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Title: The trimerone of the harmonic foundations, or the practice of music, day two

Source: Bologna, Civico Museo Bibliografico Musicale, MS B44, 23-84

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[-23-] DIALOGUES OF THE TRIMERONE

OF THE HARMONIC FOUNDATIONS,

OR,

OF THE PRACTICE OF MUSIC,

WRITTEN BY KNIGHT HERCOLE BOTTRIGARO:

SECOND DAY.

INTELOCUTORS,

ANNIBALLE Melone. ALONSO Cupino.

Anniballe. WHILE I was climbing the steps of these stairs which, if they seem so long and steep to me who I have been climbing them at least twice a day for many years, and twice a day I come down them, I can well believe that they seem so very long and steep to others who climb them only rarely, and for this reason uncomfortable and very demanding, I remembered of the plan we agreed yesterday to get together today immediately after lunch to continue the discussion on the modes, tropes or musical tones which we had started, so I have regretted greatly to have been late to return to this usual refuge of mine, especially because I was not sure that, having you come on time, as you have, and not having found me here, as I was not here, because of my inconsiderate lateness, and minding, quite with reason, to wait for me, you would have left, disappointed and dissatisfied with me. Therefore, forgive, Alonso, my memory lapse, and let us enter, sit down and start our conversation.

Alonso. [A. in marg.] The ancients imagined that Apollo and the Muses did not live on the plain, but on the peak of a high mountain. Besides this it is well known, namely, that lovers do not find waiting very boring, if they are certain, though, [-24-] to achieve the object of their desire and their aim, as I am sure. You may compensate me for this delay of yours in coming here by lingering longer, should it be necessary, and by [B. in marg.] beginning immediately to explain to me the ecclesiastical modes, or tones, as we agreed yesterday, explaining their number, names and order.

Anniballe. I say to you that the first tones were four, according to the ancient Greek ecclesiastical theorists, as venerable Bede in his incomplete book *de ratione calculi*, Oddo in his *Enchiridion harmonicum*, Guido of Arezzo in the first part of his dialogue on music entitled *Micrologus*, and, to be brief, all the other authors, who have mentioned this in their writings, state unanimously. These authors order them by name using these Greek words indicating a sequence, Prothos, Deutheros, Tritos, Tetrardos, which, translated into Italian, first, second, third, fourth. But, since each one of those always moves upwards and downwards through all the voices of the system of the three disjunct tetrachords, which are eleven, from *proslambanomenos* to *nete diezeugmenon*, and of the three conjunct tetrachords, which are eleven from *proslambanomenos* to *nete sinemmenon*, Pope Gregory, who was not only a man of very saintly living and very expert in literary studies, but of greatest expertise and judgement in music, realised that the singers, were finding them very hard and uncomfortable to sing, and wanted, as it is believed traditionally, to provide a remedy for this.

And from [C. in marg.] four, as they were, said ecclesiastical tones, tropes, or modes, as I said, he doubled increased their number up to four by dividing each one of them into two, taking away from each of the first four the first three lower notes of the diatessaron, and giving them the name of authentic, while he called plagal the four added by subtracting from the nine-note system the last three notes of the high diatessaron. Thus, he left the middle diapente to be in common with them, he restricted the lower and upper part of the ones and the others within the system of the species of the diapason, which he wanted to assign to them. So, to the first one of the authentic modes was added the first species of

the diapente in the low range, and the first species of the diatessaron in the high range, and to the second one, its plagal, was added the diapason also made up of the first species of the diapente, but in its higher part, and by the first species of the diatessaron in the lower range. He added to the third one, which is the second authentic, the diapason, consisting in the second species of the diapente, in the lower register, and in the second species of the diatessaron in the high register. He added to the fourth one, which is the second plagal, the diapason consisting in said second species of the diapente at the top, and of the second species of the diatessaron at the bottom. To the fifth one, which is the third authentic, he added the diapason formed by the third species of the diapente at the bottom, and of the third species of the diatessaron at the top; to the sixth one, which is the third one of the plagal modes, he added the union of the same third species of the diapente at the top, and of the third species of the diapason at the bottom. He added to the seventh, which is the fourth of the authentic modes, the diapason contained by the fourth species of the diapente set in the lower part, and by the similar species of the diatessaron [-26-] in the higher part. Finally, he added to the eighth, which is the fourth plagal mode, the Diapason composed of the same fourth species of the diapente located at the top, and of the similar species of the diatessaron at the bottom.

Alonso. Before you go any further, please listen to me, to ensure that I am following your discourse correctly, as I would not like to find that I am, if not completely ignorant of it, at least not very confident about it, when I presume to have understood all of it.

Anniballe. Please speak. I am here both to listen, and to explain to you. And, if it is necessary, I am here to repeat several times any explanation that I have provided you with so-far, and which I am going to produce for your benefit.

Alonso. I seem to have gathered from what you said that the tones used in the early Christian church were only four, and they were ordered with numbers in Greek words, but I do not remember, nor I believe that you told me, if they had any correspondence with the tones of the ancient theorists, namely Dorian, Phrygian, Lydian, and Mixolydian, which you have explained yesterday with such ease. Hence, I would be very grateful to know this.

[D. in marg.] Anniballe. The correspondence between these four ecclesiastical tones with the most ancient is very strong, and it is such that it can be said with utter certainty that the Prothos, or, as we call it, first, corresponded to the Dorian, the Deuterios, or second, to the Phrygian, the Trithos, or third, to the Lydian, and the tetrardos, or fourth, to the Mixolydian.

Alonso. How is this possible?

Anniballe. It is possible for many different reasons, which offer effective demonstration and evidence, and mainly because the historical times were the same, therefore, those reverend fathers did not need, as we do nowadays, to investigate, conjecture, and make suppositions about the way and the manner in which the ancient musicians, especially Greek ones, exercised the art of music, and how their compositions were written, by means of the writings of the ancient theorists, which are so corrupted and filled with mistakes. In fact, the early Christian church began to grow at the time of Constantine the great, the emperor who lived around 320 anno Domini under the papacy of Sylvester, as by then it was safe from the constant and terrible persecutions of the heathen, and free to

congregate in public [-27-] to praise God omnipotent and Jesus Christ, his only child, our redeemer and lord.

Alonso. If this is so, why did they not call those tones by the same names given to them by the ancient theorists, namely, Dorian, Lydian, Mixolydian?

[E. in marg.] Anniballe. They did so to follow the heathens in this, just as they did not want to follow them in distinguishing the days of the week by organising the with the ordinal number, and, they gave the name of the true sun, namely, of God, or Dominus, to the day that the heathens used to call day of the sun, accompanying always to it the word *feria*, and therefore calling it *feria dominica*, or first, to sanctify it and highlight its festive character. As to the day that the heathens had dedicated to the domain of the moon, the early Christians called it second *feria*. The next day, which the heathens had attributed to the power of Mars, they called it third *feria*, just as they named fourth *feria* the one that the heathens dedicated to Mercury. The early Christians called *feria quinta* the following day, that the heathens had called *Giouedi*, or *Giobia* in a corrupt form, as it was Jove's domain, and Friday sixth *feria*, which the heathens had called *Venerdi* from the fact that, they believed, Venus exercised her power upon it. The early Christians left to the seventh, and last day of the week, which the Roman gentiles called 'belonging to Saturn', the name that the Jews gave to it, namely, *Sabbath*, which means rest and quiet, because, as you well know, the Jews abstain from manual labour on that day and rest by making it a solemn feast day. And just as in this day of *Sabbath* the early Christians wanted preserve the name for that day, which was considered sacred by [F. in marg.] the Jews, equally in the other days they decided to imitate the order of the Jews, rather than that of the heathens, which consists in naming the days of the week by their number *ordinativo*, which is first, second, third, fourth, fifth, sixth after the *Sabbath*, or of the *Sabbath*. However, let us go back to our task, as I feel that I could be easily drawn to say many things on this subject.

Alonso. I have listened to this with great pleasure. Now tell me, do you believe that, in the division of the four authentic modes, or tones enacted by the very saintly Gregory, any consideration was given, in providing them with another four plagal ones, to the other four used by the [-28-] ancients, which had the prefix *hypo*, as you explained to me yesterday?

Annibale. I believe this very strongly, nor should anyone doubt this, given what Batholomeus Ramus, a Spaniard, public reader of this discipline at the studio of Bologna more than a hundred years ago writes in the second chapter of the third treatise of the first part of his *Musica Pratica* printed in the year 1482, Franchino Gaffurius at chapter seven of the first book of his *Musica utriusque cantus*, and in the sixth and seventh chapter of the fourth book *de harmonia instrumentorum*, Stephano Vanneo in his *Recanetum* at chapter 47. of the first book, Pietro Aaron at chapter twenty-six of the first book of his *dialogues de institutione harmonica*, and Brother Angelo at chapter thirty of the second book of his *Fiore Angelico*. To sum up, also each one of the many other writers of music theory of our time subscribe to this very opinion, but there is this difference, that, where the ancient modes or tones have their plagals, or dependent tones at the distance of a *diatessaron*, our modern writers put every plagal immediately close to its authentic. For instance, if we call the first authentic Dorian, we will call the second its plagal *Hypodorian*, and similarly, if we call the third authentic Phrygian, we also call the fourth its plagal *Hypophrygian*, if we call the fifth and authentic Lydian, we call the sixth the

sixth its plagal Hypolydian. If we call the seventh authentic Mixolydian, we call the eighth its plagal Hypermixolydian, according to Bartholomeus Ramus in the passage mentioned above, but Hypomixolydian according to Gaffurius at chapter seven in the first book of his *Musica utriusque cantus* cited above. However, I believe that we should give authority nor credence to the opinion of neither of these two authors.

Alonso. Why?

Anniballe. Because if, as Ramus does, we want to call Hypermixolydian this eighth plagal tone, we are calling it so improperly, since it turns out to be called 'the one above the Myxolydian' because of that prefix hyper which means, as you must remember, above, but it is lower and deeper than the Myxolydian, because it has its own diatessaron under the diapente, which is in common with said Myxolydian. However, if we call it, as does Gaffurius rather more appropriately, Hypomyxolydian, one has to be very careful that it should not be the same as the Dorian, as far as its diapason is concerned. In fact, were it the same as the Dorian, it would have two names, both of Dorian and Hypomyxolidian. Besides, we would be falling back into that same error as the ancients did, consisting in the fact that said eighth plagal tone is redundant, not so say useless, since, if we take it [-29-] as Hypermixolydian, it would become, at the octave, Hypodorian.

Alonso. It is true that the eighth plagal mode, or tone progresses thus through the same species of the diapason as the first and authentic, but, it seems to me, there is this difference between them, since the first one has the diapente at the bottom, while the eighth has the diatessaron.

Anniballe. This difference between them would be very small and of no importance. What distinguishes them instead, is their final note, or voice, [G. in marg.] since the first and authentic one has to end in the licanos hypaton, where its octave starts, while the eighth and plagal has to end on the licanos meson. This rule of the final note is observed as a general difference also among all the other six remaining modes, or tones. You must understand that this rule stands between and two authentic, or two plagal modes, since it is a certain rule as well, that the final note or voice of an authentic mode is also always the final of [H. in marg.] its plagal. For this reason the venerable Bede, towards the end of his book *de ratione calculi*, which has been preserved incomplete, as I noted above, says these words, which I translate into Italian: 'Therefore, the final notes or voices are the licanos hypaton, the hypate meson, the parhypate meson, and the licanos meson.' Thus, every mode and its plagal, namely, the melodic span of the first one and of the second one, is governed and delimited by the authority of the licanos hypaton; the melodic span of the second (namely the Deutheros) and its subjugal or plagal, namely, of the third and the fourth one, is governed and delimited by the Hypate meson; the melodic span of the third one (that is of the Tritos), and of its subjugal or plagal, namely of the fifth and sixth, is governed by and ends on the parhypate meson, while the melodic span of the fourth one (also called Tetrardos) with its plagal and subjugal, namely, of the seventh and eighth, is moderated and contained by the authority of the licanos meson. Therefore, it seems that everything corresponds to what has left written and explained Oddo Abbot in his musical *Enchiridion*, namely, that the first and lowest sound is called by the Greeks Prothos, or Archos, the second Deutheros, which is a tone above the Prothos, that the third one is called Tritos, and is removed from the Deutheros by the distance of a semitone, and that finally the fourth one, Tetrardos, is located a tone above the Tritos. He also says that, 'with this continuous and replicated sequence (I will add this as well [-30-],

he says, in one and the other place), the infinite number of sounds is weaved, and a tetrachord is made to follow another one of the same type to such an extent, that the great number of them grows upwards and downwards, so that the voice is lacking at the bottom of the range, or at the top.' Oddo, later on in his dialogue, not far from the beginning, applies these words to the variety of the first four modes, saying, in agreement with what we read in chapter seventeen of the fourth book of Boethius' Music, that 'the span of the tone Prothos (or first one), which he has described, will become of the mode, or tone Deuterios, also called second if we transpose all of it, as it stands, a note higher, or, as he says, a space higher. If we transpose it two steps upwards, it will become the Tritos, or third; and if we transpose it three steps upwards, it will become Tetrardos, or fourth. Hence we can gather that, as the distance upwards between the second note and the first note or Prothos is a tone, equally the distance between the first mode, or trope, or tone Prothos, or first one, which starts on said first sound, and all the Deuterios or second tone which starts on the second voice, is a also and equally a tone. Similarly, just as the sound Tritos, or third, is a semitone above the Deutherios, equally, all the mode or tone Trithos, or third, which starts on its third sound, or voice of the Deutherios, lays a semitone higher. Thus, since its Tetrardos, or, as we call it, fourth is a tone higher than the Tritos, or third, all the system of the mode, trope, or tone Tetrardos, which starts on said fourth sound, or note, equally is a tone higher than Trithos. In order to clarify further this explanation of his, he adds either this letter T., or this other one S between each two of the characters which signify the sounds or notes, to which letters we attribute the most certain interpretation of tone, or semitone, as abbreviations of such terms.

Alonso. Please tell me, are the characters used by this ancient theorist the same as those used by Guido of Arezzo?

Annibale. Allow us a little time to conclude this subject which we have started and which concerns the positions and, so to speak, the locations of these tropes, modes, or tones, and then we will deal with this other very interesting topic of the characters, or ciphers, or notes, or signs, and of the single, double and triple syllables used by the ancient musicians, and not only in their sacred music. Later I will explain them to you at a better, and more appropriate time.

[-31-] Alonso. Continue, please, to assign, or rather, to confirm the lay-out of said ecclesiastical tones, authentic and plagal, for my benefit. From the extent that I seem to have been progressing in my understanding of them thanks to your explanation, I would believe that their description according to our modern characters, or notes, should be really this one that follows, also in relation to the most ancient modes or tones. <[I. in marg.]>

[Bottrigari, Il trimerone, Giornata seconda, 31; text: DORIO. HYPODORIO. FRIGIO. HYPOFRIGIO. LIDIO. HYPOLIDIO. MISSOLIDIO. HYPOMISSOLIDIO. Primo Autento, Protho. Secondo Plagio. Terzo Autento, Deuthero, Quarto Plagio. Quinto Autento, Tritho. Sesto Plagio. Settimo Autento, Tetrardo. Ottauo Plagio.]

