

Franco de Colonia:
Ars cantus mensurabilis

Prologus

Cum de plana musica quidam philosophi sufficienter tractaverint, ipsamque nobis tam theorice quam practice efficaciter illucidaverint, theorice precipue Boetius, practice vero Guido monachus, et maxime de tropis ecclesiasticis beatus Gregorius, idcirco nos de mensurabili musica—quam ipsa plana precedit tanquam principalis subalternam—ad preces quorundam magnatum tractare proponentes, non pervertendo ordinem, ipsam planam perfectissime a predictis philosophis supponimus propalatam.

Nec dicat aliquis nos hoc opus propter arrogantiam, vel forte propter propriam tantum commoditatem incepisse, sed vere propter evidentem necessitatem et auditorum facillimam apprehensionem necnon et omnium notatorum ipsius mensurabilis musice perfectissimam instructionem.

Quoniam cum videremus multos tam novos quam antiquos in artibus suis de mensurabili musica multa bona dicere, et e contrario in multis et maxime in accidentibus ipsius scientie deficere et errare, opiniones eorum fore existimavimus succurrendum, Ne forte propter defectum et errorem predictorum scientia dicta detrimentum pateretur, proponimus igitur ipsam mensurabilem musicam sub compendio declarare; bene dictaque aliorum non recusabimus interponere, erroresque destruere et fugare; et si quid novi a nobis inventum fuerit, bonis rationibus sustinere et probare.

Capitulum 1
De diffinitione musice mensurabilis et eius speciebus

Mensurabilis musica est cantus longis brevibusque temporibus mensuratus. Gratia

Franco of Cologne:
The Art of Measurable Song (c.1280)

trans. Rob C. Wegman

Prologue

Since certain philosophers have already sufficiently treated plain music, and have effectively elucidated the same for us with respect to both theory and practice (Boethius especially with regard to theory, Guido the monk with regard to practice, and the Blessed Gregory above all with regard to the ecclesiastical songs), therefore we, who at the request of certain lords intend to treat measurable music—which that plain music precedes just as the principal does the subordinate—[and who intend to treat it] without overturning this order, understand the same plain music to have been most perfectly covered by the aforesaid philosophers.

And let not somebody say that we have undertaken this work out of arrogance, or perhaps even for our own advantage, but truly for the sake of evident necessity, and for the sake of readiest understanding by students, and also, indeed, of the most perfect instruction of all notators of the same measurable music.

For when we considered that there are many, both young and old, who in their doctrines say many good things about measurable music, but who are also deficient and in error about many things—especially the accidental aspects of this discipline—we have considered that their viewpoints shall be in need of help, lest the discipline were perhaps to suffer damage on account of the aforesaid defects and errors. Therefore we propose to clarify the same measurable music in compendious fashion; we shall not hesitate to include things well said by others, nor to destroy and avoid errors, nor, if something new shall be found by ourselves, to uphold and prove it with good reasons.

Chapter 1
The definition of measurable music and its species

Measurable music is song measured by long and short tempora. With the help of this definition we must now

huius diffinitionis, videndum est quid sit mensura et quid tempus.

Mensura est habitudo quantitativa longitudinem et brevitatem cuiuslibet cantus mensurabilis manifestans. Mensurabilis dico, quia in plana musica non attenditur talis mensura.

Tempus est mensura tam vocis prolate quam eius contrarii, scilicet vocis amisse, que pausa communiter appellatur. Dico autem pausam tempore mensurari, quia aliter duo cantus diversi, quorum unus cum pausis, alius sine sumeretur, non possent proportionaliter adinvicem coequari.

Dividitur autem mensurabilis musica in mensurabilem simpliciter et partim. Mensurabilis simpliciter est discantus, eo quod in omni parte sua tempore mensuratur. Partim mensurabilis dicitur organum pro tanto quod non in qualibet parte sua mensuratur.

Et sciendum quod organum dupliciter sumitur, proprie et communiter. Est enim organum proprie sumptum organum duplum, quod purum organum appellatur. Communiter vero dicitur organum quilibet cantus ecclesiasticus tempore mensuratus.

Sed quia simplex precedit compositum, primo dicendum est de discantu.

Capitulum 2

De diffinitione discantus et divisione

Discantus est aliquorum diversorum cantuum consonantia, in qua illi diversi cantus per voces longas, breves vel semibreves proportionaliter adequantur, et inscripto per debitas figuras proportionari adinvicem designantur.

Discantus sic dividitur: discantus alius simpliciter prolatus, alius truncatus qui oketus dicitur, alius copulatus qui copula nuncupatur; et de hiis per ordinem est dicendum.

Sed quia quilibet discantus per modos procedit, idcirco primo de modis et consequenter de eorum signis, scilicet de figuris, est tractandum.

consider what is measure, and what tempus.

Measure is the quantitative unit by which length and shortness in any song are indicated. I speak of “measurable music” since measure of this kind is not applied to plain music.

Tempus is the measure of sound which is uttered, and of its opposite, that is, sound which is muted, commonly called rest. Now, I do indeed say that a rest is also measured by tempus, because otherwise two different songs, one with rests and the other without, cannot be proportionally adjusted to each other.

Now, measurable music is divided into that which is wholly measurable and that which is only partially so. Wholly measurable is discant, because it is measured by tempora in all of its parts. Partially measurable is organum, inasmuch as it is not measured in all of its parts.

And one must know that the term organum is understood in two ways, namely, organum properly so-called and organum according to common usage. For organum properly so-called is organum duplum, which is termed pure organum. But in common usage any ecclesiastical song measured in tempora is called organum.

But since that which is undivided goes before that which is composite, we must speak first of discant.

Chapter 2

The definition and division of discant

Discant is the sounding together of a number of different tunes. In it, the different tunes are proportionally adjusted to each other through long, short, or half-short sounds, and, when written down in the appropriate figures, marked to be mutually proportioned.

Discant is divided thus: one type of discant is pronounced straightforwardly, another truncated type is called hocket, and another intercoupled type is named copula; and we must speak of these in order.

But since all discant proceeds in modes, we should first discuss the modes and thereafter their signs, that is, the figures.

Capitulum 3

De modis cuiuslibet discantus

Modus est cognitio soni longis brevibusque temporibus mensurati. Modi autem a diversis diversimode enumerantur et etiam ordinantur. Quidam enim ponunt sex, alii septem. Nos autem quinque tantum ponimus, quia ad hos quinque omnes alii reducuntur.

Primus enim procedit ex omnibus longis, et sub isto reponimus illum qui est ex longa et brevi duabus de causis. Prima est quia isti duo in similibus pausationibus uniuntur; secunda est propter antiquorum et aliquorum modernorum controversiam compescendam.

Secundus procedit ex brevi et longa. Tertius autem ex longa et duabus brevibus. Quartus ex duabus brevibus et longa. Quintus ex omnibus brevibus et semibrevibus.

Cum autem istorum modorum voces sint causa et principium et earum note sint nota, manifestum est quod de notis vel figuris, quod idem est, est tractandum. Sed cum ipse discantus tam voce recta quam eius contrario, hoc est voce amissa, reguletur, et ista sint diversa, horum erunt diversa signa, quia diversorum diversa sunt signa. Sed cum prius sit vox recta quam amissa, quoniam habitus precedit privationem, prius dicendum est de figuris, que vocem rectam significant, quam de pausis que amissam.

Capitulum 4

De figuris sive signis cantus mensurabilis

Figura est representatio vocis in aliquo modorum ordinate, per quod patet quod figure significare debent modos, et non e converso, quemadmodum quidam posuerunt.

Figurarum alie simplices, alie composite. Composite sunt ligature. Simplicium tres sunt species, scilicet longa, brevis et semibrevis. Quarum prima in tres dividitur: in longam perfectam, imperfectam et duplicem longam.

Longa perfecta prima dicitur et principalis. Nam in ea omnes alie includuntur, ad eam etiam omnes alie reducuntur. Perfecta dicitur eo quod

Chapter 3

The modes of all discant

Mode is the knowledge of sound as it is measured by long and short tempora. The modes are however numbered and ordered in different ways by different people. For there are some people who posit six modes, and others seven. Yet we posit only five modes, since all the others are reducible to these.

