

CHAPTER III

MUSIC IN GENERAL

1. Perhaps it will be considered less of a necessity to bring forth here a definition of music, since everyone must know, what the discipline designated by this name is about. Nevertheless I believe that from the definition it is going to be very useful for setting up our application, both for the division of the labour as well as for the manner of treating each part. Therefore I define music thus, so that I may call that to be the science of connecting together various sounds, in order that they may provide a pleasing harmony to be heard. And hence I have judged that to be expounded further now from the preceding chapters both concerning the sounds to be heard as well as the principles of harmony to be taught, so that not only may that definition be perceived easily, but also the manner may be considered, in which that theory may be agreed to be treated especially .

2. It is usual to divide music generally into two parts, the one theoretical and the other practical. The former precept, to be called the harmony, must be established to handle the composition of the music. But the task of the practical part is said to consist of this, that it may lead to the actual sounds themselves prescribed, whether they are to be produced by voice or instruments, and to this aspect only the name of music commonly is imposed. From which it is understood the theoretical part to be taken first, since without this the other part produces nothing, nor yet does that consequently have an end without a practical part, which is to please the audience. But, since this practical part is nothing other than the art of playing the musical instrument between the parts required, we will not dwell on this aspect.

3. Now in the above discussion, it has been shown how one can enjoy the agreement of sounds in two ways, of which the one considers the low [*i.e* bass] sounds and the acute [*i.e* treble] sounds, and the other way is the durations of these. And anyone who may consider the music of today with more care, can understand at once everything present in that, both the delight proceeding from the deepest and highest variations as well as the duration of the sounds. Indeed neither can the loudness of the different sounds be denied to add to the pleasure which may be produced, sometimes louder and sometimes softer ; truly since a measure of this strength is not usually prescribed, nor can it be discerned exactly by the listeners, as that remains arbitrary for the one playing ; thus, we are unable to distinguish this quality from these, which we have discussed in order to enumerate the level of the pitch of the sound, or of the different durations. But this characteristic can be observed in general, these sounds which have as it were a greater emphasis, must also be expressed by a greater strength.

4. The different natures of the instruments from one another has a great influence on the pleasure experienced from the forthcoming music, and frequently is referred to with regard to the kind of instrument to be used for the expression of a prescribed melody.

Indeed one type requires an instrument with plucked strings, another the violin, another the flute, another is suitable for the horn or trumpet. For not only do these instruments produce different kinds of sounds, but the individual ones almost before the others have a certain fixed property, so that they shall be able to perform the proposed series of sounds either more easily or more elegantly. On this account, anyone who composes musical songs and melodies, must attend carefully to the nature of the instrument, so that nothing may be arranged, which may be able to be produced without either ease or elegance. On account of which generally an instrument is accustomed to be designated by the musicians, so that it may agree as much as possible with the prescribed melody being played.

5. We must admit, from the two governing principles of the sounds, evidently from an account of the notes of high and low pitch, with the differences and durations of these granted, that the delightful nature of music can be present in a collection of the notes in the three following ways. For in the first place all the pleasure can have come from the diversity of the high and low notes alone, either with all lasting for the same length of time, or with the time completely ignored and with no attention paid to that. Secondly, even if all the notes were equally bass or treble, but in the same order, by which the durations of these is maintain, the music would still have charm. But in the third place, which is considered to give the most perfect pleasure in listening, which will be obtained, with each of the adjoining notes or chords connected by their tones and duration. And on being put in order in this way the music itself may advance to the level of excellence, which can give rise to so much pleasure, where both an account of the durations of the notes may be given as well as a scale of the differences which may be present between the low and high notes.

6. Almost the whole of present day music is concerned with this last and third kind. Indeed in that not only the agreement of the succeeding notes but also the measure is used to give rise to agreeable sounds, for musicians are accustomed to use the beat or measure of time intervals to the greatest effect ; from which hand-clapping has its origin. Yet meanwhile it is possible to consider examples of these first two kinds in music. For which choral music and litanies may be considered, where everything may be conducive to the listener, which begins from a single steady source of sounds, and proceeds by a succession of suitable notes taken together. Truly tambourines provide an example of the second kind ; since with these, just about all the low and high sounds sound the same ; all the agreeable sounds depend mainly on the speed of the beats and thus depend only on the variation of the duration of a beat.

