THE FATHERS OF THE CHURCH

A NEW TRANSLATION

VOLUME 4

THE FATHERS OF THE CHURCH

Founded by
LUDWIG SCHOPP

EDITORIAL BOARD

ROY JOSEPH DEFERRARI
The Catholic University of America
Editorial Director

RUDOLPH ARBESMANN, O.S.A.
Fordham University

BERNARD M. PEEBLES
The Catholic University of America

STEPHAN KUTTNER
The Catholic University of America

ROBERT P. RUSSELL, O.S.A.
Villanova College

MARTIN R. P. MCGUIRE
The Catholic University of America

ANSELM STRITTMATTER, O.S.B.
St. Anselm's Priory

WILFRID PARSONS, S.J.
Georgetown University

JAMES EDWARD TOBIN
Queens College

GERALD G. WALSH, S.J.
Fordham University

SAINT AUGUSTINE

THE IMMORTALITY OF THE SOUL

translated by
Ludwig Schopp

THE MAGNITUDE OF THE SOUL

translated by
John J. McMahon, S.J.

ON MUSIC

translated by
Robert Catesby Taliaferro

THE ADVANTAGE OF BELIEVING

translated by
Luanne Meagher, O.S.B.

ON FAITH IN THINGS UNSEEN

translated by
Roy Joseph Deferrari
and
Mary Francis McDonald, O.P.

NEW YORK
FATHERS OF THE CHURCH, INC.

NIHIL OBSTAT:

JOHN M. FEARNS, S.T.D.
CENSOR LIBRORUM

IMPRIMATUR:

✠ FRANCIS CARDINAL SPELLMAN
ARCHBISHOP OF NEW YORK

October 1st 1947

Copyright 1947 by
LUDWIG SCHOPP

All rights reserved

Lithography by Bishop Litho, Inc.
Typography by Miller & Watson, Inc.
U. S. A.

WRITINGS

OF

SAINT AUGUSTINE

VOLUME 2

PUBLIC LIBRARY

6604305

CONTENTS

ON MUSIC

(*De musica*)

Translated

by

ROBERT CATESBY TALIAFERRO, Ph.D.
Portsmouth Priory School
Rhode Island

INTRODUCTION

These six books *On Music* were begun, before Augustine's baptism, at Milan in 387 A.D., and finished later in Africa, after the *De magistro* in 391.[1] While they are, therefore, among the earliest work of his career, they are not the earliest, but follow the four philosophical dialogues of Cassiciacum. They also straddle the period of the *De immortaliate animae,* the *De quantitate animae* and the *De libero arbitrio.* They are, however, only one of a series of treatises on the liberal arts which Augustine started, but never finished. He speaks of finishing one on Grammar and of starting one each on Dialectic, Rhetoric, Geometry, Arithmetic, and Philosophy.[2] Treatises on Grammar, Rhetoric, and Dialectic which have come down to us under his name were not accepted as genuine by the Benedictines. Recent scholars accept the last one as being a draft of the original done probably by Augustine himself, and are doubtful about the first two.[3]

But if these six books *On Music* are only a fragment of a projected cycle on the liberal arts, they are, also, only a fragment of a larger treatise on music. They are, in the words of Augustine, 'only such as pertain to that part called Rhythm.'[4] Much later, in writing to Bishop Memorius, he speaks of having written six books on Rhythm and of having

1 See *Retractationes,* 1.6,11, Migne 33, and Portalié, 'Augustin,' in DTC.
2 *Retract.* 1.6.
3 See Marrou, *St Augustin et la fin de la culture antique* 576-578, for a discussion of the authenticity of *De dialectica.*
4 *Retract.* 1.6.

intended to write six more on Melody (*de melo*).[5] As we shall see, this intended part would have been a treatise on Harmonics.

It is necessary, for the understanding of these books on Rhythm, to know what the ancients meant by music, by rhythm, and by melody. It is true St. Augustine tells us that, of these six books, the first five on rhythm and meter are trivial and childish,[6] but this is a rhetorical statement to introduce to us to the more serious business of the sixth book on the hierarchy of numbers as constitutive of the soul, the universe, and the angels. In the same letter to Memorius, written about 408 or 409 A.D., he also distinguishes the first five books from the sixth, considering them much inferior, and sends him only the sixth. This has given Westphal the opportunity to indulge in irony, to agree with Augustine, and so to dismiss his treatment of rhythm and meter as something strange and foreign to the correct ancient theories.[7] But Westphal, in his passion for everything Aristoxenian, did not always have good judgment; in another case, that of Aristides Quintilianus, he sacrificed a really excellent treatise on music, the only complete one to come down to us from the ancient world, as only a source of fragments of Aristoxenus. Schäfke, in a recent book,[8] has tried to bring Aristides' work back to its proper place.

It is usually dangerous procedure to ignore the technical details a thinker uses to test or suggest his general and more seductive theories. It is too easy to overlook the first five books and to concentrate on the sixth. It would seem neces-

5 *Epist.* 101 (Paris 1836).
6 *On Music,* 6.1.
7 R. Westphal, *Fragmente und Lehrsätze der Griechischen Rhythmiker* (Leipzig 1861) 19.
8 R. Schäfke, *Aristeides Quintilianus von der Musik* (Berlin-Schöneberg 1937).

sary, rather, to place these five technical books in the general picture of the theory of ancient music, and to try and read from the Augustinian variations on the ancient themes the intentions of his mind and doctrine.

As we have said, the only complete treatise on music to come down to us from the Greeks or Romans is that of Aristides Quintilianus, a Greek of probably the first part of the second century A.D.[9] There are a good many treatises on harmonics, those written from the Pythagorean point of view such as the Harmonics of Nicomachus, of Ptolemy, and of Theo of Smyrna, and the Harmonics of Aristoxenus from a less directly mathematical viewpoint. The treatise of Aristides combines the two approaches.

The Pythagorean harmonics starts from the fact that two strings of the same material and thickness, stretched by the same weight, form the two fundamental consonances (for the Greeks the only two) when they are in length in the ratio of 2 to 3 (the perfect fifth) and 3 to 4 (the perfect fourth). Thus, in moving from the lower to the higher pitch of the perfect fourth, the ear rests and is satisfied, and in passing from the higher to the lower pitch of the perfect fifth it also rests. For ancient music, no other ratios or intervals provided such a rest. Further, if from the first pitch to the second is a perfect fourth, and from the second to the third is a perfect fifth, then from the first pitch to the third is an interval called the octave, the ratio of the string lengths being $4/3 \cdot 3/2 = 2/1$. The characteristic of this interval is that the higher pitch seems to repeat the lower pitch and vice-versa: the higher pitch can replace the lower one (and vice-versa) in its relations with other pitches without changing the essential character of the relation. The octave, therefore, furnishes a cyclic

9 See Schäfke, *op. cit.*, for full discussion of possible dates.

pattern for the musical relations.[10] From the Pythagorean point of view the problem of musical intervals is the problem of whole-number ratios, the smallest possible numbers furnishing the octave and the next smallest the consonances.

The further musical problem was to fill in this octave, made up of the fourth and fifth, with other pitches to make a *systema* or scale. The interval between the fourth and fifth, called the tone, was taken as fundamental here, that is, in ratios of string-lengths $3/2$ divided by $2/3 = 9/8$. The diatonic scale is built by taking two pitches at intervals of a tone from the lower pitch of the fourth. What is left over of the fourth is called a leimma: $4/3$ divided by $(9/8 \bullet 9/8) = 256/243$, which is approximately a semitone. That is, two such leimmas add up nearly to a tone $(256/243)^2$ nearly equals $9/8$. This is the diatonic scheme of the fundamental tetrachord. The scale can be completed by adding a tone and then another such tetrachord to fill out the octave: $(9/8)^2 \bullet 256/243 \bullet (9/8)^3 \bullet 256/243 = 4/3 \bullet 3/2 = 2/1$. This is one mathematical and one musical solution of the problem of the octave.[11] There were other solutions. It is also possible to combine tetrachords in other ways: either by taking the upper pitch of the fourth as the beginning of a new tetrachord and so continuing, or by constantly jumping a tone before beginning the new tetrachord.[12] But neither of these last two ways solves the problem of the octave as the first one which alternates the two.

---

10 For the reader interested in a more extended account of such relations there is the introduction to Lord Rayleigh's *The Theory of Sound*.

11 See Plato, *Timaeus* 35-36, for a particularly fine derivation of this solution. See also Theo of Smyrna, for a second-hand account.

12 Aristoxenus, *Harmonica* I 17, III 59. See also introduction by Macran to his edition, pp. 10-17.

Such principles could not be confined by Greek consonances. They could extend themselves to all kinds of relations, indeed to any relation. And although the purely Greek restrictions could be given a mathematical rationale in contradiction to what Aristoxenus and his modern supporters have had to say, since the supply of mathematical relations is seemingly inexhaustible and all plastic, yet Aristoxenus, a pupil of Aristotle, preferred to build a system which, if not totally unmathematical, preserving as it does a necessarily ordinal character, is certainly non-arithmetical. 'The science [of harmonics]' says Aristoxenus, 'is reduced to two things: hearing and reason. For by hearing we distinguish the magnitudes of the intervals, and by reason we consider the potentialities of the notes.'[13] By potentialities of the notes, he means their functions within a system of notes, a system which in turn obeys the fundamental restriction that the only consonances are the fourth, fifth, and octave, perceived as such by the ear. The tone is the interval which is the difference between the fourth and fifth as perceived by the ear. The fourth is the invariant interval to be filled in by two movable notes and only two. The movable notes can take their places continuously within certain limits, and these limits are further subdivided so that the positions of these movable notes fall into three classes which define the three kinds of scales: the diatonic, chromatic, and enharmonic. It is not necessary for our purpose to discuss these in detail. The tetrachords so formed can be added to each other (but only those of the same kind) by disjunction, by conjunction, or by a combination of both, as we have already explained above, that is, with a tone between, no tone between, or first one way, then the other.

13 *Ibid.* II 33.4-9.

The upper note of the lower tetrachord, that is, the upper limit of the lower fourth, properly filled in with the two movable notes, is called the mese and is the functional center of the system of two tetrachords; the potentiality of every note in the scale is with reference to this mese.[14] True, one or more of the lower notes of the lower tetrachord might be moved up an octave, or down an octave, and the pitch of the mese relative to the other notes would be different. With the survival of only the one method of combining teterachords, by alternate conjunction and disjunction, the different relations of pitch of the mese gave rise to the *tropoi* or modes of the one series of notes.[15] In these different modes the mese is no longer the center by position, but it remains the musical center.

Such, then, is the non-arithmetical Greek theory of harmonics which confines itself to principles laid down within a certain idiom of notes, abstractions from a certain ordered experience, but not constitutive of that experience as in the Pythagorean theory.

No strictly Pythagorean treatise on rhythm exists, and of the Rhythmics of Aristoxenus we have only the fragments piously and passionately collected by Westphal, first in *Fragmente und Lehrsätze der griechischen Rhythmiker* and last in *Aristoxenos von Tarent, Melik und Rhythmik des Classischen Hellenenthums*. A fragment of the Oxyrhynchus Papyri is also attributed to him. But the essential theses are repeated in Aristides Quintilianus. In both of these writers a clear distinc-

14 *Ibid.* II 33.32-34 10; Aristotle. *Problems* XIX 20: also Ptolemy, *Harmonica* II 7, quoted by Macran in his Introduction.

15 This, at least, is the interpretation of Macran, which certainly fits the facts and the texts better than the opposing theories of Westphal and Monro; see Introd. to *Harmonica* 21-40 See the same work also for an account of the extension of the octave and the consequent emergence of the modes as *tónoi* or keys.

tion is made between rhythmics and metrics, a distinction not so clear in Augustine and other Latin writers.

For Aristides, music is divided into theoretical and practical. The theoretical, in turn, is divided into the technical and natural, that which has to do with the art and that which has to do with the nature. The technical is divided into three parts: harmonics, rhythmics, and metrics. The natural is divided into two parts: the arithmetical and the physical. On the other hand, the practical is divided into the applied and the expressive. The first of these is divided into melopoeia, rhythmopoeia, and poetry, and the second into instrumental, vocal, and declamatory.[16]

And so the first book of Aristides' treatise is devoted to the discussion of the technical part of theoretic music: harmony, rhythm, and meter; the second book to ends served by the practical part of music: education and the State; the third book to the discussion of the natural part of theoretic music: whole-number ratios and cosmology. Thus, Aristides quite rightly assigns the Aristoxenian theory its place within the science of music as a technique, an art depending for its real validity on the Pythagorean theory. And he might well have added that it is only one of a possible many, a restricted set of rules, a particular idiom compared to the *mathesis universalis* of the Pythagorean theory.

Let us, then, focus our attention on rhythm. 'Rhythm,' say Aristides, 'is a scale of times collated in a certain order, and their affects we call arsis and thesis, strong and weak.'[17] 'Rhythm is determined in speech by syllables, in melody by the ratios of arsis and thesis, in movements by the figures and their limits . . . . And there are five parts of the art of rhythm.

16 Aristides, *op. cit.*, ed. Meibom, I 7,8.
17 *Ibid.* I, p. 49. We give only an outline here. Detailed discussion will be found in our notes to the treatise.

For we divide it thus: (1) in primary times, (2) on kinds of feet, (3) on rhythmical tempo, (4) on modulations, (5) on rhythmopoeia.'[18] A rhythmical foot is a part of the whole rhythm by means of which we comprehend the whole. And it has two parts, arsis and thesis.[19] And there are three kinds of rhythmical foot according to the ratio of arsis and thesis: the one-one ratio, the one-two, the two-three, and sometimes a fourth, the three-four. But the inner structure of these ratios is conditioned by the order of long and short syllables and, therefore, by the thing rhythmed.

'Metres,' says Aristides, 'are constructed of feet. Then meter is a scale of feet collated of unlike syllables, commensurable in length.'[20] Some say meter is to rhythm as part to whole; some, as matter to form; some say that the essence of rhythm is in arsis and thesis, and the essence of meter is in syllables and their unlikeness. And for this reason rhythm is constructed of like syllables and antithetical feet, but meter never of syllables all alike and rarely of antithetical feet.[21] Therefore, rhythm is the repeated sameness of ratio of arsis and thesis, which informs the syllables of speech, giving a variety of meters according to the variety of syllable structures and the variety of strong and weak.

If we compare Augustine's treatise with the traditional ones and, in particular, with that of Aristides, it does not appear as strange as some would make it out. The first five books deal with rhythm and meter. The last book deals with music in its cosmological and theological aspects, correspond-

18 *Ibid.* I, p. 32.
19 *Ibid.* I, p. 34.
20 *Ibid.* I, p. 49.
21 *Ibid.* I, pp. 49-50. See note to Book 2 p. 226, for discussion of meaning of 'antithetical.' In any case, Aristides seems here to consider rhythm as only concerned with the ratio of arsis and thesis. Strong and weak as affects of the collated time of rhythm apparently belong to meter rather than to rhythm.

ing to the last book of Aristides and to the well known tradition of the *Timaeus*. The six books which were never completed would have dealt with harmony. All this is perfectly obvious and perfectly usual. It is, therefore, a grave mistake to accuse Augustine, along with Plato, of being unfortunately ignorant of musical sensibility and of the theory of it so highly developed in the nineteenth century. It is obvious that, in the case of both, the emphasis on music as a liberal art and science is the result of their being so well aware of the dangers of musical sensibility and of the consequent disorders arising from the irresponsible independence of music as a fine art. The mathematical theory of music has had a long and fruitful career, taking in such names as Ptolemy and Kepler; it has no apologies to make. The remarks of Laloy and Marrou and others like them on this subject, therefore, are quite beside the point.

If Augustine's treatise as a whole is well within the tradition, so also are the details of his treatment of rhythm and meter. The emphasis is decidedly on rhythm in the meaning of Aristides, and meter in any important sense is almost wholly ignored. For Augustine, there are two principles of rhythm which cannot be violated: the rhythmical feet must be equal with respect to the number of primary times, and the ratio of arsis and thesis within the rhythmical foot must be kept constant. The metrical foot, then, is entirely subservient to these two rhythmical principles and no deviation seems to be allowed; this subservience goes so far as to allow the complete dissolution of the molossus into its primary times for the sake of rhythm. There is no mention in Augustine of the rhythmical modulation found in Aristides, and, indeed, to some commentators trained in the tradition of certain Latin grammarians, it has seemed that Augustine tortures one line of poetry after another to fit them into the mold of his rhythmical principles. Every pleasing appearance must be explained by them. And Augustine pushes his investigations much like a physicist who must explain every phenomenon in the light of his fundamental premises. The use of the musical rest is one of his favorite devices in accomplishing this. But the theory of the musical rest, without any application, appears in Aristides' treatise, and there is evidence that the use was quite in tradition, although in a tradition different from that of the Latin grammarians such as Diomedes and Victorinus.[22] Yet the severity of Augustine's doctrine is remarkable, and, as we suggest later in our notes, seems to be the result of a deliberate attempt to restore a purely musical science of rhythmics against the usages of a whole tribe of grammarians and rhetoricians.

Given the Pythagorean themes of Augustine's dialectic in Book VI, this is not a surprising attempt. If it is also remembered that Augustine stands at the end of the classical quantitative metric and at the beginning of the stress or accentual metric, there may even be more point to it. In the quantitative metric, the thing rhythmed is informed by the rhythm through the pattern of primary times given by the syllables; in the stress metric it is the stress that determines the pattern primarily and the syllables only determine it secondarily. Since the stress is associated with each word as a whole, the stress metric gives more prominence to the word as a unit than does the quantitative metric. In the confused situation of metrics, the Augustinian theory, although it takes as its base the quantitative syllable with many protests at its mere conventionality, arrives at a pure musical rhythmics of whole-number ratios which can well apply to any system

22 The justification for these general remarks will be found in the notes to the treatise itself.

of metrics whatever. It stands above the metrical conflict of the period, therefore, and is, as Augustine continually points out, a purely musical discipline and not a grammatical one. Questions of stress, of the relative position of arsis and thesis, and even of syllabic quantity, are simply modes by which rhythm is incarnated in the rhythmed; they are not of its essence. And so Augustine gives the very innocuous definition of meter as the measuring off of rhythms, but a definition wholly traditional and mentioned by Aristides Quintilianus.

At first glance, we are tempted to consider the great concern of Augustine with these details of rhythm and meter as something of a tragedy. If we think of the comparable mathematical concerns of Plato, those of Augustine seem trivial, unworthy vehicles of the weighty dialectical truths they are supposed to carry. We think of Augustine as the victim of a period which had lost the profound mathematical insight of the great Greek age and could offer little for those living in it to reason on. There was not much a deep and sensitive soul could avail itself of, to escape the all-pervading rhetoric. But such a view is, perhaps, too simple, true in part though it may be.

For anyone reading the treatise *On Music* and then Books X and XI of the *Confessions,* the dovetailing of the themes is striking. Augustine remains a rhetorician. But, from the frivolous rhetorician that he was before his conversion, he becomes the real rhetorician, he who wins the outer to the inner man, the world to number, and the soul to its Redemption. Again and again he returns to the example of the syllable as a strange arbitrary quantum of time and of motion. And, properly, the locus of this rhetorical problem is the problem of motion and time. For, if time is an irreversible succession of before and after, then there is no Redemption possible; what has been, has been. And if mind and sense are to have a common point, it must be in memory and time, where motion as pure passage is caught in its numerableness and unchangingness, and number in its immobility is incarnate in change.

The problem of motion and time is also the focus for the problem of creation. Each moment of time, appearing ever as something new from a relative non-being, is symbolic of creation *ex nihilo*. If one is hypnotized as Aristotle by the successiveness of time, then no creation *ex nihilo* seems possible. But Plato sees not only this aspect, but the aspect of 'jump,' of the discontinuous and abrupt instant, indicative of the radical contingency of all temporal appearance. So, too, Augustine is fascinated by these instants which are and are not, and which are really understood only in so far as they are held distinct and together in the memory, just as the creation is only a whole and its parts as seen in Christ.