The first mode proceeds by longas only, and under it we place the one that proceeds by longa and brevis, and this on two grounds. The first is that these two modes are united in having similar rests; the second is for the sake of ending the controversy between the old and some of the moderns.

The second mode proceeds by brevis and longa. The third however proceeds by a longa and two breves. The fourth by two breves and a longa. The fifth by breves and semibreves only.

Since, however, the sounds of those modes are the cause and principle, and their notes the denotation, it is clear that we should first treat the notes, or figures (which is the same thing). But since discant itself is regulated both in direct sound and in its contrary, that is, muted sound, and since these are different things, their signs shall also be different, since the signs of different things must be different. And since direct sound is prior to muted sound, because possession always comes before privation, we must first speak of the figures which signify direct sound, rather than the rests which signify muted sound.

Chapter 4

Figures, or signs, of measurable song

A figure is the representation of sound as arranged in one of the modes; it is evident from this [definition] that figures must signify modes, and not conversely as some have asserted.

Of the figures, some are onefold, and some composite. The composite ones are ligatures. There are three species of onefold figures, namely, longa, brevis, and semibrevis. The first of these is divided into three: the perfect longa, the imperfect, and the double longa.

The perfect longa is called first and principal. For in it, all others are included, and to it, all others are

tribus temporibus mensuratur; est enim ternarius numerus inter numeros perfectissimus pro eo quod a summa trinitate, que vera est et pura perfectio, nomen sumpsit. Cuius figuratio quadrangularis est, caudam habens in parte dextra descendentem, per quam representat longitudinem, ut hic: ¶

Longa vero imperfecta sub figuratione perfecte duo tantum tempora significat. Imperfecta quidem pro tanto dicitur, quia sine adiutorio brevis precedentis vel subsequentis nullatenus invenitur. Ex quo sequitur quod illi peccant qui eam rectam appellant, cum illud quod rectum est possit per se stare.

Duplex longa sic: ▢ formata duas longas significat, que idcirco in uno corpore duplicatur, ne series plani cantus sumpti in tenoribus disrumpatur.

Brevis autem, licet in rectam et alteram brevem dividatur, quadrangularis tamen sine aliquo tractu pro utraque illarum figuratur sic: •

Semibrevis autem alia maior, alia minor dicitur; harum tamen quilibet uniformiter ad modum losenge sic: ♦ formatur.

Capitulum 5

De ordinatione figurarum adinvicem

Simplicium autem valoris cognitio ex ordinatione quam habent adinvicem declaratur. Ordinatio vero earum sic accipitur: aut enim longam sequitur longa, aut brevis; et nota hoc idem esse iudicium de brevibus et semibrevis.

Si autem longam longa sequatur, tunc prima longa sub uno accentu tribus temporibus mensuratur et perfecta longa nuncupatur, sive sit figura vel pausa, ut hic:



Si vero longam sequatur brevis, hoc est multipliciter, quoniam sola vel plures. Si sola, tunc longa est duorum temporum et dicitur imperfecta, ut hic:

reducible. It is called perfect because it measures three tempora, and the ternary number is indeed the most perfect among numbers, for the reason that it has taken its name from the most high Trinity, which is the true and pure perfection. Its figuration is quadrangular, having a downward tail on the right-hand side, by which it represents the length [of the figure], as here: ¶

Yet the imperfect longa, under the [same] figuration as the perfect, signifies two tempora only. It is indeed called imperfect, inasmuch as it cannot in any way be found without the help of a brevis preceding or following. It follows from this that those people who call this the *recta longa* are mistaken, for that which is *rectus* can stand by itself.

The double longa formed thus ▢ signifies two longas, which are doubled in one body lest the sequence of plainsong [notes] in tenors be broken up.

The brevis, although it is divided in *recta* and *altera*, is shaped quadrangularly in both cases, without any line, thus: •

One type of semibrevis is called major, the other minor; both of them, however, are formed uniformly in the manner of a losenge, thus: ♦

Chapter 5

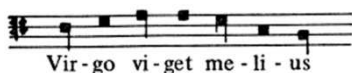
The mutual arrangement of figures

The value of onefold figures is indicated by the way they are arranged with respect to each other. Their arrangement is understood thus: either a longa is followed by a longa or it is followed by a brevis; and note that this judgement is the same for breves and semibreves.

Now if a longa is followed by a longa, then the first longa measures three tempora under one accent and it is called a perfect longa, irrespective of whether it be a figure or a rest, as here:



But if a longa is followed by a brevis, then there are more possibilities than one, since there may be either one brevis alone or several. If one alone, then the longa is of two tempora and it is called imperfect, as here:



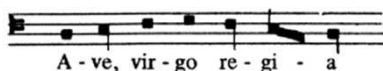
nisi inter illas duas, scilicet longam et brevem, ponatur quidam tractulus qui signum perfectionis dicitur, qui etiam alio nomine divisio modi appellatur; et tunc longa prima perfecta est, et brevis imperficit sequentem longam, ut hic:



Si autem plures, hoc est multipliciter: aut due, aut tres, aut quatuor, aut quinque, aut plures quam quinque. Si due tantum, ut hic:



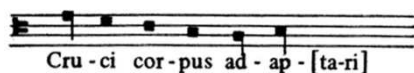
tunc longa est perfecta, nisi eam sola brevis precedat, ut hic:



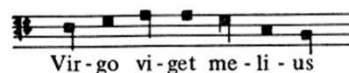
Duarum autem brevium prima recta, secunda vero altera brevis appellatur. Recta brevis est que unum solum tempus continet; altera autem brevis similis est longe imperfecte in valore, differens tamen in figuratione. Nam utraque sub diversa figuratione duobus temporibus mensuratur. Unum tempus appellatur illud quod est minimum in plenitudine vocis. Si vero inter predictas duas breves ille tractus qui divisio modi dicitur apponatur, ut hic:



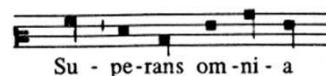
tunc longa prima est imperfecta et etiam secunda; brevium autem ipsarum quelibet erit recta: hoc tamen rarissime invenitur. Si tres breves tantum inter duas longas accipiuntur, ut hic:



idem quod prius habetur, nisi quod illa que primo altera brevis dicebatur, hic in duas rectas breves separatur. Sed si inter primam brevem et duas sequentes divisio modi apponatur, ut hic:



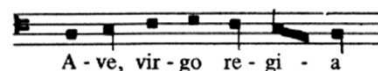
unless between those two, that is, longa and brevis, some little line is notated which is called the sign of perfection, and also, under another name, the division of mode; and then the first longa is perfect, and the brevis imperfecits the following longa, as here:



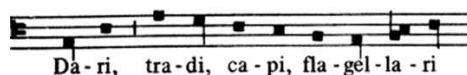
If several breves, however, then there are several possibilities: two, three, four, five, or more than five. If there be only two, as here:



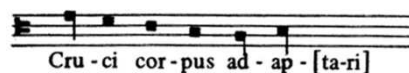
then the longa is perfect, except if it is preceded by a single brevis, as here:



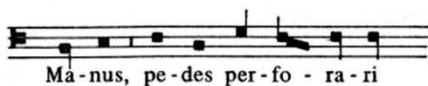
Of these two breves, the first is called *recta* and the second *altera brevis*. The *recta brevis* is one that contains one tempus only; the *altera brevis* is the same in value as the imperfect longa, but different in figuration. For each of the two notes measures two tempora under a different figuration. A single tempus is called that which is the smallest in fullness of sound. But if the line which is called division of mode is notated between the aforesaid two breves, as here:



then the first longa is imperfect and the second also; but each of the same breves shall be *recta*: this, however, is encountered very rarely. But if three breves are found between two longas, as here:

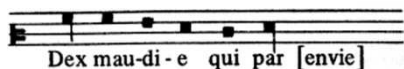


the same obtains as before, except that the one that was first called *altera brevis* is here separated into two *breves rectae*. But if a division of mode is written between the first brevis and the next two, as here:

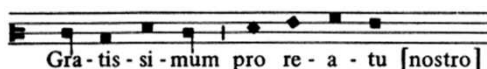


tunc prima longa a prima brevi imperfectitur; secundarum brevium sequentium prima fit recta, ultima vero alteratur. Et nota quod tria tempora, tam uno accentu quam diversis prolata, unam perfectionem constituunt.