7. But in all these kinds, which one may compose of musical melodies or songs, besides the general rules of the acceptable manner of presentation, it must also be taken into account, how the composer may wish the listeners to respond, either with joy or sadness. For it has indeed been shown in the preceding chapter, how each issue should be considered. Which especially is to be observed in the composition of melodies for proposed hymns ; for with sad words or passages occurring, thus also a suitable melody

must be put in place, as that may be seen to be more difficult to arrange. On this account either more complicated groups of notes or a series of these may be taken, which may appear more difficult, or the periods of the sounds may be constituted thus, so that the music in these cannot be understood at first. On the other hand, these constraints may be quite the opposite, when the text itself is inclined towards pleasure.

8. But there is a need that altogether a piece of music be required to be just as a discourse in speech or song. Indeed as in these there may not sufficient elegance in the words and phrases occurring, so that in addition there must be presented an ordered disposition of the ideas and manner of the arguments, and similarly this is to be found in music too. Indeed neither may there be much delight in many chords placed together in a series, even if the individuals ones may have charm enough, as in these same chords an order must appear, just as if a certain discourse was being expressed by these. And in this it may be useful to consider chiefly the degree of ease or difficulty by which the order is perceived ; and as the situation requires, gay and sad passages may be interchanged and returned in this or that way in the manner intended.

9. Therefore we may see, how in particular any of these kinds of music may be agreed to be treated. Certainly the first of these, because, as has been said now, any order of the duration either is not present or is not considered, the whole consists of various expressions of the notes in succession. But here generally several notes may occur together, which anyone hearing these sounds calls a chord. Truly I am unwilling to call this the opposite of dissonance in the common sense, for I wish this to designate the sound of a number of notes resounding together. And with this significant simplification, a single sound [*i.e.* note] can be considered as the most simple of chords, just as unity is accustomed to be considered as the simplest of the numbers. Therefore the first kind of music is agreed to consist of a series of chords, which may constitute a pleasant harmony.

10. Therefore before all else, initially a discussion is required to investigate all the chords, such sounds as may be required to constitute the suitability of these, and then the level of harmony which they reach. Thus innumerable kinds of chords emerge, which hence will be put to use, as the account to be established in the following chapters will demand. Therefore in the exposition to follow it will be enquired how two chords must be prepared, so that they may produce successive pleasing sounds. Finally it will be investigated how, from an examination of several chords of whatever kind , a pleasing sound may be produced for the listener. From which it may be judged precisely from any series of proposed chords, how much pleasurable sound may be contained, while the individual chords themselves will be considered first and then the relations which exist between these successions of chords will be examined.

11. Thence on considering the ways of putting together innumerable series of chords, none of which are used by musicians, except for special cases. But of these compositions which require certain special sounds, it will be required to consider, how such sounds for which there is a special need may be put together in some manner, so that it may be

apparent for whatever kinds of sounds required, musical instruments ought to be constructed for their production. Thus a fuller examination of the kinds of music will follow, and with everything concerning these interchangeable, by which the composition of music is determined more, and may be contained within boundaries. Finally in turn the simple members of the chords evidently will be recalled for examination and inquired into with greater care, how the kinds of each manner may be required to be used in whatever occasion and how these may be permuted amongst themselves and others it may be convenient to be substituted in place of these. This composition, which may be produced from these precepts alone and in which the duration of the sounds is ignored, is usually called simple or unrestrained, as if similar in some way to a discourse in speech, and generally freed from the restraint of time measures.

12. Afterwards another kind of music will be set out, which does not discriminate between the high and low notes of the sounds but is occupied completely in the production of a rapport of the durations of these. But these, as has been shown in the second chapter, will be obtained, if an ordered account will be able to be recognised between the durations of the individual sounds. Therefore any measurement and determination of the sound will have to be of the duration of its time and thus all the times will have to be compared, so that the ratio of these may be rendered perceptible. Therefore so that the music may begin more simply, it will help if the time interval between the two sound may be recognised by the listeners ; in which again it will be most noteworthy, where by a step of this kind the times can be recognised most easily. Several sounds will be considered In a similar manner.

13. But just as not only the division of the time into equal parts must be adhered to everywhere, but it may seem natural almost to a man, thus in music also all the sounds are accustomed to be referred to in equal times, even if actually they may have unequal durations. On this account the sounds thus are distributed with the time divided into equal parts, so that the greatest duration of the times of this kind shall be equal. Therefore several other sounds, either more if they were of shorter duration or fewer if they were longer, will be produced in the same time, provided they were of shorter or longer duration. And the part of the time of this kind, because it is accustomed to be marked out generally by a movement of the hands, is called the *beat* or *measure*. Therefore a series of sounds is distributed into such measures in this manner, which can be distinguished from each other in a similar way, just as the [poetic] feet and verse are distinguished in a poem.