Anniballe. You must have no doubt at all that the mode, or tone Prothos, and authentic must have its location or starting either on our Are, or our Dsolre, but certainly it should have start more appropriately from said Dlasolre, in order to leave its location or starting place on Are to its plagal, which has to be a diatessaron lower than itself. Consequently, the Deutherios will be placed on Elami, leaving its location or starting place on [sqb]mi to

its plagal, which has to be a diatessaron lower than itself. Since the Tritos, and authentic mode, has to lay a semitone higher than said Deutheros, it is certain that it will have to start on the Ffaut, and not on Cfaut, for the same reason as its plagal, and for the consequentiality that it must have to the Deutheros, in the same way as it is convenient that the authentic Tetrardos begins on Gsolreut, and not on Dsolre, in consideration of its plagal, as it was said, for its right consequentiality after the Tritos, on the basis, not only of the doctrine of the venerable Bede, and of Oddo Abbot which I have described, according to which the mode, or tone Prothus authentic has to be a tone lower than the Deutheros, and this a semitone lower than the Trithus, and the Tetrardus a tone higher than the Tritus itself, as you will be able to see clearly through this table, which I come to draw for you according to the most ancient Greek theorists and to the ecclesiastical ones, and which matches very well this one described by you [, namely the table in marg.], but also according to what has written and illustrated with examples Guido of Arezzo in the second half of the dialogue Micrologus on music, by giving all the models (as he says) of said modes, or tones, both authentic and plagals with their true properties.

[-32-] [Bottrigari, Il trimerone, Giornata seconda, 32; text: PROTHO, DEVTHERO, TRITO, TETRARDO, Primo Authento. Secondo Plagio, Terzo Autento. Quarto Plagio. Quinto Autento. Sesto Plagio. Settimo Autento. Ottavo Plagio. DORIO. HYPODORIO. FRIGIO. HYPOFRIGIO. LIDIO. HYPOLIDIO. MISSOLIDIO. HYPOMISSOLIDIO. Nethe, Paranete, Trite, MESE, Licanos, Parhypate, Hypate, Proslambanomenos]

both ascending and descending, as he deemed appropriate, or maybe according to what was still the practice in his times, explaining which are the four final notes or voices, one of which. he says, is the fourth D, on which the mode, or tone called Prothos authentic ends. The fifth E is another one, he says, on which the mode, or tone called Deutheros authentic ends, and the sixth F is another one, on which the mode or tone called Trithos authentic has its conclusion, such as another one is the seventh, where the mode or tone called Tetrardos ends. But he provides a better and more ample description later on, where he says that the first mode, or tone ends on the fourth note, and continues up to the eleventh, which is represented by the same letter d. Similarly, the second ends on D, and together with the first ascends up to the ninth and first b, namely, both round and flat, and has under its lower end a tone, a semitone, and a tone, and therefore having the[Gamma] Gammaut, the first A, and the second [sqb] more than the first one, which has the tenth c and the eleventh d, more than the second. The third mode, or tone ends on the fifth note, on the letter E, and spans a diapason up to it, and his intervals from the bottom upwards are a semitone, three tones, a semitone, then two tones, namely, through the system of the disjunct tetrachords. The fourth [-33-] does not have three tones near its lower end, but, starting on the ninth and b (namely round, or flat) and proceeding through the system of conjoined tetrachords, ascends up to the tenth c, and descends to the second B. The fifth ends on the sixth F, and its most acute note is written with the thirteenth letter, also f. The sixth ascends with it (namely, with said fifth) up to the eleventh, and, from their common end, it descends to the third C. The seventh ends on the seventh note G, its highest note being the fourteenth g. starting on the second note [sqb] (namely, square or sharp) and proceeding through the system of the disjointed tetrachords. The eighth ascends with the seventh up to the twelfth e, but rarely, and sometimes it descends under its lower end down to the third C, but not very often. I do not what to omit to relate to you what the good, and very expert [K. in marg.] Guido of Arezzo adds about the singers, albeit I leave out many other important things. 'The baseness and clowning attitude of the singers must be lampooned, since they know nothing of the division or separations of the modes, but

they follow only what seems to please the ear, like those who practise gastronomy, who, following a false ideal of taste, fail to observe the true rule of temperance. Moreover,
Boethius

Alonso. Before you move on to Boethius, and beyond, please explain how Guido of Arezzo wants that expression of his, fourth note D., ninth and first b., should be understood. In fact, although you have explained this one ninth and first b as well as ninth and second [sqb], I am not clear about the organisation according to which similarly he calls tenth the c, eleventh the d and F the sixth, since, if it were so, he would be forced to begin his system not on [Gamma], Gammaut, but in Are, as it seems to me that you mention in the description of the second tone, as you named after said Gamma ut, A first, and B second. I do not think that I am mistaken in believing that you showed me yesterday that said Guido' s scale begins not from Are, but from [Gamma]ut.

Anniballe. Your doubt is one of those that are not undue, therefore, in order to solve it, I will say that it is true (as I confirm now to you that I said yesterday [M. in marg.]) that the [Gamma]ut is put by the monk Guido as the first note of his system, since he says at the beginning of his musical Micrologus, when he describes the monochord. 'The Greek [Gamma]ut added by modern musicians should be put at the beginning. Then the seven letters of the alphabet for the lowest notes, for this reason they are notated with capital letters in this way, namely, A B C D E F G. [L. in marg.].' So, since he says that therefore the [Gamma]ut must be put at the beginning, this shows, that he begins from that note, and that he puts it in front of the first seven letters of the Latin alphabet. But it is not with [-34-] the ordinal number, namely, [Gamma], first A, second, and the others to follow, rather, he puts them simply like this [Gamma] A B C D E F G; hence, in the division of the monochord, which he illustrates in the second part [M. in marg.] of said musical Micrologus of his, after showing the sequence that said letters have to follow in said monochord, he inscribes and describes a table in this way.

[Bottrigari, Il trimerone, Giornata seconda, 34; text: [Gamma]. A. [sbq]. C. D. E. F. G. a. b. c. d. e. f. g. Gamma. prima seconda, terza, quarta, quinta, sesta, settima, ottava, nona, decima, undecima, duodecima, tredicesima, quattordicesima, quindicesima]

having given this advice though, that in many monochords, the letter [Gamma], namely, the Greek G. - he says – has to be put at the lower end of the monochord, in the first place, since it is rarely used. Therefore, you must be clear, that, not only the [Gamma], is an added sign, and the beginning of the system, but that the natural ordinal number of the seven letters begins from the letter A, so the letter D. is really the fourth, the b flat the first ninth, the [sqb] square the second ninth, because of its different duplication; tenth is the c, eleventh the d. and likewise all the others in order.

Alonso. I have understood everything perfectly. Now, move on to Boethius, following what you wanted to tell me, according to his authority.

Anniballe. Boethius, in conformity to whose doctrine of the ancient modes, or tones of the ancient Greeks the abbot Oddo first, and the monk Guido wrote, as I told you, the scope and movement of said ecclesiastical tones, illustrates in the description (which is in the universal table of the eight modes or tones, which he put in the sixteenth chapter of the fourth book of his Music) particularly of Hypermixolydian tone which he takes as an example of the other seven, that said Hypermixolydian tone proceeds from its

extremities, both upwards and downwards in its particular system, with the pattern tone, semitone and tone. There, one can read words of such meaning and tenure. 'It is necessary that between the proslambanomenos and the hypate hypaton (we leave aside for now those Greek characters which he adds, as they are not very important to us for this purpose) there is the interval of a tone, and between said hypate hypaton and parhypate hypaton the distance of a semitone. This has to be observed regularly in all the others.' We have to understand this being the case in the diatonic genus, as he had informed us earlier, in the fourteenth chapter of the same book, while much earlier, in the tenth chapter, he had drawn a table with proportionate numbers in all three the musical genera, and particularly in the diatonic genus, where he constituted a tone of sesquioctave proportion between the proslambanomenos noted 9216. and the parhypate hypaton noted 8192. Then, between said hypate hypaton and the parhypate hypaton marked 7776, he constituted a semitone with the proportion 256/243. Between said parhypate hypaton, [-35-] and the licanos hypaton 6912. there is another sesquioctave tone, just as between said licanos hypaton and the hypate meson noted 6144. Between the hypate meson and the parhypate meson noted 5832 he put a semitone in the already mentioned proportion 256/243. Then, between said parhypate meson and the licanos meson noted 5184. he put a sesquioctave tone, just as between said licanos meson and the mese, which he noted with the number 4608, which is half of the number applied to the proslambanomenos. Therefore, he resumed and replicated the entire sequence that he built between the proslambanomenos and the hypate hypaton an octave higher, as one can see from the numbers halved and applied orderly to the higher notes, and so he described the perfect system of the fifteen diatonic notes entirely, together with the other two, chromatic, and enharmonic. So, let us state as a close that, having Boethius set out in this way the lower system, which was the Hypodorian on our Are, and in conformity with this, the Hypermixolydian and the Dorian on Dsolre, therefore, it follows, that the Prothos or Archos mode or tone, [N. in marg.] or first authentic ecclesiastical assigned to the Dorian is built on Dsolre, just as the eighth and plagal ecclesiastical allotted to the Hypermixolydian, and the rest as well, as you have described them, in a way which is very akin to the already mentioned received opinion, and still current subscribed to by all the writers of this plainchant, or ecclesiastical cantus [N. in marg.] firmus, which they have approached and accepted without considering and investigating the matter any further and in depth, as it should have been done with good reason.

Alonso. Is there any difficulty perhaps?

Anniballe. Without a doubt, but of the sort that makes your demonstration not good and really in conformity with the practice of the ancient ecclesiastical musicians, as well as of our contemporary ones, as I explained and stated.

Alonso. Are these perhaps the difficulties that clouded my mind a little when I decided to lay out my description, so that I said that, 'in my opinion', or 'I would believe', said description of mine should be along those lines?

Anniballe. I really noticed your saying 'in my opinion', or 'I would believe', but I applied it only to the simple description of the characters or notes, where your uncertainty lies in representing such modes or tones, according to what I said. Explain to me your doubts, and I will tell you if they are the same as the ones that I think musicians should have kept in mind.

Alonso. The memory of two things which you told me yesterday arose in me a doubt regarding such description. The first one of these is that the [Gamma]ut always corresponds to the proslambanomenos of the ancients, and that all the other notes of ours which follow that one correspond to those of theirs which followed the [Gamma]ut, and whose name I do not remember well. The other one is the statement that the Dorian mode, or tone has as its Diapason the one that begins in Cfaut. As a consequence, the Hypodorian tone has the one that begins in [Gamma]ut as its Diapason.

Annibale. It is true that both of these statements were made yesterday by me, and I stand by each one of them just as well now, since two other statements that I made yesterday, namely, one that says that the same proslambanomenos is always the lowest note, or sound of the proposed perfect system, and the other, and very important, which I almost repeated just now, that says that such species of Duapason were named by those ancient ecclesiastical musicians according to the order that they wanted to give them, these two statements can easily solve both of those doubts which you raised, so that you will abandon your doubts completely, and you will come to the clear realisation that this description of yours is good and true.

Alonso. I remember well both statements, but if you did not help me somewhat, I would not have the intellectual strength to make this contrast by myself, which I proposed to you, and I would be forced to believe that my demonstration is good and true only because you said it to be so.

Anniballe. I did say that this description of yours is such, but according to the opinion of those ancient ecclesiastical musicians, and of our contemporary ones, as they believe to be following Boethius' intention. But you will learn how you have to set up this contrast, as I will come to tell you how these later musicians, not only the ecclesiastical, but the secular ones, both in plainchant, or cantus firmus, and figurato, should have considered and examined if the Abbot Oddo and the monk Guido after him, and perhaps their predecessors, of which I have seen no writings however, except those by Bede, if these had well laid out these modes, [-37-] or tones. In fact, they would have easily realised that one and the other of those two had made a mistake [O. in marg.] in locating the tone Prothos authentic with its first note in Dsolre, and its plagal in Are, and, as a consequence, all the other three, both authentic, and plagal. However, the reason why that Oddo, and then Guido made a mistake in this, was also the reason why all the other later theorists after them, as if blinded by the splendour of their authority, did not recognise such error of those two. Therefore, I believe, Oddo and Guido misunderstood the words of Boethius, words which are found at chapter fourteen of the fourth book of his Music. In fact, although Boethius in this passage and in all the previous similar ones, says that the hypate hypaton is the lowest note of the first and lowest tetrachord, that the parhypate hypaton is the second and a little higher, that the licanos hypaton the third and higher, then the hypate meson is much higher, the parhypate meson greatly higher, the licanos meson still more greatly higher, and finally the mese is the highest, and that he had said even earlier (at chapter twenty-one of the first book) that every tetrachord, but only in the diatonic genus, has between its first low and second voice, or note a semitone, between the second and third a tone, between the third and fourth another tone, and, besides this, that in the twentieth and twenty-second chapter of the same first book, that under said first note, voice or sound hypate hypaton later was added the proslambanomenos, which he calls also prosmelodos, so that the mese, according to its true name, which means half-way note, were set in the middle of the perfect system, and

at the octave with the mese itself, and therefore one tone removed, or lower than the hypate hypaton, which is what separates the mese, which is lower, from the paramese; hence, one could gather that, truly, as the intervals between the proslambanomenos, and the hypate hypaton have to correspond to a tone, and those between said hypate hypaton and parhypate hypaton to a semitone, then between said parhypate hypaton and the licanos hypaton to a tone, and given that later on in the aforementioned chapter fourteen of the fourth book of Boethius one can read as a close that the Hypodorian tone is located on the proslambanomenos, the Hypophrygian on the hypate hypaton, the Hypolydian on the parhypate hypaton, the Dorian on the licanos hypaton, and so on all the others following in order in the remaining higher notes, or voices, so that equally one could gather that the interval between the Hypodorian tone and the Hypophrygian must be always one tone, and between that one and the Hypolydian a semitone, and between said Hypolydian and [-38-] the Dorian a tone, and since such intervals are found, to sum up, between Are, [sbq]mi, Cfaut, Dsolre, and Elami with all the other following, namely Ffaut and Gsolreut, and not in any other place, if not in the octave starting on said Gsolreut, and for this reason it seemed that one could reasonably conclude that the tone Prothos authentic, which represents the Dorian mode, or tone, should start on Dsolre, and its plagal, as it is similar to it should start on Are, and similarly all the following ones starting on the rest of the remaining notes, but it is not so, according to reason.

Alonso. What is that forbids this?

