifested range of the voice judged and the species exchange.

The first two classes are intended to classify the chant according to the manifested range. The first, related to *ambitus*, is named after the degree of relationship between perfection or imperfection (*perfettione* and *imperfettione*) of the octave, that is, when the full (or perfect) octave of a certain idealized mode is reached or when it is not. The second is intended to classify the chant when a mixture of *ambitus* between authentic and plagal modes is manifested—an explanation that only appears in the *La Illuminata* (1562) treatise. Thus, two situations are foreseen, which was organized according to the quality of the exposition of their pairs: the *mistione perfetta*, when the chant participates in the range of the adjacent mode (plagal, when authentic, and vice versa, and when it is fully achieved, totaling a range equivalent to an eleventh); and the *mistione imperfetta*, when the adjacent mode texture is partially reached (even if exceeded by a semitone).

The third class is related to a commixture afforded by the foreign species, be it a diapente or diatessaron, which is divided into four subclasses: (1) *perfetta*, when the chant manifests two species other than the predominant mode that may exceed the standard *ambitus* by a note or more above (when authentic) or below

¹⁰¹ *Ibid.*, p. 75.

¹⁰² Aiguino does not explicitly suggest this category. Here we opted for this systematization only to organize the exposition of his doctrine.

(when plagal); (2) *maggiore imperfetta*, when a manifestation of a diapente species (called ‘*spetie maggiore*’) is other than the predominant mode; (3) *minore imperfetta* (appearing only in *Il Tesoro*), when the foreign species is a diatessaron (called ‘*spetie minore*’); and (4) *mista* (appearing only in *Il Tesoro*), when both diapente and diatessaron foreign species are manifest, thereby establishing the highest level of ambiguity among the main modal markers (between species and finalis), as well as in the last subclass, (5) *commistioni con tutti i tuoni*, with the presence of all diapente species (if authentic), diatessaron (if plagal), or even with both species.

The classification that appears in both treatises serves different purposes, with definitions that turn out to be slightly different in certain cases. Thus, to understand the logic of Aiguino’s discourse, a more detailed discussion is required for each one of the classes, as follows.

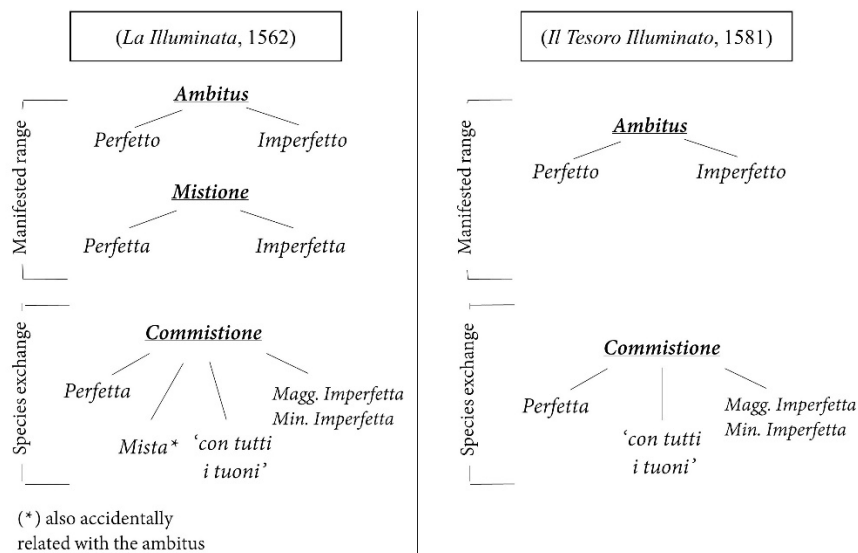


Figure 10. The modal extratification of both Aiguino’s treatises: *La Illuminata de tutti i tuoni di canto fermo* (1562) and *Il tesoro illuminato di tutti i tuoni di canto figurato* (1581)

Ambitus

The aspects related to the perfection and imperfection of modal *ambitus* have similar definitions in both treatises, although *Il Tesoro* provides more details on this matter. Thus, perfection of a mode is simply stated as the integral manifestation of the species extension of its inherent diapason. The adjective ‘perfect’ is also applied to the octave as a quality of its integrity from the concatenation of the dipente and diatessaron species. In addition to Examples 16a and 16b, Example 19 manifests the octave of G to g related to the eighth mode. The author

endeavors to highlight the inherent mode's diapente and diatessaron species, which are explicitly presented in upward motion as a typical direction of authentic modes, according to the author's discourse.

La Illuminata...di Canto fermo (1562)

...dalla positione *Dsolre* infino alla positione *Dlasolre*, che sarà una ottava chiamata perfetta.¹⁰³

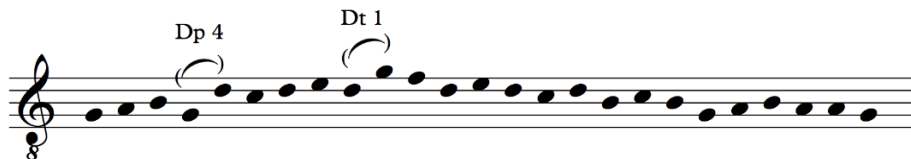
From position *D solre* to position *D lasolre*, which will be an octave called a perfect one.

Il Tesoro...di Canto Figurato (1581)

La perfettione del modo, overo Tuono, non è altro ch'una compositione di otto note continenti in se di estremo à estremo cinque Tuoni sesquiottavi, & duoi minori Semituoni, la qual compositione sarà la vera Diapason, ò vuoi dire ottava, la qual ottava verrà essere composta di Diapente perfetto, & Diatessaron minore.¹⁰⁴

The perfection of the mode (i.e., tuono), is nothing but a composition of eight notes in itself that have five sesquioctave tones, and two minor semitones, which composition will be a true diapason, or octave, formed by a perfect diapente and a minor diatessaron.

Example 19. «Demonstration of the seventh perfect mode»¹⁰⁵



The category concerning imperfection finds a more precise definition also in the second treatise, although both have the same end as object. The brief citations below include the essential information about this category. In *Il Tesoro*, Aiguino uses the term *scemare* ('lessen') to indicate that the imperfect mode consists of those chants that manifest a smaller *ambitus* than a perfect chant (that is, the full octave). This interval difference is systematically presented in the examples offered by Aiguino, among them two were selected to illustrate this process. As can be seen by a comparison of both examples in the authentic mode (Ex. 20), the imperfection occurs in the upper part (by the difference of a minor third), since the reduction of the lower part would directly interfere with its finalis—a process that is possible only in chants in the plagal modes (Ex. 21). In both cases, the species remain alligned with the finalis, which operates as main marker for the modal judgment.

¹⁰³ AIGUINO, *La Illuminata*, f. 16r.

¹⁰⁴ AIGUINO, *Il Tesoro*, f. 14r.

¹⁰⁵ AIGUINO, *La Illuminata*, f. 18v.

La Illuminata...di Canto fermo (1562)

...la imperfettione del tuono non è altro che levare qualche intervallo deo *diapente*, ovvero del *diatessaron*, ovvero a tutti duoi gli speti', & questo so appartiene a tutti li modi, cosi Signori, come suiugali che possono essere fatti imperfetti de tutti duoi gli speti.¹⁰⁶

The imperfect mode is nothing but the subtraction of some intervals of the diapente or diatessaron, or both, and this may incur all modes, be it authentic or plagal, which can be made imperfectly from both aspects.

Il Tesoro...di Canto Figurato (1581)

La imperfettione del Tuono, ovvero modo, non è altro che scemare alcuno intervallo, ovvero alcuni intervalli all'ottava, ò vuoi dire al *Diapente* & *Diatessaron*; nel che nelli tuoni autentici, ovvero Signori restaranno imperfetti dalla parte intensa, per cagione della terminatione loro, perche non possono essere imperfetti dalla parte remissa, per la terminatione loro. Ma nelli tuoni collaterali, ò vuoi dire placati potranno essere fatti imperfetti dalla parte remissa et intensa.¹⁰⁷

The imperfection of the *tuono*, or *modo*, is nothing but a diminution of some interval or intervals from the octave, which means, from the diapente and diatessaron. The authentic modes will remain imperfect from the upper part, because they cannot be imperfect on the lower part, due to their termination. But in the plagal ones, the imperfection can be made from both lower and upper parts.

Example 20. Demonstration of the seventh imperfect mode by a minor third, that is, a manifested range from G to e (instead g)¹⁰⁸



Example 21. Demonstration of the eighth imperfect mode by higher and lower part, that is, a manifested range from E to c (instead from D to d).¹⁰⁹



In the case of chants having a maximum range of a fifth or fourth, Aiguino suggests that they should be judged also by their species. However, by the severe limitation concerning the *ambitus*, a certain level of ambiguity immediately arises regarding whether it is authentic or plagal. In this case, the criterion used

¹⁰⁶ AIGUINO, *La Illuminata*, f. 16r.

¹⁰⁷ AIGUINO, *Il Tesoro*, f. 18v.

¹⁰⁸ AIGUINO, *La Illuminata*, f. 18v.