14. The measure is then distinguished in two ways, either with regard to the duration, or to the manner of subdivision. According to the first way, the music emerges either in a slower or faster motion, just as its time lasts longer of shorter. The variations or rhythms which arise from the other way, is extremely changeable, where the measure may be subdivided in innumerable ways. If the number of these parts of the division, which we call the *time*, is two, and in this itself there will be diversity, just as these parts were equal or unequal; otherwise, the measure may be divided into three or four parts. Again, these parts themselves often are subdivided further and be changed otherwise into other

measures, while it may produce the individual sounds. From which the most may arise perhaps in this kind of musical diversity, so that evidently no further enumeration of the variations may be able to be put in place.

15. Often also the measures may be changed in their succession, either on account of their duration or manner of subdivision, thus so that the music may be arranged slower after a fast speed, likewise faster after a slow speed. Truly in the account of the subdivision the measures can be changed in many ways into two parts, three parts, and in many other ways, and can be mixed between themselves. Moreover this variation may be greatly multiplied thus, since several kinds of the same measure may be given to be divided in the same way, so that these same parts again may be distinguished differently. In addition, the number of changes will be increased immensely without doubt in each way, not only on account of the division of the measures, but also on account of the durations of the measures being changed. Regarding all of which, whatever rules it may be required to be observed, has been derived in the second chapter.

16. Moreover the measures and the parts of these, as we have now said, are distinguished in the same manner by the listeners, as the verses, poetic feet and syllables of poetry. And just as with these, scarcely any sensible pause in the recitation can be noticed, even if actually some gap may be present, thus also the measures of these parts are barely distinguishable from each other, even if they may be separated by some exceeding small and barely perceptible finite delay or by some other part inserted. Yet much the same distinction also can be made concerning the strengths of the different sounds ; indeed of the first or these, which begin to handle the measures of that may be produced a little stronger than the following. On account of which it is understood the first sounds in any measure must be also the principal ones of the musical phrase, truly the rest, as they have less force, thus to be of less importance than these.

17. Therefore just as the parts mentioned for the individual syllables of a poem are bound together, and these can be prepared from the feet or poetic verses, thus whatever amount dealt with constitutes a whole sentence, and several of these together constitute the whole recitation of the poem . With regard to this, similar rules are required to be observed in a musical recital as in a recitation, thus so that some part played may represent a part of the melody in some distinct form, and some number of these, which may correspond to a sentence of the recitation, must be understood in a certain sense as if the whole of the melody. Certainly therefore conclusions are to be drawn, which conveniently constitute the end . And these themselves will have to be diverse, just as only part of the sentence or the whole sentence or even the whole recitation will be finished.

18. Truly the last sound of each period must be a principal one and on this account it must become the first of a measure or a time to be played either wholly or in part. On account of which it follows that neither a recital of a piece of music nor a recitation may be able to be performed in this way to express the end, but initially either the whole or part

of it must be played for this purpose. Truly the progress or preparation for the end must fall at the end of a measure or time to be played wholly or in part, so that the following principal sound may conclude the piece. For this reason other lesser sounds may not be used, unless they be adjoined to these principal sounds; for that reason these must be placed between the principal sounds and are unable either to begin or end the playing. But a fuller exposition of these must be shown in dealing with the third kind of music.

19. Finally the third will be the kind of music, in which each of the earlier ones are combined. It may contain a perceptible order which therefore will have most of the sweetness, not only on account of the low and high notes of the first kind, but also on account of the durations, as in the second kind. And therefore, in each case where that order is greatest, there also by necessity this music also must please more. But it is seen that this third kind is certainly more difficult to elaborate on, so that it shall be perfect, since in the first two kinds, since by attending to these it must include the perfection from each. For this reason, the nature of the matter demands, that before the work can be arranged from the two above kinds, as the third may be handled; indeed unless some pleasure can be found in each kind separately, neither may any charm be effected in that, which arises from these together. But with the two former kinds understood the third can be grasped without difficulty.

20. But in this third way of composition a great multiplicity may arise; for not only are just so many of these the variations that come together in each of the preceding, but for any two being combined together the number of variations present is almost infinite. Clearly if the number of different compositions one can make in the manner of the first kind shall be m and the number of the different measures one can play according to the second kind shall be n , the number of variations of the third kind will be mn . And if m and n shall be almost infinite numbers, as we have shown, the number mn will be of an enormous magnitude. From which it is apparent all these variations of music today, which is concerned chiefly with music of this third kind, generally cannot be enumerated. Therefore it cannot happen, that this knowledge can be exhausted at any time, and as long as the world may endure, there will be a place most full of the new inventions, from which new kinds of melodies and singing will arise.