Anniballe. I am not saying that there is anything that forbids this, but what I replied, and reply now that I have told you yesterday according to the opinion of Euclid, Ptolemy and those other ancient music theorists, and which Boethius himself adds at said chapter fourteen and sixteen of the fourth book of his Music, namely, that the proslambanomenos is always the lowest note, or sound of the proposed perfect system in whichever mode or tone one wants or is. Therefore, he said in the second passage, which agrees with the first one, that if the proslambanomenos is higher of the proslambanomenos, or if any other voice is written lower than the note of that very place and established in the same genus, it is necessary for all the system and sequence to be lower, since he said in the mentioned first passage, namely, at chapter fourteen, that, if the proslambanomenos and all the system of the Hypodorian mode is raised by a tone, the result is the Hypophrygian tone. Equally, if said proslambanomenos is raised by another tone, the Hypolydian tone is created. If said proslambanomenos is raised by a semitone, the Dorian mode, or tone is born. What he says in said chapter sixteen is strongly opposed to this. There are his words. 'The highest of all the modes is the one called Hypermixolydian, and the one called Hypodorian will be the lowest of them all, but, beginning from the Hypodorian, we will draw it and all the remaining others with their differences that characterise them.'

Alonso. Good, good.

Anniballe. 'For this reason the mese of the Hypodorian mode will be a tone lower than the one of the Hypophrygian.' He proves this by showing that, if these two modes, or tones are compared [-39-] the mese of the Hypodorian is the licanos meson of the Hypophrygian. Then he says. 'Similarly the distance between the mese of the Hypolydian and that of the Hypophrygian is a tone', and to prove it he shows that the mese of the Hypophrygian is the licanos meson of the Hypolydian. He adds then. 'Similarly, a semitone is the distance between the mese of the Hypolydian and the mese of the Dorian', and he proves it by showing that the mese of the Hypodorian is the Hypate meson of the

Dorian, hence the mese of the Dorian is a diatessaron higher than the mese of the Hypodorian, as it is always in every genus, and mode. Equally, the distance of the mese of the Dorian from the mese of the Phrygian is a tone, because the mese of the Dorian is the licanos meson of the Phrygian, just as also a tone separates the mese of the Phrygian from mese of the Lydian, since the mese of the Phrygian is the licanos meson of the Lydian. 'Moreover', he continues, 'a semitone separates the mese of the Lydian from the mese of the Mixolydian, and a tone this of the Mixolydian from that of the Hypermixolydian, because said mese of the Mixolydian is the licanos meson of the Hypermixolydian.' He demonstrates practically that for this reason the mese of the Mixolydian is removed by the space of a diatessaron from the mese of the Dorian, from which, since it is the licanos hypaton of the Hypermixolydian, said mese of the Hypermixolydian is removed by a diapente, as said licanos hypaton from the mese always is in any tone in the diatonic genus. From these words one can clearly gather that in the drawing of the modes, or tones which he presents in said chapter sixteen, the mese of the Hypodorian, which is the lowest of all the tones, is a tone lower than the mese of the Hypophrygian, the mese of the Hypophrygian is another tone lower than the one of the Hypolydian, and this is a semitone lower than the mese of the Dorian, and the mese of the Dorian itself a tone lower than the mese of the Phrygian, which is a tone lower than the mese of the Lydian, itself a semitone lower than the mese of the Mixolydian. Finally, this is a tone lower than the mese of the Hypermixolydian. Therefore, since (as we said to be the case, and it really is) these systems or constitutions of two diapason are one lower than the other one (all of them) according to the pattern of tone, tone, and semitone, since their mese appear to be lower, therefore Boethius confirms again in this part what he said at chapter fourteen regarding the difference which exists between a mode and another one, namely, of tone, tone, [-40-] and semitone in the diatonic genus. Consequently, as he confirms again, the diapason of the Hypodorian mode, or tone begins on [Gamma]ut, and not in Are, that of the Hypophrygian in Are, and not in [sqb]mi, that of the Hypolydian in [sqb]mi, and not in Cfaut, the one of the Dorian in Cfaut, and not in Dsolre, the one of the Phrygian not in Elami, but in Dsolre, the one of the Lydian not in Ffaut, but in Elami, the one of the Mixolydian in Ffaut, and not in Gsolreut, the one of the Hypermixolydian in Gsolreut, and not in Alamire. And if one wanted to reply that this second confirmation is right, with respect to the highness or lowness of a mode, or trope compared to another one, but not with regard to the height of each interval within its own system, so that the clear meaning of those words that prove that the Hypodorian mode has to begin on Are, the Hypophrygian a tone higher on [sqb]mi, the Hypolydian a semitone higher in Cfaut and so on, as it has been said, in all the others, is maintained, would, please, someone tell me, apart from the fact that the same note would have been called by two different names, namely [Gamma]ut, and Are, which is clearly absurd, would not doing this create too great an inconvenience and a contradiction in this supposition?

Alonso. What contradiction or absurdity, and inconvenience would this be? Did you not tell me yesterday, and repeated today as well, that the proslambanomenos, or [Gamma]ut of the Hypophrygian is the Are of the Hypodorian, and the one of the Hypolydian is the [sqb]mi of said Hypodorian,; that the proslambanomenos of the Dorian is the Cfaut of the Hypodorian, and the of the Phrygian is the Dsolre of the Hypodorian, and finally that the [Gamma]ut, which is proslambanomenos of the Hypermixolydian turns out to be the Gsolreut, of said Hypodorian?

Anniballe. I told you yesterday, I repeated today, and I maintain it again now; and I tell you more, namely, that such a sequence and an order has to be observed from one mode

to the next one upwards, namely, that the [Gamma]ut of the higher one is the Are of the lower one immediately next to it.

Alonso. If this is true, is it not also true that the same note has two names at the same time?

Anniballe. Not just two, in this way, but three, four, five, six, seven, and eight, as you can see clearly from the scale of the systems that I drew yesterday. Moreover, all the notes of the lower diapason of the Hypodorian mode in particular would have a single name, namely, proslambanomenos, or, as we say, [Gamma]ut, and all the other ones of the high diapason would have the sole name of Mese, or [-41-] alamire. Also, the two different names, which I say that the lowest note of said Hypodorian would have, they would not be the same that you understand, namely, with regard to the other systems of the modes, or tropes, but with regard to its own rising, and becoming higher, and to its being the basis of the other modes, or tones higher than itself. However, you will understand this much better, in my opinion, if I show you at the same time the inconvenience, and the contradiction of this thesis, which, it seemed, you rejected very strongly.

Alonso. In truth, I am not far from believing these two points, which you are proposing to me, therefore I will be very glad to understand both one, and the other, in order to understand completely the absurdity of giving those two names to the same note. For this reason, as you have seen, I referred to the scales of the systems which we have drawn yesterday, so, I have understood what you have said almost completely.

Anniballe. I need to show you the inconvenience first, in order to show you the contradiction of the thesis in this subject of the structure of the modes, and, to show you this inconvenience, I am forced to tell you that the drawing of the tones, which can be seen in said sixteenth chapter of the fourth book of the Boethius Music [P. in marg.] is all wrong from the first to the eighth order, namely, from the Hypodorian to the Hypermixolydian.

Alonso. This is an important statement, but, be careful, please, to avoid doing as some do, who, not to accept the truth, deny the places where it is found clearly.

Anniballe. To deny absolutely, or, better, to state absolutely that the passages of the scriptures, which are regarded and accepted as authentic universally are apocryphal, in order [O. in marg] to contradict and oppose the manifest truth, is nothing but excessive impudence, but when their alteration, or corruption, rather than their untruth, is shown with cogent reasons, this must be dear to everyone, even if the chance to approve, or reject them must be left to the individual's judgment. This is what I intend to do now, and I know this is the intention of the knight Signor Hercole Bottrigaro, who has provided me with this knowledge, not arrived at so-far by any other person, as far as I know, [-42-] in the way, that I am about to tell you.

Alonso. Please continue, as I only said that to deride those people for their impudence.

Anniballe. Now, you must know that said table, or scale was not well constructed by Boethius, and from its disorderly layout derived the contradiction of the thesis maintained by the ancient musicians, and by Boethius himself at the beginning of said chapter fourteen, where he says. "The modes, also called tropes and tones, are made up by the

species of the consonance diapason. The compositions of the tropes are different in all the orders of the notes according to their high and low pitch.' Then, a little further on, he adds. 'Then, if anybody rises or lowers all of these constitutions according to the above mentioned species of the consonance diapason, he will create the seven modes, whose names are these: Hypodorian, Hypophrygian, Hypolydian, Dorian, Phrygian, Lydian, and Mixolydian.' Moreover, at chapter fifteen, which follows, he repeats this by saying thus. 'But, since we have said that these modes are located in the species of the consonance diapason, let us now describe them, but only in the diatonic genus, so that we do not delay our visual knowledge of their lay-out. Therefore, Boethius supposes that the systems, or constitutions of the modes, or tones are distributed in the way that I showed you yesterday, when you also described them according to the order of the species of the diapason. Therefore said constitutions, or systems of the tones are as I told you that he adds at said chapter fourteen, namely, where he says that they differ in all the orders of the voices, being higher, or lower. Hence, since all the constitutions described in said chapter sixteenth of the fourth [R. in marg.] book of said Boethius are ordered, and proceed uniformly with the same intervals, namely, with the pattern of tone, semitone and tone, and since the organisation of the Hypophrygian system is the same as the one of the Hypodorian, and the Hypolydian the same as the Hypophrygian, the Hypodorian the same as the Hypolydian, and since, in conclusion, all the systems are set up in an identical manner, namely, the one in the same way as the other, without any difference, it follows, [-43-] that said constitutions, or systems do not differ in the order of their sounds, or voices as to their high and low pitch according to the many species of the diapason, therefore, as a consequence, it also follows that the systems, or constitutions of the different modes, tropes, or tones described in Boethius' table, are not seven, nor eight, but the single constitution, or system of the Hypomixolydian, or Dorian mode, and in no other way, nor different from itself than the antiphon Regina caeli, or Salve Regina would be, if we sing it a tone, or a semitone, or a diatessaron, or whatever other indivisible interval either lower, or higher than the one that we would have repeatedly sung, since it would not cease to be always the same without any variation, as it happens very clearly in the solemnity of Easter Saturday when the Alleluia is sung, which then is sung by the priest celebrating the mass three times raising the pitch by degrees – namely, by adjacent steps, and not by intervals of ditone or diatessaron, or other similar ones - on a plainchant or cantus firmus which is the same and set only once, as the Canon requires; therefore, as we say, the outline of the melody remains the same. The same we experience when we hear that our compositions based on a tune are being sung, since, albeit they are sung now lower, now higher, according to what is comfortable for the singer, nevertheless the outline of their melody is not modified, in a way that would render it not immediately recognisable for what it is. This would not happen, if it were made higher, or lowered by changing the place of the semitones, and varying the species of the diapason and the mode or tone, as a result. Take for instance the very well-known song *Gentil madonna del mio cor patrona*, whose melody unfolds by semitone, tone and semitone, which is from high f sharp to high g solreut, and then from that to high alamire and then to high bfa, and equally, becoming lower, it descends by steps of tone and semitone touching the same notes. Therefore, when it is sung those intervals of which it is composed, whether it is sung by a lower, or higher voice, it will always be recognised as being *Gentil madonna*. However, if it is varied by altering the steps of the melody to the sequence of tone, semitone, and tone, namely, raising its sequence of notes by a semitone, from high g solreut to csolfa, [-44-] it will be recognised from its text, but not by everyone as corresponding to its true and usual melody previously employed.

Alonso. I have no doubt about this, but why do you think that such a mistake in the table of the organisation of the modes, or tones derives from its very author? Why not blame it on the printers, if this mistake is observed in printed books, or, if in the handwritten copies, to the copyists as people of little diligence, and very often of little intelligence of the subject, as, unfortunately, we know from our everyday experience the observations of those who have knowledge of the scientific disciplines? I will also add, why not attribute such error to the daring hand of someone, who wanted to show the acumen of his beautiful mind, being moved also by some occasion, not to be on the whole disregarded, which could be added as a way to justify such an act?

Anniballe. This is not one of those mistakes, or alterations, which can be thought to be deriving from the copyists, or from the printers, as some others are very likely to be, since they do not just appear in the characters of said table, but throughout all of the book, nor anyone can be accused to have wanted to put his hand to it, for the reason which you mentioned, undeterred by those words, which can be read in the description of the sequence of the Hypermixolydian mode, which I am well aware I have already mentioned to you, but which I do want to repeat. They are these. 'And this has to be regularly considered in the other modes', as if Boethius wanted to infer that all the systems, constitutions, and orders of the modes should take their example and rule from the intervals of the system, or constitution of said Hypermixolydian tone.

Alonso. If these words would be enough to serve as a guarantee for a beautiful and daring mind, why should they not do the same for Boethius?

Anniballe. I have not said that these few words would have the power to guarantee a beautiful and daring mind in such an enterprise. I said instead that they might have moved him to do it, although they have really another meaning, by which he would then remain convinced of said contradiction in the recounted, repeated and affirmed thesis, as you have understood.

Alonso. Is Boethius then going to be blamed for this? Is this mistake going to fall back [-45-] onto such a great man?

Anniballe. The fault of all of this is really Boethius', and of the fact that he did not realise the contradiction of his thesis, and the inconvenience shows [S. in marg.] (through his silence about it) that he was aware of the great error that follows from it.

Alonso. It can be said very well in this respect, that a loud sound protracted for a long time produces deafness.

Anniballe. Not completely deaf, but rather stunned, and, as we say, 'of large bells'.

Alonso. You are right, but how does one discover that Boethius knew of such error?

Anniballe. One discovers it when he demonstrates through the mese of the modes or tones that their differences and distances are such as I have described briefly already to you, as he recounts them and describes them in said sixteenth chapter of the fourth book, and which I will repeat now briefly in order for you to understand everything better. So, this is what says. 'The distance between the mese of the Hypodorian mode and the one of the Hypophrygian is a tone. This can be seen easily if you compare the two modes together,

since the mese of the Hypodorian is the licanos meson of the Hypophrygian. Similarly, the distance between the mese of the Hypophrygian and the mese of the Hypolydian is a tone, because the mese of the Hypophrygian is the licanos meson of the Hypolydian. Again, the distance between the mese of the Hypolydian and the mese of the Dorian is a semitone, because the mese of the Hypolydian is the hypate meson of the Dorian, and so it is different by the consonant interval of a diatessaron, as it is, in whichever genus, or mode.'

Alonso. To this clear evidence of the distance of the mese of the Hypodorian mode from the mese of the Hypophrygian, and of the one of the Hypophrygian to the one of the Hypolydian, which distance is a tone, according to Boethius, equally, from the first to the second, as to the third to the fourth, which I believe is in accordance with what you concluded to be Ptolemy's thinking, I believe

Anniballe. Remember it well, and continue.

Alonso. I believe, that, as Boethius is very intent on proving that the distance from the mese of the Hypolydian to the one of the Dorian is really a semitone, he adds some very obscure words, which I have not understood very well, maybe for the different type of demonstration between that one, and this one.

Anniballe. You tell the truth, and I believe you. And just as clearly you will hear [-46-] that there is even greater obscurity in the following demonstration of the mese of the other higher tones, where he says. 'Equally, the distance between the mese of the Dorian and the one of the Phrygian is a tone, because the mese of the Dorian is the licanos meson of the Phrygian.'