Si plures quam tres, ut hic:



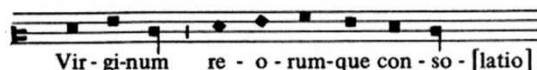
tunc prima semper est imperfecta, nisi ei signum perfectionis addatur, ut hic:



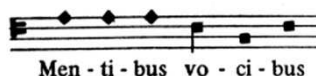
Sequentium autem brevium quilibet est recta, si in computando in ternario numero, quo constituitur perfectio, inveniatur. Sed si due tantum in fine remaneant, tunc ultima earum altera brevis dicitur, ut hic:



Si vero sola, erit recta, et ultimam longam imperfectam reddit, ut hic:



De semibrevis autem et brevibus idem est iudicium in regulis prius dictis. Sed nota semibrevis plures quam tres pro recta brevi non posse accipi, quarum quilibet minor semibrevis dicitur, eo quod minima pars est ipsius recte brevis, ut hic:

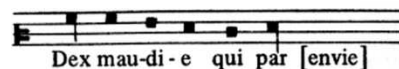


nec minus quam duas, quarum prima minor, secunda maior semibrevis appellatur. Secunda maior pro tanto dicitur, quia duas minores in se includit, ut hic:

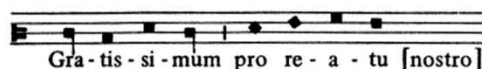


then the first longa is imperfected by the first brevis; of the next two breves, the first is *recta* but the second is altered [i.e. turned into *altera*]. And note that three tempora, whether pronounced under one accent or several, make up one perfection.

If more than three, as here:



then the first is always imperfect, except when it is notated with the sign of perfection, as here:



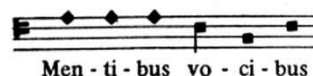
Each of the following breves however is *recta*, provided that in counting up they are found to be ternary in number, by which ternary number the perfection is constituted. But if only two remain left at the end, then the second of the two is called *altera brevis*, as here:



If only one, it shall be *recta*, and it renders the last longa imperfect, as here:



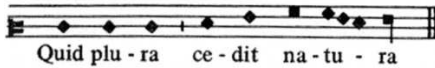
The judgement of semibreves and breves is the same in the aforesaid rules. But note that one cannot have more than three semibreves for one *recta brevis*, each of which is called a minor semibrevis since it is the smallest part of the same *recta brevis*, as here:



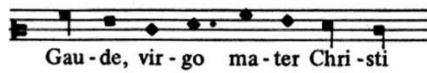
nor fewer than two, of which the first is called minor and the second major semibrevis. The second is called major inasmuch as it contains within itself two minor ones, as here:



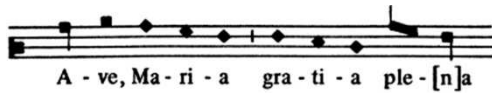
Sed si immediate due semibreves, pro recta brevi posite, tres sequuntur, vel e converso ut hic:



tunc divisio modi inter tres et duas, vel e converso, est ponenda, ut in predicto exemplo apparet. Pro altera autem brevi minus quam quatuor semibreves accipi non possunt, ut hic:



nec plures quam sex, ut hic:



eo quod altera brevis in se duas rectas includit; per quod patet quorundam mendacium, qui quandoque tres semibreves pro altera brevi ponunt, aliquando vero duas.

Capitulum 6

De plicis in figuris simplicibus

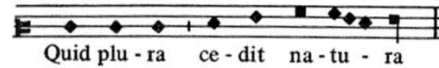
Preterea sunt alie quedam figure simplices, illud idem quod predictae significantes, eisdem etiam nominibus cum additioe huius quod est plica, nominate.

Idcirco videndum est quid sit plica. Plica est nota divisionis eiusdem soni in grave et acutum. Plicarum alia longa, alia brevis, alia semibrevis. Sed de semibrevis ad presens nihil intendimus, cum non in simplicibus figuris possit plica semibrevis inveniri. In ligaturis tamen et ordinationibus semibrevium plica possibilis est accipi, ut postea apparebit.

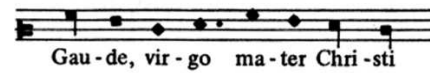
Item plicarum alia ascendens, alia descendens. Plica longa ascendens est quedam quadrangularis figura, solum tractum gerens a parte dextra ascendentem, ut hic: ▮, vel magis proprie duos, quorum dexter longior est sinistro, ut hic: ▮. Magis proprie dico, quia per illos duos tractulos nomen plice habere meretur.

Longa vero descendens similiter duos habet

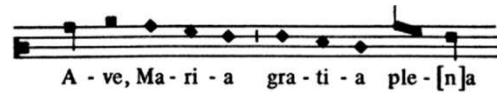
But if three semibreves immediately follow two, notated for one *recta brevis*, or the other way round, as here:



then one must notate a division of mode between the two and the three, or the other way round, as is apparent from the aforesaid example. Yet it is not possible to have fewer than four semibreves in a *brevis altera*, as here:



nor more than six, as here:



because the *altera brevis* contains within itself two *rectae breves*; and we can tell from this the falsehood of those who sometimes notate three semibreves for a *brevis altera*, and sometimes two.

Chapter 6

Plicas in onefold figures

In addition there are certain other onefold figures, signifying the same thing as did the aforesaid figures, named by the same names with the addition of that which is the plica.

Therefore we must now consider what the plica is. The plica is a mark of the division of the same sound in low and high. Among the plicas some are longa, some brevis, some semibrevis. But presently we intend [to say] nothing about the semibrevis, since in onefold figures one does not find a plica of the semibrevis. In ligatures, however, and in arrangements of semibreves it is possible to admit them, as shall appear later on.

Also, among the plicas some are ascending and some descending. The ascending plica longa is a quadrangular figure carrying an ascending line on the right-hand side, as here: ▮, or more properly two lines, of which the one on the right is longer than the one on the left, as here: ▮. I say "more properly" because it merits the name of plica through those two lines.

Now the descending longa similarly has two lines,

tractus, sed descendentes, dextrum ut prius longiorem sinistro, ut hic: ♯. Plica brevis ascendens est que habet duos tractus ascendentes, sinistrum tamen longiorem dextro, ut hic: ♯. Descendens vero brevis duos tractus habet descendentes, sinistrum longiorem, ut hic: ♯.

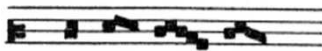
Et nota istas plicas similem habere potestatem et similiter in valore regulari quemadmodum simplices supradicte.

Capitulum 7

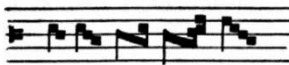
De ligaturis et earum proprietatibus

Habito de simplicibus figuris, dicendum est de compositis vel ligatis, quod idem est, que ligature proprie appellantur.

Ligatura est coniunctio figurarum simplicium per tractus debitos ordinata. Ligaturarum alia ascendens, alia descendens. Ascendens est illa cuius secundus punctus altior est primo, ut hic:



Descendens vero est cuius primus punctus altior est secundo, ut hic:



Item ligaturarum alia cum proprietate, alia sine, alia cum opposita proprietate; et hoc a parte principii ligature. A parte autem finis: alia cum perfectione, alia sine.

Et nota istas differentias essentielles esse et specificas ipsis ligaturis. Unde ligatura cum proprietate essentialiter differt ab illa que est sine, ut rationale animal ab irrationali; similiter et in aliis differentiis prius dictis.

Species quoque consistunt sub genere; ipsis tamen speciebus non est nomen impositum, sed eas dicte differentie et suum genus circumloquuntur, secundum etiam quod in generibus aliis realibus invenitur, ut corpus animatum quod circumloquitur quamdam speciem, cui nomen non est impositum.

but descending, the one on the right being, as before, longer than the one on the left, as here: ♯. The ascending plica brevis is one that has two ascending lines, the one on the left however being longer than the one on the right, as here: ♯. But the descending plica brevis has two descending lines, the one on the left being longer, as here: ♯.