Memory, in the *Confessions,* is a principle of intellectual mediation like Christ. Through it the past is and the future is, and, therefore, through it repentance and salvation are possible. It is a cry of intellectual triumph, the cry of Augustine, '*In te, anime meus, tempora metior.*' For now necessity is overruled and the struggle with the implacable is won, not by denying nor escaping it, but by mediation and comprehension.

This is the train of thought begun in the treatise *On Music,* where Augustine finds his attention strained to number at the point where body meets soul and action meets passion, in the rhythmical song and speech of man.

SELECT BIBLIOGRAPHY

Texts of the treatise:

S. Augustinus, *De musica*, ed. J. P. Migne, *Patrologiae cursus completus: Series Latina* 32 (Paris 1877).

———, editio Parisina altera (Paris 1836).

Translations:

C. J. Perl, *Augustins Musik. Erste deutsche Übertragung* (Strassburg 1937).

R. Cardamone, *S. Agostino Della musica libri sei traduti ed annotati* (Firenze 1878).

Secondary works:

F. Amerio, 'Il "De musica" di S. Agostino,' *Didaskaleion*, Nuova serie 8 (1929) 1-196.

Aristides Quintilianus, *De musica libiri III* (in Meibom, *Antiquae musicae auctores septem*, Amsterdam 1652); also ed. A. Jahn (Berlin 1882).

Aristoxenus, *Harmonica*, ed. H Macran (Oxford 1902).

J. Bartels, *Aristoxeni Elementorum Rhythmicorum Fragmentum* (Bonn 1854).

H. Edelstein, *Die Musikanschauung Augustins* (Ohlau in Schesien 1929).

E. Graf, *Rhythmus und Metrum* (Marburg 1891).

N. Hoffman, *Philosophische Interpretationen de Arte Musica* (Marlburg 1931).

J. Huré, *St. Augustin, musicien* (Paris 1924).

L. Laloy, *Aristoxène de Tarente et la musique de l'antiquité* (Paris 1904).

Martianus Capella, *De nuptiis Philologiae, ed. Meibom* (Amsterdam 1652, as above for Aristides Quintilianus).

H. I. Marrou, *St. Augustin et la fin de la culture antique* (Bibliothéque des Ecoles d'Athénes et de Rome 145, Paris 1938).

M. G. Nicolau, *L'origine du 'cursus' rhythmique et les débuts de l'accent d'intensité en latin* (Paris 1930).

R. Schäflke, *Aristeides Quintilianus von der Musik* (Berlin-Schöneberg 1937).

W. Scherer, 'Des hl. Augustins 6 Bücher *De musica,*' *Kirchenmusikalisches Jahrbuch* 22 (1909) 63-69. Not consulted.

K. Svoboda, *L'Esthétique de St. Augustin et ses sources* (Brno 1933).

Victorinus,*Ars grammatica, ed. H. Keil, grammatici Latini* 6 (Leipzig 1874).

H. Vincente, *Analyse du traité de métrique et de rhythmique de St. Augustin intitulé: De musica* (Paris 1849). Not consulted.

H. B. Vroom, *Le psaume abécédaire de St. Augustin et la poésie latine rhythmique* (J. Schrijnen [ed], Latinitas Christianorum primaeva 4, Nijmegen 1933).

H. Weil, *Etudes de littérature et de rhythmique grecques* (Paris 1902).

K. Wenig, 'Über die Quellen der Schrift Augustins *de Musica,' Listy Philologicke* 33 (1906). Not consulted.

R. Westphal. *Aristoxenus von Tarent. Melik und Rhythmik des classischen Hellinenthums* (Leipzig 1883, 1893).

———, *Fragmente und Leitsatze der griechischen Rhythmniker* (Leipzig 1861).

A. Wikman, *Beiträge zur Ästhetik Augustins.* Not consulted.

C. F. A. Williams, *The Aristoxenian Theory of Musical Rhythm* (Cambridge 1911).

CONTENTS

ON MUSIC

BOOK ONE

The definition of music is given; and the species and proportion of number-laden movements, things which belong to the consideration of this discipline, are explained.

Chapter 1

(1) *MASTER*. What foot is '*modus*'?

DISCIPLE. A pyrrhic.

M. And it contains how many times?[1]

D. Two.

M. What foot is '*bonus*'?

D. The same as '*modus*.'

M. So, what is '*bonus*' is also '*modus*.'

D. No.

M. Why are they, then, the same?

D. Because they are the same in sound, but other in signification.

M. You say, then, the sound is the same when we say '*modus*,' and when we say '*bonus*'.

D. I see of course they differ in the sound of the letters, but are otherwise alike.

M. Now when we pronouce the verb '*pone*' and the adverb '*pone*,' except for the difference in meaning, do you perceive no difference in sound?

D. There is quite a difference.

1 The doctrine of the *tempus*, or *prótos chrónos*, is more thoroughly examined in 2.2.

M. Where is the difference, since both consist of the same times and the same letters?

D. The difference is they have the acute accent[2] in different places.

M. Now to what art does it belong to distinguish these things?

D. I have always heard them from grammarians, and that is where I learnt them. But whether they are proper to this art or taken from somewhere else, I don't know.

M. We shall see later. But for the present I shall ask you this. If I should strike a drum or a string at the same intensity and speed we pronounce '*modus*' or *bonus*,' would you recognize the times to be the same or not?[3]

D. I should.

M. Then you would call it a pyrrhic foot.

D. I should.

M. Where did you learn the name of this foot; wasn't it from the grammarian?

D. Yes.

---

2 The problem of the accent is never mentioned again in this treatise. This is probably because it is considered by Augustine as belonging to the purely grammatical side of metrics and not properly to rhythmics and music. As we shall see later, Augustine's definition and treatment of meter is a purely rhythmical and musical one.

If Nicolau is right, the accent, however, played a conspicuous role in the development of the vocal ictus as distinguished from the purely mechanical ictus. See his *L'Origine du 'cursus' rythmique et les débuts de l'accent d'intensité en latin* (Paris 1930). The fusion or confusion of the vocal ictus and the accent will in turn radically change the material to be rhythmed and finally establish accentual meters in the place of quantitative meters.

3 The primacy of rhythm and beat and the complete subordination of syllable and metrics are here suggested. Quite a part of this is Augustine's war on grammar. If we remember that rhythm was treated in the discipline of grammar by Marius Victorinus, Diomedes, and other Latin writers, and that the culture Augustine lived in was declining under the weight of grammar and grammarians, this flight of a rhetorician to rhythm, and to rhythm we shall see as pure number, is not without deep significance.

M. Then the grammarian will judge concerning all such sounds. Or rather, didn't you learn those beats through yourself, but the name you imposed you had heard from a grammarian?

D. That's it.

M. And you have ventured to transfer the name which grammar taught you to that thing you admit does not belong to grammar?

D. I see the measure of the times is the only reason for imposing the name of the foot. And so, wherever I recognize the proper measure, why shouldn't I just give it its name? But even if other names can be imposed when sounds have the same measure, yet they do not concern grammarians. So, why should I bother about names when the thing itself is clear?

M. I don't wish to, either. And yet when you see a great many kinds of sound in which distinct measures can be observed, and we admit these kinds are not to be attributed to the art of grammar, don't you think there is some other discipline which contains whatever is numerable or artful in utterances of this sort?

D. It would seem probable.

M. What do you think its name is? For I don't believe it is news to you that a certain omnipotence in singing is usually granted the Muses. If I am not mistaken, this is what is called Music.

D. And I also say it's that.

Chapter 2

(2) *M*. But we want to bother as little as possible about the name. Only let us inquire, if you will, into all the power and reason of whatever art this is.

D. Let's do so by all means. For I should like very much to know the whole of this affair.

M. Now define music.

D. I shouldn't dare to.

M. Well, you can at least test my definition?

D. I'll try, if you will give it.

M. Music is the science of mensurating well [*modulandi*].[4] Doesn't it seem so to you?

D. It might seem so, if it were clear to me what mensuration [*modulatio*] is.

M. This word 'to mensurate' [*modulari*]—you have at no time heard it used anywhere, except in what has to do with singing or dancing?

D. Just so. But because I know 'to mensurate' [*modulari*] is taken from 'measure' [*modus*], since in all things well made measure must be observed, and because I also know many things in singing and dancing, however much they charm, are very reprehensible, I want to understand fully what this mensuration is. For almost in this one word is contained the definition of a very great art. And certainly we are not to study here what any singer or actor knows.

---

4 It is impossible to render *modulari* by 'to modulate,' because 'modulate' in English has a technical musical meaning: it means a change from one mode or key to another mode or key according to certain reasonable rules. It is even used in rhythmics by Aristides to denote the art of changing from one rhythm to another. The Greek word for this is *metabolé*, which is also used in Latin. We have, therefore, used the rather harsh and strange 'mensurate.' Aside from the fact that it fits well with 'measure,' its adjective 'mensurable' has a musical connotation. See the *Oxford English Dictionary*. This definition appears in Cassiodorus, *Institutiones*, II,5,2 (ed. Mynors, Oxford 1937, p. 143). In the previous chapter, Censorinus to Quintus Carellius, *de Natali eius die* is mentioned as a source for musical doctrine. The same definition is found indeed in Censorinus, *de die Natali liber*, 10,3 (ed. Hultsch, Leipzig 1867, p. 16). Holzer therefore concludes it must be from the lost works of Varro on the liberal arts. See Holzer, *Varroniana* (Ulm 1890), 6, 14, 15.

M. Don't let this disturb you, that, as you just said, in al things made, music included, measure must be observed and yet that this is called mensuration in music. For you ar aware 'diction' is properly restricted to the orator.

D. I am. But what has that to do with this?

M. Because when your servant, no matter how unculture and peasant-like he may be, replies with as much as on word to your question, don't you admit he is saying [*dicere* something?

D. I do.

M. And therefore he is an orator?

D. No.

M. Then he hasn't used diction when he has said something, although we admit diction is derived from saying.

D. I agree. But I want to know what all this is about.

M. For you to understand that mensuration can regard music alone, while measure, from which the word is derived can also be in other things. In the same way diction is properly attributed to orators, although anyone who speaks says something, and diction gets its name from saying.

D. Now I understand.

(3) *M*. Now what you said a while ago, that many things in singing and dancing are reprehensible, and that, if we take the word mensuration from them, the almost divine art becomes degraded—and that you have very prudently observed. So, let us first discuss what it is to mensurate; then what it is to mensurate well; for that is not added to the definition without reason. Finally, too, it shouldn't be forgotten the word science has been put there. For with these three I believe, the definition is complete.

D. All right.

M. Now, since we admit mensuration is named from measure, you never think, do you, you have to fear the measure's being exceeded or not fulfilled, except in things moving in some way or other? Or rather, if nothing move, we can't fear anything's being out of measure, can we?

D. No, not at all.

M. Then, mensuration is not improperly called a certain skill in moving, or at any rate that by which something is made to move well. For we can't say anything moves well unless it keeps its measure.

D. No, we can't, but, on the contrary, we have to understand this mensuration in all things well done. For I see nothing to be done, if not in moving well.

M. What if, perhaps, all these things are done by music, although the name mensuration is more used in connection with instruments of a certain kind, and not incorrectly? I am sure you think the thing fashioned, whether it be of wood or silver or some other material, is one thing, and the artist's movement by which these things are fashioned is another.

D. Yes, they differ a great deal.

M. Now you can't say, can you, the movement is desired for itself, and not for the sake of that which the artist wants to be fashioned?

D. That's evident.

M. But if he should move his limbs for no other reason than that they should be moved gracefully and harmoniously, we should say he was dancing and nothing more, shouldn't we?

D. It seems so.

M. When do you think a thing is superior, and you might say to rule, when it is desired for its own sake or for the sake of another?

D. For its own sake, of course.

M. Begin again with what we have just said about mensuration (for we had assumed it to be a certain skill in moving) and see where this name ought rather to be applied: to that movement which is free, that is, is desired for itself and charms through itself alone, or to that which serves in some way. For all those things are somehow servile which are not for themselves but are referred to something else.

D. To that which is desired for itself.

M. Then it is now to be assumed the science of mensurating is the science of moving well, in such a way that the movement is desired for itself, and for this reason charms through itself alone.

D. That is very likely the case.

Chapter 3

(4) *M.* Why, then, is 'well' added, since there cannot even be mensuration, unless the thing move well?

D. I don't know, and I don't know how it escaped me. For it had been in my mind to ask this.

M. There could be no dispute at all over this expression, so long as we dropped 'well' and defined music only as the science of mensurating.

D. And there would be none now, if you would clear it all up.

M. Music is the science of moving well. But that is because whatever moves and keeps harmoniously the measuring of times and intervals can already be said to move well. For it is already pleasing, and for this reason is already properly called mensuration. Yet it is possible for this harmony and measuring to please when they shouldn't. For example, if one should sing sweetly and dance gracefully, wishing thereby to be gay when the ocasion demanded gravity, such a person would in no way be using harmonious mensuration well. In other words, that person uses ill or improperly the motion at one time called good because of its harmony. And so it is one thing to mensurate, and another to mensurate well. For mensuration is thought to be proper to any singer whatever if only he does not err in those measurings of voice and sounds, but good mensuration to be proper to the liberal discipline, that is, to music. Now, even if the motion itself, because it is misplaced, does not seem to you good, even though you admit it is harmonious in construction, yet let us hold to our definition and keep it the same everywhere, not to have a merely verbal battle upset us where the thing itself is clear enough. And let us not bother whether music be described as the science of mensurating or as the science of mensurating well.

D. I prefer to get beyond a mere scuffle of words and to make light of such things. After all, I don't object to this distinction.

Chapter 4

(5) *M.* Finally, we must consider why the word 'science' is in the definition.

D. All right, for I remember the order of our discourse demands it.

M. Tell me, then, whether the nightingale seems to mensurate its voice well in the spring of the year. For its song is both harmonious, and sweet and, unless I'm mistaken, it fits the season.

D. It seems quite so.

M. But it isn't trained in the liberal discipline, is it?

D. No.

M. You see, then, the noun 'science' is indispensable to the definition.

D. I see it clearly.

M. Now tell me, then, don't they all seem to be a kind with the nightingale, all those which sing well under the guidance of a certain sense, that is, do it harmoniously and sweetly, although if they were questioned about these numbers or intervals of high and low notes[5] they could not reply?

D. I think they are very much alike.

M. And what's more, aren't those who like to listen to them without this science to be compared to beasts? For we see elephants, bears, and many other kinds of beasts are moved by singing, and birds themselves are charmed by their own voices. For, with no further proper purpose, they would not do this with such effort without some pleasure.

D. I judge so, but this reproach extends to nearly the whole of human kind.

M. Not as much as you think. For great men, even if they know nothing about music, either wish to be one with the common people who are not very different from beasts and whose number is great; and they do this very properly and prudently. But this is not the place to discuss that. Or after great cares in order to relax and restore the mind they very moderately partake of some pleasure. And it is very proper

5 We have here translated *intervallis acutarum gravumque vocum* by 'intervals of high and low notes.' These are more or less technical words in harmonics. 'Interval' is equivalent to the Greek word *diastema*, meaning difference of pitch; and *vox*, in the usage of Martianus Capella, is equivalent to the *phoné* of Aristoxenus and Aristides and includes voice and the sound of instruments, covering both the speaking voice and the singing voice, that is, the *phoné synechés* and the *phoné diastematiké* of Aristides. See Aristoxenus, *Harmonica*, I, 3, 4-5, Aristides, *De Musica*, I, 7; Martianus Capella, *De Nuptiis Mercurii et philologae* IX, 182. Therefore, *vox* strictly should not be translated by 'note,' which is equivalent to *phthóngos*, and translated by Martianus as *sonus*. There are later passages where Augustine evidently uses *sonus* for sound in general. A discussion of these terms would have belonged to the *De melo* which Augustine never wrote.

to take it in from time to time. But to be taken in by it, even at times, is improper and disgraceful.

(6) But how about this? Those who play on flutes or lyres or any other instrument of this kind, they can't be compared to the nightingale, can they?

D. No.

M. How, then, do they differ?

D. In that I find a certain art in these instrument players, but only nature in the nightingale.

M. That's true. But do you think it ought to be called an art even if they do it by a sort of imitation?

D. Why not? For imitation seems to me to be so much a part of the arts that, if it is removed, nearly all of them are destroyed. For masters exhibit themselves to be imitated, and this is what they call teaching.

M. But don't you think art is a sort of reason, and those who use art use reason? Or do you think otherwise?

D. It seems so.

M. Therefore, whoever cannot use reason does not use art.

D. I grant that, too.

M. Do you think dumb animals, which are also called irrational, can use reason?

D. Not at all.

M. Then, either you would be forced to say magpies, parrots, and crows are rational, or you have been pretty rash in calling imitation by the name of art. For we find that these birds sing and make many sounds because of their intercourse with human beings, and that they utter them only by imitation. Or do you object to this?

D. I don't yet fully understand how you have reached this conclusion and how far it invalidates my reply.

M. I have asked you whether you would say lyre-players and flute-players or any other men of this sort had an art, even if what they do in singing they do by imitation. You have said it is an art, and you have affirmed this so true it seems to you that, if imitation were done away with, nearly all the arts would be destroyed. And from this it can be concluded that anyone who does something by imitating uses an art, although, perhaps not everyone who uses an art acquired it by imitating. But if all imitation is art, and all art reason, all imitation is reason. But an irrational animal does not use reason; therefore, it does not possess an art. But it is capable of imitation; therefore, art is not imitation.

D. I said that many arts consist in imitation. I did not call imitation itself art.

M. And so you don't think those arts consisting in imitation consist in reason?

D. Certainly, I think they consist in both.

M. I have no objection. But where do you place science, in reason or in imitation?

D. Also in both.

M. Then you suppose those birds endowed with reason which you have supposed capable of imitation.

D. I do not. For I have supposed science to be in both, in such a way that it cannot be in imitation alone.

M. Well, do you think it can be in reason alone?

D. It can.

M. Then you think art is one thing, science another. If, then, science can be in reason alone, then art joins imitation with reason.

D. I don't see that follows. For I did not say all arts, but many arts, consisted in both reason and imitation together.

M. Well, will you also call that science which consists in these two together, or will you attribute only the reasonable part to it?

D. What is to prevent me from calling it science when imitation is joined with reason?

(7) *M*. Since now we are concerned with the cither-player and the flute-player, that is to say with musical things, I want you to tell me whether, when such people do something by imitation, that is to be attributed to the body, that is, to a kind of bodily obedience.

D. I think it ought to be attributed to both the mind and the body, although the word which you used, 'bodily obedience,' was properly enough introduced by you. For it can only obey the mind.

M. I see you are very careful about not wishing to attribute imitation to the body alone. But you won't deny science belongs to the mind alone, will you?

D. Who would deny that.

M. Then you certainly would not allow anyone to attribute the science of the sounds of strings and pipes to both reason and imitation together. For, as you admitted, there is no imitation without a body; but you have also said science is of the mind only.

D. I admit this conclusion follows from the premises I granted you. But what of it? For the piper will have science in his mind. And when he happens to be imitating, which I admitted impossible without a body, this act of his does not destroy what is embraced by the mind.

M. No, it doesn't. Nor do I affirm that all those who handle such instruments lack science, but I say they do not all have science. For we are considering this question for the following purpose: to understand, if we can, how correct it is to include science in the definition of music. And if all pipers, flute-players, and others of this kind have science, then I think there is no more degraded and abject discipline than this one.

(8) *M.* But be as attentive as possible, so that what we have been strenuously looking for may appear. For you have already granted me that science lives only in the mind.