Alonso. This is clear.

Anniballe. 'The distance between the mese of the Phrygian and the mese of the Lydian is a tone, because said mese of the Phrygian is the licanos meson of the Lydian.'

Alonso. This is clear as well.

Anniballe. 'Again', he continues, 'the interval between the mese of the of Lydian and the mese of the Mixolydian is a tone, because said mese of the Mixolydian is the licanos meson of the Hypermixolydian.'

Alonso. This is equally clear. But where do you leave, or does Boethius leave, the demonstration of the distance from the mese of the Mixolydian to the mese of the Lydian?

Anniballe. Boethius does not omit it, nor do I, but you have not allowed me to continue and thus tell you about it, hence you did not hear the difficulty, which perhaps you will sense in said demonstration.

Alonso. Continue, and I will be very attentive, in order to be able to overcome it, or render it more comprehensible.

Anniballe. 'And since the the mese of the Dorian is the hypate meson fo the Mixolydian, and since, equally, the distance between the mese of the Dorian and the mese of the Mixolydian is the consonant interval of a diatessaron, and, since distance from the mese of the Dorian to the mese of the Hypermixolydian the consonant interval of a Diapente, since said mese of the Dorian is the licanos hypaton of the Hypermixolydian, just as in the diatonic genus the interval between said licanos hypaton and the mese is always a diapente.'

Alonso. This is really an intricate labyrinth from which it is not easy to emerge, and especially since I cannot see the paths that might (perhaps easily) lead me to the exit, because of the great height of its hedges, or walls.

Anniballe. I understand you. Here is an example of said descriptions, but without the characters which I have not yet to mentioned in this brief summary [-47-] of what Boethius says throughout such description of his. I have omitted them because they are not necessary for our purposes, but I reserve talk about them when we discuss the musical characters which were invented, as Boethius himself relates at chapter three of the fourth book, by the ancient theorists [T. in marg.]

[Bottrigari, Il trimerone, Giornata seconda, 47; text: HYPERMISSOLIDIO, Netehyperboleon, MISSOLIDIO. LIDIO. Paranetehyperboleon, FRIGIO. Tritehyperboleon, Nete diezeugmenon, HYPOLIDIO. DORIO. Paranete diezeugmenon, HYPOFRIGIO. Trite diezeugmenon, HIPODORIO. Paramese, MESE, Licanos meson, Parhypate meson, Hypate meson, Licanos hypaton, Parhypate hypaton, Hypate hypaton, Proslambanomenos]

to avoid writing always the complete names of the notes. To sum up, in order to render the description brief and useful, I have added the full names, so that you might see more clearly what Boethius describes using such names, namely how the modes, or tones are removed one from the other through their mese. So, this is the table correctly described by said Boethius, through which you will be able to notice clearly [-48-] what he has related.

Alonso. I see that the mese of the Hypodorian is the licanos meson of the Hypophrygian, and equally the mese of the Hypophrygian is the licanos meson of the Hypolydian, but I do not see now that the mese of the Hypolydian has any relation with the licanos meson of the Dorian, more, it seems to me to be half-way inbetween said licanos meson and the mese of the Dorian.

Anniballe. This is what Boethius realised, and that prompted him to say that the mese of the Hypodorian is the hypate meson of the Dorian, as in this case.

Alonso. It is so.

Anniballe. Also, that, since the interval between the mese of the Hypodorian and the mese of the Dorian is a consonant diatessaron, the interval between the mese of the Hypolydian and the mese of the Dorian is a semitone.

Alonso. Così stà.

Alonso. What is the reason for this?

[V. in marg.] Anniballe. This is the reason. Boethius realised that, given the description that he produced, the mese of the Hypolydian was not in unison with any note of the Dorian mode, or tone, and, since he wanted to prove that the interval between said mese of the Hypolydian and the mese of the Dorian was a semitone, as he had proposed, he decided to demonstrate it using the diatessaron, on the solid basis that the interval between the hypate meson and the mese is always, as it is, a diatessaron. Therefore, as he argues implicitly, since the mese of the Hypodorian is the same note as the hypate meson of the Dorian, it follows also that the distance between it and the mese of the Hypodorian is also a diatessaron, and, having already demonstrated, thanks to one and the other licanos meson, that the interval between the mese of the Hypodorian from the mese of the Hypophrygian is a tone, and that, equally, the interval between the mese of the Hypophrygian and the mese of the Hypolydian is also another tone, as nothing but a semitone is lacking to complete the interval of a diatessaron, since it is formed of a semitone and two tones, therefore said semitone was therefore the distance between the mese of the Hypolydian and the mese of the Dorian.

Alonso. I have understood all this complicated matter. Continue with the rest.

Anniballe. So, since you have understood well this section, you will grasp even better, and more easily this other one. You see now here that the mese of the Dorian is the licanos meson of the Phrygian, as Boethius said, and so he establishes that the distance between them is a tone in said diatonic genus. Equally, the mese of the Phrygian is the licanos meson of the Lydian, and therefore the distance between them amounts to another tone.

Alonso. He conforms to all this very well also.

Anniballe. Now, when Boethius realised in the same way that, because of this erroneous description of his, he lacked a way to prove that the distance between the mese of the Lydian and the mese of the Mixolydian was a semitone, as he had proposed, as before, he availed himself again of the help of the distance of a diatessaron, saying, that the mese of the Dorian is the hypate meson of the Mixolydian, as you see clearly here. Also, this hypate meson is removed from the mese in every mode or tone by the interval of a diatessaron. He added, to further corroboration of his demonstration, that, since the mese of the Mixolydian and the mese of the Hypermixolydian are separated by a tone, since said mese is the licanos meson of the Hypermixolydian, as you can see clearly here, and said mese of the Dorian is the licanos hypaton of the Hypermixolydian, it follows that said mese of the Dorian and the mese of the Hypermixolydian are separated by the consonant interval of a diapente, since always (and you can see it here) the licanos hypaton of the diatonic genus and the mese are separated by a diapente, which has a tone more than the diatessaron. This is what he argues tacitly, in the same way that I put to you that he argued earlier about there being the distance of a semitone between the mese of the Hypolydian and the mese of the Dorian.

Alonso. Do not take any further bother to explain to me said evidence, because I have understood everything very well, and I understand fully how you want that we can know that Boethius has been understood to have realised such error, which he has committed in said description of the tones, because he realised that both the notes of the mese of the

Lydian and of the Mixolydian were not in unison, one with any note of the Dorian, and the other with any note of the Mixolydian. However, would this unwanted consequence follow equally even if the species of the diapason were altered orderly according to the sequence of the authentic modes applied to them, in the way that you have shown in your discussion that Boethius relates as well?

[-50-] Anniballe. On the contrary, every mistake would be eliminated, and you would realise that every note of every system or constitution is always in unison, as it has to be, with a note some other system, whether they come before, or follow, as I showed you that this is the case in the systems or constitutions described by Ptolemy and written with Guido's characters; equally, I seem to remember that you resorted implicitly just now to their description for another reason, and to Alypius tables, which have the same content. But, what are you discussing within yourself in your mind?

Alonso. That, having drawn with great effort, all the other and so different tables of the tones which you related to me with the musical notes that we ourselves use, both yesterday and today, I do not seem to be able to find a way to describe in a continuous and orderly way all the eight tones in a fashion that corresponds to this one by Boethius.

[X. in marg.] Anniballe. It is not an easy thing to do. You can derive clear evidence that its sequence is not at all natural from this, such as the order of all the other tables which you have learned and described with great ease up to now. Think hard about it, and try to find a solution, while I prepare the pen, the ink and this piece of paper, on which you can then draw it immediately. What is the problem? What is keeping you and delaying you?

Alonso. Many, many difficulties which I cannot overcome with my weak faculties, when it comes to preserve the sequence of the steps of the first scale of the Hypodorian mode in all the other sequences of the scales of the following modes, or tones.

Anniballe. Add to these words 'and the immutable order of the steps when you superimpose a mode to another one.'

Alonso. I had forgotten about this, so this description seems to me to be much harder to achieve, not to say impossible.

Anniballe. Do not despair of it at all. Take the pen with your hand, and begin to draw.

Alonso. I pick it up willingly to draw the lines and write in the our notes, or musical characters according to the Hypodorian mode or tone demonstrated by Boethius. After I have done this, I shall wait for you to agree to illustrate the other six that follow, as I invite you to do. As to the Hypermixolydian, I know that it is truly the same as the Hypodorian, but an octave higher.

Anniballe. And, as you will see, the Dorian follows on naturally according to the notes of the Hypodorian, but through [-51-] synemmenon tetrachords, or, as we say, conjunct. I will add the description of all the other modes that follow in sequence to your description of the Hypodorian, as you asked me to do. This description is really as follows. [X. in marg.]

[Bottrigari, Il trimerone, Giornata seconda, 51; text: Hypodorio, Hypofrigio, Hypolidio, DORIO, FRIGIO, LIDIO, Missolidio, Hypermissolidio] Alonso. I did say that many and multifarious difficulties presented themselves to me in planning the lay-out of these scales. I see also that it is so, because in this Hypolydian and in this other Lydian tone the aid of so many dieses, flats and naturals is required, especially in said Hypolydian, where the first step of a tone is really extraordinary.

Annibale. Now, you must observe in particular the great inappropriateness of this description, which I have already drawn up, and the clear contradiction of the thesis which we have already begun to consider. To sum up, you must understand clearly that Boethius acted in a way that was totally different from his most learned words, and you can conclude that he was a theorist more gifted as an excellent organiser of theories, than someone who was good at executing practical operations.

Alonso. One cannot deny that such description of the modes – except for what concerns the Hypodorian, Dorian and Hypermixolydian – is not very different from the supposed thesis, and that it is extraordinary because of its uniformity in rising upwards, since invariably the steps of tone, semitone and tone are preserved as in the Hypophrygian mode.

Anniballe. Now you can add this other warning regarding the harmonic genera, albeit one steps not only into the realm of *musica finta*, but into the chromatic genus, despite Boethius having already made a firm pledge to give a description according to the diatonic genus by saying, as I have already mentioned, in said chapter fourteen of the fourth book. 'Let the order of the voices be ordered from the *proslambanomenos* to the *nete hyperboleon* in the diatonic genus, and this be the Hypodorian mode.' Then, in the following fifteenth chapter he adds similarly.' But since we have said that these modes are to be found in the species of the consonant interval *diapason*, let us describe them only in the diatonic genus;' and in the following sixteenth chapter he repeats as evidence of the distances between the modes in said description. 'The *mese* of the Dorian is the *licanos hypaton* of the Hypermixolydian, and the *licanos hypaton* compared to the *mese* is separated from it by a consonant interval of a *diapente* in whichever way within the diatonic genus.'

Alonso. It was a remarkable thing that Boethius, a philosopher renown for such vast mastery in mathematics, should have been so dazzled, that, as the saying goes, he should have let a spear fly instead of a fist.

Anniballe. You must resolve yourself to believe that he who does nothing, commits no mistake, and that for this reason one should condone [Y. in marg.] past mistakes with ease, especially if incurred by able men. 'But in a very long work sleep is allowed to creep in', says Horace, and we must think that they were writing with the intention to benefit humanity while they were preoccupied with something else, and they did have later the ease, or the time, or the serenity of spirit to revise their writings and recognise and correct the errors, or faults committed in them. All these factors may well have contributed to this topic. Nor must you believe that he was alone in his fate, because, were it not so much outside our aim, I would mention many most excellent authors, who have fallen into such a trap, and atop of that list would be the prince of philosophers. But, do let us return to our tones.

Alonso. When you warned me of the contradiction of the thesis in said description of the tones, you said that Boethius moves not only from the diatonic genus to the musica finta, but to the chromatic genus, and I imagine that you said this because of the dieses, flats and naturals which are found in the scale of the Hypophrygian, in this one of the Hypolydian, and in this other of the Phrygian, and similarly in the scales of the Lydian and Mixolydian, as you wanted to infer that such signs are not typical of the diatonic genus, which is the only one proposed as a topic by Boethius.

Anniballe. There is no doubt that all these signs of diesis do not belong to the pure diatonic genus, but some are typical of the chromatic, and some others (and I mean some of these flats as well, except the tritesinemmenon, or, as we call it the high b fa) belong to the musica finta, but I want to delay talking about both these topics more in detail to another, more suitable time, since now it is time by now that I should devote myself to the public service of my patrons, answering to my obligations.

Alonso. But today is Friday, and today you are free.

Anniballe. You tell the truth, and I forgot about it. So, you must have recognised [-53-] the untruth of that description of the tones drawn up by Boethius, and, as you must have understood the inconvenience of how the different name given at the same time to the same note derives from such untruth, you must have grasped the contradiction of Boethius' thesis very solidly, and you must have grown sure that [Z. in marg.] there is no stronger and better remedy to this error made by Boethius, than observe the advice of Ptolemy, who built the Dorian tone - which represents for us the tone, or mode Prothus authentic ecclesiastical with which we are familiar – not on Dlasolre, but on Cfaut, and, consequently, the second mode, or tone, its plagal, which is a diatessaron lower and corresponds to the Hypodorian tone, on Gamma[ut]. The most erudite Zarlino recognised this after he published his *Institutione armonica* in the press. In the tenth and eleventh chapter of the fourth book of that work, following, as I said, the opinion of all the other theoretical writers of this plain chant, or ecclesiastical cantus firmus, who came before him, he described, and illustrated with examples that the location of said modes, both authentic, and plagal, begins on Dlasore. Therefore, in the re-print of said *Institutione armonica*, he retracted his first opinion and built said mode, or trope Prothos and authentic on Cfaut, and its plagal on [Gamma]ut. But, because he did not tell this reason for this change of mind, or retraction, which in my opinion is very true and important, he has left to some theorists plenty to work on, not only in their discussions, but in their writings as well.

Alonso. Therefore, you deem that, according to the opinion related by Ptolemy, the diapason, or octaves of the ecclesiastical modes, or tones, had their beginning on Cfaut, and not on Dlasolre?

Anniballe. I am not alone in subscribing resolutely to this opinion, but much before me, as I said earlier, the knight Signor Cavalier Hercole Bottrigaro, who has to be provided with the greatest trust, and with good reason, in all the mathematical disciplines.

Alonso. It seems to me, I reply, a matter of great importance, that the ancient ecclesiastical musicians, and then the more recent, and lastly the modern and contemporary to us, did not know the clear and easy truth of the good doctrine of

Boethius regarding the description of the tones, and they have clung to the obscure and difficult falsehood of said description, or outline of the systems.