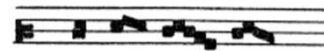
And note that those plicas have a similar power and are similarly regulated in value as are the aforesaid onefold ones.

Chapter 7

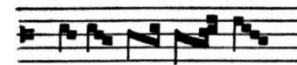
Ligatures and their properties

Having dealt with the onefold figures, now we should speak of the ones that are composite, or ligated (which is the same thing), which are properly called ligatures.

A ligature is the conjoining of onefold figures arranged by the appropriate lines. Among ligatures some are ascending and some descending. Ascending is the one whose second note is higher than the first, as here:



But descending is the one whose first note is higher than the second, as here:



Again, some ligatures are with propriety, some without, and some with opposite propriety; and all this at the beginning of the ligature. But at the ending some are with perfection and some without.

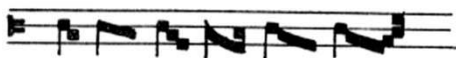
And note that these differences are essential, and specific to the same ligatures. Thus a ligature with propriety differs essentially from one without, just as the rational animal differs from the irrational; and similarly also with regard to the other aforesaid differences.

There are also species classed under the genus; no name is assigned to the same species, however, but the said differences and their genus are described, according to what is encountered also in other real genera, just as the animated body is described as a certain species, to which however no name is assigned [Arist., *De anima*].

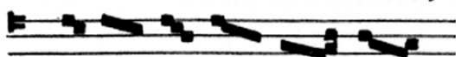
A parte autem medii ligaturarum nulla essentialis differentia invenitur. Ex quo sequitur quod omnia media ipsarum ligaturarum conveniunt in significatis. Per quod patet positionem illorum esse falsam qui ponunt in ternaria aliqua mediam esse longam, in omnibus autem aliis fore brevem.

Unde videndum est quid sit proprietas, quid sine, et quid opposita; quid etiam sit perfectio, quid imperfectio, et de horum omnium significatis. Proprietas est nota primarie inventionis ligature a plana musica data in principio illius. Perfectio vero idem dicit, sed in fine; unde sequuntur regule differentiarum predictarum.

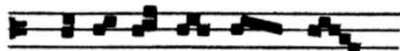
Omnis ligatura descendens tractum habens a primo punctu descendente a parte sinistra, cum proprietate dicitur, eo quod sic in plana musica figuratur, ut hic:



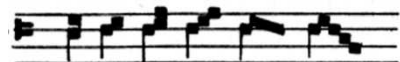
Si autem careat omni tractu, sine proprietate dicitur, ut hic:



Item omnis figura ascendens cum proprietate dicitur, si careat omni tractu, ut hic:



Si vero tractum habeat a parte sinistra primi puncti descendente, ut hic:



vel dextra, quod magis proprium est, ut hic:



tunc proprietate carebit.

Item omnis ligatura tam ascendens quam descendens, tractum gerens a primo puncto ascendente, cum opposita proprietate dicitur, ut hic:

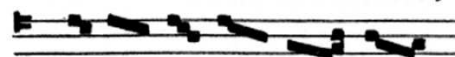
No essential difference is found in the middle of ligatures, however. It follows from this that all middle notes agree in the things they signify. And it is apparent from this that the position of those people is false who assert that in a certain ternary ligature the middle note is longa, while the others are breves.

Now we need to consider what is propriety, what without, and what opposite; also what is perfection, what imperfection, and about the things signified by all these. Proprietas is a mark indicating the primary conception of the ligature as given by plain music at the beginning of the same. And perfectio says the same thing, except about the end; thence follow the rules of the aforesaid differences.

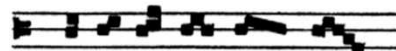
Every descending ligature that has a line descending from the left side of the first note is called with propriety, for the reason that it is figured in this way in plain music, as here:



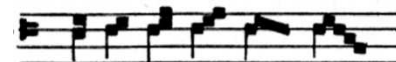
But if it lacks any line, it is said to be without propriety, as here:



Also, every ascending figure is called with propriety if it lack any line, as here:



But if it has a descending line on the left side of the first note, as here:

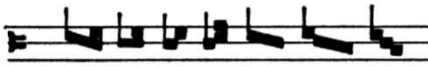


or on the right side, which is much more proper, as here:

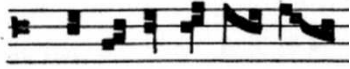


then it shall lack propriety.

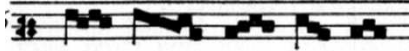
Also, every ligature, ascending as well as descending, which carries a line ascending from the first note, is called with opposite propriety, as here:



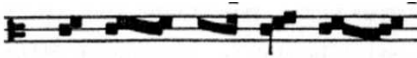
A parte autem finis ligature, tales dantur regule. Omnis ligatura ultimum punctum recte gerens supra penultimum est perfecta, ut hic:



vel sub penultimo, ut hic:



Imperfecta autem redditur ligatura duobus modis: primo si ultimus punctus directus averso capite stat supra penultimum sine plica, ut hic:



secundo vero si duo ultima puncta ligature in uno corpore obliquo ascendente commiscantur, ut hic:



vel descendente, ut hic:

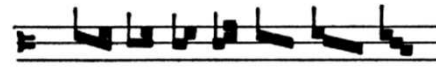


Ascendens tamen talis imperfectio non in usu habetur, nec etiam est necessaria, nisi quando brevem plicari oportet in fine in ligatura ascendente, ut postea apparebit.

Preterea notandum est quod, sicut per has differentias ligatura una differt ab alia formaliter, ita et in valore, unde sequuntur regule omnium ligaturarum.

Omnis ligatura cum proprietate primam facit brevem. Item omnis sine: longam. Item omnis perfectio longa, et omnis imperfectio brevis. Item omnis opposita proprietas facit illam semibrevis cui additur et sequentem, non per se sed ex consequenti, eo quod nulla sola semibrevis inveniri possit.

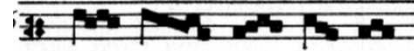
Item omnis media brevis, nisi per oppositam proprietatem semibreviatur, ut dictum est prius. Intelligendum est etiam in ligaturis longas perfici et imperfecti eo modo quo in simplicibus fuit dictum, breves quoque rectas fieri et etiam alterari.



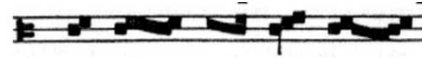
But the following rules are given concerning the end of the ligature. Every ligature that has the last note directly above the penultimate is perfect, as here:



or under the penultimate, as here:



But a ligature can be rendered imperfect in two ways: first, if the last direct note stands with head averted above the penultimate without a plica, as here:



and second, if the last two notes of the ligature are mingled together in one body ascending obliquely, as here:



or descending, as here:



But such ascending imperfection is not in use, nor indeed is it necessary, except when the brevis at the end in an ascending ligature needs to be plicated, as shall be apparent later on.

One should note, moreover, that just as one ligature differs, because of those differences, from another ligature as to its shape, it does so as well with respect to value; from this follow the rules of all the ligatures.

Every ligature with propriety makes the first note a brevis. Also, every one without: longa. Again, every perfection longa, and every imperfection brevis. Again, every opposite propriety makes the one to which it is added a semibrevis, and also the following note, not on its own account but by indirect consequence, because a semibrevis cannot occur on its own.

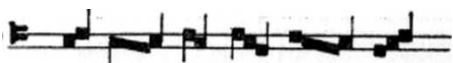
Again, every middle note is a brevis, unless it is semi-breviated through opposite propriety, as said before. One should also know that longas in ligatures are perfected and imperfect just as was said in onefold figures, and that breves, too, can be made *recta* and also be altered.

Capitulum 8

De plicis in figuris ligatis

Preterea sciendum est quod omnis ligatura, tam perfecta quam imperfecta, plicabilis est, et hoc a parte finis. Quid autem sit plica dictum est prius in capitulo de simplicibus figuris.