¹⁰⁹ *Ibid.*, f. 18v.

by the author resides in the emphasis of the notes above the ‘*corda*’ or ‘*stanza*’, that is, the note that divides the fifth species characterized by a third over the finalis. As a neutral point, when there is more space above the *corda* (in other words, characterized by greater emphasis on the fifth itself), then the chant would be related to the authentic mode according to the manifested species, otherwise, they would be related to the plagal mode. Consequently, those melodies with a range delimited by a fourth are attributed exclusively to plagals. Examples 22 and 23 provide illustrations that are different than the first case: despite the range of a fifth, the former is related to the authentic modes while the latter is related to the plagal; and Example 24 is assigned to the plagal mode by virtue of its range (a fourth). Thus, it is noticed that this criterion arises not without ambiguity, since the judgment demarcates the emphasis on one or another species present in the melody, although these features may be inaccurate at some level.

Example 22. Demonstration of the first mode due to a larger interval found above the *corda* or *stanza*.¹¹⁰ The arrow indicates the range’s extreme (a fifth above final)



Example 23. Demonstration of second mode due to the presence of its diapente and its diatessaron.¹¹¹ The arrow indicates the range’s extreme (a fifth above final)



Example 24. Demonstration of second mode.¹¹² The arrow indicates the range’s extreme (a fourth above final)



Mistione (or Mixture)

As mentioned earlier, the discussion concerning mixture appears only in the *La Illuminata* (1562) treatise. The absence of the subject in the later treatise is at least strange, since this category plays a significant role in Aiguino’s modal discourse. Thus, by conjecture, at least two paths can be traced considering this fact: (1) the understanding that, to Aiguino, this category should not be applied to melodies

¹¹⁰ AIGUINO, *Il Tesoro*, f. 19r.

¹¹¹ *Ibid.*, f. 19r.

¹¹² *Ibid.*, f. 19v.

in polyphony; or (2) that this category is implicitly considered by the reader, assuming that the previously discussed theory had already been assimilated. No direct evidence has been found for any of these options; however, we believe that in virtue of his frequent references to the earlier treatise, maybe this category could be treated as an implicit doctrine, which would lead us to believe in the second option more assertively.

Regarding the definition presented by Aiguino, as briefly commented earlier, he categorically states that mixture is characterized by the ‘participation’ of the authentic mode in the diatessaron species of its plagal, and vice versa¹¹³, and is divided into two classes: perfect and imperfect, while they refer to the integrity of the *ambitus* in the adjacent mode. Consequently, it is understood that this category is theoretically possible only from certain combinations, precisely by the limits that characterize them, that is: perfect modes that produce a perfect mixture; or imperfect modes that produce an imperfect mixture.

Facing this dichotomy, Aiguino begins with examples of the imperfect class, supposedly more common in plainchant repertoire. Among the examples, we present only two in order to briefly illustrate the category. It is important to notice that when Aiguino offers his examples, besides mentioning which modes are present in the mixture, he also categorizes them according to the interval influenced by the adjacent mode. Thus, Example 25 demonstrates the presence of the third perfect mode with the imperfect mixture caused by a major third from its plagal pair (fourth mode); and in Example 26, he demonstrates the fourth perfect mode with the imperfect mixture caused by a semitone from its authentic pair (third mode).

Example 25. Demonstration of the third perfect mode with the imperfect mixture of a major third with its plagal pair.¹¹⁴ The square slurs stress the proper third mode *ambitus* and the mixture portion with the fourth mode



Example 26. Demonstration of the fourth perfect mode with the imperfect mixture of a semitone with its authentic pair.¹¹⁵ The square slurs stress the proper fourth mode *ambitus* and the mixture portion with the third mode



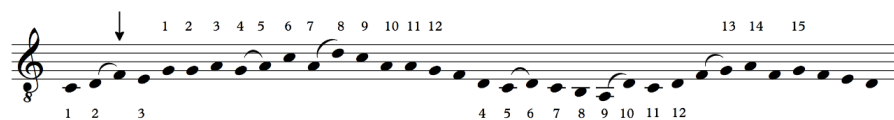
¹¹³ «La mistione non è altro che gl' autentici, partecipano de li diatessaron delli suiugali, et per contrario gli placati pigliano del diatessaron delli suoi Signori, et in questo modo sono accompagnati» (AIGUINO, *La Illuminata*, f. 20r).

¹¹⁴ AIGUINO, *La Illuminata*, f. 20v

¹¹⁵ *Ibid.*, f. 20v

Also noteworthy is the possibility of a perfect mixture in which the full *ambitus* concerning the adjacent mode is manifest in the chant. According to the definition provided by Aiguino, one of the two modes should have the *principato del tuono*, and consequently, the perfect mixture with the adjacent portion will emerge.¹¹⁶ In this case, since the range of both modes is fully manifested, we will know which mode has the *principato* from the number of notes above or below the note that divides the diapente into two parts (i.e., the third) or the *mezzo del diapente* as mentioned before. Example 27 illustrates this situation. Considering the finalis, the relationship between modes 1 and 2 is established; to know which mode will be assigned the *principato*, we must count to then realize the presence of fifteen notes above F and eleven notes below it, which results in a precedence of the perfect authentic mode 1 with a perfect mixture and its plagal (mode 2).

Example 27. Demonstration of the first and second perfect modes with the perfect mixture.¹¹⁷ The arrow indicates the ‘*mezzo del diapente*’. The number of notes shows the prevalence of the mode 1



Commistione (or Commixture)

The main issue concerning commixture, in general terms, is the taxonomy of melodic situations where a melodic gesture can be directly related to foreign species (i.e., a species different from that of its authentic/plagal pairs); the situation is a result, according to Aiguino, mainly «per forza delle parole»¹¹⁸ (by the power of words), but not exclusively, since he comments on the possibility of occasional presentations of foreign diapente or diatessaron species for variety purposes.¹¹⁹

However, chants judged by the prism of combining any available species immediately bring enormous malleability. As mentioned earlier, this approach has a remarkable level of development through Marchetto, but with Aiguino, there is an even greater attempt to systematize the doctrine adapted from the Padovan master.

¹¹⁶ «un canto, il qual sia autentico et placato perfetti, dove è necessario che uno di loro tenga il principato, et di qui nasce la mistione perfetta, per rispetto della perfezione loro» (AIGUINO, *La illuminata*, f. 22r)

¹¹⁷ AIGUINO, *La Illuminata*, f. 20v.

¹¹⁸ AIGUINO, *Il Tesoro*, f. 31v. This same passage is also quoted by Meier (*The Modes*, p. 292).

¹¹⁹ MEIER, *The Modes*, p.293. Aiguino precisely limits the foreign species presentation (under a variety of circumstances, and not by text) to ‘one’ diapente, and ‘one or two’ diatessarons, mainly when applied in long chants: «Ma se le parole non chiamassero la commistione, da noi sarà concesso uno Diapente diverso dal tuono nella parte qual tiene il principato del Tuono...et il simile uno Diatessaron, ovvero duoi diversi di natura, et questo s’intende quando il canto fosse longo; et questo vi sarà per ammaestramento in tutti i Tuoni» (AIGUINO, *Il Tesoro*, f. 33v).

Perhaps one of the main difficulties inherent in this category is related to the methodological characteristics of this particular category, especially with regard to the circumstantial condition of its application. On this, Peter Schubert affirms that «commixture can only be illustrated in the behavior of a given composed melody, not by a schema».¹²⁰ In this way, Aiguino endeavors to systematize it, considering the application of a commixture to both the *tuoni regulati* and *irregolari*¹²¹, dividing it into four main subclasses: *perfetta*, *maggiore imperfetta*, *minore imperfetta*, and *mista*.

Following the order of exposition presented by Aiguino, the discourse on this class begins with an imperfect major commixture in both treatises. As can be seen from the respective definitions, by use of the adjective «maggiore», this category encompasses the presence of foreign diapente species to that mode, while the term «imperfetto», indicates a limited *ambitus* in comparison to the perfection of the *diapason* species.

La Illuminata...di Canto fermo (1562)

...la commistione maggiore imperfetta, non è altro che intervallo di duoi diapente d'una spetie istessa, da estremo a estremo posti in un canto non pertinente a quell tuono.¹²²

The imperfect major commixture is nothing but an interval from two diapente of the same species, [within] from extreme to other [of the *diapason*], placed in a chant that not belonging to that mode.

Il Tesoro...di Canto Figurato (1581)

La commistione maggiore imperfetta non è altro, che duoi Diapenti d'una specie istessa di estremo à estremo, posti nella parte, quale tiene il principato del Tuono, non pertinenti al Tuono.¹²³

The imperfect major commixture is nothing but two diapentes of the same species from [within] one extreme to another [of the *diapason*], that not belonging to that mode, placed in the part which holds the *principato del tuono*.

In the first treatise, Aiguino presents 48 examples that illustrate various situations of imperfect major commixture in all eight modes, while in the second treatise, just one example is provided, requiring the reader to refer to the previous treatise to contemplate other examples of this procedure. Here we will restrict ourselves to showing only two examples in each mode: a commixture with an authentic mode and another with a plagal (Examples 28 to 43). All examples have an indication provided by Aiguino to show what species was emphasized in that situation of commixture, and being composed examples, the direct exposure of the species is often easily observed. It is noteworthy that according to Aiguino,

¹²⁰ SCHUBERT, *The Fourteen-Mode System*, p. 193.

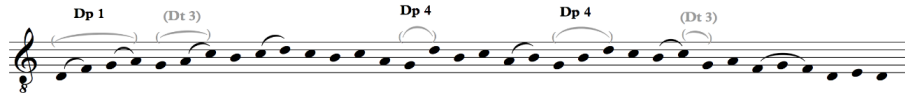
¹²¹ In fact, they are explicitly related to *tuoni irregolari* only in *La Illuminata*: «...avertiscovi che ciascun tuono irregolare possono essere misti imperfetti et perfetti, et anchor commisti perfetti, et commisti con la maggiore et minore, come hanno fato gli tuoni regolari» (AIGUINO, *La Illuminata*, f. 43r).