D. And why shouldn't I?

M. Further, do you attribute the sense of hearing to the mind, to the body, or to both?

D. To both.

M. And memory?

D. To the mind, I think. For if we perceive by the senses something we commit to memory, that is no reason to think we must consider memory to be in the body.

M. This happens to be a great question, and one not proper to this discussion. But I believe you can't deny—and that is enough for the subject in hand—that beasts have memory. For swallows come back to their nests the next year, and it is very truly said of goats: 'And even goats remembering return to their sheds.'[6] And a dog is said to have recognized the hero, his master, already forgotten by his men. And we can bring up many cases, if we wished to prove our claim.

D. I don't deny it, and I am anxiously awaiting what help this will give you.

M. Why this, of course, that whoever attributes science to the mind alone refuses it to all irrational living things, and places it neither in sense nor memory, but in the intellect alone. For sense is not without body, and both sense and memory exist in beasts.

D. And I am still waiting to see how this will help you.

M. In this way. That all who follow sense and what is

6 Vergil, *Georgics* 3.316.

pleasing in it commit to memory, and in this way, by moving their body, acquire a certain power of imitation; and that they do not have science even if they seem to do many things cleverly and skillfully unless they possess in the purity and truth of the intellect the very thing they profess or exhibit. And if reason demonstrate these comedians to be just people, there is no reason, I believe, why you should hesitate to deny them science, and, therefore, music which is the science of mensurating.

D. Explain this. Let's see about it.

(9) *M.* I believe you attribute the greater or less mobility of the fingers not to science but to practice, don't you?

D. Why do you believe so?

M. Because just now you attributed science to the mind alone. But, although in this case the mind commands, you see the act belongs to the body.

D. But, since the knowing mind commands this of the body, I think the act ought to be attributed to the mind rather than the servile members.

M. But, don't you think it is possible for one person to surpass another in science, even though the other person move his fingers much more easily and readily?

D. I do.

M. But, if the rapid and readier motion of the fingers were to be attributed to science, the more science anyone had the more he would excel in the rapidity of the motion.

D. I concede that.

M. Consider this, too. For I suppose you have sometimes noticed how artisans or craftsmen of this sort keep striking the same place with an axe or hatchet and how the blow is only carried where the mind intends it, and how, when we try and can't do likewise, they often ridicule us.

D. It's as you say.

M. Then, since we can't do it, do you think we do not know what ought to be struck or how much ought to be cut?

D. Often, we don't know, often we do.

M. Suppose, then, someone who knows everything artisans ought to do and knows it perfectly, and yet is less able than they in practice; who nevertheless prescribes for these same people who work with such ease, more wisely than they could for themselves. Would you deny that came from practice?

D. I shouldn't.

M. Then, not only the speed and facility of moving but also the manner itself of the motion is to be attributed to practice rather than science. For, if it were otherwise, the cleverer one were the better he would use his hands. Now, we can translate this in terms of pipes or citherns, in order not to think that what fingers and joints do in such cases, because it is difficult for us, is done by science and meditation rather than by practice and diligent imitation.

D. I have to give in. For I am always hearing how even doctors, very learned men, in the matter of amputating or binding limbs, are often surpassed by less clever men in their use of the hand or knife. And this kind of curing they call surgery. The word itself signifies a certain operative habit of curing, developed in the hands. But pass on to other things, and let's finish up this question of ours.

Chapter 5

(10) *M.* I believe it remains for us to find, if we can, the arts which please us in the practical mastery they give our hands, and which do not derive immediately from science, but from sense and memory. For of course you can tell me

that it is possible for there to be science without practice, and very frequently greater science than in those who excel in practice; but that on the other hand they can't even acquire practice without science.

D. Go on, for it is clear that ought to be the case.

M. Have you never listened carefully to actors of this sort?

D. More perhaps than I should wish.

M. How do you explain the fact that an ignorant crowd hisses off a flute-player letting out futile sounds, and on the other hand applauds one who sings well, and finally that the more agreeably one sings the more fully and intensely it is moved? For it isn't possible to believe the crowd does all this by the art of music, is it?

D. No.

M. How then?

D. I think it is done by nature giving everyone a sense of hearing by which such things are judged.

M. You are right. But now consider this, too, whether the flute-player himself is also endowed with this sense. And if it is so, he can, by following his own judgment, move his fingers when he blows on the flute, and can note and commit to memory what he decides sounds well enough; and by repeating it he can accustom his fingers to being carried about without hesitation or error, whether he gets from another what he plays or whether he finds it himself, led on and abetted as he is by the nature we spoke of. And so, when memory follows sense, and the joints, already subdued and prepared by practice, follow memory, the player sings as he wishes, the better and more easily the more he excels in all those things which reason just now taught us we have in common with the beasts: that is, the desire of imitating, sense, and memory. Have you any objections to that?

D. No, I haven't. Now I want to know what kind of discipline this is I see so nicely appropriated by knowledge belonging to the lowest animals.

Chapter 6

(11) *M*. We haven't yet done enough. And I shall not allow us to pass to its explanation unless we have already agreed how actors without this science can satisfy the popular ear. And it also will have been established that actors can in no way be students of, and learned in, music.

D. It will be marvelous if you do this.

M. That is easy, but you must be more attentive.

D. Never that I know have I been even a little careless in listening from the very beginning of this dialogue. But now, I admit, you have made me more intent.

M. I am grateful, although you more or less suit yourself. But, tell me whether you think a man who wishes to sell a gold piece for a fair price, and judge it to be worth ten cents knows what it is.

D. Well, who would think so?

M. Then tell me, which is to be considered dearer, what is contained in our intellect or what is accidentally attributed to us by the judgment of an ignorant people?

D. No one doubts the first is far above all others, even those things which are not to be thought ours.

M. And so you don't deny, do you, all science is contained in the intellect?

D. Who does?

M. And, therefore, music is in the intellect.

D. That seems to follow from its definition.

M. Well then, don't the people's applause and all those theatrical rewards seem to you to be of the kind which is attributed to the power of chance and the judgment of the ignorant?

D. I don't suppose anything is more fortuitous and liable to chance, or subject to the domination and pleasure of the many, than these things are.

M. Would actors, then, sell their songs for this price, if they knew music?

D. I am not a little shaken by this conclusion, but I can't gainsay it. For it doesn't seem that the seller of the gold piece ought to be compared with the actor. For when he accepts applause or when money is given him, he doesn't give up his science, if he chanced to have any, to please the people with. But, heavier with pennies and happier with the praise of men, he returns home with the same discipline entire and intact. But he would be a fool if he despised these advantages. For, if he hadn't gotten them, he would be much poorer and more obscure; having gotten them, he is no less skilled.

(12) *M.* Let's see if we can get what we want in this way. For I suppose you think that for the sake of which we do a thing is much more important than the thing we do.

D. That's evident.

M. Then he who sings or who is learning to sing for no other reason than to be praised by many or some other man, doesn't he judge the praise to be better than the song?

D. It does seem so.

M. And he who judges wrongly about a thing, does he seem to you to know it?

D. Certainly not, unless he has somehow been bribed.

M. And so he who really thinks something inferior to be superior is, no doubt, lacking in the science of it.

D. That's so.

M. Therefore, when you have persuaded me or proved to me that any actor, if he has any talent, neither has developed it nor does he exhibit it to please the people for gain or fame, then I shall concede it is possible both to possess the science of music and to be an actor. But if it is very likely all actors conceive the end of their profession in terms of money and glory, then we must admit either that actors do not know music or one is right in seeking other people's praise or some chance gain rather than his own understanding.

D. I see that in conceding the other things, I must also accept these. For I don't believe there is any way of finding a man on the stage who loves his art for itself, and not for outside advantages. For it is hard to find one even from a school of higher learning. Yet if one exists or should exist, liberal artists are not for that reason to be despised; so why isn't it possible that actors ought sometimes to be honored. And then explain, if you will, this great discipline which now can't seem to me so degraded as you make out.

Chapter 7

(13) *M.* I shall do so; or rather you will do so. For all I shall do is question you. And by your answers you will explain all of what you now seem to be after, without knowing it. And now tell me whether anyone can run both fast and for a long time.

D. It is possible.

M. How about both slow and fast?

D. By no means.

M. Then 'for a long time' signifies something different from 'slow.'

D. Quite different.

M. Again, tell me what you think is the contrary of 'longness of time,' just as 'speed' is the contrary of 'slowness.'

D. No usual word occurs to me. And I find nothing I may oppose to 'of a long duration' except 'not of long duration,' so that the usual contrary of 'for a long time' is 'not for a long time.' Because if I didn't wish to say 'fast' and said 'not slow' instead, there would be no difference in meaning.

M. That's so. For it doesn't affect the truth any when we speak this way. And as for me, if this word exists you say hasn't occured to you, then either I don't know it or at present it doesn't come to my mind. And so let's go on, calling contraries each of the pairs, 'for a long time' and 'not for a long time,' 'slow' and 'fast.' And first, if you will, let's discuss 'of long duration' and 'not of long duration.'

D. Very well.

Chapter 8

(14) *M*. Now it is clear what is said to be done for a long time [*diu*] is done over a long period of time [*per longum tempus*], but what is said to be done not for a long time [*non diu*] is done over a short period of time [*per breve tempus*].

D. That's clear.

M. For example, doesn't a movement accomplished in two hours have twice the time of that accomplished in one hour?

D. Who would doubt it?

M. Therefore, what we call 'of long duration' or 'not of long duration' is capable of such measurements and numbers that one motion is to another as two to one; that is, that one has twice as much as the other. And again that one movement is to another as two to three; that is, that one has three parts of time to the other's two. And so it is possible to run through the rest of the numbers in a way that avoids indefinite and indeterminate spaces, and relates any two movements by some number. Either by the same number, as one to one, two to two, three to three, four to four; or not by same, as one to two, two to three, three to four, or one to three, two to six, and whatever measurements anything is capable of.

D. I want to get this point of yours more clearly.

M. Return, then, to the hours, and apply to each case what I thought sufficiently explained, since I explained it for one hour and for two. For certainly you don't deny the possibility of a movement of one hour, or another of two.

D. That's true.

M. Well, don't you admit the possibility of two-hour movement, and another of three?

D. I do.

M. And one of three hours, and another of four, again one of one hour and another of three, or one of two hours and another of six; isn't that clear?

D. It is.

M. Then why isn't the rest clear? For I said this same thing when I said two movements could be related by some number as one to two, two to three, three to four, one to three, two to six, and any others you wish to enumerate. For when you know these, you can follow through with the others, either seven to ten or five to eight and anything else consisting of two movements having parts so measured with respect to one another they can be described as so much to so much, either with equal numbers or with one larger and one smaller.

D. Now I understand, and I admit its possibility.

Chapter 9

(15) *M.* You understand this, too, I believe, that all measure and limit is preferred to infinity and immeasurableness.

D. That is very evident.

M. Then two movements which, as I said, are related by some numerical measurement are to be preferred to those which are not.

D. And this is evident and logical. For there is a certain limit and measure in numbers which connect them one with another. And those numbers lacking this measure are not joined together by any ratio.

M. Then, if you will, let us call those which are commensurable with one another rational, and those which are not commensurable, irrational.[7]

D. I am willing.

M. Now, tell me whether the agreement doesn't seem to you greater in the case of the rational movements of those things equal to each other than of those which are unequal?

D. Who wouldn't think so?

M. Again, of those which are unequal, aren't there some of which we can say by what *aliquot* part of the greater the greater is equal to, or exceeds, the less, as two and four or six and eight? But others of which that cannot be said, as in the numbers three and ten or four and eleven? You see immediately for the first two numbers that the greater is made equal to the less by its half. For those I mentioned next that the greater is in excess of the less by a fourth part of the greater. But for the others, such as three and ten

7 These are not the irrational feet defined by Aristoxenus and Aristides Quintilianus, but irrational movements incommensurable in the sense of magnitude without common measure.

or four and eleven, we find some agreement, because at least the parts are so related it can be said of them so many to so many. And yet we don't see such a relation as we saw in the earlier ones. For it can in no way be said by what *aliquot* part the greater is equal to the less or by what *aliquot* part it exceeds the less. For no one would say what *aliquot* part of ten three is, or what *aliquot* part of eleven four is. And when I tell you to consider what part it is, I mean the exact part, without any addition, like a half, a third, a quarter, a fifth, a sixth, and so on; so that thirds and twenty-fourths and such divisions are in no way added on.

D. I understand.

(16) *M.* Then, of these unequal rational movements, since I have also proposed two kinds of numbers in the examples adduced, which do you think are to be preferred, those in which the *aliquot* part can be given or those in which it cannot?

D. Reason seems to force my saying those in which it is possible to say by what *aliquot* part of itself the greater is either equal to the loss or exceeds it, ought to be preferred to those in which this is not the case.

M. But don't you think we ought to give them names, so that, when we have to recall them later on, we may speak of them more easily?

D. I do.

M. Then let us call those we prefer connumerate, and the others dinumerate, because the former not only have a common measure one, but also have as a common measure that part by which the greater is equal to or exceeds the less. But the latter only have a common measure one and do not have as a common measure the part by which the greater equals or exceeds the less. For in the case of these it is impossible to say either how many times the greater contains the less, or how many times both the greater and the less contain that by which the greater exceeds the less.

D. I accept these names, and I shall try as well as I can to remember them.

Chapter 10

(17) *M.* Come now, let's see what division there can be of the connumerate numbers. For I think it is pretty clear. For one class of the connumerate numbers is that in which the smaller number measures the greater, that is, the greater contains it a certain number of times, just as we said the numbers two and four do. For we see that two is contained twice in four, and it would be contained three times if we compared not four, but six to two, four times if it were eight, and five times if it were ten. The other class is that in which the part by which the greater exceeds the less measures both, that is, the greater and less contain it a certain number of times, and we have already noted this in the numbers six and eight. For the part by which the less is exceeded is two and that, you see, is contained four times in eight, three times in six. And so let us also mark out and designate with names the movements we are now talking about, and the numbers which reveal what we want to know about these movements. For I believe the distinction is already apparent. And so, if you will, those in which the greater is a multiple of the less are called complicate; the others sesquate, a name already long in use. For that is called '*sesque*' in which two numbers have such a ratio to each other that by whatever *aliquot* part of itself the greater exceeds the less, so many parts does it contain with respect to the less. For if it is three to two, the greater exceeds the less by a third part of itself; if four to three, by a fourth; if five to four, by a fifth, and so on. And

we have the same kind of ratio also in the case of six to four, eight to six, ten to eight; from these we can find this ratio in the larger numbers which follow. But I should find it hard to tell you the origin of this name, unless perhaps '*sesque*' is said for '*se absque*' or '*absque se*' [from itself], because in the case of five to four the greater minus [*absque*] a fifth of itself is the same as the less. And what is your opinion of all this?

D. Why, the ratio of measurements and numbers seems very correct to me. And the names you have given seem to be suitable for remembering the things we have understood. And the origin of the name you just explained to me is not absurd, although it may not be the one followed by the person starting the name.

Chapter 11

(18) *M.* I approve and accept your judgment. But do you see that all such rational motions, that is, those in some relation of numerical measure to each other can go on through numbers to infinity, unless some ratio should again delimit them and keep forcing them over and over again into a measure and form? For to speak of the equal pairs first: one to one, two to two, three to three, four to four, and if I follow through, what will be the end, since number has no end? For such is the power of number that every number named is finite, and not named is infinite. And what happens in the case of equal pairs also happens, as you see, in the case of unequal pairs, either complicate or sesquate or connumerate or dinumerate. For if you take one to two, and wish to continue with multiples by saying one to three, one to four, one to five, and so on, there will be no end. Or if only the double, as one to two, two to four,

four to eight, eight to sixteen, and so forth, here also there will be no end. And so, if you want to continue with only the triple, or whatever else you wish, they will go on to infinity. And this is true also of the sesquate. For when we say two to three, three to four, four to five, you see nothing keeps us from going on, for there is no limit. Or if you wish to proceed in the same class in this way, two to three, four to six, six to nine, eight to twelve, ten to fifteen, and so on. And so, either in this class of numbers or in all the others, no limit appears. And there is no need now to speak of the dinumerate numbers, since anyone can understand from what has been said that their continual recurrence allows no limit. Doesn't this seem true to you?

(19) *D*. What could be truer? But I am now waiting anxiously to learn about the ratio which forces such an infinity back into some measure, and prescribes a form it may not exceed.

M. You will find you already know this, too, as well as the other things, when you answer my questions right. For, since we are discussing numerically ordered movements, I wonder whether we first should not consider numbers themselves, and decide that whatever sure and fixed laws numbers make manifest are to be looked for and apprehended in the movements.

D. I certainly agree. I think nothing could be more orderly than that.

M. Then, if you will, let us start considering numbers from the very beginning and see, as far as we can grasp such things with the mind's strength we have, what the reason[8]

8 There is a continuous play on the Latin word *ratio,* which means both ratio and reason. This intentional ambiguity runs through the whole treatise. *Lógos* in Greek gives same ambiguity. Since ratio or *lógos is* defined by Euclid as 'a certain relation according to multiplicability

is that, although as we have said numbers progress to infinity, men have made certain articulations in counting by which they return again and again to one, the beginning or principle of numbers. For, in counting, we progress from one to ten, and from there we return to one. And if you wish to follow through with the intervals of ten, so that you go on with ten, twenty, thirty, forty, then the progression is to a hundred. If with intervals of a hundred, one hundred, two hundred, three hundred, four hundred, the articulation by which you return is at a thousand. Now why go farther? You certainly see the articulation I mean, whose first rule is given by the number ten. For, as ten contains one ten times, so a hundred contains the same ten ten times, and thousand contains a hundred ten times. And so you can go as far as you wish in these articulations, in a way predetermined by the number ten. Is there any thing in these matters you don't understand?

D. It is all very clear and true.

Chapter 12

(20) *M.* Then let us examine as diligently as we can what the reason is for there being a progression from one to ten and thence a return to one again. And next I ask you if what we call the beginning or principle can be a beginning at all unless it is the beginning of something.

D. Not at all.

M. Likewise, what we call the end, can it be an end, unless it is the end of something?

D. It can't either.

M. Well, you don't think you can go from the beginning to the end without going through the middle?

---

between magnitudes of the same kind,' it is obvious in what dialectical direction and toward what doctrine this intentional ambiguity directs us.

D. I don't think you can.

M. Then, for something to be a whole, it must consist of a beginning, middle, and end.

D. It seems so.

M. Now tell me, then, in what number do you think a beginning, middle, and end are contained.

D. I think you want me to say the number three, for three is one of those you are looking for.

M. You think right. And so you see there is a certain perfection in three because it is a whole: it has a beginning, middle, and end.

D. I see it clearly.

M. And don't we learn from boyhood every number is either even or odd?

D. You are right.

M. Recollect, then, and tell me which we usually call even and which odd.

D. That which can be divided into two equal parts is called even; but which cannot, odd.

(21) *M.* You have it. Now, since three is the first whole odd number, and consist of a beginning, middle, and end, then doesn't an even number have to be whole and perfect,[9] too, so that it also has a beginning, middle, and end?

D. It certainly must.

M. But this number, whichever it is, cannot have an indivisible middle like the odd one. For if it did, it could not be divided into two equal parts, for that, we said, was the property of an even number. Now, one is an indivisible middle; two is a divisible middle. But the middle in numbers is that from which both sides are equal to each other. Has

9 Not perfect in the technical sense of a number which is the sum of its different factors.

anything been put obscurely, and do you find it hard to follow?

D. On the contrary, this, too, is all very clear to me, and when I look for a whole even number, I first strike the number four. For how can the three things by which a number is whole, that is, beginning, middle, and end, be found in the number two?

M. You have answered the very thing I wished you to, and reason has forced you to. And now repeat the discussion beginning with the number one itself, and think. Then you will see immediately one has no middle and end, because there is only a beginning, or rather it is a beginning because it lacks a middle and end.