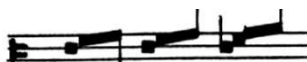
Plicatur enim ligatura perfecta dupliciter, ascendendo et descendendo. Ascendendo sic:



descendendo vero sic:



Item dupliciter plicatur imperfecta. Et nota imperfectam semper plicari in imperfectione obliqua ascendente, ut hic:



vel descendente, ut hic:



Et in tali casu ubi debet plicari imperfecta, est necessaria obliquitas fieri ascendendo, ad hoc quod ultima brevietur. Quoniam si recta imperfectio plicaretur, per plicam perficeretur, eo quod perfecte rationem participaret. Imperfectio tamen obliqua ascendens non est ponenda sine plica, nam positio imperfectionis recte sufficit ubicumque non est plica, et proprior est et magis usitata. Sic patent plice omnium ligaturarum.

Sunt etiam quedam coniuncturae simplicium et ligaturarum, que partim participant ligaturas et partim simplices figuras. Que nec ligature nec simplices figure appellari possunt, ut hic patet:



De valore autem talium coniuncturarum non possunt alie regule dari quam ille que de simplicibus et ligatis prius dantur.

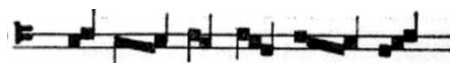
Preterea sunt quedam alie ordinationes

Chapter 8

Plicas in ligated figures

One should know, moreover, that every ligature, whether perfect or imperfect, can be plicated, and this at the end. What a plica is has already been said before in the chapter on onefold figures.

The perfect ligature can be plicated in twofold manner, ascending and descending. Ascending in this way:



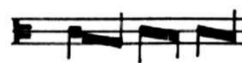
and descending in this way:



The imperfect ligature can also be plicated in twofold manner. And note that the imperfect ligature is always plicated in the type of imperfection that ascends obliquely, as here:



or descends obliquely, as here:



And in such a case, where the imperfect ligature must be plicated, it is necessary for the oblique shape to be ascending, in order that the last note can be breviated. For if the direct imperfection is plicated, it is perfected by the plica, because it shares in the cause of the perfect one. But imperfection that ascends obliquely cannot be notated without a plica, for the notation of direct imperfection is sufficient wherever there is no plica, and is more proper and more in use. Thus the plicas of all ligatures do behave.

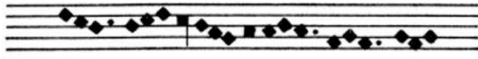
There are also certain *coniuncturae* of both onefold figures and ligatures, which belong partly with the ligatures and partly with the onefold figures. These cannot be called either ligatures or onefold figures, as is evident here:



With regard to the values of such *coniuncturae* no rules can be given other than the ones that were given previously concerning the onefold and ligated figures.

There are, in addition, certain arrangements of

simplicium figurarum et ligaturarum quarundam non impositarum suppletes defectum que regulis simplicium tantummodo dignoscuntur, ut hic patet:



Capitulum 9

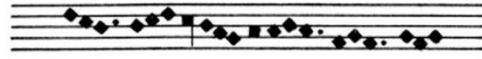
De pausis, et quomodo per ipsas modi adinvicem variantur

Dicto de signis rectam vocem significantibus, videndum est de pausis que obmissam representant. Pausa est obmissio vocis recte in debita quantitate alicuius modi facta. Pausationum sex sunt species: longa perfecta, longa imperfecta, sub qua comprehenditur altera brevis, eo quod mensuram eandem comprehendant, brevis recta, semibrevis maior, semibrevis minor, et finis punctorum.

Pausatio perfecte longe est obmissio recte vocis perfecte in se tria tempora comprehendens. Imperfecta vero similiter imperfecte alterius quoque brevis duobus tantum temporibus mensurata. Brevis est obmissio recte brevis in se includens solum tempus. Semibrevis maior duas partes obmittit recte brevis. Minor tertiam tantum linquit. Finis punctorum immensurabilis appellatur, nam et ipsa in plana musica reperitur. Hec tantum penultimam notam significat esse longam in quocumque modo evenerit, licet forte ista penultima de ratione modi in quo est brevis esset.

Preterea iste sex pause sex tractibus subtilibus designantur, qui etiam pause appellantur. Quarum prima que perfecta dicitur, quatuor tangens lineas, tria spatia comprehendit, eo quod tribus temporibus mensuratur. Imperfecta vero tres lineas apprehendens, eadem ratione spatia duo tegit; brevis unum, maior semibrevis duas partes unius, sed minor tertiam tantum tegit. Finis punctorum omnes lineas attingens, quatuor spatia comprehendit. Harum autem omnium patent formule in presenti exemplo:

unestablished onefold figures and ligatures, supplying what is lacking, which [arrangements] can only be discerned by the rules of onefold figures, as appears here:



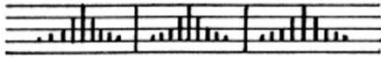
Chapter 9

Rests, and how modes can be mutually changed by them

Having spoken of the signs that signify direct sound, we must now consider rests which represent muted sound. A rest is the muting of direct sound, made in the appropriate quantity of some mode. There are six species of rest: the perfect longa, the imperfect longa (under which is comprised also the *brevis altera*, since they both comprise the same measure), the *brevis recta*, the major semibrevis, the minor semibrevis, and the *finis punctorum*.

The perfect longa rest is the muting of the direct sound of a perfect longa, which contains within itself three tempora. The imperfect longa rest similarly of another imperfect one, and this also serves as the brevis rest measuring two tempora. The brevis rest is the muting of the *brevis recta*, which includes in itself one tempus alone. The major semibrevis rest mutes two parts of the *brevis recta*. The minor leaves out only the third part. The *finis punctorum* is called immeasurable, since it is found also in plain music. It signifies that the penultimate note is a longa, regardless of the mode in which it occurs, even if that penultimate were a brevis by reason of the mode.

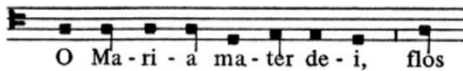
Furthermore, those six rests are designated by fine lines, which are also called rests. The first of these, which is called the perfect rest, comprises three spaces, touching four lines, because it measures three tempora. But the imperfect rest, by the same reasoning, covers two spaces, embracing three lines; the brevis [rest] one [space], the major semibreve [rest] two parts of one, and the minor [semibrevis rest] only a third. The *finis punctorum* comprises four spaces, touching all the lines. Of all these the little forms appear in the present example:



Et nota pausationes mirabilem habere potestatem; nam per ipsas modi adinvicem transmutantur. Unde propria pausa primi modi est brevis recta vel longa perfecta; pausa vero secundi modi est longa imper-fecta; tertii autem et quarti pausationes sunt proprie longe perfecte, improprie vero recta brevis et altera; quintus autem proprie brevem pausationem vel semibreven meretur habere. Unde si primus modus, qui procedit ex longa et brevis et longa, pausam post brevem habeat longam imperfectam, ut hic:

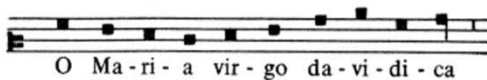


variatur primus modus in secundum. Si vero secundus post longam notam pausam brevem assumat, ut hic:



variatur in primum.

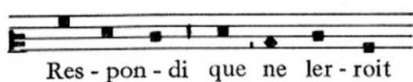
Quintus autem modus, quando in discantu aliquo cum primo accipitur, pausationibus primi regulatur, et longam ante pausationem facit notam, ut hic:



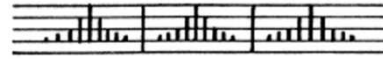
Si vero cum secundo, pausationes secundi habet, et in fine ante pausationem brevem sumit, ut hic:



Si vero nec sic nec sic, tunc propriis pausationibus regulatur, ut hic:



Et nota quod in uno solo discantu omnes modi concurrere possunt, eo quod per



And note that rests have a marvelous power; for by them modes can be transmuted one into the other. Thus the proper rest of the first mode is the *brevis recta* or the perfect longa; but the rest of the second mode is the longa imperfecta; the rests of the third, however, and of the fourth are properly perfect longas, but improperly the *recta brevis* and *altera brevis*; the fifth, however, properly deserves to have brevis or semibrevis rests. Thus if the first mode, which proceeds by longa and brevis and longa, has an imperfect longa rest after the brevis, as here:

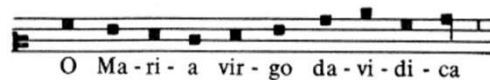


then the first mode is changed into the second. Then again, if the second mode assumes a brevis rest after the longa note, as here:

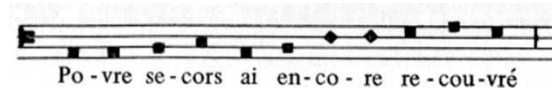


Then it is changed into the first.