21. In treating the third kind of music it will be agreed to follow the division made into the second kind, and any kind of measures or beats being adopted will require to be composed according to the first kind. But before all the general precepts are required to be treated for joining together the first two kinds of music, in which it will be necessary to set out, by concords of some kind in whatever part played it may be used to the greatest convenience. Indeed while some parts performed shall be more principal, others less, it may appear necessary to discriminate between some of the consonants, which will be used in this way. Then since several if the parts played shall be similar to sentences and others to the parts of a discourse, it is required to show also, whatever the distinction, how consonants of this kind may be expressed most conveniently. Therefore from such

conclusions requiring to be acted on in this place, and the differences of these which arise an account of their distinction.

22. After having enumerated the various kinds of measures, it will be required to indicate from the second kind of music, how the musical sentences or periods may be put in place in whatever ways [to form a recital], and from these just as if a whole recitation were to be established in poetry. This will provide the fullest treatment on account of the almost innumerable kinds of measures and assembling the music. In addition to this, a huge number of different styles will be present; indeed in a similar manner, as in rhetoric, by which a style is required to be established as in music, which is nothing other than some certain account be given of the periods to be formed, and these to be joined together. Finally here, these musical figures are comparable also to the similar figures of speech in orations or poetic recitations, by which these musical orations may be adorned and carried out to the highest degree of perfection.

23. Various so called *voices* arise from the concords which are composed in the following manner. For if the sounds are produced either by voice or by such instruments, which cannot produce many sounds at the same time, then whenever there is a need for several concords these must be supplied at the same time either by several voices or instruments of this kind. And from these a new treatment arises, in which manner several voices shall be established, so that a series of suitable and pleasing concords may be heard at the same time. Therefore initially a single voice must be considered, then two, again three, four and still more. And on this account all the precepts, which will be elicited, will be adapted especially for this manner of composition; for almost all musical needs for which a certain number of voices is required, constitute the individual parts of some melody, but indeed not yet complete on their own, so that acting all together at the same time may form a charming melody.

24. Thus with the complete theory of music resolved into three parts, from which so many kinds of music are set out. And of which it is understood how any music may be reduced to the precepts of harmony established in the second chapter. Therefore since everything in music shall be resolved from certain principles, the truth of which is sufficiently established, the method which we will use, clearly is philosophical or demonstrable. Nor truly anyone, as far as I know, will have used a method of this kind in the treatment of music. For everyone, who has written about music, will have been exceedingly negligent either with regard to the theory or the practice. Evidently these have been gathering together the component parts of the precepts without demonstrations; truly those others have been totally occupied in explaining consonants and dissonants and in attempting to find from these a better way of constructing musical instruments, but they have used either insufficient or doubtful principles, thus so that from these it would not be possible to progress further.

CAPUT III

DE MUSICA IN GENERE

1. Minus fortasse necessarium putabitur musicae definitionem hic afferre, cum cuique notum sit, quae disciplina hoc nomine designetur. Attamen magnam nobis utilitatem ex definitione ad institutum nostrum accommodata esse proventuram arbitror, cum ad operis divisionem tum ad ipsum cuiusque partis pertractandae modum. Ita igitur musicam definio, ut eam esse scientiam dicam varios sonos ita coniungendi, ut auditui gratam exhibeant harmoniam. Et hanc ob rem iam in praecedentibus capitibus fusius exponendam esse iudicavi tum de sonis tum de harmoniae principiis doctrinam, quo non solum ipsa definitio facilius possit percipi, sed modus etiam perspiciatur, quo eam tractari maxime conveniat.

2. Dividi solet plerumque musica in duas partes, alteram theoreticam, alteram practicam. Illa praecepta tradere debere statuitur compositionis musicae et proprio nomine harmonicae appellatur. Practicae autem partis officium in hoc consistere dicitur, ut doceat ipso actu sonos praescriptos vel voce vel instrumentis edere, huicque soli musicae nomen vulgo imponitur. Ex quo intelligitur partem theoreticam esse praecipuam, cum altera sine hac nihil efficere possit, neque tamen eam sine practica parte finem suum, qui est oblectatio, consequi posse. Sed, quia haec practica pars nihil est aliud nisi ars instrumenta musica tractandi, hanc nos inter postulata ponentes non attingemus.