¹²² AIGUINO, *La Illuminata*, f. 28r.

¹²³ AIGUINO, *Il Tesoro*, f. 31r.

species in downward motion indicate a relationship to the inherent plagal mode, as can be seen in the following examples. Some extra diatessaron species related to the commixed mode are also identified and highlighted by species in grey.

Example 28. Demonstration of first mode commixed with the seventh by reason of its diapente¹²⁴



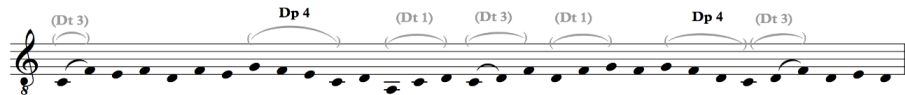
Example 29. Demonstration of first mode commixed with the fourth by reason of its diapente¹²⁵



Example 30. Demonstration of second mode commixed with the seventh by reason of the fourth diapente species¹²⁶



Example 31. Demonstration of second mode commixed with the eighth by reason of the of the upside down fourth diapente¹²⁷



Example 32. Demonstration of third mode commixed with the first by reason of its diapente¹²⁸



¹²⁴ AIGUINO, *La Illuminata*, f. 28v.

¹²⁵ *Ibid.*, f. 28v.

¹²⁶ *Ibid.*, f. 29r.

¹²⁷ *Ibid.*, f. 29r.

¹²⁸ *Ibid.*, f. 29v

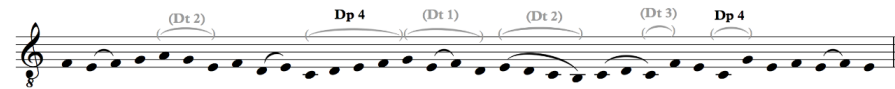
Example 33. Demonstration of third mode commixed with second by reason of the upside down first diapente species.¹²⁹



Example 34. Demonstration of fourth mode commixed with the second by reason of its diapente.¹³⁰



Example 35. Demonstration of fourth mode commixed with the eighth by reason of its diapente.¹³¹



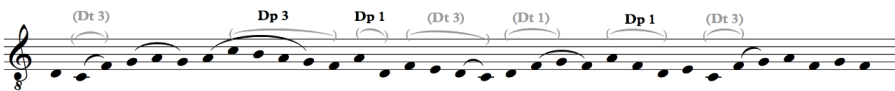
Example 36. Demonstration of fifth mode commixed with the first by reason of its diapente.¹³²



Example 37. Demonstration of fifth mode commixed with the third by reason of its diapente.¹³³



Example 38. Demonstration of sixth mode commixed with the seventh by reason of its diapente.¹³⁴



¹²⁹ *Ibid.*, f. 29v

¹³⁰ *Ibid.*, f. 30v

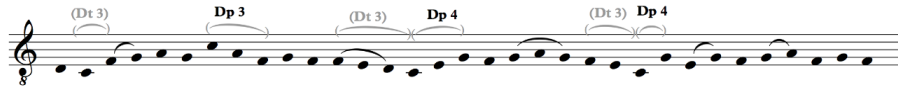
¹³¹ *Ibid.*, f. 30v

¹³² *Ibid.*, f. 31r

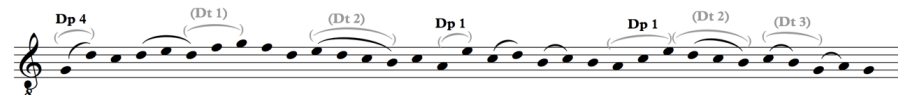
¹³³ *Ibid.*, f. 31r.

¹³⁴ *Ibid.*, f. 31v.

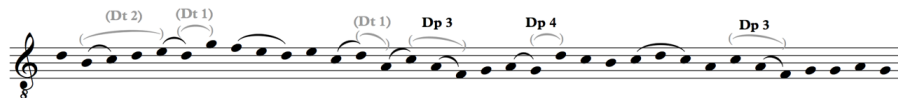
Example 39. Demonstration of sixth mode commixed with the second by reason of its diapente¹³⁵



Example 40. Demonstration of seventh mode commixed with first by reason of the first diapente species¹³⁶



Example 41. Demonstration of seventh mode commixed with the sixth by reason of its diapente.¹³⁷



Example 42. Demonstration of eighth mode commixed with the first by reason of its diapente.¹³⁸



Example 43. Demonstration of eighth mode commixed with the fourth by reason of its diapente.¹³⁹



In his treatise of 1562, Aiguino comments on the possibility of an additional underlying category, namely the mixed mode with the imperfect major commixture, that is, a mixed *ambitus* combined with a foreign diapente to both modes (authentic and plagal) that results in what may be considered a hybrid category. Example 44 illustrates this situation: a first mode mixed with its respective plagal (as identified) and commixed with the third.

¹³⁵ *Ibid.*, f. 31v.

¹³⁶ *Ibid.*, f. 31v.

¹³⁷ *Ibid.*, f. 32r.

¹³⁸ *Ibid.*, f. 32r.

¹³⁹ *Ibid.*, f. 32r.

Example 44. First mode perfect mixed and commixed with the third, by reason of its diapente¹⁴⁰



The second subclass, called imperfect minor commixture, is indicated by three diatessaron species foreign to the mode. However, there is no further information about the criteria Aiguino used regarding the number of incidences of the «spetie minore» (i.e., diatessaron), the reason for the name of this subclass. The archetype for this judgment is most likely based on examples from the repertoire, for example, in the offertory of the first Mass of Nativity, *Laetentur caeli et exsultet terra*, which had been quoted by Aiguino and judged as belonging to the fourth imperfect mode and commixed with the seventh with the presence of three species of the first diatessaron. The reason for the connection to the seventh mode rather than the first or second modes, is supposedly related to the subject content of the offertory text that brings great joy.¹⁴¹ Therefore, the condition regarding the minimum number of appearances of these species (three) is, in fact, clearly stated as one of the main definitions of this category; thusly:

La Illuminata...di Canto fermo (1562)

La commistione minore imperfetta, non è altro che porre tre volte in un canto un diatessaron minore, d'una compositione istessa non pertinente al tuono.¹⁴²

The imperfect minor commixture is nothing but placing three times a diatessaron species in a chant, from a composition itself not belonging to that mode.

Il Tesoro...di Canto Figurato (1581)

La commistione minore imperfetta, non è altro che porre tre volte in uno concento uno Diatessaron d'una compositione istessa non pertinente al Tuono, nella parte qual tiene il principato del tuono.¹⁴³

The imperfect minor commixture is nothing but placing three times a diatessaron in a chant from a composition itself not belonging to that mode, [particularly] in the part that holds the *principato del tuono*.

However, in the last sentence of Chapter 21 of the second book in the 1562 treatise, Aiguino allows up to two appearances of diatessaron species foreign to the main mode, stating that this number is sufficient to set up an imperfect minor commixture. However, all the examples provided by Aiguino have three appearances of foreign diatessaron, as showed in the example below (Example 45),

¹⁴⁰ *Ibid.*, f. 32v.

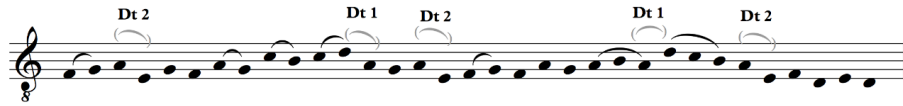
¹⁴¹ «Laetentur caeli, et exsultet terra ante faciem Domini quoniam venit» (cf. text presented in Benevento, Biblioteca Capitolare, MS 34 f. 15); in a translation: «the heavens shall rejoice, the earth shall rejoice before the face of the Lord: For He is coming!»

¹⁴² AIGUINO, *La Illuminata*, f. 37r.

¹⁴³ AIGUINO, *Il Tesoro*, f. 31r.

where he illustrates the presence of the second diatessaron species (related to the fourth mode) in a melody judged primarily as belonging to the first perfect mode (due to the full manifestation of its *ambitus*).

Example 45. Demonstration of first mode commixed with the third by reason of its diatessaron (*la-mi*)¹⁴⁴



Therefore, all commixed categories discussed until now are characterized by the appearance of only diapente and diatessaron species. The subclass of 'perfect commixture' (*commistione perfetta*), however, is set by the presence of a perfect diapason species that is different from the main mode. It is interesting that Aiguino specifies that this class of commixture specifically occurs when the *ambitus* is exceeded by at least a note (or more) in the high part when authentic, or in the low part when plagal, as can be seen in the definition that appears in both treatises.

La Illuminata...di Canto fermo (1562)

La commistione perfetta nelli tuoni autentici, non è altro che passare l'ottava sua dalla parte intensa, una nota overo piu. Anchor nelli tuoni suiugali, non è altro la commistione perfetta, che passare l'ottava sua dalla parte remissa una nota overo piu.¹⁴⁵

The perfect commixture in authentic modes is nothing but an exceeding of the octave's upper part by a note or more. Likewise, with the plagal modes, which the perfect commixture is nothing but an exceeding of the octave's lower part by a note ore more.