D. That's clear.

M. What, then, shall we say of two? We can't find a beginning and middle both in it, can we, since there can be no middle where there's no end? Nor a beginning and end both, since nothing can attain its end except through a middle?

D. Reason forces my admission, and I am very uncertain what to reply.

M. Be careful this number isn't also a beginning of numbers. For if it lacks a middle and end, as you have said reason forces us to admit, then there is nothing else for it to be but a beginning, is there? Or do you hesitate to set up two beginnings?

D. I hesitate very decidedly.

M. You would be right, if the two beginnings were made opposed to each other. But in this case the second beginning is from the first, so that the first is from none, but the second is from the first. For one and one are two, and so they are both beginnings in such a way that all numbers are really from one. But because they are made by combination and addition, and the origin of combination and addition is rightly attributed to two, therefore it is this first beginning from which [*a quo*], but the second through which [*per quod*], all numbers are found to be. Or have you objections to the things you are discussing.

D. I have none. And I ponder them with admiration, even though I am answering them myself under your questioning.

(22) *M*. Such things are more subtly and abstrusely examined in the discipline which concerns numbers. But here let us return as quickly as we can to the task in hand. And so, I ask, what does two added to one make?

D. Three.

M. So the two beginnings of numbers added together make the whole and perfect number.

D. So it is.

M. And in counting, what number do we place after two?

D. The same three.

M. And so the same number made out of one and two is placed after both of them as regards order, in such a way no other can be interposed.

D. So I see.

M. But now you must also see this can happen to none of the other numbers, the fact that, when you have singled out any two next to each other in the order of counting, the one immediately following them should be made up of these two.

D. I see that, too. For two and three, which are adjoining numbers, added together make five. And not five, but four, immediately follows them. Again, three and four make seven, but five and six have a place between four and seven. And the farther I should want to go, the more there are in between.

M. Therefore, this great harmony is in the first three numbers. For we say one and two, and three, and nothing can be put between. But one and two themselves are three.

D. It is a great one certainly.

M. And have you no consideration for the fact that this harmony tends to a greater unity the more compressed and the more closely connected it is, and the more it makes a one from many.

D. On the contrary, the greatest consideration. And I don't know why, but I admire and love this unity you commend.

M. I very much approve. But certainly any conjunction and connection of things most definitely make something one when the means agree with the extremes, and the extremes with the means.

D. That certainly must be so.

(23) *M.* And so we must be careful to find it in this relation. For when we say one, two, three, isn't two exceeded by three as one is exceeded by two?

D. That's very true.

M. Well now, tell me, in this ordered set[10] how many times have I named one?

D. Once.

M. How many times three?

D. Once.

M. How many times two?

D. Twice.

M. Then once, and twice, and once, how many is that altogether?

D. Four times.

M. Then the number four rightly follows these three; to

10 We use 'ordered set' advisedly as a term from modern point-set theory, although there the term is used with a view to infinite sets.

it in fact is attributed this ordering by proportion. And it is now time you learn to know how important this thing is, because the unity you love can be effected in ordered things by that alone whose name in Greek is *analogía* and which some of our writers have called proportion. And we'll use this name, if you will, for, unless necessary, I should not like to bring a Greek word over into Latin speech.

D. I am quite willing. But go on with your story.

M. I shall. For we shall try and know more thoroughly by its place in this discipline what proportion is and how great is its authority in things. And the more advanced you are in learning, the better you will know its nature and power. But you see certainly, and that is enough for the present, that those three numbers whose harmony you were wondering at could only have been brought together in the same relation by the number four. And therefore, to the extent you understand, it has by rule obtained its own immediate succession to the other three to be joined with them in that closer harmony. So that now, not one, two, three only, but one, two, three, four is the most closely connected progression of numbers.

D. I entirely agree.

(24) *M*. But consider these further characteristics, lest you think the number four has nothing proper all other numbers lack, and nothing adequate to this relation I speak of, for making the interval from one to four itself a determinate number and the most beautiful art of progression. We agreed a while back something became most one when the means agreed with the extremes and the extremes with the means.

D. That's so.

M. Now, when we order one, two, three, tell me which are the extremes, and which the mean.

D. One and three seem to be the extremes, and two the mean.

M. Tell me now, one and three make what?

D. Four.

M. Well, two, the lone middle number, can't be joined with anything but itself, can it? And so tell me now what twice two makes.

D. Four.

M. So then, the mean agrees with the extremes and the extremes with the mean. And, therefore, just as there is a certain virtue in three in that it is placed in order after one and two, while consisting of one and two, so there is a certain virtue in four in that it falls in counting after one, two, and three, while consisting of one and three, or twice two. And this agreement of the extremes with the mean and of the mean with the extremes is by proportion which in Greek is called *analogía.* Now say, have you understood this?

D. I have.

(25) *M.* Try and see whether the property we attributed to the number four can be found in other numbers or not.

D. I shall. For if we fix upon two, three, four, the extremes added together make six, and the mean added to itself also makes six; yet not six, but five, is the number immediately following. Again I take three, four, and five. The extremes make eight, as also twice the mean. But between five and eight I find no longer one number but two, namely six and seven. And in the case of this ratio the farther I progress the greater these intervals become.

M. I see you have understood and know thoroughly what has been said. But now, not to delay, you certainly see that from one to four is the most complete progression, either from the point of view of odd and even numbers, since three is the first whole odd number and four the first whole even (this subject was treated a while ago). Or because one and two are the beginnings and seeds, as it were, of numbers, three is made from; and this accounts for three numbers. And when they are brought together by proportion, the number four appears and comes to be, and is joined to them by rule, to become the final number of the measured progression we seek.

D. I understand.

(26) *M.* Very well. But do you remember now what we had begun to look for? I believe it had been proposed we should find out, if we could, why, when definite articulations for counting had been established in the infinity of numbers, the first articulation should be at ten as the greatest. In other words, why those we count, having gone from one to ten, should return to one again.

D. I remember clearly it was for this we made our long digression, but I don't see what we have accomplished in the way of solving the problem. Unless all our reasoning has led to the conclusion the progression to ten is not a fixed and measured one, but the progression to four is.

M. But don't you see? What is the sum of one, two, three, and four?

D. I see now. I see and marvel at it all, and I admit the question which arose has now been solved. For one, two, three, and four together are ten.

M. And so it is fitting these first four numbers and the series of them and their relations be given more honor than any other numbers.

Chapter 13

(27) *M.* But it is time to return to the treatment and discussion of the movements properly attributed to this discipline, for whose sake we have considered with regard to numbers, plainly from another discipline, such things as seemed sufficient for the business in hand. Now, as aids to understanding, we took such movements in hour-intervals as reason showed to be related by some numerical measure. And so I ask you, supposing some one should run for an hour, then another for two hours, could you tell, without looking at a sun-dial or water-clock, or any time-piece of this sort, that one of these movements was single, the other double? And not being able to tell, would you nevertheless be delighted by the harmony and pleasurably affected?

D. I certainly could not.

M. And suppose an instrument struck in rhythm, with one sound a time's length and the next double repeatedly and connectedly, to make what are called iambic feet,[11] and suppose someone dancing to it moving his limbs in time. Then could you not give the time's measure, explain the movement's intervals alternating as one to two, either in the beats heard or the dancing seen? Or if you could not tell the numbers in its measure, wouldn't you at least delight in the rhythm you sense?

D. It is as you say. For those who know these numbers and discern them in the beats and dancing easily identify them. And those who don't know them and can't identify them admit, nevertheless, they get a certain pleasure from them.

---

11 This is the rhythmical foot, and the times here spoken of could well be, in the language of the school of Aristoxenus, *chrónoi podikoí*. This will be explained in greater detail in the next Book, which formally deals with the metrical foot.

(28) *M.* Now, although all well measured movements admittedly belong to the rationale of this discipline, if indeed it is the science of mensurating well, and especially those not referred to any thing else but keeping within themselves their end of ornament and delight, yet even in proper ratios these movements, as you just rightly said under my questioning, cannot be suited to our senses when accomplished in a long space of time, an hour or more. And since music somehow issuing forth from the most secret sanctuaries leaves traces in our very senses or in things sensed by us, mustn't we follow through those traces to reach without fail, if we can, those very places I have called sanctuaries?

D. We certainly must, and I earnestly pray we do so now.

M. Then let us not speak of those bounds of time extending beyond the capacity of our senses, and discuss, as far as reason goes, the short interval lengths which delight us in singing and dancing. Or do you, perhaps, think of some other possible way of following these traces which have penetrated, as we said, our senses and the things we sense with this discipline?

D. I think it can be done no other way.

BOOK TWO

Syllables and metrical feet[1] *are discussed.*

Chapter 1

(1) *M.* Then pay good attention and let's make something like a second beginning to our argument. But first, say whether you have learned well one of the things grammarians teach, that is, the difference between long and short syllables, or whether you prefer, knowing them or not, that we explore these matters as if we were altogether ignorant of them, in order to have reason bring us to all these conclu-

---

1 Augustine discusses now the metrical foot as distinguished from the rhythmical foot. In Book One the appeal has been to the rhythmical foot without any explicit mention of it and without any technical examination of it It is not until the last half of this present Book (2 18) that mention is made of arsis and thesis, which are the distinctive parts of the rhythmical foot Aristides is more explicit in distinguishing the two kinds of foot 'Rhythm is a system [scale] of times collated in a certain order, and their affects we call arsis and thesis, and strong and weak' (*op. cit* 1.20.) . . . 'Now foot is a part of the whole rhythm by means of which we comprehend the whole. And its parts are two arsis and thesis' (*op. cit.* 1 34). So much for the rhythmical foot. As for the metrical foot, it depends fundamentally on the rhythmical foot, but emphasizes the *rhythmizómenon* or thing rhythmed as it appears within the rhythm or conditions it. 'Meters consist of feet. For meter is a system [scale] composed of feet of unlike syllables commensurable in length . . [Some say] the essence of rhythm is in arsis and thesis, but the essence of meter is in syllables and their unlikeness' (*op cit.* 1 49). Thus, the rhythmical foot with one time to the upward beat and two to the downward beat could furnish two different metrical feet· a short syllable followed by two shorts or a short followed by a long. The problem of the difference which might arise from changing the upward and downward beat and whether it is rhythmical or metrical will come up later.

sions rather than having inveterate habit or the authority of another's judgment force us.

D. Not only reason, but also an inexperience—I might as well admit it—in matters of syllables certainly leads me to prefer a radical beginning.[2]

M. Well, then, tell me whether you yourself, by your own observation, have ever noticed that some syllables are enunciated very rapidly and briefly, but others more slowly and in a longer time.

D. It is certainly true I have not been insensible of such things.

M. But first I want you to know that the whole of that science called *grammatica* Greek-wise, but Latin-wise *litteratura,* professes the conservation of historical precedent—either that alone, as reason in its subtler moments teaches, or for the most part, as even stupid minds concede. And so, for example, when you say *cano,* or put it in verse, in such a way as to prolong its first syllable when you pronounce it or in such a place as to make it necessarily long, the grammarian will censure you; he, of course, the guardian of history, giving no other reason why this syllable should be contracted than that those who lived before us and whose books survive

2 This passage is not just an attack on grammar and grammarians in favor of the science of music, but it is also a recognition of a definite state of affairs. At this time and before this, the distinction of long and short syllables is no longer natural to the average person. Augustine (in his *Retractationes* 1.20), describes his *Psalm against the Donatist Faction* as written for the common people, *non aliquo carminis genere,* that is, not in quantitative meter. Vroom, in his analysis of the *Psalm,* describes it as rhythmical acatalectic trochaic tetrameter where the word-accent fails to coincide with the ictus only at the begining of the two hemistiches, but where quantity is not observed. Vroom supposes this to be the first case of such verses in trochaic meter in Latin literature, since those of Commodianus which are otherwise much like them are hexameters. See Vroom, *Le psaume abécédaire de St. Augustin et la poésie latine rythmique* (Nijmegen 1933).

and are discussed by grammarians used it as a short syllable, not as a long one. And so, whatever prevails here, prevails as authority. On the contrary, the reason of music, whose province is the rational and numerical measure of sounds, takes care only the syllable in this or that place be contracted or prolonged according to the rationale of its measures. For, if you should put this word where two long syllables ought to be, and should make the first syllable, which is short, long by pronunciation, the science of music will not for that be outraged in the least. For those sound-rhythms have been heard which were necessary to that number. But the grammarian orders its emendation and bids you put in a word whose first syllable must be long according to the authority, he says, of our ancestors of whose writings he is the watchdog.

Chapter 2

(2) *M.* Therefore, since we have undertaken to follow the theory of music, even if you do not know which syllables are to be shortened and which lengthened, we can nevertheless overlook this ignorance of yours and consider sufficient your saying you had noticed some syllables were shorter and some longer. And so I now ask you whether the sound of verses has ever moved you with pleasure.

D. In fact, so often I have almost never heard a verse without pleasure.

M. If, then, someone, in a verse which delighted you in hearing it, should lengthen or shorten the syllables contrary to the rationale of the verse, you can't enjoy it in the same way, can you?

D. On the contrary, hearing it is offensive.

M. So there is no doubt about it, you enjoy a certain measuring out of numbers in the sound you say pleases you and which when disturbed cannot give you that pleasure.

D. That's evident.

M. Then tell me, in so far as it concerns the verse's sound, what differences does it make whether I say *Arma virumque cano, Troiae qui primus ab oris* or *qui primis ab oris.*

D. Both sound the same to me as far as measure is concerned.

M. And that's because of my pronunciation, with a fault, of course, grammarians call a barbarism. For '*primus*' is made up of a long and a short syllable. And in '*primis*' both ought to be long, but I shortened the last one. So your ears were right. Therefore, we must repeatedly test to see whether, on my pronouncing, you sense what is long and not long in syllables, in order to have the discussion continue, with me questioning and you replying as we began it. So I shall repeat the same verse I committed the barbarism in, and the syllable I shortened, not to offend your ears, I shall lengthen, as the grammarians order. You will tell me whether the rhythm of the verse gives your senses the same pleasure. So let me recite this way, *Arma virumque cano, Troiae qui primis ab oris.*

D. No, I can't deny I am disturbed by a sort of deformity of sound.

M. You are quite right. For, although there was no barbarism, yet there was a fault both grammar and music condemn: grammar, because a word whose syllable is to be pronounced long has been put where a syllable to be pronounced short should be, but music only because some sound has been lengthened where it ought to have been shortened, and the proper time demanded by the numerical measure has not been rendered. And so, if you now discriminated between what the sense of hearing demands and what authority demands, it follows we should see why that sense sometimes enjoys either long or short sounds and sometimes does not. For that is what concerns 'for a long time' and 'not for a long time.' And I am sure you remember we undertook to explain just that.

D. I made the discrimination, I remember, and I am waiting very eagerly for what follows.

Chapter 3

(3) *M.* Don't you think we should begin by comparing syllables with each other and seeing by what numbers they are related to each other, just as we have already done with movements in a very long discussion? For all that sounds is in movement, and syllables are certainly sound. Do you deny any of these premises?

D. Not at all.

M. Therefore, when syllables are compared with each other, movements containing numbers found by measure of the length of time are compared with each other.

D. That's so.

M. Then, one syllable cannot be compared with itself, can it? For singleness escapes all comparison. Or have you something else to say about this?

D. I haven't.

M. But that one syllable to one syllable, or one to two, or two to three and so on, you don't deny they can be compared with each other, do you?

D. Who would?

M. And then, consider this, any short syllable you will, pronounced in the shortest time, dying as soon as it begins, yet occupies some interval of time and has some brief stay of its own.

D. What you say seems necessary.

M. Tell me, now, what number we begin with.

D. One, of course.

M. Then the ancients were not absurd in calling one time a sort of minimum interval,[3] proper to the short syllable. For we go from the short to the long.

D. That's true.

M. It follows, then, you also perceive that, since as in numbers the first progression is from one to two, so in syllables where we clearly go from short to long, the long ought to be double time. And therefore, if the interval the short syllable occupies is rightly called one time, likewise the interval the long one occupies is rightly called two times.[4]

D. Very rightly, for I agree reason demands it.

Chapter 4

(4) *M*. Now, let us consider the ordered sets themselves. For I want to know what ratio you think one short syllable has to one short syllable or what these movements

3 This refers to the doctrine of the *prótos chrónos,* or primary time, of Aristoxenus. The *prótos chrónos* is that time which can never be divided by the *rhythmizómenon,* the thing rhythmed, either *léxis, mélos,* or *kínesis somatiké,* that is, speech, melody, or bodily movement. See fragments in Westphal, *Aristoxenos von Tarent,* II 79, 18-20.

Aristides gives the same doctrine: 'Primary time is then an indivisible and least time which is called a point. And I call that least with respect to us which is the first [time] capable of being grasped by sense' (*op.cit.* II.32). It is not only relative to the thing rhythmed and to us in general, but also from occasion to occasion, since it can be varied by change or tempo or *agogé.* This quasi arbitrary and creative act by which we make a divisible sensible thing stand for an indivisible one has a deep significance for the theory of time. Thus the syllable is no longer the measure of time but the thing measured, and Aristoxenus (*op. cit.* II. 76) expressly respects the theory of Aristotle in *Meta.* 13.1,7. The *diesis* plays the same role as the least interval in harmonics.

4 This is the doctrine of Aristoxenus (*op.cit.* II.76), although in the fragment in the Oxyrhynchus Papyri attributed to him the long is considered as capable also of representing three times. See H. Weil,

are called in relation to each other. For you remember, if I am not mistaken, in the discussion a while back we imposed names on all movements having certain numerical relations to each other.

D. I remember they were named equal, for they were so related with respect to time.

M. Now, you don't think this ordered set of syllables, furnishing its constituents with numbers with respect to one another, ought to be left without a name, do you?

D. I do not.

M. Well, the ancients called such an ordered set of sounds a foot.[5] But we must be careful to notice just how far reason allows a syllable to go. And so next tell me in what ratio a short and a long syllable are with respect to each other.

D. I believe this ordering comes from that genus of numbers we called complicate. At least that is so if I am right in thinking a unit is here ordered with a double, that is, the short syllable's one time with the long syllable's two.

Etudes de littérature et de rythmique grecques (Paris 1902), 200-201; Laloy, *Aristoxène de Tarente, et la musique de l'antiquité* (Paris 1904), 329. Aristides also allows a long of three times. This is, of course, a metrical question and not a rhythmical one.

---

5 Augustine here approaches the foot more from its metrical side than its rhythmical. We have already shown how Aristides Quintilianus defines the foot rhythmically, and makes the metrical foot depend on it. Likewise, Aristoxenus, having defined rhythm as a certain order of primary times, adds: 'That by which we signify the rhythm and make it known to sense, is one foot or more than one' (*op.cit.* II 81). The foot, then, he proceeds to show, is the ratio of arsis and thesis which orders the primary times. An ordered set of syllables, as Augustine says, rather than of primary times within the arsis and thesis, introduces into the notion of foot the metrical considerations of the order of longs and shorts. Marius Victorinus defines a mixture. *Pes est certus modus syllabarum, quo cognoscimus totius metri speciem, compositas ex sublatione et positione.*—'The foot is a certain measure of syllable collated from arsis and thesis, by means of which we know the species of meter' *Ars Gramm., Keil*, VI.43). But both he and Diomedes tend to confuse what the Greeks had stated clearly and with the conviction of a coherent system.

M. And what if the order should be first the long syllable and then the short syllable? But the change in order doesn't change the ratio of complicate numbers, does it? For just as in the first foot it was one to two, so in this one it is two to one.

D. That is so.

M. And in a foot of two long syllables, aren't two times compared with two times?

D. Evidently.

M. Then from what ratio is such a set taken?

D. Why from those called equals.

(5) *M.* Now tell me, how many ordered sets of feet we have treated starting from two short syllables and reaching two long syllables.