3. In superioribus iam est ostensum diobus modis· suavitatem sonis conciliari posse, quorum alter sonorum gravitatem spectat et acumen, alter vero eorum durationem. Et qui musicam hodiernam attentius contempletur, re ipsa deprehendet omnem, quae in ea inest, suavitatem tum a gravitatis acuminisque varietate tum etiam a sonorum duratione proficisci. Negari quidem non potest sonorum diversa vehementia, qua mox fortiores mox debiliores efficiuntur, non parum suavitatis accedere; verum quia huius vis mensura neque praescribi solet neque tam exacte ab auditoribus potest discerni, sed eius, qui canit, arbitrio relinquitur, non possumus illam iis, de quibus diximus, acuminis gravitatisve et durationum differentiis annumerare. In genere autem hoc potest notari eos sonos, qui maiorem quandam habent emphasin, maiore quoque vi exprimi debere.

4. Deinde non minorem suavitatem afferre solet instrumentorum musicorum discrimen multumque refert, cuiusmodi instrumentum ad praescriptam melodiam exprimendam adhibeatur. Alia enim chelydem requirit, alia fides, alia fistulam tibiamve, alia ad cornua et bucinas magis est accommodata. Non solum enim haec instrumenta sonorum specie differunt, sed singula fere prae reliquis certam quandam habent proprietatem, ut vel facilius vel elegantius propositam sonorum seriem possint exequi. Hanc ob rem, qui musicos concentus et melodias componunt, diligenter ad naturam instrumentorum debent

attendere, ut nequid collocent, quod vel non commode vel non eleganter possit effici. Quocirca plerumque a Musicis instrumentum designari solet, quo ad praescriptam melodiam canendam uti maxime conveniat.

5. Duobus autem tantum principiis sonorum, scilicet ratione gravis et acuti, differentiis et eorum duratione admissis, tribus tamen modis in sonorum congerie suavitas inesse poterit. Primo enim omnis suavitas a sola acuminis et gravitatis diversitate oriri potest, omnibus vel aequalis durationis existentibus, vel duratione prorsus neglecta nullaque ad eam attentione facta. Secundo, etiamsi omnes soni fuerint aequaliter graves vel acuti, tamen propter ordinem, quem tenent durationes eorum, suavitatem habere poterunt. Tertio autem, qui est perfectissimus suavitatis gradus, utrisque his coniunctis sonorum tenore et duratione obtinebitur. Hocque ipso musica excellere putanda est, si tam durationis sonorum quam eorum magnitudinis ratione, quae acuminis et gravitatis differentia continetur, suavitas, quantum fieri potest, promoveatur.

6. Ad postremam hanc tertiamque speciem universa fere hodierna musica referenda est. In ea enim non solum sonorum tenor ad suavitatem efficiendam adhibetur, sed duratione etiam ad eam plurimum augendam uti solent Musici; ex quo tactus sive plausus originem suam habet. Interim tamen etiam nunc exempla priorum duarum specierum cernere licet. Nam qui musicam choralem hymnosque ecclesiasticos intuetur, omnem, quam habent suavitatem, a solo sonorum tenore et consonantiarum idonea successione proficisci deprehendet. Tympana vero secundae speciei praebent exemplum; cum enim in iis omnes soni gravitate et acumine nihil propemodum differant, omnis suavitas potissimum a pulsum celeritate pendet atque ideo sola durationis varietate nititur.

7. In omnibus autem his speciebus, qui melodiam vel concentum musicum componere statuit, praeter regulas suavitatis generales praecipue etiam ad id respicere debet, utrum ad laetitiam an ad tristitiam flectere auditores cupiat. In praecedente enim capite iam monstratum est, quibus rebus utrumque efficiatur. Id quod praecipue in componendis melodiis ad propositos hymnos observari oportet; occurrentibus enim verbis vel periodis tristibus melodiam etiam sic instituera solent, ut ordo difficiliter perspici possit. Hanc ob rem vel minus simplices consonantias vel earum successiones, quae difficiliter percipiuntur, usurpant vel sonorum durationes ita constituunt, ut rationum earum perceptio fiat difficilior. Contrarium faciunt, quando ipse textus ad laetitiam inclinatur.