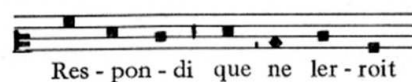
But the fifth mode, when it is found in some discant along with the first, rules the rests of the first, and makes the note before the rest a longa, as here:



If, however, it is found with the second mode, then it has the rests of the second, and has a brevis before the rest at the end, as here:



If, however, neither so nor so, then it is ruled by its own rests, as here:



And note that in one discant alone all modes can run together, since all modes can be reduced to one

perfectiones omnes modi ad unum reducuntur. Nec est vis facienda de tali discantu de quo modo iudicetur. Potest tamen dici de illo in quo plus vel pluries commoratur. Et vide quod quintus modus maxime cum aliis omnibus potest sumi.

Et hec de pausationibus et etiam modorum variatione sufficiant quoad presens.

Capitulum 10

Quot figure simul ligabiles sint

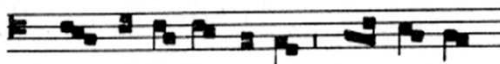
Item sciendum quod figura ligabilis non ligata vitiosa est, sed magis non ligabilis ligata. Unde notandum quod plures longe adinvicem ligari non possunt, nisi in binaria ligatura que est sine proprietate et cum perfectione. Nec adhuc in tali loco sunt vitiose si non ligentur, eo quod longa nusquam alibi cum longa ligabilis invenitur.

Ex quo sequitur quod vehementer errant qui tres longas aliqua occasione, ut in tenoribus, adinvicem ligant. Similiter illi qui inter duas breves longam ligant, cum de impositione mediarum, ut visum est prius, omnes medie brevientur.

Item plures semibreves quam due simul ligari non possunt, et semper in principio ligature; et hoc intellige in propria ligatura. Breves autem ligabiles sunt in principio, medio et in fine.

Ex hiis patet quod modus quilibet acceptus sine littera ligabilis est, excepto illo qui procedit ex omnibus longis.

Unde primus, qui procedit ex longa et brevi, primo ligat tres sine proprietate et cum perfectione; deinde duas cum proprietate et perfectione, et duas et duas quantum placuerit, ita quod super tales duas terminatur, ut hic:



nisi modus predictus varietur, ut hic:



through the perfections. Neither is great effort to be expended on judging in which mode such a discant may be, for it is quite possible to say that of a discant in which several modes abide together. And mark how the fifth mode above all can be taken with all the others.

And this enough for now about rests and also about the changing of modes.

Chapter 10

How many figures are ligatable at the same time

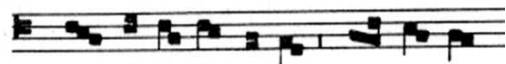
Also, one should know that a ligatable figure which is not ligated is bad, but even more so a non-ligatable one that is ligated. Therefore one should note that longas cannot be ligated to one another, except in the binary ligature without propriety and with perfection. Neither are they bad in such a place if they are not ligated, because nowhere else is a longa ligatable to another longa ever found.

It follows from this that people who ligate three longas to each other in some places, as in tenors, are seriously in error. The same is true of those who ligate a longa between two breves, for with regard to the placement of the middle ones, as seen before, all are breviated.

Also, it is not possible to ligate more than two semibreves, and this always at the beginning of the ligature; and you must understand this in a proper ligature. Breves are however ligatable at the beginning, middle, and end.

It is apparent from these things that any mode is ligatable when there is no text, except for the one that proceeds by longas only.

Thus the first mode, which proceeds by longa and brevis, first ligates three without propriety and with perfection; then two with propriety and perfection, and twos and twos as many as one shall like, in such a way that [the mode] ends with twos of this kind.



except if the aforesaid mode is changed, as here:

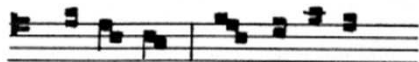


Et nota quod modi multipliciter variari possunt, ut dictum est prius in capitulo de pausationibus.

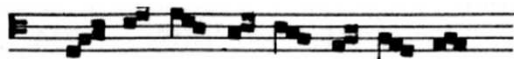
Secundus vero binariam ligaturam cum proprietate et perfectione sumit cum duabus et duabus etc. earundem specierum, una sola brevi in fine remanente, ut hic:



nisi modus varietur, ut hic:



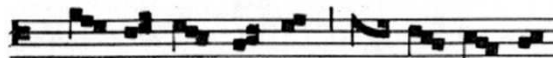
Tertius vero quaternariam accipit sine proprietate et cum perfectione, cum tribus cum proprietate et perfectione et tribus et tribus etc., ut hic:



nisi modus varietur, ut hic:



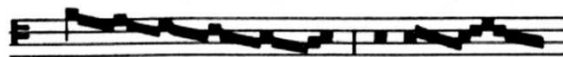
Quartus vero tres cum proprietate et perfectione primo ligat cum tribus et tribus etc. earundem specierum, et in fine cum duabus cum proprietate et sine perfectione, ut hic:



nisi modus varietur, ut hic:



Quintus autem, quantum plus potest, ligari debet, et in breves vel semibreves terminatur, ut hic:



nisi modus varietur, ut hic:

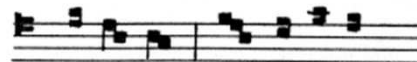


And note that modes can be changed in manifold ways, as was said before in the chapter about rests.

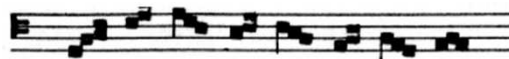
Yet the second mode has the binary ligature with propriety and perfection with twos and twos, etc., of the same species, with one brevis alone remaining at the end, as here:



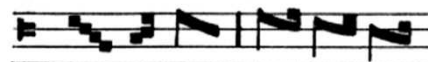
except if the mode is changed, as here:



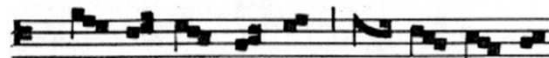
Now the third mode has the quaternary ligature without propriety and with perfection, with threes with propriety and perfection and threes and threes, etc., as here:



except if the mode is changed, as here:



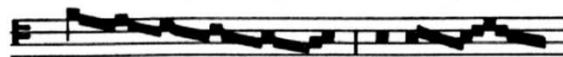
The fourth mode first ligates three with propriety and perfection, with threes and threes, etc., of the same species, and at the end twos with propriety and without perfection, as here:



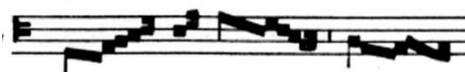
except if the mode is changed, as here:



But the fifth must be ligated as much as possible, and ends with breves or semibreves, as here:



except if the mode is changed, as here:



Capitulum 11

De discantu et eius speciebus

Viso de figuris et pausationibus, dicendum est de discantu, qualiter habeat fieri et de speciebus eius. Sed quia discantus quilibet per consonantias regulatur, videndum est de consonantiis et dissonantiis factis in eodem tempore et in diversis vocibus.

Concordantia dicitur esse quando due voces vel plures in uno tempore prolate se compati possunt secundum auditum. Discordantia vero e contrario dicitur, scilicet quando due voces sic conjunguntur quod discordant secundum auditum.

Concordantiarum tres sunt species, scilicet perfecta, imperfecta et media. Perfecte concordantie dicuntur quando plures voces conjunguntur, ita quod una ab alia vix percipitur differre propter concordantiam. Et tales sunt due, scilicet unisonus et dyapason, ut hic:



Imperfecte dicuntur quando due voces multum differre percipiuntur ab auditu, non tamen discordant. Et sunt due, scilicet ditonus et semiditonus, ut hic:



Medie vero concordantie dicuntur quando due voces conjunguntur, meliorem concordantiam habentes quam predictae, non tamen ut perfectae. Et sunt due, scilicet diapente et diatessaron, ut hic patet:



Quare autem una concordantia magis concordat quam alia, plane musice relinquatur.