Il Tesoro...di Canto Figurato (1581)

...la commistione perfetta nelli Tuoni autentici non è altro, che passare l'ottava sua dalla parte intensa una nota, overo più, cosi ancor nelli tuoni suiuggali la commistione perfetta non è altro, che passare l'ottava sua dalla parte remissa una nota overo più, nel che volendo fare il primo tuono, et havendo terminato di fare la commistione perfetta con il terzo tuono, di necessità bisogna che nel primo tuono gli sia la Diapente del terzo, overo il Diatessaron del terzo Tuono.¹⁴⁶

The perfect commixture in authentic modes is nothing but an exceeding of the octave's upper part by a note or more, as well as with the plagal ones, which the perfect commixture is nothing but an exceeding of the octave's lower part by a note or more. Thus, having made the perfect commixture with the third mode, it is necessary that the first mode have the third mode's diapente or diatessaron.

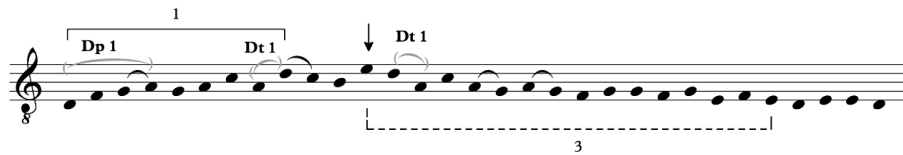
¹⁴⁴ AIGUINO, *La Illuminata*, f. 38r.

¹⁴⁵ *Ibid.*, f. 39r.

¹⁴⁶ AIGUINO, *Il Tesoro*, f. 32r.

In the first example given of this category in the 1562 treatise (Example 46), it is observed that Aiguino demonstrates that the act of transgressing a note above the octave of the main mode (first mode) results in the presence of the diapason species belonging to the adjacent plagal pair.¹⁴⁷ The same occurs in Example 47, although the commixture in this case is established between a plagal mode (second mode) and another authentic mode (seventh mode), with some emphasis on the latter by the more apparent presence of the fourth diapente species. There is also the possibility of sharing diapason species from an irregular mode (as shown in Example 48) with the presence of an octave concerning the irregular first mode in a melody judged primarily as belonging to the fourth mode.

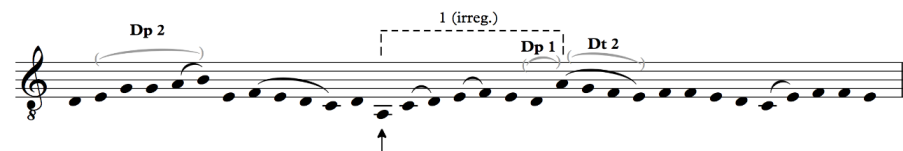
Example 46. Demonstration of first mode perfect commixed with the third.¹⁴⁸ The arrow indicates the note that exceeds the first mode *ambitus*. The square slurs stress both diapason species in this melody



Example 47. Demonstration of second mode perfect commixed with the seventh.¹⁴⁹ In this case, the apparent presence of the fourth diapente species relates more properly to the seventh mode¹⁵⁰



Example 48. Demonstration of fourth mode perfect commixed with the irregular first.¹⁵¹ In this case, the apparent presence of the fourth diapente species relates more properly to the seventh mode



Aiguino, regarding the presence of more than one diapason species that is different from the main mode, as in the case of Example 49, judges this situation as belonging to the second mode and as having manifested the diapason in respect

¹⁴⁷ Although it does not reflect the internal structure of that mode, because, as it can be observed, of the apparent presence of the first species of the diatessaron of the first or second modes in the referenced third mode perfect range.

¹⁴⁸ AIGUINO, *La Illuminata*, f. 39v.

¹⁴⁹ *Ibid.*, f. 40r.

¹⁵⁰ Like the offertory *Dextera domini*, as cited by Aiguino (*La Illuminata*, f. 40v).

¹⁵¹ AIGUINO, *La Illuminata*, f. 40v.

to the third and seventh mode, which consequently generates a melody in a wide vocal range.

Example 49. Demonstration of first mode perfect commixed with the third and seventh¹⁵²



Despite the presence of two distinct diapason species in the same melody, the author does not consider the transgression of the main *ambitus* as unimportant, as it may be evidence to a potential emphasis of a certain species referring to different modes. This understanding of the phenomenon clearly refutes the Marchettian *plusquamperfectus* category.¹⁵³ In this regard, Aiguino is emphatic saying that «nothing is given beyond the perfect» («*ultra perfectum nihil datur*»)¹⁵⁴ Therefore, the perfect commixture was the path found to explain this behavior, although it differs from the simple mixture, mainly by the presence of the diapason species referring to a different mode.

The presence of foreign species reaches significant levels in the last two subclasses of commixture. The first, present only in the 1562 treatise, is called «*commistione mista*», and refers to the presence of both the diapente and diatessaron related to a particular mode that is different from the main mode,¹⁵⁵ as illustrated in Example 50. In this example, the second diapente and diatessaron species, both related to the third mode, are present in a chant that is primarily judged as belonging to the first mode; but notably, the chant is also clearly manifested by the third diatessaron species (related to the sixth mode), which, however, Aiguino makes no mention.

Example 50. Demonstration of first mode commixed with the third by mixed commixture and the seventh¹⁵⁶



The last subclass of commixed modes presented here is declared in both treatises and has the highest degree of species exchange. Aiguino calls it «*Commistioni con tutti i Signori tuoni [et con i suigali, overo in parte]*», that is, a melody that has the presence of all diapente species (referring to authentic modes), or all

¹⁵² *Ibid.*, f.40v.

¹⁵³ As present in *Il Tesoro* treatise, in Ch. 28: «Che non si trova Tuono più perfetto, come alcuni Scrittori hanno detto» (ff. 31-32r)

¹⁵⁴ Also quoted by ANONYMOUS V, *Ars cantus mensurabilis mensurara per modos iuris*, ed. Balensuela, p. 142.

¹⁵⁵ «La commistione mista non è altro che un diapente et duoi diatessaron d'um istesso tuono, posti in un canto non pertinenti al tuono in questo modo» (AIGUINO, *La Illuminata*, ff. 41v-42r).

¹⁵⁶ AIGUINO, *La Illuminata*, f. 42r.

diatessaron species (referring to plagal modes), or even mixed species (partly from authentic and partly from plagal).

La Illuminata...di Canto fermo (1562)

...sarà un canto il quale haverà dentro tre spetie de diapenti differenti di nome, et di compositione non pertinenti al tuono, et ciascuna spetie sarà duplicata, siano poi come vogliono...Anchora puo essere commisto con i suiugali, & anchor con gl'autentici in parte, & in vari modi.¹⁵⁷

[The commixture of all authentic and plagal modes, or in part] will be a chant which has three different diapent species (which differs by name), from a composition that does not belong to that mode; any species will be duplicated as we wish...they could be commixing with the plagals and also partly with the authentics in various manners.

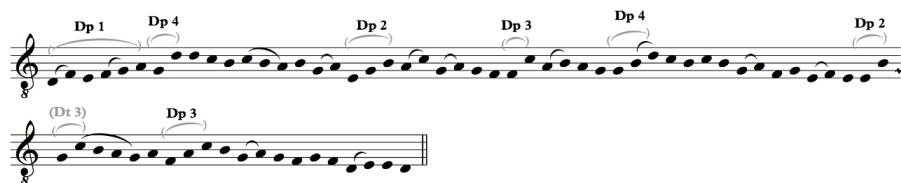
Il Tesoro...di Canto Figurato (1581)

...un Compositore, il quale vorrà comporre una sua fantasia, dil che le parole chiameranno il terzo Tuono, nondimeno in esse parole chiameranno le commistioni de tutti i Tuoni autentici, ò suiuggali, ovvero in parte delli signori, & in parte delli collateralari, ò vuoi dire suiuggali, da noi saranno concesse queste commistioni.¹⁵⁸

A composer who will want to compose his own fantasy which the text calls [only to] third mode, and, nevertheless, in these words he appeals to proceed with a commixture of all authentic or plagal modes, or in part of [each of] them, this commixture will not be allowed by us.

However, as noted in the definition from the 1581 treatise, the elevated degree of commixture of this particular subclass is only justified by the presence of a text which is suitable for such a number of foreign species. The author states that if the text is divided into two sections, then it is appropriate for the melody to manifest the diapente species of all authentic modes; however, if the text is divided into three sections, it is suggested the melody may contemplate all species of both diatessaron and diapente. Unfortunately, Aiguino does not provide any textual examples of this phenomenon, but only three textless ones, of which two are reproduced below with specie indications (Examples 51 and 52).

Example 51. Demonstration of first mode commixed with all authentic modes¹⁵⁹

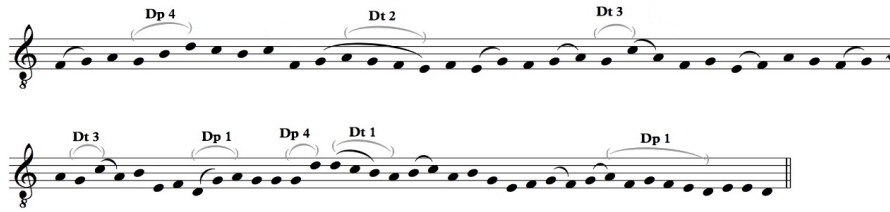


¹⁵⁷ *Ibid.*, f.36v.

¹⁵⁸ AIGUINO, *Il Tesoro*, f.33v.