8. Omnino autem musicum opus simile esse oportet orationi sive carmini. Quemadmodum enim in his non sufficit elegantia verba et phrases coniungere, sed praeterea inesse debet ipsarum rerum ordinata dispositio et argumentorum idonea accommodatio, ita etiam in musica simile apparere debet institutum. Neque enim multum delectat complures consonantias in seriem coniecisse, etiamsi singulae satis habeant suavitatis, sed in his ipsis ordinem elucere oportet, prorsus ac si quaedam oratio iis esset exprimenda. In hocque potissimum ad facilitatis vel difficultatis gradum, quo ordo percipitur, respicere iuvat; atque prout institutum requirit, laetitia et tristitia vel permutari vel modo haec modo illa intendi ac remitti debent.

9. Videamus igitur, quomodo quamlibet harum musicae specierum tractari maxime conveniat. Harum quidem prima, quia, ut iam est dictum, durationum ullus ordo sive non adest sive non consideratur, tota in successione varii tenoris sonorum consistit. In hac autem plerumque plures soni simul sonant, ex quo, qui oritur sonitus, consonantia appellatur. Nolo vero hic consonantiae vocem in vulgari sensu accipi, quo dissonantiae opponitur, sed hoc vocabulo designari volo sonitum plurium sonorum simul sonantium. Atque hac significatione simplex sonus ut infimus et simplicissimus consonantiarum gradus potest considerari, sicut inter numeros unitas collocari solet. Prima igitur musicae species serie plurium consonantiarum sese insequentium constat, quae suavem harmoniam constituent.

10. De consonantiis ergo ante omnia erit disserendum atque primum indagari debet, quales soni ad consonantiam suavem constituendam requirantur, tumque, ad quem suavitatis gradum quaeque pertineant. Hinc provenient innumerae consonantiarum species, quae deinceps in sequentibus, prout instituti ratio postulabit, in usum deduci poterunt. His igitur expositis inquiri debet, quomodo duae consonantiae debeant esse comparatae, ut sese insequentes suavem efficiant successionem. Denique pervenietur ad plurium consonantiarum examen, in quo, cuiusmodi singulae esse debeant, ut suavitate auditus sensum afficiant, investigabitur. Quibus absolutis de qualibet consonantiarum serie proposita iudicare licebit, quantum contineat suavitatis, dum singulae consonantiae primo seorsim et deinde singulae successiones omniumque communes nexus considerabuntur.

11. Exinde in conspectum prodibunt innumerabiles huiusmodi consonantiarum series componendi modi, quorum qui apud Musicos sunt in usu, non sunt nisi casus maxime speciales. Horum autem cum singuli certos sonos requirant, dispiciendum erit, quibus sonis in quoque componendi modo sit opus, ut appareat, ad quosnam sonos edendos musica instrumenta debeant instrui. Sequetur haec plenior tractatio de modis musicis, eorum commutatione aliisque rebus, quibus musica compositio magis determinatur et intra cancellos continetur. Denique iterum simplicia membra nempe consonantiae ad examen revocabuntur et diligentius inquiretur, cuiusmodi species quavis occasione adhiberi oporteat et quomodo eas inter se permutari aliasque vicarias earum loco substitui conveniat. Compositio haec, quae hisce tantum praeceptis continetur atque durationem sonorum negligit, simplex vocari solet sive soluta, quia similis quodammodo est sermoni soluto omnique metro carenti.

12. Postmodum exponenda erit altera musicae species, quae sonorum ratione gravis et acuti discrimen non curans tota est occupata in suavitate per eorum durationes producenda. Haec autem, ut in secundo capite est demonstratum, obtinebitur, si ratio et ordo, quem singulorum sonorum durationes inter se habent, percipi poterit. Quilibet igitur sonus mensuratum et determinatum habere debet durationis suae tempus omniumque tempora ita oportebit esse comparata, ut ratio eorum perceptibilis reddatur. A simplicioribus ergo ut incipiatur, primo, quanta durationis duo esse debeant soni, ut

rationem eorum auditores perspicere queant, inquirendum est; in quo iterum notasse plurimum iuvabit, quo facilitatis gradu huiusmodi rationes intelligi possint. Quo facto simili modo plures soni considerabuntur.

13. Quemadmodum autem divisio temporis in partes aequales non solum ubique adhibetur, sed homini fere naturalis esse videtur, ita in musica etiam omnes soni ad aequalia tempora referri solent, etiamsi ipsi prorsus inaequales habeant durationes. Hanc ob rem tempore in aequales partes diviso in singulas sonos ita distribuunt, ut eorum durationum summa huiusmodi temporis portioni sit aequalis. Alias igitur plures soni, alias pauciores in eodem tempore eduntur, prout brevioris vel longioris fuerint durationis. Atque huiusmodi temporis portio, quia ictu manus plerumque designari solet, *tactus* sive *plausus* appellatur. Sonorum igitur series in hac musicae specie in tales plausus distribuitur, qui simili modo a se invicem distinguuntur, quo pedes atque versus in oratione ligata.