Discordantiarum due sunt species, perfecta et imperfecta. Perfecta discordantia dicitur quando

Chapter 11

Discant and its species

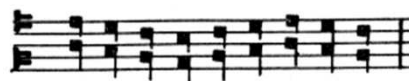
Having considered the figures and the rests, we should now speak of discant, in what way it can be made, and what are its species. But since all discant is regulated by consonances, we should first consider the consonances and dissonances that are produced at the same time in different sounds.

Concordance is said to obtain when two or more sounds produced at the same time can tolerate each other, according to the hearing. But discordance is said contrariwise, namely, when two sounds are joined together in such a way that they are discordant to the hearing.

There are three species of concordances, namely, perfect, imperfect, and middling. One speaks of perfect concordances when two or more sounds are joined in such a way that the one can scarcely be distinguished from the other, on account of the concordance. And there are two such concordances, namely, unison and octave, as here:



One speaks of imperfect concordances when two sounds are perceived to be quite different, yet nevertheless are not discordant. And there are two, namely, the major third and minor third, as here:



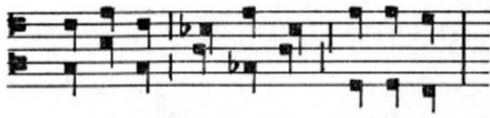
And one speaks of middling concordances when two voices are joined together that make better concordance than the aforesaid, but are not perfect. And there are two, namely, fifth and fourth, as is apparent here:



But why one concordance has better concordance than another is a matter left to be discussed in plain music.

There are two species of discordances, perfect and imperfect. One speaks of perfect discordance when

due voces sic conjunguntur quod se compati non possunt secundum auditum. Et sunt quatuor, scilicet semitonium, tritonus, ditonus cum dyapente, et semitonium cum dyapente, ut hic:



Imperfecte discordantie dicuntur quando due voces se quodammodo compati possunt secundum auditum, sed discordant. Et sunt tres, scilicet tonus, tonus cum dyapente, et semiditonus cum dyapente, ut hic:



Et nota quod tam concordantie quam discordantie possunt sumi in infinitum, ut diapente cum dyapason, dyatessaron cum dyapason, ut hic:

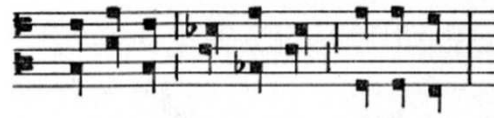


Et sic in duplici diapason et triplici, si possibile esset in voce. Item sciendum est quod omnis imperfecta discordantia immediate ante concordantiam bene concordat.

Discantus autem aut fit cum littera, aut sine et cum littera. Si cum littera, hoc est dupliciter: cum eadem vel cum diversis. Cum eadem littera fit discantus in cantilenis, rondellis, et cantu aliquo ecclesiastico. Cum diversis litteris fit discantus, ut in motetis qui habent triplum vel tenorem, quia tenor cuidam littere equipollet. Cum littera et sine fit discantus in conductis, et discantu aliquo ecclesiastico qui improprie organum appellatur.

Et nota quod in hiis omnibus est idem modus operandi, excepto in conductis, quia in omnibus aliis primo accipitur cantus aliquis prius factus qui tenor dicitur, eo quod discantum tenet et ab ipso ortum habet. In conductis vero non sic, sed fiunt ab eodem cantus et discantus.

two sounds are joined in such a way that they cannot tolerate each other, according to the hearing. And there are four, namely semitone, tritone, major seventh, and minor seventh, as here:



One speaks of imperfect discordances when two sounds can tolerate one another in a certain way, according to the hearing, but are nevertheless discordant. And there are three, namely the whole tone, the major sixth, and the minor sixth, as here:



And note that concordances and discordances alike can be extended into infinity, as fifth plus octave, fourth plus fifth, as here:



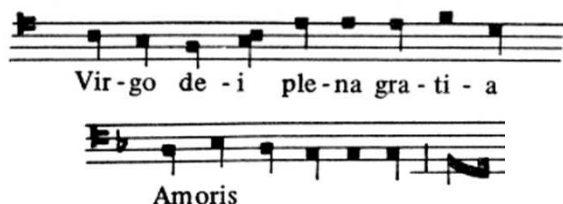
And thus into double and triple octave, if the voice allows it. Also, one should know that every imperfect discordance sounds concordant immediately before a concordance.

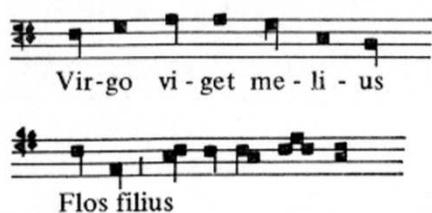
Now discant is made either with text, or without and with text. If with text, then in twofold manner: with the same text or with different texts. Discant with the same text is made in chansons, rondeaus, and in a certain type of ecclesiastical song. Discant with different texts is made in motets that have a triplum or tenor, since the tenor counts as a certain text. Discant with and without text is made in conducti, and also in a certain type of ecclesiastical discant that is improperly called organum.

And note that in all these things there is the same manner of proceeding, except in conducti, since in all others one begins with some song that was already made, which is called tenor, because it holds the discant and in it [the discant] takes its origin. But not so in conducti, for these are made from the same song and discant.

Sed discantus dicitur dupliciter: primo dicitur discantus quasi diversorum cantus, secundo dicitur discantus quasi de cantu sumptus.

Modi autem operandi in istis talis est processus: aut discantus incipit in unisono cum tenore, ut hic:





Deinde proseguendo per consonantias, commiscendo quandoque discordantias in locis debitis, ita quod, quando tenor ascendit, discantus descendat, vel e converso. Et sciendum quod tenor et discantus, propter pulcritudinem cantus, quandoque simul ascendit et descendit, ut hic patet:



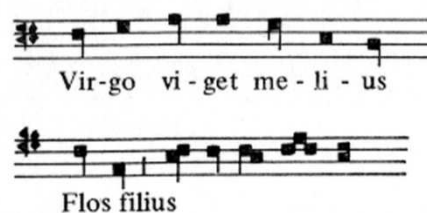
Item intelligendum est quod in omnibus modis utendum est semper concordantiis in principio perfectionis, licet sit longa, brevis vel semibrevis.

Item in conductis aliter est operandum, quia qui vult facere conductum, primam cantum invenire debet pulcriorem quam potest; deinde uti debet illo, ut de tenore faciendo discantum, ut dictum est prius.

Qui autem triplum operari voluerit, respiciendum est tenorem et discantum, ita quod si discordat cum tenore, non discordet cum discantu, vel e converso; et procedat ulterius per concordantias, nunc ascendendo cum tenore vel descendendo, nunc cum discantu, ita quod non semper cum altero tantum, ut hic:



Qui autem quadruplum vel quintuplum facere voluerit, inspicere debet cantus prius factos, ut si cum uno discordet, cum aliis in concordantiis habeatur; nec ascendere debet semper vel descendere cum altero ipsorum, sed



Thereafter continuing further with consonances, sometimes mingling in discordances in the appropriate places, in such a way that when the tenor ascends, the discantus descends, or the other way round. And one should know that tenor and discantus sometimes ascend or descend together, for the sake of the beauty of the song, as is apparent here:



Also, one should know that in all modes, one should always use concordances at the beginning of the perfection, whether it be a longa, brevis, or semibrevis.

Also, in conducti one should operate otherwise, for he who wants to make a conductus should first find as beautiful a song as possible, and thereafter use it in the same way as the tenor when making discantus, as said before.

But he who shall like to fashion a triplum, he should look back at the tenor and discantus, in such a way that when [the triplum] is discordant with the tenor, it should not be discordant with the discantus, or the other way round; and let him proceed further with concordances, now ascending with the tenor or descending, now with the discantus, in such a way that he never goes with the second one only, as here:



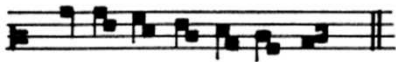
But he who shall wish to make a quadruplum or quintuplum, he should look through the songs already made, so that if he is discordant with one, he shall have concordances with the others; nor must he always ascend or descend with the second of them, but now

nunc cum tenore, nunc cum discantu, etc.