¹⁵⁹ AIGUINO, *La Illuminata*, f. 36v.

Example 52. First mode commixed with plagals and partly mixed with authentics in various modes¹⁶⁰



Therefore, the commixture comprises the emphasis of species that are different from those to which most modal markers are related. And as can be seen from the examples, the circumscription of these species is somewhat relative, relying mainly on the exposure of the melodic contour in which various nuances emerge with reference to other modes. From this perspective, the doctrine proposed by Aiguino uses a taxonomy devoted to the great malleability afforded these specie structures, allowing the encoding of various levels of the intertwinings of these fragments.

Although the 1581 treatise is intended for *canto figurato*, the author does not provide proper polyphonic examples of his doctrine, but only those for individual voices, that supposedly would be embedded in a multivocal context, distinguishing the voice that holds the *principato del tuono*, while the other voices reflect the species from the distinguished one.

With these considerations in mind, the following topics will be associated to a proposal of an approach to analyzing two polyphonic pieces based on the principles of Aiguino's doctrine. In this section, it will be possible to confront pieces having some degree of ambiguity and discuss them within the octonary tradition as supported by Aiguino when compared to Zarlino's twelvefold system.

4. A proposal of an adaptation of Aiguino's doctrine applied as an analytical approach

From a compositional perspective, the large number of variances in the organization of Aiguino's modal discourse seems to be intrinsically related to variety (in the sense of Tinctorian *varietas*) and, above all, the textual element. If the need for variety allows for the appearance of just one foreign diapente species and more intense digressions (or apperances of such structures), the need must be supported by the text, because, according to Aiguino's dialectic, the alteration of the «natural» state of the mode cannot be arbitrary, as observed below:

¹⁶⁰ *Ibid.*, f. 36v.

quando le parole chiamassero il primo Tuono, & che in esse parole fosse una parola che chiamasse il Diatessaron, ovvero Diapente del terzo ò quarto Tuono, allhora vogliamo che la cadenza del terzo ò quarto Tuono sia accettata una volta sola.¹⁶¹ (1581, f. 13v).

...nel cap. di sopradetto havemo dimostrato, che si può pigliare così la seconda specie del Diatessaron à comporre il primo Tuono, quando è la prima, & in questo voglio dimostrare, che non è cosa conveniente. Dico dunque, che non è cosa ragionevole à distruggere il naturale, per non acquistare cosa alcuna per dare luogo all'accidentale...(Concessione) Dico adunque quando le parole, che tu vuoi comporre chiamassero la specie maggiore del primo Tuono, & ancora la seconda specie del Diatessaron, & per fuggire la commistione minore imperfetta da E lamire alla positione A lamire, da noi sarà concessa la seconda specie del Diatessaron.¹⁶²

When the text called the first mode, and among them one word called the diatessaron or diapente [species] of the third or fourth mode, in this case we intended that the cadence of a third or fourth mode may be accepted just once.

In the aforementioned chapter, we have demonstrated that it is possible to take the second diatessaron species to compose the first mode, when, [instead, will be more appropriate] the first one, therefore, is not convenient. I say, however, that it is not reasonable to destroy the natural [and] not get anything else to give place to the accidental...(Concession): I say, however, when the words which you want to compose called the *specie maggiore* [i.e., diapente] of the first mode, and also the second diatessaron species – and to escape the imperfect minor commixture [of the species positioned] between the E *lamire* and A *lamire*, the second diatessaron species will be accepted by us.

Thus, from a structural point of view, Aiguino's discourse inevitably reflects the ambivalent aspect of modal polyphony, especially when there is a circumscription of foreign species. That is, although the organic unity is guaranteed by the modal markers referring to the juxtaposed species of the main mode and its finalis, the fluidity of the species is not rigidly conditioned to one set of species. However, the polyvalence of modal nuances essentially conditioned on the text is not explicitly recognized by Aiguino in a multivocal context; although it is possible to conjecture this scenario. Thus, in the presence of commixture, the precise attribution of species to certain modes encourages a bilateral description of the sound space utilized by the musical piece. If we insist on codifying the essence of the species discourse by this prism, the analytical approach can comprise at least two referential levels, which can be divided into: *main species*, which are related to the predominant mode; and *subsidiary species*, which are related to the incidence of foreign modal units.¹⁶³

Before we continue, it is necessary to clarify how Aiguino's doctrine could be expressed as an analytical approach in a polyphonic context. The referential level

¹⁶¹ AIGUINO, *Il Tesoro*, f. 13v.

¹⁶² *Ibid.*, ff. 32v-33r.

¹⁶³ It is noteworthy that this proposal has already been presented in *Lucidarium*—albeit prototypically—with the concept of interruptiones, that appears at the end of the fourth chapter of the eleventh treatise.

of *main species* is treated in pairs, although they are independently identified; in other words, the conception of main species constitutes a principal unit, in contrast to the digressive elements of the subsidiary species. This detailed level, closely related to Aiguino's doctrine, is a mapping of the use of that species in each piece, corroborating therefore, to the understanding of the sound space stratification in such terms.

In Figure 11, for example, presents the *main species* related to the first mode using the abbreviation «M-Dp 1 (r)» where: (M) refers to the main species, (Dp 1) to the first species of the diapente, and (r) to the regular position of the species. If there is an emphasis related to the species of the second mode, for example, the second diatessaron species will be referenced as «S», which means at the 'subsidiary' level of that species (in relation to the *main species*).

Figure 11. Illustration of the Main species of Mode 1 (hexachords *naturalis* and *durum*) and the Subsidiary species (second diatessaron), which is referenced to Mode 4

The same occurs in a *cantus mollis* context. However, in addition to the regular and irregular position of the species (referenced by the hexachord *mollis* and *naturalis*, respectively), there is a frequent use of transposed species beyond the ordinary mode configuration in *cantus mollis*. Therefore, the reference to transpositions with the letter 'T' will apply only to species other than those considered main species, as shown in Figure 12. In this case, we have three units: (a) the main species of mode 1 in *cantus mollis*; (b) an example of subsidiary species; and (c) an example of transposed subsidiary species. Thus, the transposed and regular position (T/r) of the species is assumed when presented a fourth above/fifth below the reference species; and a transposed and irregular species (T/i) when presented a fourth above/fifth below the already transposed reference species.

Figure 12 consists of three musical staves labeled (A), (B), and (C).
 (A) Main species in mode 1 (*per ♯ molle*). It shows two hexachords: 'mollis' (re, la) and 'naturalis' (re, sol). Above the notes are labels 'M - Dp 1 (r)' and 'M - Dt 1 (6)'.
 (B) Subsidiary species referenced to mode 4 (*per ♯ molle*). It shows a hexachord 'mollis' (mi, la) with label 'S - Dt 2 (r)'.
 (C) Transposed Subsidiary species referenced to transposed mode 6 (*per ♯ molle*). It shows a hexachord 'mollis' (ut, fa) with label 'S - Dt 3 (Tr)'.
 All staves are in treble clef with a key signature of one flat (Bb).

Figure 12. Illustration of the Main species of Mode 1 *em cantus mollis* (*mollis* and *naturalis* hexachords), the Subsidiary species (second diatessaron) referenced to Mode 4, and the transposed subsidiary species (transposed third diatessaron) referenced to mode 6.

As practical examples, two pieces will be considered in this section: *Sancta et immaculata Virginitas* (1541) by Cristóbal de Morales and *Flete oculi* (1545) by Adrian Willaert, both having been modally judged by Zarlino thereby allowing us to establish an interesting comparison between the Zarlino system and the system supported by Aiguino, tracing possible parallels and differences between them.

Thus, the first example of this section, already considered and analyzed in a study published by Mangani and Sabaino,¹⁶⁴ is assigned by Zarlino as belonging to the ninth mode in *cantus mollis* (1558, p. 332), due to the judgment of Tenor that manifests the fourth *diapason* species (D-d). Thus, this feature constitutes supreme evidence, leading him to affirm that «there is no doubt... that [*Sancta et immaculata Virginitas*] belongs to the ninth mode».¹⁶⁵ However, as already pointed out by Mangani and Sabaino, curiously this piece does not bear other attributes that Zarlino himself uses to define it, which evidently raises some degree of contradiction in his argument: Zarlino sustains his argumentation by means of the modal structure (first diapente and second diatessaron), but completely disregards cadences.

On the other hand, if we apply Aiguino's system, the piece reflects the modal markers regarding the second mode in *cantus mollis* if we consider the Tenor as the voice holding the *principato del tuono*.¹⁶⁶ Therefore, the *ambitus* used by the Tenor voice can be understood, in the eyes of Aiguino's system, as the manifestation of the second mode perfect commixed with the fourth, as presented in Figure 13. Consequently, we can assign the species of the second mode as the main level and the fourth species as subsidiaries. Although, in practice, the note that surpasses the *ambitus* of the second mode is sung as *fa super la*, it is ideally reflected as a natural *mi*, and thus, manifesting the *ambitus* referring to the fourth mode.

¹⁶⁴ MANGANI – SABAINO, 'Modo novo' or 'modo antichissimo'.

¹⁶⁵ ZARLINO, *Le Istitutione hamoniche*, p. 331.

¹⁶⁶ If Aiguino had affirmed the possibility of the presence of irregular modes in *cantus mollis*—which is not the case in either treatises— we could also consider the second irregular mode in *cantus mollis*, especially to emphasize the sonority of the finalis along with the mode itself.