D. Four. For, first there were two shorts; second, a short and a long; third, a long and a short; and fourth, two longs.

M. There can't be more than four when the comparison is of two syllables, can there?

D. Certainly not. For, with syllables measured to give a short syllable one time and a long one two, and every syllable either short or long, how can two syllables be compared with each other or combined to make a foot otherwise than as short and short, short and long, long and short, or long and long?

M. Tell me, now, the number of times in the shortest two-syllable foot, and the number in the longest.

D. The first has two; the other, four.

M. Do you see there could be no other progression than from one to four either in feet or times?

D. I see it plainly, and I remember the ratio of progression in numbers. And with great intellectual pleasure I find that power residing here also.

M. Then, since feet consist of syllables, that is, of distinct and articulate movements of sound, and syllables are extensions of times, don't you think the progression within the foot should go to four syllables, just as the progression of feet and times goes as we have seen to four?

D. I feel about it as you say and I know it is perfectly reasonable. And what should be I want very much to see done.

Chapter 5

(6) *M*. Proceed then. First, in good order, let's see how many three-syllable feet there can be, just as we found out there were four two-syllable feet.

D. All right.

M. You remember we laid the beginning of the ratio in one short syllable, that is, in one time, and you understood well enough why it should be so.

D. I remember we resolved one must not depart from that law of counting which enjoins a start from one, the beginning of numbers.

M. Since, then, in two-syllable feet the first consists of two short syllables (for reason first demanded one time be added to one time before two times), what do you think ought to be first among three-syllable feet?

D. It could only be that composed of three short syllables.

M. And how many times is it?

D. Three, certainly.

M. Then, how are its parts compared to one another? For, according to number sets, every foot must have two parts to be compared with each other by means of some ratio. And I seem to remember we discussed this before. But can we divide this foot of three short syllables into two equal parts?

D. Not at all.

M. How is it divided, then?

D. The only way seems to be for the first part to contain one syllable and the second two, or for the first part to contain two syllables and the second one.

M. Then tell me what number pattern this is from.

D. It seems to be from the genus of complicate numbers.

(7) *M*. Well now, consider this: How many permutations are there of three syllables with one long, that is, how many different feet can be gotten from them? Answer, if you find out.

D. I find a foot consisting of one long and two shorts. I don't find any other.

M. And so you think only the foot having the long syllable in first place is a foot having one long in three?

D. No, I don't, since the two shorts can be first and the long last.

M. Think whether there is a third.

D. There clearly is, for the long can be placed between the two shorts.

M. See if there is any fourth possibility.

D. There certainly can't be.

M. Can you tell me now how many permutation there are of three syllables with one long and two shorts, that is, how many different feet they can produce?

D. I certainly can, for there were three permutations and three different feet.

M. Now, can you see at one glance how these three feet are to be ordered, or do you have to go through them one by one?

D. Because you don't like the order I found them in? For first I noticed a long and two shorts, then two shorts and a long, and finally a short and a long and a short.

M. And so you wouldn't be disturbed at an order going from the first to the third, and from the third to the second, rather than from the first to the second and then to the third?

D. I don't like it at all. But where, I ask, have you seen that in this case?

M. Because in this tripartite differentiation you have placed that foot first containing the long syllable in first place, feeling, no doubt, the long syllable's unity gives it preeminence (if it really is a unit) and on that account ought to bring forth order by making that the first foot where it itself is first. And so you should also have seen at the same time the second foot is where it is second, and third where it is third. Or do you still think it ought to be in the order you first named them?

D. I certainly do not. For who wouldn't agree this is the better order, or rather, this is order?

M. Now, then, in what number pattern are these feet divided and their parts related?

D. The first and last I see are divided according to the equal pattern, because the first can be divided into a long and two shorts, and the last into two shorts and a long, each part, therefore, having two times and so being equal. But in the case of the second, since it has a long syllable in the middle, whether it be attributed to the first or to the second part, there is a division either into three times and one time, or into one and three. And so the ratio of complicate numbers presides at its partition.

(8) *M*. Now I want you to tell me, unaided if you can, what feet you think ought to be ordered next after those we have just been discussing. For first we discussed the two-syllable feet with an order fashioned after the order of numbers so as to begin from the short syllables. Then we undertook the longer three-syllable feet, and with an easy deduction

from former reasoning we began with three shorts. And then it was natural we should see how many forms a long syllable and two shorts would produce. And we have seen. And accordingly three feet found a necessary place after that first one. And it's up to you to see what follows next if we are not to get everything out of you by these short tedious arguments.

D. You are right. For any one would see the next feet are those with one short and the rest long. And since by former reasoning preeminence is given the shorter syllable because there is only one, that will be the first foot where it is first, second where it is second, and third where it is third, which is also the last.

M. I suppose you also see into what ratios they are divided for the comparison of their parts.

D. I certainly do. For the foot consisting of one short and two longs can only be divided to give a first part containing a short and a long and so three times, and a second part containing the one long syllable's two times. And the third foot is like the first in allowing only one division, but unlike it in the one's being divided into two and three times while the other is divided into three and two. For the long syllable occupying the first part embraces two times, and there remain a long and short, a three-time interval. But the middle foot with a middle short syllable allows a double division, because the same short syllable can be attributed to either the first or second part, and, therefore, it is divided into either two and three times or three and two. Hence the ratio of sesquate numbers dominates these three feet.

M. Have we now considered all the three-syllable feet, or does any remain?

D. I find one left consisting of three longs.

M. *Then discuss its division, too.*

D. Its divisions are one syllable and two or two syllables and one, that is, two times and four times or four and two. And so this foot's parts are related in the ratio of complicate numbers.

Chapter 6

(9) *M.* Now, let's consider the four-syllable feet properly and in order, and tell me yourself which of these is to be first, and give, too, the ratio of division.

D. Very evidently, there's the foot of four shorts divided into two parts of two syllables, having each two times in the ratio of equal numbers.

M. I see you understand. And so, now go on by yourself, following through with the others. For I don't think you need to be questioned through each one. For there is the method [*ratio*] of removing short syllables one by one and substituting long syllables for them until you come to all long syllables, and so of considering what varieties result and how many feet are produced as the shorts are removed and the longs substituted. And clearly, the syllable, either long or short, which is alone of its kind, holds precedence of order. And you have already had practice in these things. But when there are two shorts and two longs, a case we have not yet faced, what syllables do you think are to have precedence?

D. Now this, too, is clear from what has been done before. The short syllable with one time certainly has more unity than the long with two. And it was for that we put the foot consisting of shorts at the head and beginning of them all.

(10) *M.* There is nothing, then, to keep you from going through with all these feet while I listen and judge without questioning.

D. I shall, if I can. To begin with, one short must be subtracted from the four shorts of the first foot and one long substituted in the first place because of unity's precedence. But this foot is divided in two ways: either into one long and three shorts or into a long and short and two shorts, that is, either into two times and three times or into three and two. But when the long syllable is put second, it makes another foot with one way division, that is, into three times and two, with the first part containing a short and long and the second part two shorts. Next, when the long is put third, it makes a foot again divided one way, but in such a way the first part has two times with two short syllables, the second part three with a long and a short. A final long syllable produces the fourth foot, divided in two ways as when the long was first. For it can be split either into two shorts and into a short and long, or into three shorts and into a long, that is, into two and three times or into three and two times. And all these four feet, where the long syllable is variously placed among the three shorts, have their parts interrelated in the ratio of sesquate numbers.

(11) Next, from the four shorts we take away two and substitute two longs, and consider how many forms and feet can be produced with two longs and two shorts. Then I find two shorts and two longs are to be considered first, because the beginning is more correctly made with the shorts. But this foot has a twofold division. For it is split either into two times and four or into four times and two, so that either two shorts comprise the first part and two longs the second; or two shorts and a long comprise the first part while the remaining long comprises the second. Another foot is produced when the two shorts we placed at the beginning, according to order's demands, have been put in the middle. And the division of this foot is into three times and three. For a long

and a short syllable take up the first part, and a short and a long the second. But when they are placed last, for this is the next case, they produce a foot of two divisions, either with the first part containing two times in one long syllable and the second four times in one long syllable and two shorts, or with the first part containing four in two longs and the second two in two shorts. And the parts of these three feet are interrelated, in the case of the first and third, by a ratio of complicate numbers, and in the case of the middle, by equality.

(12) Next, these two shorts which were placed together must be split apart. It is the least separation of the two shorts we must begin with, and it is such the two shorts have a long syllable between them. And the greatest separation, such they have two between. But when one long syllable separates them, this is possible in two ways and two feet are produced. And the first of these ways is with a short syllable at the beginning followed by a long; then again a short and the remaining long. The other way is with the short syllables second and last, and the long syllables first and third; so it will be a long and a short, and a long and short. But the greatest separation occurs when the two longs are between, and the shorts are first and last. And those three feet with the short syllables separated are divided into three times and three, that is, the first into a short and long, and a short and long; the second into a long and short, and a long and short; and the third into a short and long, and a long and short. And so, six feet are produced from two short and two long syllables placed in relation to each other in as many different ways as possible.

(13) There remains the subtraction of three shorts from the four and the substitution of three longs. So there will be

one short. And a short syllable at the beginning followed by three longs makes one foot; placed second, a second foot; third, a third foot; and fourth, a fourth. And the first two of these four feet are divided into three and four times, but the last two into four and three. And they all have parts ordered in the ratio of sesquate numbers. For the first part of the first foot is a short and a long with three times, the second part is two long with four times. The first part of the second foot is a long and a short, and, therefore, three times; the second part two longs or four times. The third foot has a first part of two longs or four times; a short and long make up the second part, that is three times. Likewise, two long or four times make up the first part of the fourth foot; and a long and short or three times, the second part. The remaining foot is four syllables with all shorts removed, so that the foot consists of four longs. And it is divided into two longs and two longs according to equal numbers or into four times and four. —There you have what you wished me to explain by myself and unaided. Now you go on questioning with the rest.

Chapter 7

(14) *M.* I shall. But have you sufficiently considered to what extent that progression to four, demonstrated for numbers, is also true for feet?

D. I certainly judge this ratio of progression to exist in the ones as in the others.

M. Well, just as feet are made by joining syllables, doesn't it seem something can be made by joining feet, something called neither a foot nor a syllable?

D. It seems so.

M. And what do you think it is?

D. Verse, I suppose.

M. What if one should wish to keep adding feet together so as to impose no measure on them or no end to them except from a failing in voice, chance interruption, or the necessity of doing something else? Would you also call it a verse when it has twenty, thirty, a hundred feet or more, in any length of uninterrupted succession the person putting them together could or would wish?

D. No. For when I see feet of all sorts thrown together, many and without end, I shall not call them a verse. But I can learn from some discipline the genus and number of feet, that is, what feet and how many go to make up a verse, and judge accordingly whether I have heard verses or not.

M. Certainly, this discipline, whatever it be, has not established a rule and measure for verses in any way at all, but rather by some ratio.

D. For it should not and could not do otherwise, if it is a discipline.

M. Then, if you will, let us look for and follow out this ratio. For if we regard only authority, a verse will be whatever an Asclepiades or Archilochus, the ancient poets, or Sappho, a poetess, and others wished to be so. And the kinds of verses they first invented and sang are called by their names. For there are verses called Asclepiadean, and Archilochian, and Sapphic, and a thousand other names belonging to Greek authors have been given to verses of various kinds. And in view of this it would not be absurd to think that, if someone, to suit himself, has ordered in a certain way feet of whatever number and kind he wishes, then, just because no one before him has established this order and measure in feet, rightly and lawfully he will be called the creator and propagator of this new kind of verse. But if this sort of license is not given man, then one must ask complainingly what merit has been theirs if, following no ratio, they had the sequence of feet it pleased them to throw together considered and called a verse. Doesn't it seem so to you?

D. It is just as you say, and I certainly agree a verse is generated by ratio rather than authority. And I pray we see it right away.

Chapter 8

(15) *M.* Let us see first which feet are to be joined together; next, what is done with what has been joined, for a verse doesn't stand all by itself; finally we shall discuss the whole rationale of verse. But you don't imagine we can easily get through all this without names for the feet, do you? It is true we have arranged them so they can be called by their ordinal number; for we can say first, second, third, and so on in this way. Yet, because the old names are not to be despised and custom should not be lightly violated unless it is opposed to reason, we should use the names of feet the Greeks instituted, now in use among the Latins. And we take them over without inquiring into the origins of the names, for this matter has much talk about it and little usefulness. For in speaking you don't name bread, wood, and stone the less usefully because you don't know why they are called so.

D. I think it is certainly as you say.

M. The first foot is called a pyrrhic, constructed of two shorts, consisting of two times, as *fuga.*

The second an iamb, of a short and long, as *parens,* three times.

The third a trochee, or choree of a long and a short, as *meta,* three times.

The fourth a spondee, of two longs, as *aestas,* four times.

The fifth a tribrach, of three shorts, as *macula,* three times.

The sixth a dactyl, of a long and two shorts, as *Maenalus,* four times.

The seventh an amphibrach, of a short and a long and a short, as *carina,* four times.

The eight an anapest, of two shorts and a long, as *Erato,* four times.

The ninth a bacchius, of a short and two longs, as *Achetes,* five times.

The tenth a cretic or amphimacer, of a long and a short and a long, as *insulae,* five times.

The eleventh an antibacchius, of two longs and a short, as *natura,* five times.

The twelfth a molossus, of three longs, as *Aeneas,* six times.

The thirteenth a proceleusmatic, of four shorts, as *avicula,* four times.

The fourteenth a first paeon, of a first long and three shorts, as *legitimus,* five times.

The fifteenth, a second paeon, of a second long and three shorts, as *colonia,* five times.

The sixteenth a third paeon, of a third long and three shorts as *Menedemus,* five times.

The seventeenth a fourth paeon, of a fourth long and three shorts, as *celeritas,* five times.

The eighteenth a lesser ionic, of two shorts and two longs, as *Diomedes*, six times.

The nineteenth a choriamb, of a long and two shorts and a long, as *armipotens,* six times.

The twentieth a greater ionic, of two longs and two shorts, as *Junonius,* six times.

The twenty-first a diiamb, of a short and long and a short and long, as *propinquitas,* six times.

The twenty-second a dichoree or ditrochee, of a long and short and a long and short, as *cantilena,* six times.

The twenty-third an antispast, of a short and two longs and a short, as *Saloninus,* six times.

The twenty-fourth a first epitrite, of a first short and three longs, as *sacerdotis,* seven times.

The twenty-fifth a second epitrite, of a second short and three longs, as *conditores,* seven times.

The twenty-sixth a third epitrite, of a third short and three longs, as *Demosthenes,* seven times.

The twenty-seventh a fourth epitrite, of a fourth short and three longs, as *Fescenninus,* seven times.

The twenty-eight a dispondee, of four longs, as *oratores,* eight times.

Chapter 9

(16) *D.* I have them. Now discuss the question of which feet are joined with which.

M. You will easily decide this for yourself, if only you judge equality and similitude superior to inequality and dissimilitude.

D. I believe everyone does.

M. Then this is the principal rule to be followed in combining feet, and there should be no deviation from it without very just cause.

D. I agree.

M. You will not hesitate, then, to combine pyrrhic feet with each other, nor iambic, nor trochaic also called choric, nor spondaic. And so you will have no doubts about combining any foot with others of the same kind. For you have the greatest equality when feet are in sequence with those of their own kind and name. Wouldn't you say so?

D. I don't see any other way of looking at it.

M. So, then, you accept the principle any foot is to be combined with any other provided an equality is preserved. For what can give the ear more pleasure than being both delighted by variety and uncheated of equality?

D. I accept.

M. And only those feet having the same measure are to be considered equal, aren't they?

D. I should say so.

M. And only those with the same stretch of time are to be considered of the same measure?

D. That's true.

M. Then any feet found having the same number of times, those you will put together without offending the ear.

D. I see that follows.

Chapter 10

(17) *M.* Quite rightly. But the subject has still matter for debate. For although the amphibrach[6] is a foot of four times, certain people deny it can be mixed either with dactyls or anapests or spondees, or proceleusmatics. Yet these are all four-time feet. And they not only deny it can be joined with these feet,[7] but they think also the number does not proceed correctly and legitimately, even when amphibrach is combined with amphibrach in a repetition of itself alone.

---

6 This doctrine of Augustine on the amphibrach is that of Censorinus also. See. F. Amerio, Il "De Musica" di S. Agostino, *Didaskaleion*, Nuova serie 8 (Turin 1939) 173.

7 Both Aristoxenus and Aristides disallow the 1:3 ratio. Aristoxenus indeed only allows the 1·1, 1:2, and 2:3 ratios, that is, what he calls the dactylic, iambic, and paeonic. He refuses the epitritic or 3:4 ratio. Aristides accepts all four but no others. There is a good Pythagorean reason for this doctrine of Aristides and Augustine. These four ratios are exactly the ratios of the string-lengths of the intervals of coincidence, of the octave, of the perfect fifth, and of the perfect fourth, the only consonances admitted in Greek music. This establishes another correspondence between Rhythmics and Harmonics. Schäfke is also of this same opinion. See Westphal, *Aristox.* II 83-85. These ratios,

And we must consider their opinion, not to overlook a reason deserving our compliance and approval.

D. I want very much to hear what they say. For it seems to me this is very interesting, that, of the thirty-two feet given us by reason, this one alone should be excluded from the succession of numbers, occupying as it does the same time-stretch as dactyls and others equal to them just enumerated, combinations of which are not forbidden.

M. To understand this you must consider the interrelation of the parts within the other feet. For this way you will find a strange and peculiar accident in the amphibrach, well justifying the judgment it is little fit to be much applied in numbers.

(18) But in considering this we must first learn two names, the arsis [upward beat] and thesis [downward beat]. In making a beat, since the hand is raised and lowered, the arsis claims one part of the foot, the thesis the other. And I call these the parts of a foot which we discussed thoroughly a while ago in treating them in order.[8] If, then, you accept this, begin briefly recounting the measures belonging to every foot's parts, in order to find the peculiar accident of the one we are discussing.

---

for Aristoxenus and Aristides, distinguish rhythmical feet according to genus. This is the second differentia of feet for Aristoxenus of which the first is according to magnitude. There are five others of which the last is according to antithesis, mentioned in another note.

---

8 In this treatment of arsis and thesis, Augustine seems to recognize only the mechanical ictus, that is, upward and downward strokes whose only purpose is to break the rhythmical foot into parts in certain ratios. There is not a trace here of *psóphos kaí eremía* of Aristides' definition quoted in our first note in this Book which, according to Nicolau's interpretation, marks the recognition of a vocal ictus accompanying the arsis. Consequently, there is no recognition by Augustine of Aristides' differentiations of feet *katá antíthesin*, a distinction which appears also in the fragments of Aristoxenus. Accord-

D. I see the first foot or pyrrhic has as much in the arsis as in the thesis. The spondee, the dactyl, the anapest, proceleusmatic, choriamb, diiamb, dichoree, antispast, and dispondee are also divided in the same ratio. For the best takes as much time going down as coming up. I see the second foot or iamb has the ratio of one to two. And I find this ratio also in the choree, tribrach, molossus, and in both ionics. Now the arsis and thesis of the amphibrach (for it comes in turn, and I look for others like it) are in the ratio of one to three. But I certainly find no other in the sequel with parts in the same relation. For when I look at those consisting of a short and two longs, that is the bacchius, cretic, and antibacchius, I find their arsis and thesis in the ratio of sesquialter numbers. There is, again, the same ratio in those four consisting of a long and three shorts, called the four paeons in order. There remain the four epitrites, similarly named in order, where the sesquitertian number dominates the arsis and thesis.