Notandum quod tam in discantu quam in triplicibus etc. inspicienda est equipollentia in perfectionibus longarum, brevium et semibrevium, ita quod tot perfectiones in tenore habeantur quot in discantu vel in triplo etc., vel e converso, computando tam voces rectas quam obmissas usque ad penultimam, ubi non attenditur talis mensura, sed magis est organicus ibi punctus. Et hec de discantu simpliciter prolato ad presens sufficiant.

Capitulum 12 De copula

Copula est velox discantus adinvicem copulatus. Copula alia ligata, alia non ligata. Ligata copula est que incipit a simplici longa et prosequitur per binariam ligaturam cum proprietate et perfectione ad similitudinem secundi modi; ab ipso tamen secundo modo differt dupliciter, scilicet in notando et proferendo: in notando quia secundus modus in principio simplicem longam non habet; copula vero habet, ut hic patet:



Sed si inter primam simplicem et ligaturam divisio modi apponatur, tunc non est copula, sed de secundo modo appellatur, ut hic:



In proferendo etiam differt copula a secundo modo, quia secundus profertur ex recta brevi et longa imperfecta, sed copula ista velociter profertur quasi semibrevis et brevis usque ad finem.

Copula non ligata ad similitudinem quinti modi fit; differt tamen a quinto dupliciter, in notando et proferendo. In notando differt a quinto quia quintus sine littera ubique ligabilis est, sed copula ista nunquam super litteram accipitur, et tamen non ligatur, ut hic patet:

with the tenor, now with the discantus, etc.

One should note that in the discantus as well as in the triplices, etc., one must consider the equivalence in the perfections of longas, breves, and semibreves, in such a way that there will be as many perfections in the tenor as there are in the discantus or triplum, etc., or the other way round, counting both direct and muted sounds up to the penultimate, at which point one does not observe such measure, but rather has an organ point. And for the present this is enough about straightforwardly produced discant.

Chapter 12 Copula

Copula is a fast type of intercoupled discant. Some copula is ligated, and some is not ligated. Ligated copula begins with a single longa and proceeds with binary ligatures with propriety and perfection, very much like what happens in the second mode; but it differs from that same second mode in two ways, namely in notation and in performance: in notation because the second mode does not have a longa at the beginning, whereas copula does have one, as is apparent here:



But if divisio modi is notated between the first single note and the ligature, then there is no copula, but it is said to be in the second mode, as here:



Copula differs from the second mode in performance because the second mode is performed with *brevis recta* and imperfect longa, but copula is performed at fast speed, as if [those notes] were semibrevis and brevis, all the way to the end.

Copula that is not ligated is made very much like the fifth mode; but it differs from the fifth mode in two ways, in notation and in performance. It differs from the fifth in notation because the fifth is everywhere ligatable when there is no text, but copula is never made above text, and yet it is not ligated, as is apparent here:



In proferendo differt etiam a quinto, quia quintus ex rectis brevibus profertur; copula vero velocius proferendo copulatur. Et hec de copula sufficient.

Capitulum 13 De oketis

Truncatio est cantus rectis obmissisque vocibus truncate prolatus. Et sciendum quod truncatio tot modis potest fieri quot longam, brevem vel semibreve contingit partiri. Longa partibilis est multipliciter, primo in longam et brevem, et brevem et longam; et ex hoc fit truncatio, vel oketus quod idem est, ita quod in uno brevis obmittatur, in alio vero longa, ut hic patet:

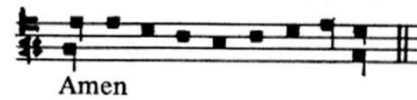


Sic etiam potest dividi in tres breves vel duas, et in plures semibreves. Et ex hiis omnibus cantatur truncatio per voces rectas et obmissas, ita quod, quando unus pausat, alius non pauset, vel e converso.

Brevis vero partibilis est in tres semibreves vel duas; et ex hoc cantatur oketus, unam semibreve obmittendo in uno, et aliam in alio proferendo, ut hic patet:



Et notandum quod ex truncationibus dictis cantantur oketi vulgares ex obmissione longarum et brevium et etiam prolatione. Et notandum quod in omnibus istis observanda est equipollentia in temporibus, et concordantia in vocibus rectis. Item sciendum quod quolibet truncatio fundari debet supra cantum prius factum, licet sit vulgaris et latinum. Et sufficiat de oketis.



And it differs from the fifth in performance, because the fifth is performed in *breves rectae*; but copula is intercoupled while performing faster. And this is enough about copula.

Chapter 13 Hockets

Truncation is song performed with direct and muted sounds in truncated manner. And one should know that one may have truncation in as many ways as the longa, brevis, and semibrevis are divisible in parts. The longa is divisible in multiple ways, first in longa plus brevis, and brevis plus longa; and from this is made truncation, or hocket (which is the same thing), in such a way that the brevis is omitted in one, but the longa in another, as appears here:



The longa may also be divided in three breves or two, and in several semibreves. And every truncation is sung with these in direct and muted sounds, in such a way that when one has a rest, the other does not, or the other way round.

The brevis is divisible in three semibreves or two; and the hocket is sung with these, omitting one semibrevis in one, and another in the other, while performing, as is apparent here:



And one should note that common hockets are sung with the said truncations by the omission of longas and breves and also by their performance. And one should note that in all these things equivalence in tempora is to be observed, and concordance in direct sounds. Again, one should know that every truncation must be founded upon a song already made, never mind whether it be in vernacular or Latin. And this is enough about hockets.

Capitulum 14

De organo

Organum proprie sumptum est cantus non in omni parte sua mensuratus. Sciendum quod purum organum haberi non potest, nisi supra tenorem ubi sola nota est in unisono, ita quod, quando tenor accipit plures notas simul, statim est discantus, ut hic:

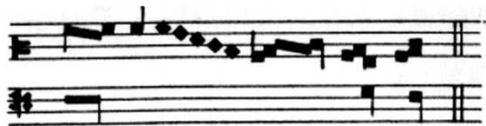


Ipsius organi longe et breves tribus regulis cognoscuntur. Prima est: quicquid notatur in longa simplici nota longum est, et in brevi breve, et in semibreve semibreve. Secunda regula est: quicquid est longum indiget concordantia respectu tenoris; sed si in discordantia venerit, tenor taceat vel se in concordantiam fingat, ut hic patet:



Tertia regula est: quicquid accipitur immediate ante pausationem que finis punctorum dicitur, est longum, quia omnis penultima longa est.

Item notandum quod quotienscumque in organo puro plures figure simul in unisono evenerint, sola prima debet percuti, relique vero omnes in floratura teneantur, ut hic:



Et hec de discantu et eius speciebus, necnon et de ipsius signis, id est de figuris et pausationibus, et de ipso organo sufficiant ibi dicta.

Explicit ars cantus mensurabilis.
Deo gratias.
Amen.

Chapter 14

Organum

Organum properly so-called is song that is not measured in all of its parts. One should know that it is not possible to make organum purum except over a tenor where a single note is sustained in unison, in such a way that when the tenor has several notes at once, it immediately becomes discant, as here:



The longas and breves of organum are recognized with the help of three rules. The first rule is: whatever is notated as a single longa is long, and as a breve short, and as a semibreve half-short. [Duh.] The second rule is: whatever is long needs to make a concordance with the tenor; but if it shall enter on a discordance, then let the tenor either be silent or change itself into a concordance, as is apparent here:



The third rule is: whatever appears immediately before the rest which is called *finis punctorum* is long, because every penultimate is long.

Also, one should note that whenever several figures in organum duplum arrive together on the sustained note, only the first must be struck, and all the others are to be held in a *floratura*, as here:



And these things said here are enough about discant and its species, and its signs, that is, the figures and rests, and about that same organum.

Here ends the art of measurable song.
Thanks be to God.
Amen.