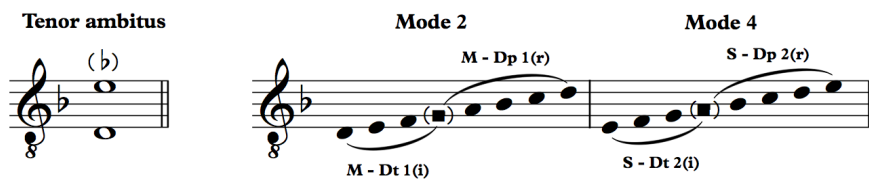


Figure 13. Tenor *ambitus* of *Sancta et immaculata virginitas* and the respective modes, according to Aiguino, that result in a second mode perfect commixed with the fourth

The text of this Marian responsory, sung during the second nocturn of the morning of Christmas Day, has a celebratory character that praises Mary as a saint and virgin who was chosen as the instrument of heaven to give life to Christ. If we observe these characteristics when reading from Aiguino's codified affects, by reason of the commixture, it is possible to associate the text by means of the 'lull the afflicted languid spirit' (*acquetare l'afflitto languente spirito*), as related to the second mode and the connection to its character of 'rest and the pleasant tranquility', which refers to the fourth mode (*per appiaceri, perche si accomoda mirabilmente al riposo, & tranquillitade*). It is noteworthy that the tradition linked to plainsong already assigns this responsory to the second mode, although Morales does not use the plainchant as cantus firmus. In this way, the similarity between the two occurs only at the modal level if we allow ourselves to establish this comparison.

(Prima pars)

- | | |
|--|---|
| 1. Sancta et immaculata virginitas, quibus te laudibus efferam nescio: | O Mary, how holy and how spotless is thy virginity! I am too dull to praise thee! |
| 2. Quia quem caeli capere non poterant, tuo gremio contulisti. | For thou hast borne in thy breast Him Whom the heavens cannot contain. |

(Secunda pars)

- | | |
|---|--|
| 3. Benedicta tu in mulieribus, et benedictus fructus ventris tui. | Blessed art thou among women, and blessed is the fruit of thy womb. |
| 4. Quia quem caeli capere non poterant, tuo gremio contulisti. | For thou hast borne in thy breast Him Whom the heavens cannot contain. |

The textual structure of the responsory is characterized by the repetition of verses 2 and 4, which is also manifested musically.¹⁶⁷ As can be seen from Table 2,¹⁶⁸ the

¹⁶⁷ MANGANI – SABAINO, 'Modo novo' or 'modo antichissimo', p. 44.

¹⁶⁸ Regarding the analysis presented in the table, we intended to maintain the cadential analysis divided into three main categories: *melodic clausulae* I, *melodic clausulae* II, and *complementary voice(s)*. In the first case, the fundamental cadence structure, precisely on the imperfect to perfect interval motion (sixth to octave, or third to unison); the symbols ↑ and ↓ distinguish the ascending (aka *cantizans*) and descending (aka *tenorizans*) interval progressions, which could be presented in any voice of the piece. In the *melodic clausulae* II

motet is systematically articulated through cadences with an emphasis exclusively on G and D,¹⁶⁹ consistently including the same systematic alternation at the end of each verses as shown by the shaded lines of the table.

Table 2. Sucession of cadences presented in *Sancta et immaculata virginitas*.

TEXT/ MEASURE in Anglés' Edition ¹⁷⁰	CADENCE	MELODIC <i>CLAUSULAE</i> I (imperf. to perf. interval progression)	MELODIC <i>CLAUSULAE</i> II (establishes a perfect interval with the melodic <i>clausulae</i> in both the <i>penultima</i> and <i>ultima</i>)*	COMPLEMENTARY VOICE(S)
Verse 1: «... virginitas» (m. 18)	G	↑ Cantus; ↓ Tenor	Bassus <i>fugg.</i> (with Tenor)	Altus
Verse 1: «... nescio» (m. 33)	G	↑ Cantus; ↓ Tenor	Bassus. (with Tenor); Altus (with Bassus)	–
Verse 2: «... poterant» (m. 38)	D	↑ Altus; ↓ Bassus	–	Cantus; Tenor
Verse 2: «... poterant» (m. 43)	D	↑ Tenor; ↓ Bassus	–	Tenor
Verse 2: «... contulisti» (m. 48)	G	↑ Cantus; ↓ Tenor	Bassus <i>fugg.</i> (with Tenor); Altus <i>fugg.</i> by pause (with Bassus)	–
Verse 2: «... contulisti» (m. 56)	D	↑ Cantus; ↓ Tenor	Bassus <i>fugg.</i> by pause (with Tenor); Altus (with Bassus)	–
Verse 2: «...contulisti» (m. 58)	G	↑ Altus; ↓ Bassus	–	Cantus; Tenor
Verse 2: «... contulisti» (m. 61)	G	↑ Altus; ↓ Cantus <i>fugg.</i>	Tenor (with Cantus)	–
Verse 2: «... contulisti» (m. 63)	G	↑ Cantus; (↓) Altus <i>fugg.</i>	Bassus (with altus); Tenor (with Bassus)	–
Verse 2: «... contulisti» (m. 71)	D	↑ Cantus; ↓ Tenor	Bassus (with Tenor); Altus (with Bassus)	–

column, we present the other significant notes to the cadence, which chiefly established the perfect consonances with the first pair. And in the third column, we distinguish the complementary notes that mainly performed as imperfect consonances with the first group. In the table, it is also possible to observe the presence of melodies that evade the cadence (*fuggire la cadenza*) in the *ultima*, or also substitutes the fifth by a third, performed by the Tenor, characterizing a termination which Aiguino calls *terminatione straordinaria*, in substitution to the ordinary one (with the fifth), called the *terminatione ordinaria*.

¹⁶⁹ Already present in the analysis by Mangani and Sabaino.

¹⁷⁰ VICTORIA, *Motetes I-XXV*, ed. Anglés, pp. 17-23.

Verse 3: «... <i>mulieribus</i> » (m. 86)	G	↑ Cantus; ↓ Tenor	–	Altus
Verse 3: «... <i>mulieribus</i> » (m. 93)	G	↑ Cantus; ↓ Tenor	Bassus <i>fugg.</i> (with Tenor); Altus (with Bassus)	–
Verse 3: «... <i>mulieribus</i> » (m. 96)	D	↑ Cantus; ↓ Tenor	Bassus <i>fugg.</i> (with Tenor)	Altus
Verse 3: «... <i>tui</i> » (m. 105)	G	↑ Cantus; ↓ Tenor	Bassus (with Tenor); Altus (with Bassus)	–
Verse 4: «... <i>poterant</i> » (m. 110)	D	↑ Altus; ↓ Bassus	–	Altus; Tenor
Verse 4: «... <i>poterant</i> » (m. 116)	D	↑ Tenor; ↓ Bassus	–	Cantus; Altus
Verse 4: «... <i>contulisti</i> » (m. 120)	G	↑ Cantus; ↓ Tenor	Bassus <i>fugg.</i> (with Tenor); Altus <i>fugg.</i> by pause (with Bassus)	–
Verse 4: «... <i>contulisti</i> » (m. 128)	D	↑ Cantus; ↓ Tenor	Bassus <i>fugg.</i> by pause (with Tenor); Altus (with Bassus)	–
Verse 4: «... <i>contulisti</i> » (m.130)	G	↑ Altus; (↓) Tenor <i>fugg.</i>	Bassus (with Tenor)	–
Verse 4: «... <i>contulisti</i> » (m. 135)	G	↑ Cantus; (↓) Altus <i>fugg.</i>	Bassus (with Tenor); Tenor (with Bassus)	–
Verse 4: «... <i>contulisti</i> » (m. 138)	D	↑ Altus; ↓ Bassus	–	Cantus; Tenor
Verse 4: «... <i>contulisti</i> » (m. 141)	«D« sonority	(↑) Cantus <i>estraord.</i> ; ↓ Tenor. (in A)	Bassus (w/Altus);	Altus

If we look at aspects of the Tenor's *exordium* and the end of both *partes* of the motet-sections of significant importance from a modal markers point of view—we observe the manifestation of a melodic contour that can be associated to species in both modes as described above in Figure 13.

Figure 14 shows the beginning of the Tenor in a descending motion (typical of plagal modes according to Aiguino), that is outlining the first diapente species by means of a hexachord *naturalis*; the end of this *prima pars* is characterized by the first diatessaron species also in a hexachord *naturalis*. Figure 14, on the other hand, shows that the beginning of the *exordium* of the *secunda pars* can be associated mainly with the subsidiary species referring to the fourth mode precisely by the emphasis of the second diatessaron based on a hexachord *mollis*. And at the end of the *secunda pars* (and the entire motet), the emphasis is again on the first diapente species, although, in this case, it is presented in the hexachord

mollis, which includes an earlier brief appearance of the subsidiary species by placing emphasis on the third diatessaron species (which refers to the sixth mode). The phenomenological *finalis* rests on the note ‘a’, syllable *mi*, closely related to the fourth mode species, albeit, as part of the D sound.

Figure 14. Comparison between the Tenor’s *exordium* and *finis* of *Sancta et immaculata virginitas, secunda pars*

If we broaden the discourse and apply the approach in all voices, we can see the ambivalence that emanates from the multiple species that are simultaneously emphasized. Through regular entries, the *exordium* (Example 53) is delineated by the initial predominance of the first (main) diapente species, the third (subsidiary) diatessaron species, and the second (also subsidiary) diatessaron species. The conjunction of the species is performed in both regular and irregular positions, and even transposed, such as the third species of the diatessaron, for example, near the beginning of the Bassus that imitates the Tenor exposition.