(19) *M*. You don't think it's too little reason for excluding this foot from the numerical series of sounds simply be-

---

ing to Aristoxenus: 'Feet differ from each other by antithesis in having the up-time and the down-time reversed in position. And this difference will be in feet which are equal but have an unequal order of up-times and down-times' (*op.cit.* II.84). According to Aristides: 'Difference according to antithesis occurs whenever of two feet considered, the one has the greater time first and the less time second, and the other vice-versa' (*op. cit.* I.34). Again Aristides says: '. . . rhythm is constructed from like syllables and antithetical feet. But meter is never constructed from feet having all syllables like, and rarely from antithetical feet' (*op.cit.* I.49-50).

In line with the definition of arsis and thesis of Aristides, it is interesting to consider the text of a later writer, contemporary of Augustine, Marius Victorinus: *Arsis igitur ac thesis quae Graeci dicunt, id est sublatio et positio, significant pedis motum. Est enim arsis sublatio pedis sine sono, thesis posito cum sono: item arsis elatio temporis, soni, vocis, thesis depositio et quaedam contractio syllabarum.*—'Therefore the arsis and thesis the Greeks speak of, that is rise and fall, cause its parts differ to the extent of one to three, do you? For the nearer the similarity of parts is to equality, the more worthy of consideration it is. And so, in the rule of numbers going from one to four, there is nothing nearer each one than itself. And, therefore, those feet take precedence whose parts are in relation of equality to each other. Then the union of single and double emerges in one and two; the sesquialter union in two and three; and the sesquitertian in three and four. But the single and triple, although dominated by the law of complicate numbers, are not brought together by this ordering. For we do not count three after one, but from one three is reached by way of two. And this is the reason in virtue of which the amphibrach is judged to be fittingly excluded from the combinations of feet we are now discussing. And if you agree to this, let us go on to the rest.

D. I do agree, for it is all very clear and certain.

---

signifies the motion of the foot. For arsis is the raising of the foot without sound, thesis the putting down of the foot with sound: likewise arsis is a lengthening out of the time and sound and a raising of the voice, thesis the lowering and a contraction of the syllables' (Marius Victorinus, *Ars Grammatica,* Keil, VI.40).

Nicolau finds the same combination of mechanical and vocal ictus in the text of Victorinus, and furthermore in the *'elatio vocis'* and *'contractio syllabarum'* he finds the confusion of vocal ictus and accent, an accent which is no longer musical and which becomes more and more the pivotal point of rhythm, meter, and word in accordance with the natural laws of accent of Latin. The accent becomes the 'soul of the word' and the totality of the word must be preserved in scansion. See texts of Pompeius, Capella, and Sacerdos quoted by Nicolau, *op.cit.* 65-66. It is for this reason, according to Nicolau, that the Latin metricists at times invert the use of arsis and thesis, the arsis for the strong time and the thesis for the weak. The exact meaning of the antithetical difference in Aristoxenus and Aristides and whether it is exactly the same thing in both is hard to determine. Bartels, in his *Aristoxeni Elementorum Rhythmicorum Fragmentum* (Bonn 1854) 51-52, considers it simply a difference in up-time and down-time and chides Aristides for his clumsy rendition of these terms by 'greater time' and 'less time.' Nicolau follows Desrousseaux in considering the difference to be one of strong time, the simple fact of the occurrence of a constantly repeated pattern of long times.

Chapter 11

(20) *M.* Since, then, you are willing all feet save only the amphibrach can be combined one with another regularly and without violation of the principle of equality, no matter what their mutual relations in syllables if only they are the same quantity in time, it is perhaps well to inquire whether those also are regularly combined which, although equal in time, yet do not agree in the beat where arsis and thesis throw the foot's one part against the other. For the dactyl, anapest, and spondee are not only similarly timed, but they are also beat to the same stroke. For in all of them the arsis carries equal weight with the thesis.[9] And so these are more properly put together than any of the ionics with the other feet of six times. For each of the ionics is beat to one-two time, that is, two times against four. The molossus, too, is like them in this. But the other six-time feet have equal divisions, for here three times go to the arsis and thesis each. And so, although all of them have an acceptable beat—for the first three are beat in a one-two ratio and the other four in equal parts—yet, because such a combination gives unequal strokes, I don't at all know if reason's judgment would countenance it. Or have you something to the point?

Thus a spondee in a series of dactyls would be antithetical to a spondee in a series of anapests. See Nicolau, *op.cit.* 47, n.2. Nicolau, of course, denies the existence of a vocal ictus in Aristoxenus and at any time much previous to Aristides. In any case, Augustine must have been aware of these evolutions in doctrine and practice. His *Psalm against the Donatist Faction* would seem to guarantee that. This flight of his, therefore, into a purely musical rhythmics, into a sort of metarhythmics, has more significance than has been supposed. Amerio, in his study of Augustine's sources, considers it a return to an older tradition of pure rhythmical doctrine. See F. Amerio, *op.cit.* 167-193.

---

9 Obviously arsis and thesis are not essentially different, except for the numerical division of the foot.

D. I am readier to pass judgment here. For I do not see how an unequal beat could avoid offending the sense of hearing. And if it offends, it cannot occur without a flaw in the combination.

(21) *M.* But you know the ancients judged such feet to be properly combined and they constructed verses composed this way. But, not to oppress you with authority, take a verse of that sort and see if it offends your ear. For if it should not, but rather delight you, there will be no reason for rejecting this combination. And here are the verses I wish you to listen to:

At consona quae sunt, nisi vocalibus aptes,
Pars dimidium vocis opus proferet ex se:
Pars muta soni comprimet ora molientum:
Illis sonus obscurior impeditiorque,
Utrumque tamen promitur ore semicluso.[10]

I believe that's enough for judging what I want. And so tell me now if this number hasn't been pleasing to hear.

D. True, nothing seems to me to flow and sound more agreeably.

M. Now look to the feet. You will quickly find that, of the five verses, the first two run in ionics only, and the last three have a dichoree mixed in, although all of them are equally pleasing.

D. I have already noticed this, and more readily while you recited.

M. Why, then, do we hesitate to agree with the ancients, conquered not by their authority but by the very reason of those who think feet of the same time-measure can with reason be combined if only their beat is proper although diverse?

10 Terentianus Maurus, *De Litteris*, ll. 89-93 (Keil VI,328).

D. I am ready now to give way. For their sound gives me no ground for contradiction.

Chapter 12

(22) *M.* In the same way listen to these verses:

Volo tandem tibi parcas, labor est in chartis,
Et apertum ire per auras animum permittas.
Placet hoc nam sapienter, remittere interdum
Aciem rebus agendis decenter intentam.

D. That is enough.

M. Too true, for these verses I was forced to compose on the spur of the moment are pretty rude. And yet I want to know the judgment your sense passes in the case of these four, too.

D. And here again what else is there to say except they sounded correct and smooth?

M. Do you see here, also, the first two verses are composed of second ionics, called lesser, but the last two have a diiamb thrown in?

D. I was very conscious of your putting it in when you recited.

M. Well, aren't you interested in the fact that in the verses of Terentianus a dichoree was thrown in with the ionic called greater, but in these verses of ours a diiamb has been cast in with the other ionic called lesser? Or do you think this is trivial?

D. It is quite important and I seem to see the reason. For, since the greater ionic begins with two longs, it ought rather to be joined with the dichoree where there is a first long. But the diiamb because it begins with a short is more suitably combined with the other ionic beginning with the two shorts.

(23) *M.* Your understanding is good. And so it must be held, given the equality of times, a symmetry of this kind must have some weight in combining feet. For, though it is not of the greatest importance, yet it is not negligible. For your own sense of hearing can judge any six-time foot capable of substitution for any other six-time foot. First let us have an example of a molossus, *virtutes*; then a lesser ionic, *moderatas;* then of a choriamb, *percipies;* a greater ionic, *concedere;* a diiamb, *benignitas;* a dichoree, *civitasque;* an antispast, *volet justa.*

D. I have them.

M. Then put them together and recite them, or better, listen to me recite them so your sense of hearing may be freer of its time for judging. For to introduce the equality of a continued number without offending your ears, I shall give the whole combination three times. And I am sure that will be enough. *Virtutes moderatas percipies, concedere benignitas civitasque volet justa. Virtutes moderatas percipies, concedere benignitas civitasque volet justa. Virtutes moderatas percipies, concedere benignitas civitasque volet justa.* You don't find anything in this flow of feet, do you, to rob your ears of equality and smoothness?

D. Not at all.

M. Were they pleased, then? Although, in this kind of thing, it logically follows what does not offend delights.

D. I can't say I have been affected otherwise than you expect.

M. Then your decision is, all these six-time feet can with propriety be combined and mixed.

D. It is.

Chapter 13

(24) *M.* Aren't you afraid some one may think these

feet were capable of this equal balance in sound because of this particular order, and another order would destroy it?

D. That is certainly an objection, but it is not hard to find out.

M. You will do that when there's time, and you'll only find your hearing is delighted by a single equality and a multiform difference.

D. I shall go through with it, although everyone foresees what will happen here.

M. You are right. But what is more to the point I shall run through them with the accompanying beats to enable you to decide whether there is a flaw or not. But as soon as you have made some trial of the possible permutations we have already declared harmless, make the change and, as you will, give me for recitation and rhythmical delivery these same feet placed otherwise than I had them.

D. First I want the lesser ionic, next the greater ionic, third the choriamb, fourth the diiamb, fifth the antispast, sixth the dichoree, seventh the molossus.

M. Now, fix your ears on the sound and your eyes on the beats. For the hand beating time is not to be heard but seen, and note must be taken of the amount of time given to the arsis and to the thesis.

D. I shall follow as well as I can.

M. All right, then, for the order of feet you have given me and their beats: *Moderatas, concedere, percipies, benignitas, volet justa, civitasque, virtutes.*

D. I see no flaw in the beat, and as much time is given to the arsis as to the thesis. But I certainly wonder how those feet with a division in a one-two ratio could have been beat to this time, such, for example, as the ionics and the molossus.

M. Well, what do you think is done here with three measures in each the arsis and thesis?

D. Only this, that the long syllable, second in the greater ionic and molossus, but third in the lesser ionic, is divided by the beat itself so that, of its two times, one is attributed to the first part and one to the second, and so the arsis and thesis are each allotted three times.[11]

(25) *M.* There is nothing more to be said or understood on this score. But why couldn't the amphibrach we so utterly struck from the list also be combined with the spondee, dactyl, and anapest, or itself produce a numerical or harmonious line with a succession of amphibrachs? For the middle syllable of this foot, being long, can also be divided by the beat into a like ratio, so that, when each side has in this way been given a time, the arsis and thesis no longer claim one and three times respectively, but each two. Have you anything to say to that?

D. Nothing except to say the amphibrach must also be allowed.

M. Then let us beat the time to an ordered composition of four-time feet with an amphibrach included, and find out if there is any inequality to offend this sense of hearing. And now listen to this number, given three times to facilitate a judgment. *Sumas optima, facias honesta. Sumas optima, facias honesta. Sumas optima, facias honesta.*

D. Please spare me. For, even without the accompaniment of the beat, the very flow of the feet runs away in that amphibrach.

11 This dissolution of the syllabic structure of the molossus to allow it to be beat with any other six-time foot is another sign of the character of this treatise. Everywhere we find the dissolution of the inner structure or purely metrical structure of the foot in favor of an all embracing and entirely rational arithmetic rhythmics. E. Graf has already remarked on this in his *Rhythmus und Metrum* (Marburg 1891) 66 and n.1. He points out this might well lead to the breaking up of an overlapping ionic and gives an example from Marius Victorinus.

M. What, then, is the cause what could be done in the case of the molossus and ionics cannot be done here? Is it because in the first case the sides are equal to the middle? For, six is the first even number where the sides are equal to the middle. Then, since the six-time feet have two times in the middle and two each on the sides, the middle falls in happily with the sides fitting with complete equality. But it is not the same in the amphibrach, where the sides are not equal to the middle, for there is one time in each of the sides and two in the middle. And so in the ionics and the molossus, when the middle has been dissolved into the sides, the times are three each. And in each of these sides again are found equal sides with an equal middle. And this doesn't occur in the amphibrach either.

D. It's as you say. And it's not without cause the amphibrach, put in that sequence, offends my hearing, while the others please it.

Chapter 14

(26) *M.* Come now, explain briefly on your own, as far as you can, which feet are to be mixed with which, beginning with the pyrrhic and in accordance with the ratios just given.

D. None with the pyrrhic, for no other foot with the same number of times is to be found. The choree can be combined with the iamb. But this combination is to be avoided on account of the unequal beat, for one begins with a single beat, the other with a double. And so the tribrach can be fitted in with either one. I find the spondee, dactyl, anapest, and proceleusmatic are compatible and permit of combination. For they agree not only in the number of times, but also in the beat. But the amphibrach we excluded could not be reduced by any ratio; equality of times was of no avail, for its division and beat are discordant. It is clear the cretic and first, second, and fourth paeons agree in times and beat with the bacchius. And this same cretic, and the first, third, and fourth paeons with the antibacchius. Therefore, all the other five-time feet can be combined, without any hitch, with the cretic and the first and fourth paeons, since a division can be made of them, beginning either with two or three times. It has already been sufficiently argued there is a strange agreement of all the six-time feet among themselves. For even those where the status of the syllables results in a different division do not clash in beat with the others, so great is the force of the equality of the sides with the middle. To go on, of the four seven-time feet called epitrites, I find the first and second can be combined, for the division of both begins with three times and, therefore, they disagree neither in time-interval nor in beat. Again the third and fourth are readily combined, because both have a first division of four times, and so have an equal time and beat. There remains the eight-time called dispondee, and just as with the pyrrhic there is no foot equal to it. Now you have what you asked of me and as much as I have been able to do. You go on with the rest.

M. I shall. But let's breathe a little after such a long discussion, and let's recall those verses fatigue prompted me with on the spur of the moment, a little while back.

Volo tandem tibi parcas, labor est in chartis,
Et apertum ire per auras animum permittas.
Placet hoc nam sapienter, remittere interdum
Aciem rebus agendis decenter intentam.[12]

D. I am very willing, and gladly obey.

12 'And now I want you to spare yourself (there is drudgery in letters), and to let your mind run free to the winds. For this is a judicious pleasure, to relax at times your attention when it has been properly strained to business.'

BOOK THREE

The difference between rhythm, meter, and verse; then rhythm is discussed separately; and next the treatise on meter begins.

Chapter 1

(1) *M.* Now, since enough has been said about the harmony and agreement of feet among themselves, this third discussion warrants our seeing what arises from their composition and from the sequences of them. And so first I ask you whether those feet which can properly be put together can be combined to create a sort of continuing number without definite end, as when chorus-boys beat castanets and cymbals with their feet according to numbers whose combinations are pleasing to the ear, but yet in an unending flow so that, unless you should hear the flutes, you could in no way mark how far the combination of feet runs forward and from where it returns to begin again. It's as if you should want a hundred pyrrhics or more, as many as you please, or any other feet belonging together, to run on in continuous combination.

D. I now understand, and I agree a certain combination of feet can be made in which it is fixed just how many feet the progression is to be, before it starts over again.

M. Then you are not doubting the existence of this sort of thing, since you don't deny there's a certain discipline for making verses, you who have always confessed to hearing them with pleasure?

D. It's evident there's such a thing, and that it's distinct from the other kind we talked about before.

(2) *M*. Then, since it's proper for things distinct from each other to be distinguished by names, it's well to learn the first kind of combination is called rhythm by the Greeks; the second, meter. In Latin they could be called, the first, number [*numerus*]; the second, measure [*mensio or mensura*].[1] But, since these names are very current with us, and since we must be careful not to speak ambiguously, we find the use of the Greek names more convenient. Yet you see, I believe, how correctly each of these names is imposed. For, since there is a rolling forward in fixed feet, and a hitch if dissonant feet are mixed together, this sort of thing is rightly called rhythm or number. But, because the rolling forward has no measure, and there has been no decision as to what foot is to be used as a definite end, this ought not to be called meter because there is an absence of measure in the succession. But meter has both: it runs in fixed feet and in fixed measure. And so it is not only meter because of a distinct end, but it is also rhythm be-

1 The result of Augustine's theories is seen clearly in this definition of meter, as Graf has pointed out. It is not a new definition, but other writers usually give it, along with the other definitions stressing the strictly metrical qualities of the foot.

To say meter is simply the measuring off of rhythm is to deny anything specifically metrical. Quite different is the approach of Aristides Quintilianus, for him, meter is the differentiation within the rhythmical foot, its inner structure. But for Augustine, only two things are demanded: that the feet be equal in length and that the ratio of their parts be the same. There is no mention of rhythmical modulation as in Aristides. The real differentiation between arsis and thesis is ignored as something outside of the rhythm.

Many scholars consider this definition to be from Varro, but Aristides also gives it among others and Diomedes reports Varro as giving quite another *'inter rythmum, qui latine numerus vocatur, et metrum hoc interesse, quod inter materiam et regulam.'* See Graf, *op.cit.* 64.

Amerio points out that Censorinus, one of the oldest of the metricists, gives also the same notion of homogeneity of meter. *'Numerus est aequalium pedum legitima ordinatio.'* See Amerio, *op. cit.* 168-172.

cause of the rational composition of feet. And so all meter is rhythm, but not all rhythm is meter. For the name rhythm makes such an extensive appearance in music that the whole part of it having to do with longs and shorts has been called rhythm. But it has seemed good to both the learned and the wise that there need be little trouble about the name since the thing itself is clear. Or do you perhaps have something to oppose, or think there ought to be some doubt about what I have said?

D. On the contrary, I agree with you.

Chapter 2

(3) *M.* Now then, consider this question with me: Whether just as all verse is meter, so all meter is verse.

D. I am considering the question, but I find nothing to reply.

M. Why do you think you have gotten into this difficulty? Isn't it because it's a question of names? For we can't reply to a question about names as to one about things belonging to a discipline, because things are implanted in the minds of all in common, but names are imposed arbitrarily, and their force depends for the most part on authority and usage. And so there can be a diversity in tongues, but in the very truth of constituted things there certainly cannot be. Take from me, then, what you could nowise get for yourself: the ancients spoke of meter, not verse only. And so, what you are to do is to say and see (for it is not a matter of names) whether there is a difference between the following two things: the one case where a certain number of feet are so defined by a fixed end there is nothing in the way of an articulation before this end is reached; the other case where there is not only a closure by a fixed end, but also before the end a division appears in a definite place to produce two members as it were.

D. I don't understand.

M. Listen to these examples:

Ite igitur, Camoenae
Fonticolae puellae,
Quae canitis sub antris
Mellifluos sonores;
Quae lavitis capillum
Purpureum Hippocrene
Fonte, ubi fusus olim
Spumea lavit almus
Ora jubis aquosis
Pegasus, in nitentem
Pervolaturus aethram.

You certainly see the first five of these so-called versicles have the break in discourse in the same place, that is, at the choriambic foot, to which is added a bacchius to complete the versicle (for these eleven versicles consist of choriambic and bacchic feet, but the others, except one, namely, *Ora jubis aquosis,* do not have the break in discourse in that same place.

D. I see that, but I don't see what it's about.

M. Why so you may understand, this meter doesn't have a place somehow laid down by law for a break in discourse before the end of the verse. For if it did, all would have this articulation in the same place or at least one which didn't would be rarely found among them. But, here of these eleven, six do, and five do not.

D. I see that and I am still waiting to see where reason is going.

M. Well, listen then to the well-worn words, *Arma virum-*

que cano, Troiae qui primis ab oris.[2] And not to take up time, since the poem is very well known, exploring each verse as far as you wish, you will always find a part of the discourse completed in the fifth half-foot, that is, two and a half feet from the beginning. For these verses consist of feet of four times, and so this completion of a part of the discourse in the tenth time is laid down by law, you might say.

D. That's evident.

(4) *M.* Then you see there is a difference in the two kinds I have just given examples of. For one meter before its close has clearly no fixed and determined division, as we saw in those eleven little verses, but the other has, as the fifth half-foot in the heiroic meter sufficiently indicates.