14. Plausus deinde duplici modo distinguitur, vel ratione durationis vel subdivisionis. Priori modo alius evadit tardus, alius celer, prout eius tempus longius durat vel brevius. Varietas, quae ex altero modo oritur, perquam est multiplex, cum multis modis plausus possit subdividi. Alius enim erit naturae, si in duas partes distinguitur, et in hoc ipso erit diversitas, prout hae partes fuerint aequales vel inaequales, alius, si in tres, alius, si in quatuor partes dividitur. Porro ipsae hae partes saepe ulterius subdividuntur et aliter in aliis plausibus, donec ad singulos sonos perveniatur. Ex quo maxima oritur in hac saltem musicae specie diversitas, ut nulla prorsus enumeratio varietatum institui possit.

15. Saepe deinde plausus etiam solent commutari, vel durationis vel subdivisionis ratione, ita ut modo post celerem tardus, modo post tardum celer collocetur. Ratione vero subdivisionis plausus bipartiti, tripartiti et reliqui multis modis commutari et inter se commisceri possunt. Varietas autem haec vehementer multiplicatur eo, quod plures dentur species eiusdem plausus eodem modo divisi, cum istae sectiones porro varie distinguantur. Praeterea utroque modo simul numerus commutationum in immensum augebitur, si nimirum plausus non solum ratione divisionis, sed etiam durationis permutantur. De quibus omnibus, quas regulas observari oporteat, ex secundo capite est derivandum.

16. Plausus autem eorumque partes, ut iam diximus, ab auditoribus eodem modo animadvertuntur, quo carminis versus, pedes atque singulae syllabae. Et quemadmodum in his vix ulla recitantis sensibilis cessatio adverti potest, etiamsi revera aliquod interstitium adsit, ita etiam plausus eorumque partes a se invicem distinguuntur, ut perquam exigua et fere imperceptibilis mora finito tactu eiusve aliqua parte interponatur. Multum tamen etiam ad hanc distinctionem facit sonorum diversa vis; primarii enim seu ii, qui tactum eiusque partes inchoant, fortiores aliquanto efficiuntur. Quamobrem intelligitur primos sonos in quoque tactu et partibus eius simul esse debere principales, reliquos vero, ut minorem habent vim, ita etiam minus esse principales.

17. Sicuti igitur tactus partes cum syllabis singulis orationis ligatae et ipsi tactus cum pedibus seu versibus comparari possunt, ita aliquot tactus integram constituunt periodum harumque plures integram orationis partem. Similes hanc ob rem regulas in musica et oratoria observari oportet, ita ut tactus quilibet melodiae quandam distinctionem repraesentet, et aliquot eorum, qui periodo oratoriae seu versui respondeant, quasi integrum quendam melodiae sensum comprehendere debeant. Certis igitur concludendae sunt clausulis, quae finem commode constituent. Et hae ipsae diversae esse debebunt, prout vel periodi tantum partem vel integram periodum vel totam etiam orationem finiunt.

18. Postremus vero sonus cuiusque periodi debet esse principalis et hanc ob rem primus esse debet vel in tactu vel in parte tactus. Quapropter fit, ut neque periodus musica neque oratio in ipsa plausus fine possit terminari, sed initium vel tactus vel eius partis cuiuspiam tenere debeat finis huius modi. Progressio vero et praeparatio ad finem in ipsum vel tactus vel partis eius finem incidet, ut sequens sonus principalis periodum concludat. Soni enim minus principales aliam ob causam non adhibentur, nisi ut ipsos principales coniungant; quamobrem ii inter principales positi esse debent et cantum neque incipere neque finire possunt. Horum autem omnium plenior expositio in pertractatione tertiae musicae speciei exhiberi debet.

19. Tertia denique exponenda erit musicae species, in qua utraque priorum coniungitur. Plurimum igitur ista habebit suavitatis, cum non solum soni ratione gravis et acuti, ut in prima specie, sed etiam ratione durationis, ut in secunda, ordinem perceptibilem contineant. Et propterea, quo maior in utroque inest ordo, eo quoque haec musica magis placeat necesse est. Perspicuum autem est hac tertia specie multo esse difficilius quidquam elaborare, quod sit perfectum, quam in duabus prioribus, idcirco quod haec utramque perfectionem coniunctim debeat complecti. Quamobrem ipsa rei natura postulat, ut ante in duabus prioribus speciebus opera et studium collocetur, quam tertia pertractetur; nisi enim in utraque specie seorsim suavis obtineri potest, neque in ea, quae ex hisce est coniuncta, quicquam suave efficietur. Intellectis autem duabus prioribus speciebus difficile non erit iis coniungendis tertiam percipere.