From a cadential point of view, if we compare this modal judgment to that made by Zarlino, the piece better reflects the option based on Aiguino’s theory, since the cadences, when not *fuggita* in B \flat , on the Bassus, is presented exclusively in G or d. The emphasis on both sonorities can be seen in the end section of the motet, as showed in Example 54, with a particular predominance of the first diapente species.

Example 53. Morales, *Sancta et immaculata Virginitas*, opening. The transcription is based on Anglés' edition¹⁷¹

The musical score is written for four voices: Cantus, Altus, Tenor, and Bassus. The key signature is one flat (B-flat) and the time signature is 2/2. The lyrics are in Latin, describing the sanctity and virginity of the Virgin Mary. The score includes various performance markings such as *M - Dp 1 (f)*, *S - Dt 3 (f)*, *M - Dp 1 (r)*, *S - Dt 3 (T)*, and *S - Dt 2 (f)*, which likely refer to specific vocal techniques or dynamics. The lyrics are:
 Cantus: la -
 Altus: la re la et im - ma - cu -
 Tenor: la re la im - ma - cu - la - ta vir - gi - ni - tas, vir -
 Bassus: la re la et im - ma - cu - la - ta vir - gi -
 re la et im - ma - cu - la - ta vir - gi - ni - tas, San - fa -
 cta mi - la ut fa la ta vir - gi - ni - tas, San - fa -
 la - ta, vir - gi - ni - tas, vir - gi - ni - tas, San - re -
 - gi - ut fa la re la San - cta
 sol re la San - re la im - ma - cu - la -
 ni - tas, et im - ma - cu - la - ta vir - gi - ni - tas, qui - bus te lau - di bus ef - fe - ram ne -
 la et im - ma - cu - la - ta vir - gi - ni - tas, qui - bus te
 re ta vit - gi - ni - tas, qui - bus te lau - di - bus

¹⁷¹ MORALES, *Opera Omnia II*, ed. Anglés, p. 17.

Example 54. Morales, ending of *Sancta et immaculata Virginitas*. The transcription is based on Anglés' edition¹⁷²

The musical score is written for four voices: Cantus, Altus, Tenor, and Bassus. The time signature is 2/2. The key signature has one flat (B-flat). The lyrics are in Latin and are distributed across the four staves. The score includes various musical notations such as *M-Dp 1(i)*, *M-Dt 1(i)*, *S-Dt 3(r)*, and *M-Dt 3(T)*. The lyrics are:
 Cantus: tu - o gre-mi - o con - tu - li - sti,
 Altus: sol re li - sti, tu - o gre-mi - o con - tu - li - sti, tu - o gre -
 Tenor: la re sol tu - o gre-mi - o con - tu - li - sti, tu - o
 Bassus: re o, la tu - o gre - mi - o con
 la tu - o gre-mi - o, tu - o gre-mi - o con - tu - li - re - sti.
 la re con - tuoli - sti.
 gre-mi - o, tu - o gre - mi - o con - tu - li - mi - sti.
 - tu - li - ut fa - sti con - tu - li - sti.

Willaert's motet *Flete oculi*, our second example, was published by Gardano in 1545 (W1109). It appears in the second revised and expanded edition of the second book of four-voice motets first published by Andrea Antico, Brandino and Ottaviano Scotto in 1539 (W1108). Gardano, however, positions *Flete oculi* with sacred intent, followed by the famous *Dulces exuviae dum fata deus* (whose text is from the fourth book of Virgil's *Aeneid*). The Anonymous text is a sestet with the presence of a dactylic hexameter manifested on lines 1, 3 and 5, while lines 2, 4 and 6 are presented in free metric. The text depicts a desolate scenario, whose subject of action (although veiled) can be conjectured as a female character who apparently suffers by reason of faith, and consequently, only finds solace in her tears (although the nature of her misery is ambiguous.)

With great influence from the lexicon and subject of the Virgilian Latin epic,¹⁷³ the text of *Flete oculi* can be related to the modal affections expressed by

¹⁷² MORALES, *Opera Omnia II*, ed. Anglés, p. 23.

¹⁷³ Among them, the term '*miser*' has great importance in the Vergilian lexicon. On this aspect, Paola Gagliardi says: «Degno di nota è anche l'uso di *miser* e di tutta la sua ampia famiglia lessicale, che in Virgilio trova un impiego ricco e vario, a rappresentare le tante sfumature della pietà e del dolore. Particolare risalto l'aggettivo assume nelle suppliche, per caratterizzare la profonda infelicità del parlante e accrescere la compassione dell'interlocutore, o nei lamenti

Aiguino. If we examine the motet through the pseudo-fourteen mode system, a third mode in *cantus mollis* commixed with the first arises from the Tenor, in this case, the *principato del tuono*: while the species and *ambitus* could be directly related to the third mode there is also an emphasis on the *cofinalis* in the first mode, which acts, in this case, as a subsidiary mode (Fig. 15). However, as we will see, the cadences do not fully reflect the main species, but the *cofinalis* of the subsidiary mode.¹⁷⁴

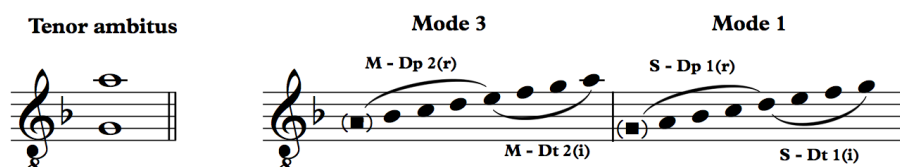


Figure 15. Tenor *ambitus* of *Flete oculi* and its respective list of modes according to Aiguino's system that results in a third mode perfect commixed with the first.

Thus, from Aiguino's perspective in terms of commixture, we have the incitement between that which 'inflames and ignites the anger's spirit' (*infiamma & accende il spirito all'ira*), and that which 'reaches joy, hilarity of spirit, and moves all the affections of the soul' (*perviene alegrezza, hillarità d'animo, & comove tutti gl'affetti dell'anima*), resulting, therefore, in a combination of contrary affections, or in other words, a *Phrygium ad Dorio* relationship.

- | | |
|--|--|
| 1. Flete oculi, rorate genas pectus que rigetis, | Cry eyes. Keep dripping on my cheeks and chest, |
| 2. Semper, semper enim sors fit acerbas magis. | Because all the time, all the time my fate causes bitter pain. |
| 3. Immo rigete, nec os nec pectora moesta rigetis, | Let it flow. Want to moisten my mouth and chest like never before, |
| 4. Nam fletus curas mollificare solet. | Because only tears can relieve my pain. |
| 5. Vita mihi est curis miseram traducere vitam, | My life is ruled by misery throughout, |
| 6. Utque obeam curis unica cura mea est. | Such that the only trouble I find is my own. |

funebri; proprio la morte, infatti, ispira a Virgilio le espressioni più intense e più belle di pietà e di commozione, sia per chi muore... sia per chi resta a soffrire... Anche l'amore, male rovinoso, rende miseri... Oltre a significare 'infelice', 'degnò di compassione', anche questo aggettivo assume una sfumatura di significato vicina a quello del $\nu\eta\pi\omicron\varsigma$ omerico, ad indicare chi è infelice per sua colpa o per ignoranza,...o per i limiti insuperabili della sua natura e della sua condizione» (GAGLIARDI, *Il linguaggio del dolore*, pp. 36-37).

¹⁷⁴ It is important to emphasize that the cadential points, normally assigned from the ordinary species, can also be applied (even in a limited number) to those modes arising from the foreign species in commixture. Aiguino exemplifies that possibility when he mentions the presence of interval species from modes 3 and 4 mingled with mode 1 for textual reasons, tolerating the appearance of just one 'foreign' cadence: «Ma quando le parole chiamassero il primo Tuono, et che in esse parole fosse una parola che chiamasse il Diatessaròn, ovvero Diapente del terzo ò quarto Tuono, allhora vogliamo che la cadenza del terzo ò quarto Tuono sia accettata una volta sola...» (AIGUINO, *Il Tesoro*, f. 13v).

However, through this perspective, we cannot properly relate the cadences to the main mode species (mode 3), instead, only that of the *cofinalis* of the ‘subsidiary mode’ (mode 1), as shown in Table 3. On the other hand, according to Zarlino’s judgment,¹⁷⁵ the motet *Flete oculis* is understood as a representative piece of the tenth mode. And, unlike Morales’ previous example, this motet accurately corresponds to the markers established by Zarlino.

The ambiguity of modal markers from Aiguino’s perspective leads us to establish the *Flete oculi* as a composition that clearly differs in its manipulation of species when compared to the previous motet, making it, indeed, a consistent example of Zarlino’s tenth mode.

Regarding the formal design of the *Flete oculi*, its organization is systematic and reflects the textual organization. The succession of cadences is always set at the end of each verse with particular emphasis on the cadences in D (five times, including the final sonority) and C (twice), while A and F, both are presented just one time each. Therefore, from a cadence point of view, the motet precisely manifests Zarlino’s predicted cadences regarding the tenth mode in the *cantus mollis* (A-d-f-a), except for the C cadences that are understood as being irregular in Zarlino’s doctrine.