[-54-] Anniballe. It happened to them what, they said, happened to a poet with regard to Homer's poems, as he chose what of them was dirt, and was not able to distinguish what their gold was therein. I want to confess to you the pure truth, namely, that I myself was one of those who was led by the authority of so many able men for a long time without looking for anything else, until I was warned and informed of this by knight Signor Cavalier Hercole Bottrigaro. Moreover, to confess myself to you entirely and free myself from my sin, I did not think, having grown old in that opinion, that I would have been able to accept the lively and rigorous reasons adduced by him, and to open the eyes of my blindness to experience so many lights of the truth. Also, after I acquired this knowledge, I have fallen back time and again on to my doubts, but in the end, I have straightened myself up, and reconfirmed myself most solidly in the good and true doctrine which I have explained to you, and again I repeat it to you and confirm it again as such. What I have left, as a conclusion to what pertains to the understanding of the progress of the eight ecclesiastical modes, or tones, is to say that those who observe and regulate them maintain that one should heed two considerations and precautions, in order to know them completely, which I consider of no regard at all, because one and the other, and especially the second, are source of confusion, rather than of distinction of that subject. Nevertheless, I will explain both of them with the briefest brevity. Such regulators believe that one should note firstly the place from which said plainchant starts and proceeds up to its half-point (this section in the psalms is called intonation), and then continues up to the end. Therefore, it is their opinion that not only the ending, as it has been rigorously concluded, suffices to determine the mode, but one needs the knowledge and awareness of their beginning and of middle part. This would be very necessary, but only every time that the places and locations of their beginnings were certain and invariable, and also their progress and their middle sections, [Bb. in marg.] just as it is the case in the places and manner of their conclusions. But if the untruths of their rules are much more numerous than the main rules themselves, what is the advantage to establish as a rule (and let me say this as an example for others) that the first mode, or tone begins on Ffaut and, progressing through Gsolreut, arrives at Alamire, but it is also free to start not only on Elami, but on Dsolre, and also on [-55-] Cfaut, and that it does not complete, if not rarely, all of its diapason, just as the others do, but it suffices almost always that the authentic modes add to their low diapente in the psalms, and the plagals to the Diatessaron [Cc. in marg.] from their end upwards. What difference can discern the human ear between the progress of the first tone and of the sixth, one authentic, and the other plagal, but even more between that of the third authentic and of the second and eighth plagal? I said the human ear, because all three progress in the same way, as far as the location of the their semitones is concerned, nor there is any difference between them, apart from the height or depth of the voice, which has not been highly regarded at all, but, to the contrary, it is so despised, that all that is sought for in our choirs is what is comfortable for the singers, so the eighth mode, or tone is sung and intoned on the same note on which is sung and intoned the third, and, equally, any other.

Alonso. So, truly this turns into a great confusion.

Annibale. Immense.

Alonso. Have the observers and regulators and writers on the subject of those modes been able to find a good and solid rule for these?

Anniballe. If they had found a good and general rule which, if I am not mistaken, would be very easy for you (I will tell you this rule at the right time and on the right occasion), we would not find ourselves in the confusion in which we find ourselves. To the contrary, our confusion derives from their rules. Their universal rule is that the first and sixth tone proceed through these notes, fa, sol, la, as you can see, but they do not define how they should sing that fa, sol, la, since the progress of the first tone begins in Ffaut, just as the one of the sixth tone, but fa, sol, la also starts on Cfaut. However, this, as I said, does not matter to the listeners who are clear in their distinctions. Moreover, they speak without making any distinction, which could be enacted with an easy and brief rule, as I also told you, if we make the children and the young men intone the authentic tropes, or modes, and the men the plagals.

Alonso. Facile, e breue sarebbe ueramente questa Regola.

[-56-] Anniballe. They say that the second mode, or tone progresses from its beginning through the notes ut, re, fa, just as the third and the eighth. But the third one, which starts on the low Gsolre, just as the third one and the eighth, forms its ut, re, fa through the tetrachord which we call diazeugmenon, or disjointed, or with [sqb] natural, but the second one forms its ut, re, fa beginning from Cfaut. They assigned to the fourth, as its movement, the notes la, sol, la, because they want that one should understand, making this distinction, that it one has to begin to build it in alamire. In their confused theory, they want that the fifth should move through the notes fa, re, fa, and the seventh through the notes fa, mi, fa, sol, but they do not say clearly where we have to start, almost as one should guess that the fifth has to start on the low Ffaut and procede through the diazeugmenon tetrachord, or, as we say, with a [sqb] natural in alamire and in csolfaut by saying fa, re, fa, or through the synemmenon tetrachord, or with a b flat, pronouncing the notes ut, mi, sol, and, in the case of the seventh, not only in csolfaut with [sqb] natural, but in Gsolreut, where I cannot see that it can form the fa, mi, fa, sol assigned to it, if not by adding said Gsolreut. You will find that all the writers who deal with said ecclesiastical tones give this rule in a Latin tetrast, which was typical of those times, when simple brevity [Dd. in marg.] was more sought after than elegance of expression, especially when such scholastic matters pertaining to the rules of the arts and sciences were involved. Nor do I want you to expect me to recite these four verses which pertain to the observation of the beginning of said modes or tones, nor the three ones which deal with the movement by leap of said beginning, nor the other four pertaining their rising equally by leap, but I refer you to many the books which contain them.

Alonso. At least name the writers of those books, please, if they are not too many.

Anniballe. To the contrary, because there are many, and you would end up by forgetting some of them, not only I will name them, but I will give you a written record with the titles of their works.

Alonso. I do not want you take on this bother to write them. Leave it to me. Please start.

Anniballe. I omit the main two, whom I have already mentioned, Oddo and Guido, together with Bede [-57-], who, although they write about music, they do not include in

their books such verses, as the ones, which, I believe, were composed by the writers nearer to our times. Write, please.

Alonso. Franchinj Gaffurij Musica utriusque Cantus, Frà Bonaventurae Breuiloquium. Nicolaj Volicj Enchiridion Musices de Gregoriana, et figuratiua pertractans. Nicolaj Listenij Elementa Musices. Fiore angelico di Musica by Frà Angelo Picitono. Domini Petrj Aaron Dialogi de Institutione armonica. Frà Illuminato author of the illuminata di Canto piano, ò fermo. Frà Stefano Vanneo, Recanetum de Musica aurea. Don Vincentio Lusitano with his Introduttione facile alla Musica piana,

[Anniballe. add. in marg.] Also, besides many others, I could tell you to note the Directorium Chorj by our Don Giouannj Guidetti. But, since this book of his is more an antiphonary, gradual, or book of psalms, than a book containing the general rules of ecclesiastical music, I suggest that you do not put it in the same category as the others, which you have written down. For the same reason, I will not talk about the anonymus familiaris Clericorum, about the Antiphonary and ordinary Roman Processional, and of the one according to the order of the Dominicans, and other such books. Therefore, in those you will find written the good, but not very well observed (as I told you) rules of proceeding, and of the movements of the other parts of said plain chants, or cantus firmi, namely of their middle points, and endings, which they call Euouae.

Alonso. What is the meaning of this word, which is so strange? Is it an Hebrew word, Egyptian, African, or Arabic?

Anniballe. It is a so-so word. And it is a word, as I was telling a gentleman friend of mine not so long ago, that some modern theorists have chosen to impress their ignorant readers with their weirdness, but it has no meaning taken by itself, if not ah, ah, ah, this, that

Alonso. Tell me, please, what has made you laugh? My silliness perhaps?

Anniballe. Ah, ah, ah, I will tell you, so that you may rest assured that my laughter is not [-58-] at your expense, and you may laugh yourself when you learn that this ah, ah, ah does not relate, as it is sometimes, [Ee. in marg.] to my laughter, but to the fact in itself. When last week I found myself somewhere with an Antiphonary camurale very well written by hand and annotated in pen, and I was discussing and thinking about these errors in the plainchant, of which we talk to this day, and I was showing how it is uncomfortable and not very logical, and for what reasons, to judge what is or should be the tone of the following psalm from the leap from the end of the antiphon to the euouae, although there are rules, somebody, whom I do not want to name at all for respect of the habit which he wears, nor do I want to describe why, since he showed to me to be not very knowledgeable of the doctrine of the tones, he wanted to reveal his ignorance of what pertains to this voice euouae, by telling me that he did not remember not even one of its four or five meanings, so, wanting to help him out from such an embarrassing situation, I said to him. You will have to be content with remembering only one, since it has no more than one. Then he got angry, and he replied snobbishly that he was most certain that that word had four, or five interpretations, and meanings. I replied to him that I could not obtain so many meanings from any good expert, and that the only one and true one that it has, if he was happy with it, I could point out to him again, as I remembered it. He snubbed my offer obstinately by saying, 'I am sure that, as soon as I am back at home, I will be able to find again all these interpretations.' 'So,' I replied, 'the word euouae can

accept only one [F. in marg.] meaning, and no more than one, and this is *Seculorum amen*, if you take away all the consonants that make up said two words. Nor there is a writer that maintains otherwise. And if a writer were found that gives to it another meaning, and you wanted to do me a favour and inform me, or name the writer, even without providing me with the passage where he says this, as it is my habit I will not rest until I have searched his entire book, even if it is as long as the entire Bible, I would be very obliged to you.' Thus I got away from him laughing, just as I have been laughing even now, ah, ah, ah, as I was telling you about it.

[-59-] Alonso. So, the word *euouae* does not mean anything but the *Seculorum amen*, which concludes each *Gloria Patri* without all of the consonant letters, namely, S c l r m m n?

Anniballe. In truth, it has no other meaning, as the *Fiore angelico* relates at chapter fifty-nine of the first book. *Vuollicio* at chapter four of the third book of his *Enchiridion*, *Vanneo* at chapter fifty-five of the first book of his *Recanetum*, *Franchino* in the eighth chapter of the first book of his *Musica utriusque cantus*, *Don Pietro Aaron* at chapter thirty-five of his first *Dialogue*, our *Giovanni Spataro* towards the end of the first *Correction* in the second part of the defence of *Ramus* against *Burtius*, and said *Burtius* in the twenty-fifth chapter off his *Florum libelli*, *Zarlino* at chapter fifteen of the fourth part of said treatise, and each one of the other authors named above mentions this. For this reason I told you that it was a so-so word.

Alonso. I remember, but I do not know why.

[Gg. in marg.] Anniballe. Because the true words, unless they are monosyllable, they cannot be, nor are composed only of consonants, or vowels, but by consonants and vowels mixed together. However, this voice *euouae* is composed only by vowels, which, if the two V were not considered as having the value of consonants, it would not be possible to approach it as a word, not to pronounce it. But it is approached and pronounced in the same way as the word *Vuoua* is pronounced, which indicates what is begotten by a chicken: *Voj*, *uia*, *Vua*, *Oue*, *Viuo*, but, if the strength of the consonant were absent, as it happens in *aia*, *uaio*, and in other similar voices with the letter *i*, all these vowels would remain, just as these others, totally disconnected, without relief and deprived of a compounded pronuntiation, which can be seen also in [Hh. in marg.] another word which is this one, *aeuia*, to which if we add the three sounds *l*, which were taken away originally, the result is *alleluia*, as *Oddo* shows in the chapter *ex his postea* of his musical *Enchiridion*. In order that you may clearly see that some notable example of such manner or rule is found, I will not say as an instance of imitation, but as a similar circumstance, you must know that in the medals of the kings of the Goths in Spain, and particularly in the thirty-three of king *Vuamba*, thirty-four of king *Ervigio*, thirty-five of king *Eziga* his son [Ii. in marg.], and thirty-six of king *Vuitiza*, albeit rare, these letters *I D M N* are found, which signify *In Dei nomine* once all the even letters are removed without exception, as more clearly one can see in a medal by said *Ervigio*, where there are these letters *I D I N M N ERVIGIVS Rè*. But if I do not collect the sails, I realise that the pleasure of roaming around could easily mean that we have to spend the night away from the harbour, or else that we should spend most of the night wandering. Let us collect the sails and let us return to the harbour. Therefore, I tell you that the *Euouae* have [-60-] different terminations for the most part, although, according to the rules, there should be only one in each mode, or tone, as I told you that the common rule is. Take the *Euoae* of

the first tone as an example of most of the others. This one not only ends in Dsolre, but in Ffaut, and also in Gsolreut and alamire. To justify such irregularity these writers and regulators say the most vacuous things in the world. Among the others this is the most important and relevant, that some of the plainchant melodies are perfect, other imperfect, others more than perfect, others mixed, other commixed with regard to their tone or mode, and that the perfect ones have regular beginnings, middle sections and endings, while the imperfect, and the more than perfect have not. Hence, as you can easily understand, there is no plainchant, or cantus firmus which cannot be admitted. I leave the judgment of such things to whoever wants to express it, but I will provide a rule, [Ll. in marg.] which is applied to the middle sections of said modes or tones (it is a very attractive rule, and it has not been noticed by any other, as far as I have read). This is the rule, namely, that they should have a note in the middle, which does not appear the beginning. For instance, there is in the middle of the first tone the note b fa, which is not found anywhere in its beginning, or, there should be in the middle of the second mode the note gsolreut, which is not sung at the beginning, and equally in all the others.

Alonso. Surely, this is a rule that has to be greatly valued.

Anniballe. There should be also another rule of no less consequence, but it has been altered and corrupted, because it appears to be applied clearly in the first four modes, and in the last two, since the fifth and the sixth have been altered, although the proper and good form of said sixth mode is still extant as well, and the fifth one could be easily accommodated and reduced to what I believe to be its original form.

Alonso. Please teach me this other rule as well.

Anniballe. Gladly. This rule would be that the middle section of the authentic or principal tones end ascending, and the middle parts of the plagal tones, or followers, should end descending. As I said, this can be seen in the first and third one, which ascend, and in the second and fourth one, which descend. And while we find that the fifth ends currently downwards and the sixth upwards, it should be necessary for the fifth to ascend, and for the sixth [Nn. in marg.] to descend. I repeat that this would be very easy, particularly so in the case of the sixth. In this way the confusion that derives from their excessive similarity, when they need to be distinguished one from the other, would be eliminated for the most part.

Alonso. I would appreciate very much that you completed your description with an example.

[-61-] Anniballe. If we want start to draw doodles on paper, and copy things copied over and over hundreds of times, it would be not only an effort without much gain, but a loss of much time. Nor should you believe that I say this to avoid making the effort of moving my pen, but because [Y. in marg.] it would really be a wasted effort, since all of this is found in the books of the theorists who wrote about this plainchant, called by some also music of the angels, and whom have been already listed. Nevertheless, I will do what is necessary to satisfy and please you, because I am here with this sole aim.

Alonso. I would be really very pleased, but, because we could move on instead to the other things which are left for you to discuss, I will be happy if you showed me the

change of the middle sections of the fifth and sixth mode, which should be enacted to reduce them to this beautiful rule.

Anniballe. The fifth mode, or tone now ends in his middle section in this way

[Bottrigari, Il trimerone, Giornata seconda, 61,1]

[yy. Oo. in marg.] In order for it to come under this rule, it should be necessary for it to end thus

[Bottrigari, Il trimerone, Giornata seconda, 61,2]

The sixth now usually ends in its middle section thus

[Bottrigari, Il trimerone, Giornata seconda, 61,3]

and to regulate it well it should be reduced to its first and true form, and termination, which is this one

[Bottrigari, Il trimerone, Giornata seconda, 61,4]

Alonso. This is something very easy, and I am very surprised that such corruption has not been corrected.