D. What you say is now clear.

M. Now the first kind, you should know, is not called verse by the learned men among the ancients in whom there is great authority, but that is defined as verse and so called which consists, you might say, of two members joined in a fixed measure and ratio. But don't trouble yourself too much about a name you couldn't possibly come out with on any amount of questioning without its being thrown at you by me or someone else. But what reason teaches, keep your mind first and foremost on that, as we are now doing. For reason teaches there is a difference between these two kinds, no matter what names they are called by. And so, if questioned correctly, you could put your finger on the difference, confident in the truth itself, but the names you couldn't without following authority.

D. I was already very clear about that. And what you so constantly harp on I now consider as important as you do.

M. Then I want you to learn by heart these names we are

2 Vergil, *Aeneid* 1.1.

forced to use from the necessities of discourse itself: rhythm, meter, and verse. And these are distinct in such a way that all meter is also rhythm, but not all rhythm meter. And likewise that all verse is also meter, but not all meter verse. Therefore, all verse is rhythm and meter. For you see, I am sure, this follows.

D. I certainly do, for it's clearer than light.

Chapter 3

(5) *M.* First, then, if you will, let's discuss as far as we can the rhythm that's without meter, then the meter without verse, and finally verse itself.

D. Very willingly.

M. Now, take from your own head pyrrhic feet, and compose a rhythm of them.

D. And now if I should be able to do this, what will be its length?

M. It will be enough to extend it (for we are doing it as an example) up to ten feet. For verse, which will be thoroughly discussed in its proper place, does not go as far as this number of feet.

D. You do well not to ask me to put many feet together. But just the same you don't seem to me to remember you have already sufficiently distinguished the difference between the grammarian and the musician when I told you I didn't possess the knowledge of long and short syllables, a knowledge passed down by grammarians. Unless, perhaps you let me show the rhythm in beats and not in words. For I don't deny I am capable of ear-judgments for regulating the values of times. But as to what syllables are to be pronounced long or short, since it's a matter of authority, I am altogther ignorant.

M. I admit we distinguished a grammarian from a musician in the way you say, and you confessed your ignorance of this sort of thing. And so take this by way of example from me: *Ago celeriter agile quod ago tibi quod anima velit.*

D. I have it.

(6) *M.* Now, by repeating this as many times as you will, you could make the length of this rhythm as great as you wished, although these ten feet are enough for an example. But I want to know this. If anyone should tell you this rhythm is composed not of pyrrhic feet but of proceleusmatics, what will you say?

D. I certainly don't know. For where there are ten pyrrhics I can measure five proceleusmatics, and therefore there is a greater doubt about the decision to be made in the case of a rhythm flowing on without stop. For eleven or thirteen or any odd number of pyrrhics cannot contain a whole number of proceleusmatics. And so, if there were a fixed end to the rhythm in question, we could at least say it ran rather in pyrrhics than in proceleusmatics in the case where all the feet would not be whole proceleusmatics. But this infinity confounds our judgment even when the feet are counted out for us, but in an even number, as these ten are.

M. But the question isn't even clear as it seemed to you in the case of the uneven number of pyrrhics. For what if, given eleven pyrrhic feet, one should say they are five and a half proceleusmatics? What's wrong with that since we find many verses closing with a half-foot?

D. I have already said I don't see what to do about this matter.

M. But you aren't at a loss about this, are you, that, if the proceleusmatic is made of two pyrrhics, then the pyrrhic is prior to the proceleusmatic? For, just as one is prior to two, and two to four, so the pyrrhic is prior to the proceleusmatic.

D. That's very true.

M. Then, since we fall into this ambiguity of both the pyrrhic's and the proceleusmatic's being measured in the one rhythm, to which are we to give preference? To the prior one the other is composed of, or to the secondary one the other is not composed of?

D. To the prior one certainly.

M. Why, then, on being consulted about this do you hesitate to reply this rhythm is to be called pyrrhic rather than proceleusmatic?

D. I don't hesitate at all now. I am ashamed at not having immediately noticed such an evident reason.

Chapter 4

(7) *M*. Do you now see by this reasoning you are forced to the conclusion there are certain feet not able to continue the rhythm uninterruptedly? For, what was found to be true of the proceleusmatic with its priority usurped by the pyrrhic can also be proved, I think, for the dichoree and the diiamb. Or does it appear otherwise to you?

D. How can it, for, after the reason has been established, I cannot disprove what follows from it.

M. Then consider all this too, and compare and judge. For it seems when such an uncertainty occurs the distinction ought to be made by the beat rather than by the foot it runs in. And so if you wish to run in pyrrhics, you'll have one time for the arsis, one for the thesis; if in proceleusmatics, two and two. And in this way the foot will be unambiguous, and no foot will be excluded from a purely rhythmical succession.

D. I am more inclined toward the opinion leaving no foot free of this kind of succession.

(8) *M*. You are right, and for your greater approval think what we could reply in the case of the tribrach, if someone should further contend this rhythm runs not in pyrrhics or proceleusmatics, but in tribrachs.

D. I see judgment must be referred to the beat, so that, if there is one time in the arsis and two in the thesis, that is one and two syllables, or if two in the arsis and one in the thesis, the rhythm is said to be tribrach.

M. That's right. Therefore, tell me now whether the spondaic foot can be joined with the pyrrhic rhythm.

D. Not at all. For the same beat will not continue, since the arsis and thesis in the pyrrhic have each one time, but in the spondee each two times.

M. Then it can be joined with the proceleusmatic.

D. It can.

M. Then suppose it is, what will we say when we are asked whether the rhythm is proceleusmatic or spondaic?

D. How can you decide, unless preference is to be given the spondee? For since the beat does not here decide the case—in both rhythms the arsis and thesis take two times—what else is there to do except to prefer that which is prior in the order of feet?

M. I quite approve the reasoning you have followed. And you see, I am sure, what that entails.

D. Well, what?

M. Why that no other foot can be mixed with the proceleusmatic rhythm. For whatever foot consisting of the same times is mixed in—and otherwise the mixing is not possible—the name of the rhythm would necessarily be transferred to it. For all those feet consisting of the same number of times are prior to the proceleusmatic. And since reason forces us, as we have seen, to prefer the prior, that is, to name the rhythm by them, there will no longer be any proceleusmatic rhythm with some other four-time rhythm mixed in, but a spondaic or dactylic or anapestic rhythm. For it is agreed the amphibrach is rightly excluded from the composition of such numbers.

D. I admit it's so.

(9) *M.* Now, next in order let's consider the iambic rhythm, since we have now sufficiently discussed the pyrrhic and proceleusmatic born of the double pyrrhic. And so tell me what foot is to be mixed in, with the iambic rhythm's still keeping its name.

D. Why, the tribach, of course, agreeing as it does in beat and times. And yet, being posterior, it cannot prevail over the iambic. The choree is also posterior and of the same number of times, but it hasn't the same beat.

M. Now examine the trochaic rhythm, and here again give me a reply to the same purpose.

D. My reply is the same, for the tribach can fit in with it not only in extent of time but also in beat. But it's clear the iambic must under these conditions be avoided. For even if it were of equal beat, yet in the mixing it would carry off the palm.

M. And further, what foot shall we compound with the spondaic rhythm?

D. In this case there is evidently a very great number of choices. For I see the dactyl, the anapest, and the proceleusmatic can be mixed in with it without inequality of times, without any hitch in the beat, and without claims of priority.

(10) *M.* I see now you can easily explain the others in order. And so without my questioning, or rather as if questioned about them all, tell as briefly and clearly as you can how each of the remaining feet, with others lawfully mixed in, gets its name in the rhythm.

D. I shall. For it's no trouble with such a light of reasons cast before. And none will be mixed with the tribach, for all equal to it in time are prior to it. The anapest can be mixed with the dactyl, for it is posterior and runs in equal time and beat. But the proceleusmatic is compounded with both for the same reason. Now the cretic, and the first, second, and fourth paeons can be mixed with the bacchius. Further, all the five-time feet after the cretic are by right mixed with the cretic itself, but they are not all of the same division. For, some are divided in the ratio of two to three, and others of three to two. But the cretic can be divided both ways, because the middle short is attributed to either part. But the antibacchius, because its division begins with two times and ends with three, is suited to, and composable with, all the paeons except the second. Of the trisyllabic feet there remains only the molossus, the beginning of the six-time feet, all of which can be joined with it: partly on account of the one-two ratio, and partly on account of that partition of the long syllable giving up to each part one time, because in the num-six the middle is equal to the sides. And therefore the mollossus and both ionics can be given not only a one-two beat, but also a three-three beat in equal parts. And so all posterior six-time feet can be compounded with any six-time foot. And so there is only the antispast allowing no mixture. The four epitrites follow: the first accepting the second; the second, none; the third, the fourth; and the fourth none. And finally there is the dispondee, it, too, beating out its rhythm only alone, because it finds no foot posterior to it or equal to it. And so of all the feet there are eight giving rhythm of their own only if no other foot is mixed in: the pyrrhic, tribrach, proceleusmatic, fourth paeon, antispast, second and fourth epitrites, and dispondee. The others allow those posterior to them to be compounded with them without dropping their name from the rhythm even if they are fewer. And this, I believe, is what you wanted of me, sufficiently digested and explained. It is up to you now to explain what is left.

Chapter 5

(11) *M*. And up to you, too, along with me, for we are both in the search. But what do you think there is left to say about rhythm? Isn't it pertinent to find out if there isn't a foot more than four syllables in length although it doesn't exceed the eight times of the dispondee?

D. Why, I ask?

M. And you, why do you ask me rather than yourself? Or don't you think two short syllables can be substituted for one long without deceiving or offending the ear either with respect to the beat and division of feet or to the matters concerning time?

D. Who would deny they could?

M. And so in this way we substitute a tribrach for an iamb or choree, and a dactyl or anapest or proceleusmatic for a spondee, when we substitute two shorts for the second long or for the first, or four shorts for both longs.

D. I agree.

M. Do this same thing in any ionic, or in any other four-syllable foot of six times, and substitute two shorts for any one long. There is no loss in the time or hitch in the beat, is there?

D. Not at all.

M. Let's see, then, how many syllables there are.

D. I see there are five.

M. You see, then, the four syllables can certainly be exceeded.

D. I certainly do.

M. And what if you should substitute four shorts for the two longs there? Wouldn't six syllables have to be measured in one foot?

D. So they would.

M. What if you dissolve all the longs of any epitrite into shorts? It would certainly make seven syllables, wouldn't it?

D. Certainly.

M. And what about the dispondee? Doesn't it make eight syllables when we substitute two shorts each for all the longs?

D. That's very true.

(12) *M.* What, then, is this ratio we are forced to measure feet of so many syllables by, and do we admit in accordance with ratios already discussed a foot used for numbers does not exceed four syllables? Don't these seem to you contradictory?

D. Very much so, and I don't see how it can be patched up.

M. This is easy enough, if you again ask yourself whether a while back we rationally established the pyrrhic and proceleusmatic ought to be determined and distinguished by beat so there might be no foot lawfully divided not producing a rhythm, that is, not having a rhythm named after it.

D. I certainly remember this, and I don't see why I should have misgivings about its having seemed right to me. But where is this leading?

M. Well, clearly all the four-syllable feet, except the amphibrach, produce a rhythm, that is, they hold priority in rhythm, and bring it about in use and name. But many having more than four syllables can be substituted for these, yet they cannot themselves produce the rhythm nor impose their name upon it. And so I shouldn't have thought they ought to be called feet. And therefore those contradictions troubling us are now, I believe, arranged and laid at rest when it is possible to substitute more syllables than four for any foot and yet not to call foot anything not producing a rhythm. For it was proper to establish for the foot some measure of syllable-progression. But that measure could best be established, transferred from the ratio of numbers and consisting in fours. And so there could be a foot of four long syllables. And when, instead, we construct one of eight shorts, occupying the same interval of time, it can be substituted for the other. But because the eight shorts exceed the lawful progression, that is, the number four, not the sense of hearing but the law of the discipline forbids their being substituted for it and producing a rhythm.—Perhaps you wish to oppose?

(13) *D.* I very much intend to, and I shall do so right now. For what kept the foot from going on up to eight syllables, since we see that number can be allowed as far as rhythm is concerned? And your saying it can be substituted for another doesn't move me, but on the contrary it puts me in mind to ask about or, rather, to complain about a thing's being substituted for another without also taking over its own name.

M. It's not surprising you are deceived, but there's an easy explanation of the truth. For, omitting the many things already disputed in favor of the number four, and why the syllable-progression should only go so far, suppose I have given in to you and have agreed the length of a foot ought to be extended to eight syllables. You can't object, then, to the possibility of a foot of eight long syllables? For, certainly, the maximum length of a foot in terms of syllables applies alike to both longs and shorts. And so, when the law permitting the substitution of two shorts for a long is again applied—and it can't be cut short—we get to sixteen syllables. And at that point if you should want again to decree the foot's increase, we arrive at thirty-two shorts. Your reason compels you to bring the foot that far, too, and the law again compels you to substitute a double number of shorts for the longs. And in this way no limit will be established.

D. Well I give in to your reason of taking the foot only as far as four syllables. But I don't reject the fact it's proper for feet of more syllables to be substituted for these legitimate feet, with two shorts in the place of one long.

Chapter 6

(14) *M.* Then it is easy for you also to see and agree there are certain feet put in place of those having priority in rhythm, others which are placed with them. For, where two shorts are substituted for each long, we put another foot in place of the one holding the rhythm: for example, a tribrach in place of an iamb or trochee, or a dactyl or anapest or proceleusmatic in place of a spondee. But where that is not the case, whatever lower foot is mixed in is placed with, not in place of: for example, an anapest with a dactyl, and a diiamb or a dichoree with either ionic, and similarly for the others according to their peculiar laws. Or does this seem false to you, or too obscure?

D. No, I understand now.

M. Then tell me whether the feet put in place of others can also produce rhythms on their own.

D. They can.

M. All?

D. All.

M. Then even a five-syllable foot can produce a rhythm in its own name, because it can be put in place of a bacchius or cretic or any of the paeons.

D. But it cannot. For we no longer call this a foot, if I remember well enough the progression to four. But when I replied all could, I replied only feet could.

M. And I praise your diligence and vigilance in retaining a name. But it is true, you know, many have thought it proper for even six-syllable groups to be called feet. Yet, as far as I know, for more than that no one has thought it proper. And even those favoring the six-syllable foot have denied its applicability in producing a rhythm or meter of its own. And so it wasn't even given a name. And so the four-syllable measure of progression is the truest, since all those feet, at whose division two cannot be made, have been able, joined together, to make a foot. And so, those who have gone as far as the sixth syllable have dared give only the name of foot to those exceeding the fourth syllable; but they have not allowed them to aspire to the domination of rhythms and meters. But when the shorts are substituted by twos for the longs, even the seventh and eight syllables are reached, as reason has already shown. But no one has extended the foot this far. But since I see we have agreed any foot of more than four syllables, when we have substituted two shorts for each long, can be put in place of, but not with, the legitimate feet and cannot create a rhythm of its own, lest in this way things determined by reason go on to infinity, let us pass on to meter, if you will, having, I belived, talked enough about rhythm.

D. I am willing, certainly.

Chapter 7

(15) *M.* Tell me, then, would you say meter is made of feet or feet of meter?

D. I don't understand.

M. Do feet joined together produce meter, or meters joined together produce feet?

D. I know now what you are saying, and I think meter is produced by the joining together of feet.

M. But why do you think that?

D. Because you said there was this difference between rhythm and meter: in rhythm the conjunction of feet has no determinate end, but in meter it has. So this joining together of feet is understood to belong to both rhythm and meter, but in one case it is infinite, in the other finite.

M. Then one foot is not a meter.

D. Not at all.

M. What about a foot and a half?

D. That isn't, either.

M. Why? Is it because meter is made of feet, and that can't be called feet where there is less than two?

D. That's it.

M. Then let's look at those meters I recited a while back and see what feet they consist of, for it's no longer right you should be untrained in discerning this sort of thing. They were:

Ite igitur Camoenae
Fonticolae puellae,
Quae canitis sub antris
Mellifluos sonores.

I think these are enough for what I intend. Measure them, now, and tell me what feet they consist of.

D. I am altogether unable to do it. I believe those feet are to be measured that can be legitimately put together, and I can't see my way out of this. For if I should make the first a choree, an iamb follows, equal in times, but not the same in beat. And if I should make the first a dactyl, nothing follows even equal in time. If a choriamb, there's the same difficulty, for what's left over doesn't agree with it either in time or beat. Then, either this is not meter or what we said about the joining together of feet is false. For I don't see what else I can say.

(16) *M.* And by the ear's judgment it is certainly proved to be meter, both because it is more than one foot and because it has a determinate ending. For it would not sound with such sweet equality or be beaten with such a skillfully adjusted motion, if there were not some numerical quality in it proper only to this part of music. But I am surprised you think false those things we decided on, for nothing is surer than numbers, or more orderly than the recitation and placing of feet. For we have seen whatever is expressed in the nowise deceptive ratio of numbers is capable of delighting the ear and dominating rhythm. But rather listen as I keep repeating *Quae canitis sub antris*, and charm your senses with its numerical quality. What difference is there between this and what results from the adding of a short syllable also repeated in this same way, *Quae canitis sub antrisve*?

D. To my ears both seem to flow agreeably. Yet I am forced to admit the second you added a short syllable to occupies more space and time, if it has been made longer.

M. And when I repeat the first, *Quae canitis sub antris,* in such a way I don't stop at all after the ending? Do you experience the same pleasure?

D. I don't know what sort of hitch it is here offending me unless perhaps you drew out that last syllable more than other long ones.

M. Then do you think either what is more extended or what is given as a rest [*siletur*][3] have both a time-value?

D. How can it be otherwise?

3 The doctrine of rests and their wide use are not just Augustinian novelties as many have thought, but they are traditional rhythmical

Chapter 8

(17) *M.* You are right. But tell me what interval you think there is.

D. It's very hard to measure.

M. That's true. But doesn't that extra short syllable seem to measure it? And when we added it on, doesn't it seem your senses didn't demand any unusual lengthening of the last long or any rest [*silentium*] as the meter was repeated?

D. I entirely agree. For while you were just reciting and repeating the first, I was repeating the second after you to myself in the same way. And so, since my last short exactly fitted your rest, I sensed the same time-interval occurs in both.

M. Then you must hold there are fixed rest-intervals in meters. And so when you have found some defect in a regular foot, you ought to consider whether there will be compensation when the rest has been measured and accounted for.

D. I now understand that. Go on.

(18) *M.* It seems to me we ought now to examine the measurement of rest itself. For in this meter where we found the bacchius after the choriamb, the ear very easily sensed the one time's lack to make it six like the choriamb, and forced us, in repetition, to interpose a rest length of a short syllable. But if a spondee should be placed after the choriamb, on repeating it we have to cross a two-time rest, as in this case,

---

and musical elements. Thus in Aristides: 'An empty time is one without sound for the filling out of the rhythm. A leimma in rhythm is the least empty time; a prothesis is a long empty time, double the least' (*op.cit.* 40-41).

Amerio reports two other places. One is the Paris Fragment where the word for rest is *siópesis*. The other is in the scholiast of Hephaestion and worth quoting: 'Heliodorus says that a foot-division in paeons is perfectly regular practice, so that the rest gives a time, makes the rhythmical unit six-timed and in a 1 to 1 ratio like the others.' See Amerio, *op. cit.* 177 n.1.