Table 3. Succession of cadences presented in *Flete oculi*. The graphics and abbreviations are the same as those applied in the previous table¹⁷⁶

TEXT/ MEASURE in Zenck’s Edition ¹⁷⁷	CADENCE	MELODIC <i>CLAUSULAE</i> I (imperf. to perf. interval progression)	MELODIC <i>CLAUSULAE</i> II (which establish a perfect interval with the one melodic <i>clausulae</i> on both penultima and ultima)*	COMPLEMENTARY VOICES
Verse 1: «... <i>rigetis</i> » (m. 25)	F	↑ Tenor; ↓ Bassus	–	Cantus; Altus
Verse 2: «... <i>magis</i> » (m. 34)	D	↑ Tenor; ↓ Bassus	–	Cantus; Altus
Verse 2: «... <i>magis</i> » (m. 41)	A	↑ Cantus; ↓ Tenor	Bassus (w/cantus)	Altus
Verse 3: «... <i>rigetis</i> » (m. 55)	D	↑ Tenor; ↓ Bassus	–	Cantus; Altus
Verse 4: «... <i>solet</i> » (m. 63)	D	↑ Cantus; ↓ Altus	Tenor <i>fugg.</i> (with Altus)	–

¹⁷⁵ ZARLINO, *Le Istitutione harmoniche*, p. 332.

¹⁷⁶ For the symbols description, see note 168.

¹⁷⁷ WILLAERT, *Opera Omnia 2*, ed. Zenck, pp. 62-66.

Verse 4: «... solet» (m. 70)	D	↑ Tenor; ↓ Bassus	–	Cantus; Altus
Verse 5: «... vitam» (m. 84)	C	↑ Tenor; ↓ Bassus	–	Cantus; Altus
Verse 6: «... curis» (m. 99)	C	↑ Cantus; (↓) Altus <i>fugg.</i>	Bassus (with Altus)	Tenor
Verse 6: «... est» (m. 105)	‘D’ sonority	(↑) Cantus <i>estraord.</i> ; ↓ Tenor. (in A)	Bassus (with Altus)	Altus

From a species perspective, on the other hand, the ambiguous nature of the motet is expressed already in the *exordium* (Example 55) by the presence, in the first duo (Cantus/Altus), of the second diatessaron species (main species) and the first diatessaron species (subsidiary species), respectively, which are stated once again by the second duo, Tenor/Bassus. However, the predominance of the first exposition lies essentially with the first diapente and diatessaron species, with the presence of the third diatessaron species as well as the diminished fifth (*mi-fa*) in the Altus voice. The intensification of the subsidiary species referenced in the first mode occurs mainly as they approach the first cadence (F), which punctuates the end of the first verse.

At the end of the motet (Example 56), we observe great emphasis on the third diatessaron and the fourth diapente species, although the final pitch remains in D, which is also the case in the *Sancta et immaculata virginitas*, that includes the exact same voice arrangement in the final pitch.

Thus, in terms of species, a digressive aspect is promoted by such a subsidiary structure, which are performed together with the Tenor’s first diatessaron (related with the first mode), but ends in *mi*, which corresponds to the *finalis* of the third mode (one of the main species presented above).

Therefore, from these two brief examples, despite the similarity of the imitative procedures and their identical terminations, it is noteworthy that Willaert’s writing explores species in a quite different manner than Morales did, thereby promoting a larger palette of nuances from the modal point of view. In short, the differences can be potentially related to an attitude towards modality: while Morales maintained some structural features that allows for a more traditional treatment of species related to the octonary tradition and therefore affording more affinity to Aiguino’s system, Willaert’s motet explores certain modal features that are not entirely compatible to the octonary tradition or even to versions of Aiguino’s system.¹⁷⁸

¹⁷⁸ Already presented in some extent in Josquin’s *oeuvre*, according to Glarean and Zarlino themselves.

Example 55. Opening of Willaert's *Flete oculi*. The transcription is based on Zenck's edition¹⁷⁹

The musical score is presented in four systems, each with four staves (Cantus, Altus, Tenor, Bassus). The lyrics are written below the notes. Various ornaments are indicated by brackets and labels above the notes.

System 1:

- Cantus: sol mi ut - - - - - fa - te ge - ut fa - la - mi - nas
- Altus: re o - cu - li, ro - ra - te ge - ut - - - - -
- Tenor: - - - - - sol mi o - cu - li, - - - - -
- Bassus: - - - - -

System 2:

- Cantus: sol pe - ctus que re - ge - tis, Sem - per, sem -
- Altus: fa/fa - - - - - nas pe - ctus - que, la - pe -
- Tenor: - - - - - ro - ra - te ge - ut - - - - - nas ut sol pe -
- Bassus: sol re - te o - cu - li, ro - ra - te ge - nas

System 3:

- Cantus: la - re per, la pe - ctus - que ri - ge - re tis, Sem - sol per
- Altus: ctus - que ri - ge - tis, sem - - - - - per, sem -
- Tenor: ctus - que ri - ge - tis, Sem - - - - - per,
- Bassus: sol pe - ctus - que ri - ge - tis, Sem - - - - - per,

System 4:

- Cantus: - - - - -
- Altus: - - - - -
- Tenor: - - - - -
- Bassus: - - - - -

¹⁷⁹ WILLAERT, *Opera Omnia* 2, ed. Zenck, pp.62-63.

Example 56. Willaert, *Flete oculi*, ending. The transcription is based on Zenck's edition¹⁸⁰

The musical score is presented in four systems, each with a vocal line and its corresponding lyrics. The lyrics are Latin and describe the ending of the piece. The score includes various musical markings such as 'S - Dt 3(e)', 'S - Dt 3(i)', 'S - Dt 1(e)', 'S - Dp 3(e)', 'S - Dp 4(i)', and 'S - Dt 1(i)' with brackets indicating their scope over the notes.

Although a much more in-depth mapping is required to support comprehensive conclusions from this viewpoint—a matter for further study—it is interesting to note at this point that, among other aspects, the understanding of these particular features (that includes elements of both agreement and disagreement within the different musical manifestations), becomes more clear with modal judgment by means of species, whose commixture, according to Aiguino, establishes an important role in this process.

5. Final remarks: polyphonic modality as science and practice

Along with the reassessment of the modal doctrine, as did Glarean and Zarlino, species malleability as codified by Aiguino (after the Marchetto tradition) may be a sign of the imminent flexibility of these structural units, that intrinsically contributed to the gradual dilution of the poetic grounds traditionally related to modes: an aspect that will be increasingly extant in contexts of seventeenth-

¹⁸⁰ WILLAERT, *Opera Omnia 2*, ed. Zenck, p. 63

century music theory. Supposedly, among the many elements concerning this context, the change occurs mainly as an empirical reflection guided by the necessity of an emerging compositional aesthetics, where textual expressiveness is experienced in a very different way when compared to the vocal works of the generation before Josquin, acting then, as an element of transfiguration even among insistently conservative theorists, such as Aiguino.

Thus, it is assumed that the development of polyphonic modality as a science may not be a purely inductive process at all, that is, a knowledge of a particular character, which when repeated many times, leads to knowledge of a general character. But to approach the incongruities and difficulties resulting from the accumulation of many layers of codification of a mostly oral practice, it may be interesting to draw attention to this matter from the principle of falsifiability, and thus, to establish an alternative and possible approach to sixteenth-century modality. In short, from this approach, a particular assertion is understood as a scientific «principle» (hypothesis) that is proven not by its confirmation, but by its falsifiability, making it valid in light of its limits.

Thusly, one can conjecture a possible explanation for the enormous ambiguity and vagueness, as even stated by the authors themselves. When approaching the issue in this way, it is necessary to suspect that, even before the most particular elements of the doctrine, the theory of modal polyphony may be understood as a science, as well as its relationship to the repertoire of that time. However, as Wiering reminds us,¹⁸¹ the mental construction of modal doctrine in this context is considered an 'ideal state' (in platonic terms) and is achieved only through musical speculation and not derived from compositional experience: even if the mode as an inherent structure of that melody is veiledly manifested, the effort of those who judge from this perspective will consist in tracing how this expressive resource is organized through the prism of this idealized state of mode.

In this perspective, two rhetorical questions could be made at this point: does the *tonus commixtus* consist of a specific class of polyphonic modality behavior or is it a symptom of the doctrine's failure? Therefore, the former considers the commixture from a diachronic position that could be understood as the music theorist's efforts to create possibilities within the doctrine to comprehend some behaviors of some of the monophonic chants, to then, proceed to polyphonic chants. The latter, on the other hand, establishes an anachronic observation similar to the *tonus peregrinus*, for example, which could be understood as one of the symptoms of the doctrine to precisely comprehend such 'inexplicable' behaviors of the repertoire from a theoretical point of view.

Thus, starting from the late fifteenth-century music theory, a period when the writings of Tinctoris can be considered a paradigmatic turning point in terms of polyphonic modality, attempts to provide modal codification related to musical practice increased substantially during the sixteenth century, even proposing a total reformulation. One of these almost forgotten crosscurrents was characterized by Aiguino's careful systematization and his proposal on commixture, which

¹⁸¹ WIERING, *The Language*, pp. 165-166.

occurs in the light of profuse expressiveness and diversity, related to the updated harmonic aesthetics essentially associated to the text. The contribution of Aiguino's doctrine, although it had no impact in his context, could help us to understand how the conservative mind dealt with these innovations and tradition, demonstrating, once again, how the plurality and richness of the means of expression can involve the modal discourse.

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