Anniballe. You should not be surprised, because it is not something anyone has thought about. You should be more surprised of the fact that nobody has thought about it, than of the existence of corrupted passages that have not been corrected, because nature, for many reasons, is prone actively to those.

[Aa. in marg.] Alonso. Did you not say that some of these plainchants of cantus firmi are called perfect, others more than perfect, others compounded, or mixed, and others commixed, with regard to the modes, or tones?

Anniballe. I did tell you this, but I also added the reason why they are called thus by the regulators, which is one of the main absurdities, if not abuses, that can be found in dealing with this topic, and one that is in greater need of correction.

Alonso. I have a great desire for you to agree to show me an example.

Anniballe. In the books of the writers quoted above and which you remembered, and particularly in those by Gaffurius, you will find most of the answers to what you want to know. I will say to you only that, since in order to know one of two opposites it is enough to know one of them, it will suffice for me, to be brief, to outline an example or two for each of the eight modes or tones, among those that in truth one can call perfect. With regards to the first tone, note the [-62-] antiphone *Ecce nomen domini. Ave maris stella*. Of the second, *Innocentes pro Christo, Salve sancte pater*, and also *Mundi totius*. I do not believe that you can find any perfect ones ascribed to the third one, and to the fourth one, and few of the others. Of the fifth mode, you will have *Vestri capilli, ex secreto, Coeli et terra*; of the sixth, *Gaudent in caelis*; of the seventh *Urbs fortitudinis*; of the eighth, *Ne timeas Maria*. In order to peruse them, you will be able to avail yourself of the Roman

Manual, and I refer you to that in particular, to avoid that, by some ill fortune, you should come across some other book containing such antiphons or hymns, that have been changed and fitted with a new melody with different notes or musical signs, as you can clearly realise if you count the hymns which Gaffurius quotes as examples of said tones in the book of his *Pratica Utriusque Cantus*. In those examples he wanted to show the perfection of those in any trope, or mode, or tone without any other consideration. I also warn you that it was allowed to every [Pp. in marg.] church of any main noble city to have particular psalmodies and antiphonaries. Hence, I am becoming convinced that this irregularities, abuses, and not well understood and considered doctrine (if I am not mistaken; and at any rate, may this be said by me always with the due and suitable respect) has ensued from this, since easily anyone has wanted to take the licence to compose in music hymns, antiphones, psalms, and all that is needed to sing in church, being satisfied (as nowadays is common practice, alas, also in [Qq. in marg.] contrapuntal music) with allowing new things to be heard. Hence, the listeners are more focussed on the new features of what is sung, than on the important meaning of the words, which should have been moved them to listen. And just as in imitation of the ancient Greeks, who published their [Rr. in marg.] laws with sounds and songs, which they called *nomoi*, of which Aristotle talks about in the fifteenth proposition of the nineteenth division, when the people hear the sound of the trumpet before our public proclamations commonly called *Bandi*, they do not come just to hear that sound, but to understand the words expressed by that town crier or trumpeter, equally, they must not be drawn to listen to the chants [-63-] and the music, which are simple embellishments and pure enticements for the hymns, antiphons and psalms, but to listen to and to understand well the words, and the meaning which are like the bodies and the souls of those songs and chants. For this reason Augustin [Ss. in marg.] saintly Doctor said in the book of the *Confessions* Cum me magis mouet Cantus quam res; quae canitur: tunc me audiuisse [audiuissere ante corr.] Cantantem, et paenaliter peccasse confiteor. When the singing moves me the most, than what is sung, I confess that then I hear the singer and I have committed a sin worthy of punishment. And Saint Jerome in the Division 92 chapter one says, Deo non Voce tantum: sed corde esse cantandum. Nec in Tragedorum modum guttur, et Fauces medicamine liniendae sunt, ut in Ecclesia Theatrales Moduli, et cantica audiantur. [One must not sing unto God just with his voice, nor the throat has to be loosened with potions, so that songs and music suited to the theatre are heard in church add. supra lin.] And the most saintly Gregory in the ninety-second Distinction In Sancta says again himself, Plerunque in Sacro ministerio dum blanda uox quesitur, congrua uita negligitur. Et Cantor Deum moribus simulat cum populum uocibus delectat. [Very often when in the sacred function an enticing voice is sought after, an appropriate lifestyle is spurned, and the singer embodies God with his attitudes, while he entertains the audience with his voice. To this you can add what Saint Basil wrote about the first psalm, and Saint Chrysostom about psalm one-hundred and eleventh in the thirty-eighth homily about Saint Matthew add. supra lin.]

Alonso. It is all in order, but, I believe, it is neither the appropriate time or the place to deal with this topic.

Anniballe. You tell the truth, when you say that the most beautiful rule among those that cover the modes or tones is the one that can be seen between the middle of [Tt. in marg.] the first and the middle of the fourth, since as one progresses the other regresses. In fact, the progress of the first one is this

[Bottrigari, Il trimerone, Giornata seconda, 63,1]

and the one of the middle is this one

[Bottrigari, Il trimerone, Giornata seconda, 63,2]

Here you can see clearly that the progress of the first one amounts to the regress of the fourth, and conversely, when the fourth advances, the first regresses. This rule would be extremely beautiful if it were observed in sequence by the authentic and by the plagal modes, namely, so that the plagal modes corresponded in this way to their authentic modes, resulting, as we say nowadays, in an inverted fugue. I hope that you shall be able to understand me completely much more and with more clarity and ease, if I add the description, which one could make of the other six without too much alteration, to these two which I have described, and this is why I am holding the pen in my hand. Let us suppose that the fourth mode, or tone becomes the second and plagal of said first and authentic, because of its contrary motion, and also that the progress of the third which [-64-] is such

[Bottrigari, Il trimerone, Giornata seconda, 64,1]

and its regress is such

[Bottrigari, Il trimerone, Giornata seconda, 64,2]

and let the fourth become its plagal in sequence, and let us underpin this progress of the second with a plagal mode, which has become now fifth and authentic, according to our supposition

[Bottrigari, Il trimerone, Giornata seconda, 64,3]

with this imperceptible (except in its high section, of which, as I said earlier, we are not considering now),

[Bottrigari, Il trimerone, Giornata seconda, 64,4]

becomes plagal and sixth in sequence, and similarly, that to the seventh and authentic, whose proceeding is such

[Bottrigari, Il trimerone, Giornata seconda, 64,5]

corresponds its contrary motion thus

[Bottrigari, Il trimerone, Giornata seconda, 64,6]

and so, after becoming plagal, it is placed in the last and final place of said tropes, modes, or tones. And since I cannot remember anything else that I should discuss about them, I want (If you like, and if you have no more questions on the matter) that we should turn our discussion on to the ancient and modern tones that are used by our modern musicians in their compositions which are called *canti figurati*.

Alonso. You can do as you please, as I have no more questions.

Anniballe. So, I will tell you first that these modern tones, or modes are eight, just as the ancient ecclesiastical ones which we have discussed, and that the low, middle, and high parts of voices of counterpoints were written among themselves in accordance with the progress of the sequence, or system of those modes, as we find evidence in the masses, psalms, motets, hymns and laudi, firstly by Gian Mottone, then by his pupil Okenghem, who in turn taught Josquin, by Vaqueras, Stokhem, Tangem, Brumel, Buaumont and of the many composers of that age, among whom I will not omit to mention by name our Giovanni Spataro, and later on up to the age of Hadrian, pupil of Giosquino, when he and Verdelotto from_ _ _ _ and many, many other composers of their age began to set to music Italian poems, which later (and I do not know really how) were and are still called madrigals.

Alonso. I seem to have understood that before Adrian, Verdelott and those others set to music Italian poems, there were certain songs in Italian entitled Frottole, Barzelle, Strambotti and also Canzoni francesi.

Anniballe. There were indeed, and, apart from the volumes that knight Signor Bottrigaro has transcribed by hand, there are ten small volumes which he possesses and were printed about one hundred years ago. Among said Barzelle and Frottole there are some in a comic and in a parodic vein, and some others, which I believe are carnival songs, such as the one of the Hot chestnuts, of the peasant tree-cutters and of the sellers of grain [Vu. in marg.] and similar ones. They are all for three or four voices and they are like precursors and sketches, as they really appear to be, for the Neapolitan songs and Canzonette, which then followed, just as the madrigals were then imitations of the motets [Xx. in marg.], and they have progressed so much further, that they are now taken as guide and models, albeit improperly, as the motets were, by composers who imitate them in the composition of their masses.

Alonso. This is very true.

[Yy. in marg.] Anniballe. On this subject, I want to give you to read one day a letter by Cirillo to messer Ugolino Gualteruzzo, printed in the fourth book of letters by different authors, as you will be able to know from it the judgement made by wise and prudent men on such imitations.

Alonso. I will read it gladly.

Anniballe. It was found than (whether who discovered this were Zarlino or Glareanus [Zz. in marg.] or Glareanus or Zarlino, I will leave this contention to them) that it was possible to add another four to these eight tones, and to reach the number of twelve from eight that they were, as they did, as Oddo ancient ecclesiastical theorist relates.

Alonso. For this reason they say that ours is not knowledge, but remembering. However, what does this theorist say?

Anniballe. In the chapter that begins Propitia Divinitatis gratia in his musical Enchiridion (such is the title of that book by Oddo, which few modern theorists have seen since it was never printed, and few copies found, such as the one owned by knight Signor Hercole

Bottrigaro. This title was believed to be the name of the author, turned into Enchiriades, by the monk Sigiberto in his catalogue of the illustrious ecclesiastical writers, perhaps because he had no understanding of the Greek language, where the word Enchiridion means [-66-] what in latin is called manuale, and in Italian manesco, or something that one has between his hands. These words perhaps are missing in the copy seen by him, just as, not only the title and the name of the author, but many examples and demonstrations are missing in that ancient copy written in pen on parchment, very beautiful and well preserved, which is property of knight Signor Hercole Bottrigaro. Hence it is possible that other have believed the same thing as Sigiberto, as Burtius shows in his *Florum Libello* where he writes a few notes against Bartholomeus Ramus) Oddo puts, as I was saying, these words, which translate thus in Italian. 'There were many singers who said that there were certain antiphons which could not be accommodate to any of the rules. For this reason the pious August, and father [aa. in marg.] of our homeland, the emperor Charles the fourth ordered other four modes, whose names are contained herewith.' Oddo also adds some syllables composed by letters which he calls Greek, but I will tell you about them at the appropriate time, and place. 'And because' - he continues - 'the Greeks claimed to have restored the eight tones thanks to their intellect, he wanted to achieve the number of twelve, so that they could be common both to us and to the Greeks, and agree also with the knowledge of the Romans. And to avoid that they might be found of an inferior nature, and _ _ _ _ , they added another four, I had the idea to cite their letters here below.' Similarly he adds some characters akin to the first ones, and he adds. 'As to these tones found in our modern times, although the Latin and Greek letters are different, nevertheless the outline of these tones harks back always to the first eight.' Therefore, you can well gather that this was a practice that was abandoned, and now resumed, and of which Glareanus wrote extensively in that book of his entitled *Dodecachordon*, if indeed though the divisions, or systems of those four tones added in those time by those musicians (this is something which would be long and difficult to discover) as these systems of four modes added by these others in this time to enlarge their number up to twelve.

[-67-] Alonso. Hence it is a true saying that nothing is said that has not been said before. However, given that they are twelve, can they not be equated with any number of the ancient tones, since Aristoxenus' tones were thirteen and those according to Alypius fifteen?

Anniballe. Since these were not the same as the ones of the ancient in the way that they are built, equally, they did not conform to the number of those.

Alonso. So, do neither Zarlino nor Glareanus follow the rule of the ancient in adding said four tones?

[bb. in marg.] Anniballe. Their methods are very different, since the ancients, as I explained to you yesterday, increased the number of theirs by dividing accurately in half according to Aristoxenus' way, namely, proceeding by semitones, while Glareanus and Zarlino, following the ancient order of the eight ecclesiastical modes, or tones, namely, using the diapente and diatessaron now above, and now below within the diapason, and dividing it now harmonically, and now arithmetically, have increased their number up until the total of twelve. Zarlino in the tenth chapter of the fourth part of his *Institutioni armoniche*, and Glareanus in the first part of his *Dodecachordon*, and at chapter seven and twenty-eight of the second book, show that it is not possible to go beyond that number

without falling into the repetition of the low tones in the highest register, or of the high tones in the lowest, which is a fault of which Ptolemy greatly disapproves, as I have shown you today.

Alonso. Tell me, please, since the species of the diapason are seven, as they are, and since each one of these is divided both harmonically and arithmetically, should not the modes, or tropes built on them be fourteen, a number which is between the numbers of Aristoxenus and Alypius?

Anniballe. In truth, it would really so, if all seven of the diapason could be divided both arithmetically, and harmonically, but apart from the fact that, as you already know, one is the diapason of the first tone, or mode, another one is the one of the second, albeit they have the same diapente in common, that one becoming higher because of the diatessaron which is added to at its higher end, dividing it harmonically, and this one, becoming lower because of the diatessaron added at its lower end, and thus being divided harmonically, so that proceeding in this order towards the high register, four other modes, or tones are created above the eight ecclesiastical modes, or tones, you must remember, [-68-] that between the hypate hypaton, or, as we say, low [sqb], and the parhypate meson, or low Ffaut, one does not find the interval of a true and perfect diapente. Equally, between said parhypate meson and the paramese, or, as we said between said low Ffaut, and high [sqb] one does not find a true diatessaron, and this prevents the use of this lower diapason and, consequently, the other higher diapason, as I will put under your eyes if you draw a description of it. Thanks to this description you will achieve the most clear realisation that it is much better to start the first authentic ecclesiastical tone, as the Dorian, on the parhypate hypaton, or, as we say, Cfaut, rather than on the licanos hypaton, or, Dsolre, as you want to call it, and this is another reason that convinced the very wise Zarlino to change, as I have told you, the starting note of said first authentic tone from the place that he had given to it in the first print of his *Institutioni armoniche* and to put it where he put it where he put it in the second and further reprints of that work.

Alonso. I will add to this description or the eight ecclesiastical modes, or tones, of which I have already provided you, the other four, putting the lowest note of the ninth in Alamire, and that of the tenth in Elami, in this way.

[Bottrigari, *Il trimerone*, Giornata seconda, 68; text: 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. D. E. F. G. a. [sqb]. c.]

Anniballe. This is correct.

Alonso. As for the eleventh in [sqb] with its octave, and as to the twelfth

Anniballe. Slow down, not so fast. What diapente is this which you assign to said high [sqb]?

Alonso. Oh, I did not realise it. I let myself be taken by the excessive speed of the hand driven by the feeling of unbound greed. It is an imperfect diapente. Therefore, what are we to do?

[cc. in marg.] Anniballe. First, leave aside that diapason for the eleventh mode and this one for the twelfth, which are a diatessaron lower, since one and the other, as I said earlier, has either the common diapente too small and imperfect, or it has the medium term of high Ffaut altered with by a diesis, but still imperfectly, and, as a consequence, the other term of the diapason in Ffaut then proceeds [-69-] to the following diapason, which starts in csolfaut according to the eleventh mode, or tone, and it takes the other one, which ends on Gsolreut, as its twelfth.