20. In hac autem tertia specie maxima versatur multiplicitas compositionis; non solum enim tot eius sunt varietates, quot in utraque praecedentium coniunctim, sed binis quibusque combinandis infinitus propemodum existit varietatum numerus. Scilicet si numerus diversorum compositionis modorum in prima specie sit m numerusque tactuum variorum et mensurae formarum in secunda specie n , erit numerus varietatum tertiae speciei mn . Atque si m et n sint numeri, ut ostendimus, fere infiniti, erit numerus mn stupendae magnitudinis. Ex quo apparet variationes omnes musicae hodiernae, quae potissimum in hac tertia specie est occupata, omnino non posse enumerari. Fieri igitur non potest, ut ista scientia unquam exhauriatur, sed quamdiu mundus durabit locus semper erit plenissimus novarum inventionum; ex quo perpetuo nova melodiarum et concertuum genera emanabunt.

21. In pertractatione tertiae musicae speciei sequi conveniet divisionem in specie secunda factam, atque ad quod licet tactuum sive plausuum genus accommodanda erit componendi ratio primae speciei. Ante omnia autem generalia tradenda sunt praecepta ad duas priores musicae species coniungendas, in quibus exponi oportet, cuiusmodi consonantiis in quavis tactus parte uti maxime conveniat. Cum enim aliae tactus partes sint magis principales, aliae minus, in ipsis quoque consonantiis, quae adhibentur, huiusmodi discrimen appareat necesse est. Deinde cum plures tactus similes sint periodo aliique orationis parti, ostendendum est etiam, cuiusmodi consonantiis quaevis distinctio commodissime exprimatur. De clausulis igitur hoc loco agendum erit earumque differentia, quae ex distinctionis ratione oritur.

22. Enumeratis deinceps variis tactuum generibus ex secunda specie musicae indicandum erit, quomodo in quovis genere periodum musicam constitui atque ex his integram quasi orationem componi oporteat. Amplissima haec erit tractatio ob innumera fere tactuum genera innumerosque componendi modos. Praeter haec vero accedet ingens diversitas styli; simili enim modo, quo in rhetorica, de stylo in musica est agendum, qui nihil aliud est nisi certa quaedam ratio periodos formandi easque coniungendi. Huc tandem quoque pertinent figurae musicae, similes etiam figurarum in oratoria, quibus hae musicae orationes maxime exornantur et ad summum perfectionis gradum evehuntur.

23. Ex consonantiis, quae hoc modo concentum musicum componunt, oriuntur variae, uti vocantur, voces. Nam si soni vel voce vel tali instrumenta, quod plures sonos simul formare non potest, eduntur, ad quamvis consonantiam pluribus opus est vel vocibus vel huiusmodi instrumentis. Ex hisque oritur nova tractatio, quo modo plures voces constituendae sint, ut simul sonantes aptam et gratam consonantiarum seriem exhibeant. Primum igitur una vox debet considerari, tum duae, porro tres, quatuor pluresque. Hacque ratione omnia praecepta, quae erunt eruta, maxime accommodabuntur ad receptum componendi modum; omnia enim fere opera musica constant certo vocum aliquot numero, quarum singulae quandam melodiam constituunt, non quidem completam, sed tamen, ut omnes simul concinentes suavem harmoniam efficiant.

24. Tribus itaque completa de musica tractatio absolvetur partibus, quibus totidem musicae species sunt exponendae. Harumque quaelibet quomodo ad harmoniae praecepta capite secundo stabilita reducenda sit, intelligitur. Cum igitur omnia ex certis derivanda sint principiis, quorum veritas sufficienter est evicta, methodus, qua utemur, plane est philosophica seu demonstrativa. Neque vero quisquam, quantum scio, huiusmodi methodum in musica tradenda adhibuit. Omnes enim, qui de musica scripserunt, vel theoriam nimis neglexerunt vel praxin. Illi scilicet praecepta componendi collegerunt sine demonstrationibus; hi vero toti erunt occupati in consonantiis et dissonantiis explicandis atque ex his modum instrumentorum musicorum attemperandorum investigaverunt, principiis autem usi sunt vel insufficientibus vel precariis, ita ut ipsis ulterius progredi non licuerit.