Quae canitis fontem. For I believe you now feel there ought to be a rest, for the beat not to hit amiss when we return to the beginning. But in order for you to experience the time of this rest, add a long syllable to have, for example, *Quae canitis fontem vos,* and repeat this with the beat. You will see the beat occupies as much time as it did before, although in the first case two longs are placed after the choriamb, in the other three. And so it appears a two-time rest is put in there. But if an iamb is placed after the choriamb, as, for example, *Quae canitis locos,* we are forced to a three-time rest. To experience it, the times are added either by means of another iamb or by a choree or by a tribrach, to have, for example, either *Quae canitis locos bonos* or *Quae canitis locos monte* or *Quae canitis locos nemore.* For since with these added an harmonious and equable repetition moves on without a rest, and since with the beat applied each of these three is found to occupy just such a time-interval as with a rest, evidently there is a three-time rest there. Again, one long syllable can be put after the choriamb to give a four-time rest. For the choriamb can also be divided so as to have an arsis and thesis in a one-two ratio. An example of this meter is *Quae canitis res.* And if you add to this either two longs, or a long and two shorts, or a short and a long, and a short, or two shorts and a long, or four shorts, you will fill out a six-time foot bearing repetition without need of a rest. Such are *Quae canitis res pulchras, Quae canitis res in bona, Quae canitis res bonumve, Quae canitis res teneras,* and *Quae canitis res modo bene.* With these things known and agreed to, I believe it is already evident enough to you there cannot be a rest less than one time or more than four. For this is that very same measured progression so much has already been said about. And in any foot no arsis or thesis takes more than four times.

(19) And so when something is sung or recited having a determinate ending, more than one foot, and a natural motion pleasing the senses by a certain equableness even before consideration of the numbers involved, then it is already meter. For though it should have less than two feet, yet because it exceeds one foot and forces a rest, it is not without measure, but what is needed for filling out the times is owing the second foot. Instead of two feet, the ear accepts what occupies the times of two feet up to the return to the beginning of the foot, with the fixed and measured silence of the interval also counted out by sound. But I want you to tell me now whether you understand and agree with what has been said.

D. I understand and agree.

M. Do you simply believe, or do you see for yourself they are true?

D. For myself certainly, although it's from your talk I know they are true.

Chapter 9

(20) *M.* Come, then, since we have now found out where meter starts, let's also find out where it ends. For meter begins with two feet, either filled by sound, or to be filled with whatever the numericaly determined silence lacks. And therefore you must now consider that fourfold progression, and tell me to what number of feet we ought to extend meter.

D. That is certainly easy. For reason teaches eight feet are enough.

M. Well, do you remember we said that is called a verse by the learned consisting of two members joined and measured in fixed ratio?

D. I remember it well.

M. Then, since it was not said a verse consists of two feet, out of two members, and since it is clear a verse hasn't one foot but several, doesn't this very fact indicate a member is longer than a foot?

D. So it does.

M. But if the members of a verse are equal, can't the order be inverted so, without distinction, the first part becomes the last, and the last first?

D. I see.

M. Then to keep this from happening and to have one thing in the verse sufficiently apparent and discernible as the member it begins with, and another as the member it ends with, we must admit the members have to be unequal.

D. That's so.

M. Let's consider this first then in the case of the pyrrhic, if you will, where I believe you have already seen there can't be a number of less than three times, since that's the first greater than a foot.

D. I agree.

M. Then how many times will the least verse possess?

D. I would say six, if the inversion you spoke of didn't belie me. It will have seven then, because a member cannot have less than three, but to have more is not yet gainsaid it.

M. Your understanding is right. But tell me how many feet seven times contain.

D. Three and a half.

M. Then a one-time rest is due before the return to the beginning, to fill out the foot's interval.

D. It is certainly due.

M. How many times will there be when this is counted in?

D. Eight.

M. Then as the least which is the first foot cannot have less than two times, so the least which is the first verse cannot have less than eight times.

D. So it is.

M. What is the largest verse than which there is no greater and how many times must there be? Won't you see immediately if we refer back to that progression so much has been said about?

D. Now I see a verse can't be greater than thirty-two times.

(21) *M*. What about the length of meter? Do you think it ought to be greater than verse, since the least meter is much less than the least verse?

D. I do not.

M. Since, then, meter begins with two feet, verse with four, or the first with a two-foot interval, the second with four if the rest is counted in, but since meter does not exceed eight feet, doesn't verse, being also meter, necessarily not exceed too that same number of feet?

D. That is so.

M. Again, since verse can't be longer than thirty-two times, and since meter is a length of verse if it does not have a conjunction of two members such as is the rule in verse, but is only closed with a determinate ending, and since it must not be longer than verse, isn't it evident just as verse should not exceed eight feet so meter should not exceed thirty-two times?

D. I agree.

M. There will be, then, a same time-interval and a same number of feet both in verse and meter, and a certain common limit beyond which neither should progress, although meter is bounded by a fourfold number of times for its beginning, and verse by a fourfold number of feet[4] for its beginning. And so this quaternary ratio is kept, and meter evidently shares with verse its manner of expansion in feet, verse with meter in times.

D. I understand and am satisfied, and I am delighted they agree and are in harmony this way.

4 I have interchanged the terms 'times' and 'feet.'

BOOK FOUR

The treatise on meter is continued.

Chapter 1

(1) *M.* Let's return to the consideration of meter. It was in connection with its length and expansion I was forced to talk with you a little on verse which we decided was to be treated afterwards. But first, tell me if you don't reject the opinion of poets and their critics, the grammarians, thinking it of no importance whether the last syllable ending the meter be short or long.

D. I certainly do. For this doesn't seem rational.

M. Then tell me, please, what pyrrhic meter is shortest.

D. Three shorts.

M. What quantity must the rest be when it is repeated?

D. One time, the length of one short syllable.

M. Come now, carry this meter through, not by voice but by beat.

D. I have.

M. Then beat out the anapest this way, too.

D. I have also done that.

M. What's the difference?

D. None at all.

M. Well, can you give the cause?

D. It seems clear enough. For what is ascribed to the rest in one is ascribed to the lengthening of the last syllable in the other. For the short syllable in the one case is given the same beat as the long in the other, and after an equal interval there is a return to the beginning. But, in the first case there is a stop to fill the space of a pyrrhic foot; in the second, to fill that of a long syllable. So in each there is an equal delay before we return.

M. Then they haven't been so absurd in saying it makes no difference whether the last syllable of the meter is long or short. For the ending is followed by as great a rest as necessary to finish out the meter. Or do you think in this matter of the cause they ought to have considered some repetition or return to the beginning, and not only the fact it ends as if nothing were to be said after it?

D. I now agree the last syllable must be considered indifferently.

M. Right. But if this is due to the rest, it being in this way considered the end as if no sound were to follow it to give it an ending, and if because of the very large time-span in the rest it makes no difference what syllable is pronounced there, doesn't it follow the very indifference of the last syllable, conceded on account of the large interval, comes to this that whether there be a long or short syllable there, the ear always takes it as long?

D. I see that certainly follows.

Chapter 2

(2) *M*. And when we say the last pyrrhic meter is three short syllables with a rest for the space of one short before the return to the beginning, do you see, too, there is no difference between repeating this meter and repeating anapests?

D. I already saw this a while ago in the beat.

M. Don't you think the confusion here ought to be separated out by some ratio?

D. I certainly do.

M. Tell me, do you find any ratio to distinguish them except the pyrrhic meter in three shorts is not a minimum as it seemed, but in five? For the similarity of the anapest doesn't allow us, after a foot and a half, to rest for the space of the half necessary to fill out the foot and so to return to the beginning, and to establish this as the minimum pyrrhic meter. Therefore, if we wish to avoid confusion, that one time is to be taken as a rest at the end of two and a half feet.

D. But why aren't two pyrrhics the minimum meter in pyrrhics, and rather four short syllables without a rest than five with a rest?

M. Quite on the lookout, but you aren't noticing the proceleusmatic forbids this just as the anapest did the other.

D. You are right.

M. Do you agree, then, to this measure in five shorts and a one-time rest?

D. I certainly do.

M. Well, it seems to me you have quite forgotten the method we set up for discerning whether a rhythm was running in pyrrhics or proceleumatics.

D. You are right in warning me, for we found these numbers were to be distinguished from each other by beat. And so in this case I am no longer afraid of the proceleusmatic, for I can distinguish it from the pyrrhic when the beat is applied.

M. Why didn't you see this same beat is to be applied to distinguish the anapest from those three shorts or pyrrhic and a half, followed by a one-time rest?

D. Now I understand, and I go back and confirm the least pyrrhic meter as three syllables occupying with an added rest the time of two pyrrhics.

M. Then your ears approve this sort of number: *Si aliqua, Bene vis, Bene dic, Bene fac, Animus, Si aliquid, Male vis, Male dic, Male fac, Animus, Medium est.*

D. They do, especially when I now remember how they are to be beaten out so anapests aren't confused with pyrrhic meter.

(3) *M.* Consider these, too: *Si aliquid es, Age bene, Male qui agit, Nihil agit, Et ideo, Miser erit.*

D. These too run harmoniously, except in one place, where the end of the third is joined with the beginning of the fourth.

M. That's just what I wanted of your ears. It's not for nothing they are offended, since they expect one time each for all syllables and no rests between. But the concourse of two consonants, '*t*' and '*n*,' immediately cheat this expectation, forcing the preceding vowel to be long and extending it to two times. And the grammarians call this kind a syllable long by position. But because of that famous indifference of the last syllable no one incriminates this meter, even though unspoiled and exacting ears condemn it without benefit of an accuser. For see, if you will, the difference there is, if for *Male qui agit, Nihil agit* you should say *Male qui agit, Homo perit.*

D. This is quite clear and right.

M. Then, for the sake of musical purity let us observe what the poets do not observe for the facility of composing. So, for example, as often as we must put in meters where nothing is owing the foot to be compensated by a rest, so often do we put those syllables last the law of that number absolutely demands, so as not to return from the end to the beginning with offense to the ear and falsity of measure. But we concede, of course, there are meters ending as if nothing were to be said following them, and in that case they may treat the last syllable as either long or short with impunity. For in a succession of meters they are clearly convicted of error by the ear's judgment that no syllable is to be placed last except by the law and ratio of the meter itself. But this succession exists when nothing is owing the foot to force a rest.

D. I understand, and am thankful you promise examples of the kind giving the senses no offense.

Chapter 3

(4) *M.* Come, now report on the pyrrhics too, in order:

Quid erit homo
Qui amat hominem,
Si amat in eo
Fragile quod est?
Amet igitur
Animum hominis,
Et erit homo
Aliquid amans.

How do these seem to you?

D. Why, to flow very smoothly and vigorously.

M. What about these:

Bonus erit amor,
Anima bona sit:
Amor inhabitat,
Et anima domus.
Ita bene habitat,
Ubi bona domus;
Ubi mala, male.

D. I also find these follow along smoothly.

M. Now three and a half feet, see:

Animus hominis est
Mala bonave agitans.
Bona voluit, habet;
Mala voluit, habet.

D. These, too, are enjoyable with a one-time rest put in.
M. Four full pyrrhics follow; listen to them and judge:

Animus hominis agit
Ut habeat ea bona,
Quibus inhabitet homo,
Nihil ibi metuitur.

D. In these, too, there is a fixed and agreeable measure.
M. Listen now to nine short syllables, listen and judge:

Homo malus amat et eget;
Malus etenim ea bona amat,
Nihil ubi satiat eum.

D. Now try five pyrrhics.
M. *Levicula fragilia bona,*
Qui amat homo, similiter habet.

D. That's enough; they pass. Now add a half-foot.
M. I shall.

Vaga levia fragilia bona
Qui amat homo, similis erit eis.

D. Very well: now I am waiting for six pyrrhics.
M. Then listen to these:

Vaga levicula fragilia bona,
Qui adamat homo, similis erit eis.

D. That's enough; add another half-foot.

Fluida levicula fragilia bona
Quae adamat anima, similis erit eis.

D. That's enough, and very good; now give seven pyrrhics.
M. *Levicula fragilia gracilia bona*
Quae adamat animula, similis erit eis.

D. Add a half-foot to these, for this is all very fine.

M. *Vaga fluida levicula fragilia bona,*
Quae adamat animula, fit ea similis eis.

D. Now I see the eight-foot lines remain before we can get beyond these trifles. For, although the ear approves, by a natural measuring, what you give out in sound, yet I shouldn't wish you to look for so many short syllables. And, if I am not mistaken, they are more difficult to find woven in a succession of words than if some longs could be mixed in.

M. You are quite right, and to show my gratitude at our being allowed to get this far I shall compose the one remaining meter of this kind with a more joyful sentence:

Solida bona bonus amat, et ea qui amat, habet.
Itaque nec eget amor, et ea bona Deus est.

D. I now have with abundance a complete set of pyrrhic meters. The iambics come next; two examples of each meter are enough. And it is pleasant to hear them without interruption.

Chapter 4

(5) *M.* I'll obey you. But how many kinds have we already gone through?

D. Fourteen.

M. How many iambic meters do you think there are too?

D. Also fourteen.

M. What if I should wish in these meters to substitute a tribrach for an iamb, wouldn't the variety of forms be greater?

D. That's very evident. But, not to be too long, I want to hear these examples only in iambics. For it's easy art to substitute two shorts for any long.

M. I shall do as you wish, and I'm thankful your keen intelligence lessens my labor. But listen now to the iambics.

D. I am listening; begin.

M. Bonus vir
Beatus.

Malus miser,
Sibi est malum.

Bonus beatus,
Deus bonum eius.

Bonus beatus est,
Deus bonum eius est.[1]

Bonus vir est beatus,
Videt Deum beate.

Bonus vir, et sapit bonum,
Videns Deum beatus est.

Deum videre qui cupiscit
Bonusque vivit, hic videbit.

Bonum videre, qui cupit diem,
Bonus sit hic, videbit et Deum.

Bonum videre qui cupit diem illum,
Bonus sit hic, videbit et Deum illic.

Beatus est bonus fruens enim est Deo,
Malus miser, sed ipse poena fit sua.

Beatus est videns Deum, nihil cupit plus,
Malus bonum foris requirit, hinc egestas.

Beatus est videns Deum, nihil boni amplius,
Malus bonum foris requirit, hinc eget miser.

Beatus est videns Deum, nihil boni amplius vult,
Malus foris bonum requirit, hinc egenus errat.

1 There is a misprint in the Migne Edition which has been corrected according to the Benedictine Edition.

Beatus est videns Deum, nihil boni amplius volet,
Malus foris bonum requirit, hinc eget miser bono.

Chapter 5

(6) *D.* The trochee is next; give the trochaic meters, for these are the best.

M. I shall, and in the same way as the iambic:

Optimi
Non egent.

Veritate,
Non egetur.

Veritas sat est,
Semper haec manet.

Veritas vocatur
Ars Dei supremi.

Veritate factus est
Mundus iste quem vides.

Veritate facta cuncta
Quaeque gignier videmus.

Veritate facta cuncta sunt,
Omniumque forma veritas.

Veritate cuncta facta cerno,
Veritas manet, moventur ista.

Veritate facta cernis omnia,
Veritas manet, moventur omnia.

Veritate facta cernis ista cuncta,
Veritas tamen manet, moventur ista.

Veritate facta cuncta cernis optime,
Veritas manet, moventur haec, sed ordine.

Veritate facta cuncta cernis ordinata,
Veritas manet, novans movet quod innovatur.

Veritate facta cuncta sunt, et ordinata sunt,
Veritas novat manens, moventur ut noventur haec.

Veritate facta cuncta sunt, et ordinata cuncta,
Veritas manens novat, moventur ut noventur ista.

Chapter 6

(7) *D.* The spondee clearly follows; I have had enough of trochees.

M. Here are the spondaic meters:

Magnorum est,
Libertas.

Magnum est munus
Libertatis.

Solus liber fit,
Qui errorem vincit.

Solus liber vivit,
Qui errorem iam vicit.

Solus liber vere fit,
Qui erroris vinclum vicit.

Solus liber vere vivit,
Qui erroris vinclum iam vicit.

Solus liber non falso vivit,
Qui erroris vinclum iam devicit.

Solus liber iure ac vere vivit,
Qui erroris vinclum magnus devicit.

Solus liber iure ac non falso vivit,
Qui erroris vinclum funestum devicit.

Solus liber iure ac vere magnus vivit,
Qui erroris vinclum funestum iam devicit.

Solus liber iure ac non falso magnus vivit,
Qui erroris vinclum funestum prudens devicit.

Solus liber iure ac non falso securus vivit,
Qui erroris vinclum funestum prudens iam devicit.

Solus liber iure ac non falso securus iam vivit,
Qui erroris vinclum tetrum ac funestum prudens devicit.

Solus liber iure ac non falso securam vitam vivit,
Qui erroris vinclum tetrum ac funestum prudens iam devicit.

Chapter 7

(8) *D.* I have all the spondees I need; let's go to the tribrach.

M. All right. But since all four of the preceding feet have each given birth to fourteen meters, making fifty-six all told, more are to be expected from the tribrach. For when there is a half-foot rest in those fifty-six, the rest is never more than a syllable. But in the case of the tribrach you certainly don't think the rests are only for the space of a short syllable, or do you think there are also rests for the space of two short syllables? For there is a double division here, you know, since the tribrach either begins with one short and ends with two, or begins with two and ends with one. And so it must generate twenty-one meters.

D. That's very true. For they begin with four times and, therefore, a two-time rest; then five times with a one-time rest; third, six times with no rest; fourth, seven with a two-time rest; then eight with a one-time rest; sixth, nine with no rest. And so, when they are added on one by one until you come to twenty-four syllables or eight tribrachs, there are twenty-one meters all told.

M. You have certainly very readily followed reason here. But do you think we ought to give examples of all of them, or ought we to think those we have given for the first four feet will furnish light enough for the rest?

D. In my opinion, they are sufficient.

M. I only need yours, now. But, since you already know very well how with a change of beat tribrachs can be forged out of pyrrhic meters, tell me whether the first pyrrhic meter can also have a tribrach meter.

D. It cannot, for the meter must be greater than the foot.

M. How about the second?

D. It can, for four shorts are two pyrrhics and a tribrach and a half, so in the one case there is no rest and in the other a two-time rest.

M. Then with a change of beat the pyrrhics give you examples of tribrachs up to sixteen syllables or five and a half tribrachs. And you will have to be content with that, for you can compose the others yourself either by voice or beat, if you still think these numbers ought to be explored by the sensible ear.

D. In any case I shall do as seems best. Let's see about the others.

Chapter 8

(9) *M*. The dactyl is next, and divisible only one way, isn't it?

D. Certainly.

M. What part of it, then, can be given as a rest?

D. Why, the half.

M. Well, if someone should put a trochee after a dactyl and want to have a one-time rest in the form of a short syllable to fill out the dacytl, what shall we say? For we can't say it's impossible to have a rest of less than a half-foot. For that reason we've discussed convinced us there could be no rest, not of less, but more than a half-foot. For there is certainly a rest of less than a half-foot in the choriamb, when a bacchius follows it, and an example of this is *Fonticolae puellae*. For, you know, we have here a short-syllable rest, needed to fill out the six times.

D. That's true.

M. Then, when a trochee follows a dactyl, isn't it also permissible to have a one-time rest?

D. I am forced to admit it.

M. Yet who could have forced you, if you had only remembered what has been said? You are in this plight because you forgot the demonstration about the indifference of the last syllable, and how the ear takes upon itself a final long syllable even if it's short, when there's an interval to prolong it in.

D. Now I understand. For, if the ear takes the final short syllable as long when there's a rest as we found out by that reason discussed with examples, then it will make no difference whether a trochee or spondee is pronounced after the dactyl. And so, when the repetition is to be punctuated by a rest, it is proper to place a long syllable, to have a two-time rest.

M. What if a pyrrhic should be put after a dactyl? Do you think it would be right to do so?

D. It would not. Whether a pyrrhic or an iamb, there is no difference; although it must be taken for an iamb because with the rest the ear makes the last syllable long. But every one knows it's not proper for an iamb to be put after a dactyl because of the difference in the arsis and thesis, neither of these in the dactyl having three times.