Alonso. In this way then?

Anniballe. Exactly thus. Now, put the beginning of the first trope, or tone in Cfaut, and you will see that this disharmony disappears, and said modes, or tones proceed orderly without any obstacle, or blockage up to a total number of twelve, and four are contained by these diapason, which are halved by such common and imperfect diapente.

[dd. in marg.] Alonso. Thanks to this positioning of the first mode, or tone in Cfaut, all the complex of said twelve tones appear distinct, clear, uninterrupted nor convoluted in their progress.

[Bottrigari, Il trimerone, Giornata seconda, 69; text: 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. C. D. E. F. G. a. [sqb][sqb] inhabili.]

Anniballe. Hence the rule, which allows to know which ones are the tones that are formed by one and the same diapason or its species divided harmonically and arithmetically, is clear to see.

Alonso. Is there a rule for this as well then?

[ee. in marg.] Anniballe. There is, for sure. And it is this: the first mode or trope has the diapason of Cfaut in common with the eighth, but it is divided harmonically for the first one and authentic, and arithmetically for the eighth and plagal. The third and tenth have the diapason of Dsolre in common, which is divided harmonically for the third authentic mode, and arithmetically for the tenth plagal. The fifth has the Diapason of Elami in common with the twelfth, which is divided harmonically for the fifth authentic, and arithmetically for the twelfth plagal mode. The second, then, has the diapason of Gammaut in common with the ninth, which is divided arithmetically for itself, which is a plagal mode, and harmonically for the ninth mode, which is authentic. The fourth has the diapason of Are in common with the eleventh. Such diapason is divided harmonically for the fourth plagal, and the species of the diapason transposed an octave higher, which is of alamire, divided harmonically for the eleventh mode, which is authentic. The sixth plagal mode [-70-] and the seventh authentic are left. For the rule of the number seven, which is between one trope and the other, the thirteenth, which should be authentic, and the fourteenth which should be plagal, ought to correspond to these. But, as we have said, since the higher species of the their diapason are incapable of this because they have their diapente in common, and, as you see, smaller and imperfect, they cannot provide them with a suitable correspondence. Hence, their total number has to add up to twelve in all. Some beautiful minds maintain that the twelfth mode and its other three companions are useless, since their difference can be barely distinguished with the ear, and therefore it is very small, and thus what Oddo said, about the recurrence of these four tones added to the first eight, becomes true.

Alonso. From what I have been gathering from your discourse about this rule, the main point is that the modes, or tones correspond to each other by adding or subtracting the number seven to the number of the proposed tone or mode, either through the same within the same diapason, or within the following octave.

Anniballe. You have understood it perfectly, and to complete it you can add that, if the mode or tone proposed is authentic, his correspondent will be plagal, and conversely, if the proposed mode, or tone is plagal, the correspondent will be authentic.

Alonso. All this makes sense, if the first trope, or tone starts on C_{faut}, in this new way. However, what happens if it starts on D_{solre}, in the same way as the ecclesiastical mode?

Anniballe. It will work well in the first and eighth, and ninth, third, and tenth, but the fourth and fifth will be deprived of that correspondence because of that common imperfect diapente in the sixth and thirteenth, namely, eleventh for the break down, and it will work very well in the seventh and fourteenth, namely, twelfth.

Alonso. Tell me, can these tones, or tones be used, as I heard they are, in transposition for practical reasons?

Anniballe. The habit of transposing them is due more to vanity or whim, since, what practical advantage can be gained from their transposition? Perhaps so that the natural high nature [ee. in marg.] of the ninth and eleventh tone is sung and played with the natural deep nature of the second, [-71-] fourth, and sixth? Also, so that this low nature may be useful to aid the middle nature of the first, third and fifth? Nevertheless, they are transposed, as you said, by changing their clefs and turning them from tones with the [sbq] natural, in tones with the b flat, both through the higher diatessaron and the lower diapente, where, in all the authentic modes, namely [gg. in marg.] in the first, third, fifth, seventh, ninth and eleventh, the notes of the lowest part, or, as we say, of the Bass, are so similar among them, that it is enough to change, or pretend to change the key of c_{solfaut}, in the tetrachord diazeugmenon, or with [sqb], into the key of F_{faut} with the sinemmenon tetrachord in the lower octave, or, as we say, with the b flat (a note, as you must know, [hh. in marg.] which was added by modern musicians for this practical reason to the organs, harpsichords of various kinds, and similar instruments, and found in the flute almost by virtue of the instrument in itself). In the plagal modes, namely, [ii. in marg.] second, fourth, sixth, eighth, tenth and twelfth, you will see repeated the same configuration of the diapason of the ninth and eleventh, and of the first, third and fifth at the distance of an octave.

Alonso. I seem to have understood that such transpositions can be done through that we call *musica finta*.

Anniballe. And not only through the false one, but through the disfigured now with the flats, other times with the sharps. I would never suggest that this were done in this, or that, or any other way, because all this consists in taking the lowest, or highest voice of the composition, which is composed in a particular tone. And commonly, when [kk. in marg.] one picks up the note to begin to sing, especially if the note is given from one or the other of the two extreme parts to a middle voice, it is normal practice to say, 'accommodate yourself'. But is it not true the addition of that note b fa [ll. in marg.] in Elami, to achieve a fifth with the bfa of the sinemmenon is something ridiculous?

Alonso. Why should it be something ridiculous?

Anniballe. You ask me why? It is ridiculous because it does not produce a real fifth with said bfa, as it is lacking of a sesqui-eightieth comma of ours.

[-72-] Alonso. Nevertheless it creates a very good tuning for the harpsichord, organs, and in other similar instruments. e

[mm. in marg.] Anniballe. It is in tune in a participated way, but not in a perfect way. But, since I have discussed this at length already, at knight Signor Hercole Bottrigaro's request, in the Dialogue of the playing together of several musical instruments intituled Il Desiderio under the name of Alamanno Benellj, which corresponds, as an anagram, and with its letters in different order, to my name and surname, and there I discussed said musica finta and I gave examples of it, I refer you to that for now, and I do not want to add anything else. But I will continue, by saying that [oo. in marg.] these eight, or twelve tones of ours are practised not less wrongly by our modern composers in their motets and madrigals, than our ancestors used their eight tones in the plainchant, or cantus firmus, since they maintain that the part called the Tenor is the foundation and the guide of the melodic outline of the tone, on which they are convinced they are building their composition, being moved to do so by no other reason, in my opinion, [pp. in marg.] than by their wrong interpretation of a word.

Alonso. I have always understood that this is the method that has to be employed.

Anniballe. To the contrary, in my opinion, they are very mistaken. And the main cause of this is that word.

Alonso. What word?

[qq. in marg.] Anniballe. The word Tenor, since, thinking, as they do, that such word means the part that is lower than the others in a composition, apart from the one that is nowadays called Bass, they maintain that said voice has that supreme authority, and that the distinction as to which tone underpins the composition stems from it.

Alonso. Even Merlino, Macaronic poet, has left it written in the passage where he describes the particular effect of each part of a composition. Hear it in his own macaronic language.

The Soprano penetrates more the hearing of the listeners

But the Tenor is the ruler of the voices, and the guide of the singers:

The Alto paints and decorates the Apollonian song

And the Bass feeds the voices, nourishes, grounds, and raises them.

Anniballe. Good. You have quoted me an author, to whom nobody else but Tortello [-73-] well-covered-in-cheese could reply, but this word Tenor could not have been in his fantastic vocabulary. Therefore, since he cannot answer, let the chestnut 'maron', or rather Vergilius Maro, Ovidius Naso, Statius and Vallo. But, leaving the jokes aside,

listen to how Lucan, Quintilian, Cicero and Livy explain the meaning of such word, which, [ss. in marg.] first of all, according to the Greeks, from which Quintilian derives its etymology, Tor [[<.>]] means accent, which the Greeks also called [Prosodias], then was understood by the Romans as form, continuation and order, or style. Hence Virgil, in the second book of the Georgica said (I shall recite his words and those of all these other authors, to make it easier for me)

I would believe that no other days rose

At the very beginning of the life of the universe,

And that they kept a stable course

And in the tenth book of the Aeneis

The spear launched by the arm

flies, and maintains its course covered in blood.

Ovid in the third book of the Transformations

Everything else little by little, drown out by a steady course.

Again Statius in the third book of the Silvae near the end of the Tears of Claudius Etruscus

Fortunate centuries with periods of five years passed, twice

eight by eight, and a tenure without dark times

Lucan around the end of book five

But the savage night tore away from the sailors

the control of wind and the command of the sails et cetera

Valerius Maximus then in the first book said. To prevent their following and respect from being attributed to religions. Livy in the third book of the Greek war. These customs and such love for the homeland belonged to every social class in one single manner. And in the eighth book ab urbe condita. The constant noise and the constant progress of the battle presented as a conclusion either the complete exhaustion of the soldiers, or the end of the battle because of the approaching night. I come now to Cicero, who said in his perfect orator. He was of a consistent tenure, as they say, in his speeches. What more would you want that would be better than this? Does not Petrarch himself show this clearly in Italian in the fourth stanza of the Canzone One day, when I was. Listen to it now.

[-74-] On that beautiful seat, secluded, shaded and dark,

No Shepherds approached (and perhaps it would be better accosted themselves, or accosted himself)

No peasants:

But Nymphs, and Muses singing to that Tenor.

Nor Petrarch is alone, since Dante as well said, metaphorically, at the beginning of the twenty-eighth chapter of the Purgatorio

But full of joy singing

They (namely, the small birds) received the first hours of the day,

among the leaves which held a bordone to their verses,

where he adopts the metaphorical sense of the word bordone for Tenor, in my opinion, as the commentators Landino, Vellutello, [tt. in marg.] Daniello, and others explain. In fact, just has the stick with one end coated in metal carried by the pilgrims as an aid to walking is called bordone, and similarly that largest [vv. in marg.] wooden beam on the roof of a house, which holds it up, is called bordonale, equally in a group of musicians and singers in musical accord this part called Tenor sustains all the others, and I believe that word bordone should be neither new to you in its musical meaning, nor difficult to understand. [uu. in marg.] Alonso. Not at all, since I remember well that the second among the strings of the lute, or of the viol is called thus, and that the longest pipe of the bagpipes, or sordina, or piva with the pocket, which entertains the shepherds, is also called thus. Moreover, I remember that there is a type of composition called by the contrapuntists and by the singers falso borodne, in the same way.

Anniballe. Therefore, this word Tenor must not be understood as the part of the counterpoint or composition which is the nearest to the lowest part, [yy. in marg.] but for the one that is really the lowest, and is commonly called Bass, as if it is the base and foundation of said counterpoint or composition. Bartholomeus Ramus shows clearly that he has interpreted the word in this way in the first chapter of the second part of his musical Isagoge, where he says firstly these Latin words that have this meaning in their Italian translation. 'Namely, to create a perfect consonance with the Tenor that ascends through a similar perfect species.' And somewhat further on. 'As if the Tenor d e c d and the organ l [sqb] k b', and thus in the others. Here he takes this word organ, (which was not well understood by Zarlino in the third chapter of his Supplementi musicali, since he interpreted it as the instrument, called in this way par excellence) [zz. in marg.] like all the other contrapuntists, as the part that created counterpoints [AA. in marg.], or, as our contemporaries say, playing now with fast, now with slow notes, as an upper part, against the Tenor. Ramus then continues. 'The third [-75-] rule has to be understood in this way. If the Tenor ascends c d e, the organ will be allowed to ascend e f g in the same way.' A little further on, he adds. 'If the Tenor sustains the same note for two or more notes, the organ can play two or more imperfect consonances in the same place.' Considerably further on he continues. 'The fifth (namely, the fifth rule, since he is talking about the rules of counterpoint) is explained in this way. If the Tenor descends d c, we ascend [xqb] k, since if it descends from e to d, or to another similar note, the organ must not play k l, since it is a minor sixth.' And not far from the end of said chapter, he says. 'For instance if the Tenor plays l n m l n m o, the organ can carry on a fourth lower after the first note and play b k [sbq] b k [sbq] l. Similarly then the organ will play then p r q p r q s, observing the rest. The same happens with their compound intervals, unison or octave. If the Tenor

is d e f g d c f e d, the organ will be able to repeat the same notes at the octave, since l m n o l k n m l is the same at the unison, and in its higher and lower octaves. But', and so on. Finally, he says, to conclude. 'And if the Tenor descends, the counterpoint will rise, and this is the movement which has to be observed most often in counterpoint.' Nor I want to omit, as if I had forgotten, what he said earlier on, around the middle of said chapter. 'Since, one or the other voice could be called appropriately organ and Tenor.' Nicolaus Burtius, interpreting the word in the same way, says on the matter, and with much greater clarity in the third chapter of the second treatise of his *Florum Libelli*. 'For instance, if the Tenor played thus in the lowest part d f g a e d. cioè e re fa sol la fa mi re, then we should start to sing in a group either on high a, which is La, and a fifth, or in high d, which is sol, and most perfect octave, or starting from the other perfect consonances giving, as one continues, to each one its opposite upwards, namely, d c [sbq] a d c d, which sounds sol fa mi re sol fa sol. Thus', and so on. Then, he says in the second teaching. 'As if the Tenor sung f g a c in the low voices, and you wanted organise a counterpoint, or sing as a group in the high voices f g, which, one after the other, [-76-] are two octaves, and then f g, at the end. The ending is correct, but the beginning is very imperfect, because of the two octaves. Equally, in the fifth teaching. 'One organises a counterpoint, or sings with a group, when the organ, or the Soprano, as we commonly say, (and here the explanation that I mentioned to you of the word organ) imitates the Tenor in ascending or descending at the same time. But,' et cetera. Moreover, at the beginning of the sixth chapter of said treatise he says, in an example. 'Suppose the Tenor begins in f e d e d, in the low register, which notes mean fa mi re mi re according to Guido, then it is necessary that who organises the counterpoint (namely, the contrapuntist, be he a singer, or an instrumentalist) starts on the same f, but at the octave,' and so on. Then, not very far from the end of the same chapter he adds, also as an example. 'Imagine that the Tenor is in high a [sqb] c d e, namely, re mi fa sol la, according to Guido' s syllables. In this case, the contrapuntist will start on the first letter, or note in unison, as to the eye, but at an octave, as to the sound, by playing a g g f e, namely, la sol sol fa mi, because g, under the second letter of the Tenor will be a third, as to the eye, but a sixth, as to the sound.' Nor do I want that you should blame me, if I omit what Burtius says at the end of the previous chapter five, where he teaches how one has to proceed in building a counterpoint of more voices. He says, in my translation. 'It is necessary first to write out the cantus firmus, then to write the Soprano with great diligence and care taking into account the Tenor, which is the cantus firmus.' And this does not contradict my opinion, to the contrary, it supports it. He concludes. 'Then come to composing the Bass, and eradicating everything that is contrary to the sweet nature of harmony, with the mind, the eyes and the reason, reach the end. Let this be sufficient to you as far as composing new pieces goes. So, finally, one discovers that the opinion of your macaronic Merlino Cacao, whom you have quoted to me, is wrong. Equally, it seems that Zarlino also favours this opinion in the fifty-eighth chapter of the third part of his *harmonic Institutions*, where he says. 'The Tenor follows [-77-] the Bass immediately upwards. The bass is that part which sustains and governs the composition and it is the part that maintains the mode on which it is built. It must be composed with elegant movements, and with such disposition that the nature of the mode, in which the piece is composed, be it first, second, third or whichever one wants, is preserved.' For this reason, a little further he adds those same verses by your Merlino, which you quoted earlier. However, I said that it seems to me that he favours that common opinion, albeit at chapter sixty-three of said third part one can see that he also said the opposite, namely, he agreed with my opinion, since he put the cantus firmus of the antiphon *Veni creator* in the lowest part in the example of the first way to create a

counterpoint in three parts in canon, and in that one of the fourth and sixth way on the same antiphon, first in this way

[Bottrigari, Il trimerone, Giornata seconda, 77,1; text: Veni Creator Spiritus]

then thus,

[Bottrigari, Il trimerone, Giornata seconda, 77,2; text: Veni Creator Spiritus]

and finally in this way.

[Bottrigari, Il trimerone, Giornata seconda, 77,3; text: Veni Creator Spiritus]

Hence I say, as a conclusion, that, since those who hold this opinion do not adduce any reason to ground and strengthen this popular opinion, which is purely founded on the Socratic authority, I would praise as very well done, that the lowest part of the composition, called the Bass, were the one that sustained even in this and held up the composition, since, were it otherwise, namely that the part nearest to the Bass guided and governed the air of the tone or mode which the composer has decided to adopt, apart from the fact that no composition [BB. in marg.] could be composed appropriately in the first three plagal tones, namely, the second, fourth and sixth, and especially in the second and fourth, if not via a capricious transposition, since there would be no note [-78-] under the lowest of the second, since it is the [Gamma]ut, or few, as in the fourth, since the Are is the lowest and the only one lower is the [Gamma]ut, and in the sixth, since his lowest note is [sqb]mi, there are only two that are lower, namely, [Gamma]ut and are; in this case, one would hear that there are two modes, or tones in musical compositions built in such a way, that they are one close to the other and in contrast [EE. in marg.], but in the end the Tenor must yield and submit to the lowest part, which is very strong and powerful, since it is one of the two extreme ones. In order that I make myself more clearly understood, I say, that every time that the Tenor proceeds through the notes of the diapason of the proposed tone, for instance, of the first true ecclesiastical or ancient Dorian, the lowest part will be forced to proceed through the notes of the second ecclesiastical or ancient Hypodorian, namely, if the Tenor lay within the notes of the diapason of Cfaut, ut sol, fa, it will be appropriate for the Bass to sing across the notes of the diapason of [Gamma]ut, ut fa sol, and it will be the Bass to establish the main cadence of said tone with the fa, ut, fa of its low diatessaron, and not the Tenor with the same ut, sol ut, of its low diapente. Therefore, that composition of his will be of the second ecclesiastical mode, or Hypodorian, and not of the first trope, or tone, as the composer set out to achieve. This is not a very clever thing to do, or rather it is laughable, not to say monstrous, as, even if one wanted to avoid this inconvenience of singing two tones at the same time, another oddity would ensue, which consists in the fact that, the Bass in the authentic modes, since it cannot move beyond the five notes of the diapente which are in common to those two tones, would result redundant, or hardly pleasing, if not very boring, because of its continuous copying the Tenor part. Therefore, what your Merlin sings macaronically about said Bass would become true, namely that the Bass feeds the voices, nourishes, grounds, and raises them.

Alonso. Would you want then for the cantus firmus to be sung always by the Bass?

Anniballe. I am not saying this to you, nor is my intention to do so. But, if I were to say my opinion, I would say, and advise, that, in conformity with that I have already said to you to distinguish the intonation of the psalms of the second tone from the intonation [-79-] of those in the third and eighth, the hymns, antiphons and psalms should be sung by the high, middle and low parts according to the high and low quality of their cantus firmus, or plainchant, and that the motets and much more the madrigals should be distinguished along these lines. Therefore, I think it would be very well done that an expert contrapuntist should keep under his eyes as a reminder a brief table, in which are noted not only the diapason of said tones and similar to these which you have drawn, but the clefs of all the four parts with particular clarity, namely, Bass, Tenor, Alto and Soprano, which have to cooperate in a composition. I mean, thus:

[Bottrigari, Il trimerone, Giornata seconda, 79; text: primo et ottauo Trope, ò Tuono, B. Tuono, A. Semituono, per lo secondo, quarto e sesto, per lo settimo nono undecimo, per lo terzo quinto decimo duodecimo]

For complete clarity, one could add the particular diapason of the tone within whose limits each part has to move with its melody, and so it will appear clearly that the Soprano has to move within a similar octave as the Bass, and the Tenor through the diapason composed in the authentic tropes, or modes of the diatessaron above the Bass, and of the diapente below the Soprano. However, in the plagal modes, or tones that it has to move through the Diapason composed in the reverse way, namely, of the diapente above the base, and of the diatessaron below the Soprano. Hence the Diapason of the Tenor are divided arithmetically if the ones of the Bass are divided harmonically, and vice versa, if the ones of the Bass are divided arithmetically, the ones of the Tenor [EE. in marg.] will be divided harmonically. The Contralto, since it is half-way between the Tenor and the Soprano, will be able to wander to an extent, now through the part of one of them, now through the one of the other, according to the need to fill out the texture, as it will be necessary. For instance in this example of the first and eighth mode, or tone, where [-80-] I will add the respective octaves of the Tenor and Soprano, but I will only put the low diapente and diatessaron of the Contralto, in order to show the freedom that the Contrapuntist will have and will be able to use at his leisure.

[Bottrigari, Il trimerone, Giornata seconda, 80; text: primo, Basso, ottauo, Tenore, Alto. Sourano]

Alonso. If, as you have said and shown here, the Tenor has to move always through the octaves divided now harmonically, now arithmetically, but always in a way that is opposite to the one of the Bass, will he not sing through the plagal of the authentic mode which the Bass is singing at the same time, or will it sing through the authentic mode, when the Bass sings in its plagal? In this way, will not two modes or tropes be formed, which will be heard clash with each other, in the way which you have described above as being not very clever, inconvenient and laughable?

Anniballe. I would have shown myself as not very clever and betraying my argument as ridiculous straight away, if the type of singing which you describe were born (as i said) of this way of proceeding of the Tenor. But you will find that the matter rests on other terms, since, although the Tenor sings through the octave of the diapason of the plagal tone of that authentic that is sung at the same time by the Bass, and conversely, it is not true nevertheless that it sings in that plagal mode, or conversely, in said authentic, so that that

boring, and not very attractive contrast between the two parts, which I called monstrous, would be heard.

But its singing through that octave is very different from the way it would sound if it proceeded in its own diapason of that tone, since, when said Tenor sings through the diapason that I have allotted to it at the interval of a fifth with the Bass, if he sang through its own diapason of the tone paired with the one that the Bass sings, he would sing in this one, and if he sang through said diapason, and being at the interval of a ditone, or high major third with the bass, he would be at the interval of an exachord, or low minor sixth. If it sang a semiditone, or, as we call it, a high minor third, he would really sing an exachord or low major sixth. All that could be opposed to my thesis is that, if the Bass sings for instance in his own diapason of the eight plagal tone arithmetically divided, the Tenor, singing within its own particular diapason, would sing at the same time through its diapason of the seventh authentic mode, or tone harmonically divided, and equally, through the one of the ninth, or of the eleventh, and of all the other authentic modes, [-81-] every time that the Bass sang through its own notes of the tenth, twelfth, and of all the other plagal modes. However, since this is a natural imperfection of our modern art of counterpoint, or to write with many parts at once, so that they may sing different melodies at the same time, there is no universal remedy, but only the particular one which I mentioned, [FF. in marg.] namely, to let the Bass govern and regulate the tone, since the advantage will be that, as you have understood, that in the plagal tones the clash of the Bass with the Tenor singing across the octaves of the authentic modes, will not occur.

Alonso. This is really a great imperfection, but such remedy is equally great, since it takes care of one half of said imperfection. It would be good if one could take care of the other half.

Anniballe. I do not know, nor can tell you about another remedy, but I know some ways to temper such imperfection.

Alonso. Which?

Anniballe. Namely, that the Tenor should never use, if not extremely occasionally, the middle note of its particular diapason, namely, the high note of the diapente it has in common with the Bass, and the common note which is the lowest of its high diatessaron. In fact, it should leave that note to the Bass completely. But, since doing so could be very detrimental to completing the consonances with the Bass, or avoiding this would be very uncomfortable for the other parts, I do not praise at all the habit of omitting said middle note completely, but I prefer another remedy, especially in the composition not only of madrigals and of other pleasant Italian words, but also of Latin motets, and other such grave compositions, which are not used in the celebration of the divine ecclesiastical rituals, since I do not believe that we should put hand to those and change anything, but those that praise and celebrate only human achievement.

Alonso. What is this other remedy?

Anniballe. It consists in adopting the seven tones of Ptolemy organised in the various species of the diapason naming first the Hypodorian, second the Hyprphrygian, third the Hypolydian, fourth the Dorian and everyone of the remaining three in this way and order. Therefore, the composer [-82-], or contrapuntist, without leaving the terms of the

diapason of said tone with the principal lowest part, will move across the notes of said diapason according to the words that he has selected, and will return to one, or the other, and others again, in an elegant way, and particularly to the two at the top and bottom of the diapason, in order to let the listener know distinctly and with clarity which is the tone of his composition. Hence, in this way, the two lowest parts, namely the Tenor and the Bass, will not be heard clash in any way, with regard to their progress and position, or difference of tone, in his composition, and the Tenor will be free to be subordinate to the Bass, as it is its function, together with the other part, namely the Contralto, whether they are one, or two. The Bass will govern the composition itself with gravity, but will allow always the elegant and polished melodic movement and outline of the Soprano, albeit it should have itself an elegant deportment. In fact, as they say, if the Soprano is not accompanied by the elegant singing [HH. in marg.] of the bass, it gives the ear no pleasant harmony. This is to be considered really one of the most difficult and important features of the art of counterpoint, or writing musical compositions for many voices.

Alonso. Tell me, if you please, will these superior, or higher parts have to be contained within firm limits, within which they can move freely? Or can they wander freely?

[II. in marg.] Anniballe. The Soprano should be contained within the limits of the high octave of the diapason of the tone, if the composition is for four voices or less, but if it is for more voices and there is more than a Soprano, each one of them can have a slightly wider range, say a major or minor third upwards. The other parts, namely, Tenor, and Contralto, whether they are one or more, will have the freedom that seems to be appropriate and convenient to the wise contrapuntist.

Alonso. When you were talking of the clash of the tone of mode between Tenor and Bass, you said that, after all, the Tenor has to yield and submit to the bass, since the Bass creates the cadences, and you made an example of the main Fa, ut, fa, of the second ecclesiastical mode, or trope. Now [-83-] I would like to know how you think these cadence should be done, since I have always heard people saying that the high parts are the ones involved in the cadences, and not the lowest one, as it is the lowest.

Anniballe. To the contrary, in more than two parts no part [KK. in marg.] can create a syncopated cadence without the participation of the Bass, and although said lowest part is not there in essence, it is there in potency. Take for instance this principal cadence of the first ecclesiastical trope, or tone, which the Tenor does in syncopation with the Contralto and the Soprano in essence.

[Bottrigari, Il trimerone, Giornata seconda, 83,1; text: ò cosi, Contralto, Tenore, Sourano]

Here there is effectively no part lower than said Tenor, but it is a natural law that the Bass is there in potency.

This can be shown presently to you in this manner.

[Bottrigari, Il trimerone, Giornata seconda, 83,2; text: ò cosi]

Alonso. You are right, but what about if the Tenor created this cadence in four parts without the Bass, or with a Contralto that sang thus

[Bottrigari, Il trimerone, Giornata seconda, 83,3; ò così]

or an octave higher with another Soprano?

Anniballe. The Bass could not stand in the first example, either because of the two fifths that he would have with the second Contralto, or for the two octaves between himself and the other Soprano. The second way would work, but this discussion of the tones has nothing to do with the appropriateness of their cadences, as they pertain to the pure contrapuntist. I conclude and sum up my discussion on the cadences by saying that the Bass must prepare and organise his notes in a way that is suitable to receive the syncopated cadence of the higher parts in the appropriate places of said tone, which I would say, together with the most venerable Zarlino, that are four in the ecclesiastical musical compositions, [LL. in marg.] and especially in the psalms, namely, the three main of its diapason divided both arithmetically and harmonically by dividing always the diapente of that tone with the major third and minor third, or, conversely, with the major third and minor third

[-84-] Alonso. Namely, thus in the first tone, and thus in the second.

[Bottrigari, Il trimerone, Giornata seconda, 84,1; text: Primo Tuono, Secondo Tuono]

[MM. in marg.] Anniballe. This is what I mean. In those motets, which are not for the church, in the madrigals and in the other Italian compositions, I believe that everything has to be entrusted to the judgement of the very expert and daring contrapuntist, since an unexpected cadence outside of the tone in which the composition is weaved and spun can have the result of moving the listener profoundly, but it has to be handled with great wisdom, as I said, and not at random, and also never at the beginning or at the end of a composition, where there should always be a complete close (if one wants to conclude with a cadence, which I do not deem to be always appropriate) with the principal cadence of said tone or mode. This is one of the four that end with the leap of a diapente downwards in the authentic modes, and with the leap of a diatessaron in the plagal ones. I mean to say this with regard to the ecclesiastical compositions, but in the secular ones it will be according to the Hypodorian, Hypophrygian and Hypolydian and to said Dorian, Phrygian and Lydian, and also to the Mixolydian. In those, I refer to the leap of the diatessaron upwards, in these I am talking about the leap of the Diapente downwards. During the course of the composition it will be possible to use two other type of cadences, namely, stepwise by tone, or stepwise by semitone. An example of this will be as follows, going back to the first trope, or tone.

[Bottrigari, Il trimerone, Giornata seconda, 84,2]

The following example will be in the fifth tone

[Bottrigari, Il trimerone, Giornata seconda, 84,3]

However, it seems to me, as it is now evening, and since my lateness has been compensated by this lateness in leaving, since there is nothing left to say of any importance on the subject of the tones, we have to end our discussion.

Alonso. I defer everything to your pleasure and convenience.

Anniballe. Take this piece of paper, and, when you have read and considered its content at your leisure, come back tomorrow to learn from me about the musical characters, since we will talk of this in tomorrow' s discussion, and I will make sure that I am not late. Let us go.

Now that the fourth hour of the night following Saturday 24 October 1598 was sounded by small watch, I completed this second Dialogue in my pleasant villa in the town of Santo Alberto.

And at hours 22 and a half, as my small watch indicates, of Wednesday 15 September 1599 I have finished copying it in the same villa, which belongs to me. Hercole Bottrigaro.