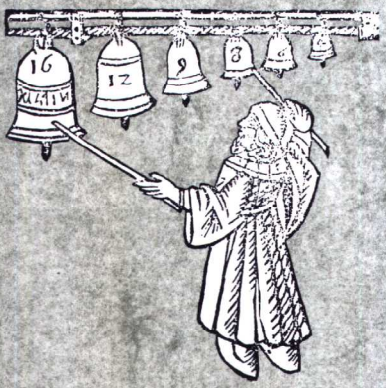
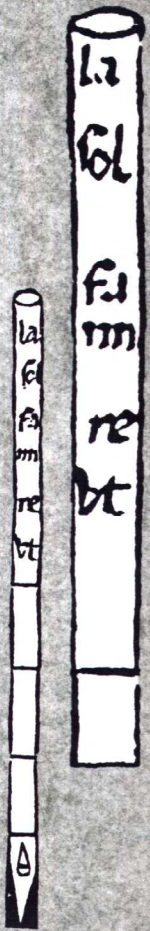
The Theory of Music

Franchino Gaffurio





Translated, with Introduction and Notes, by Walter Kurt Kreyszig

Edited by Claude V. Palisca

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DEDICATION

1 To the magnanimous and most devout Lord Lodovico Maria Sforza, the Viscount, the duke of the most distinguished Principality of Bari and governor of the Milanese State: this theoretical work on the Art of Music of Franchino Gaffurio of Lodi, Music Director in the Choir of the greater church [cathedral].

2 To whose judgment ought I to assent, greatest Lodovico Sforza, ruler of your time? **3** To that of those who demand an account of leisure as well as of serious occupation and believe that a wasted day (when their work is dying of neglect) must be regained by twofold profit of diligence in making false charges? **4** Or to that of those who attribute the disgraceful mark of idleness and the ignominy of the base dullness of mind as a troublesome and peculiar burden to brute living beings? **5** This I do not yet know sufficiently well. **6** Those who propound what it fits a free man to do **7** and what everyone ought most greatly to avoid **8** put this before the eyes as if in a picture. **9** Because the study of the liberal arts and letters—among the first, the practice of writing—seem to suffice both notions [that is, what men should do and what they should not do], **10** I thought the account of my honorable leisure must be made valid. **11** I turned to free music by means of letters from its untidy neglect and abuse. **12** If I did not presume to outdo or equal the volumes researched by the ancients with more fruitful ingenuity, I have preferred to emulate in them (however little I have achieved of this) the most beautiful and not the most unpleasant. **13** I claim this work to be owed to my diligence and skill alone, that, if it may not be held in great estimation, **14** nevertheless it may be valued for its manifold and convenient utility. **15** For the ancients—by means of the agreeable tie to the other arts and by that faculty of association inborn to a noble sharpness of mind and by a luxuriant wealth of words as if by many stinging rays of light—blinded the eyes of [their] students with [their] lectures. **16** Almost all recent [authors] talk idly about this art out of either laziness or ignorance, with incomparable damage, and they now and then publish what is part inanity, part error, confounded and confused by a dry and barren style in a barbarous manner. **17** Abstaining from extremes, we proceed on a middle road through an easy path of explanation, that is, by writing in a pure and clear exposition with common, yet not poor, words, and we rejuvenate for a new beginning that which has become obsolete by age. **18** We have cleansed the obscure and false, we have added light to shadows, an entrance to subtleties, and faith to perplex-

ities, **19** so that above all we desire that our vigilance be explored and inwardly examined, all the way to the finest details. **20** Moreover, we have improved upon the not unscrutinized little works for novices, **21** by revealing an easier way for those who long to learn, **22** not because our [approaches] are averse or inconsonant with theirs **23** but because it is not of little moment and makes a difference, in what way, how not discordantly and how clearly something is said. **24** In practice it happens that those who have cultivated the arts thoroughly, are ranked higher than the very inventors of them (because they give more results), **25** just as those who purify the gold drawn out from the interior of the earth **26** and distribute it for use among the people, surpass those who retrieve from the gold mines the more precious bronze. **27** Your Jacopo Antiquario, a consummate [man], has, however, reinforced my opinion (he "put the spur to a running horse" so to speak). **28** So great is both his authority and his piety, his erudition in all sciences, along with the highest purity of morals and of life, **29** that nothing is so open to question as how much he wants to research further. **30** Having been lured by his encouragement to writing, I most humbly dedicate this otherwise aimless work to you, gentlest of Princes, in good faith (the [faith], that is, which is owed entirely to a prince) and with my old devotion. **31** This is my own book, my little runaway, whose life is under the risk of a capital sentence. **32** It claims your [help] against its accusers, it names you its patron, and it recognizes you as an easy ruler. **33** Once you have published this noble compendium of doctrine from your rich resources, **34** and you promote the liberal arts and do not neglect the care of the artificers and of farmers, it prays for a humble place in your most venerable home. **35** You, a man most knowledgeable in the works of Mars, shut the creaking gates of the temple of Janus, and with a stillborn war have brought peace not only for Italy and Europe but also to the world. **36** In the firmest conviction of mankind, you have seized with both hands the palm of humanity, prudence, and generosity. **37** You think only wise thoughts. **38** You settle [all matters] with great deliberation. **39** You rule and govern with paternal and very great fortune. **40** Therefore the name "Moro" [mulberry tree] is bestowed upon you since it is the wisest of all trees. **41** Throughout the entire world, you recall the shunned virtues. **42** Now, you urge to be loved and to be sought out in the manner of the old emperors; **43** to your state you are a successful Augustus. **44** You challenge the learned and offer the very greatest rewards for labor. **45** To the eternal glory of your mighty name old heroes go with you on the heavenly path. **46** Even rude antiquity ascribed to them, who deserve the best from mankind, favors from the gods. **47** Therefore receive (as you are accustomed to do) with a cheerful countenance this

27 Secretary to the Governor of Milan. See also introduction, note 19.

musical volume, which has been written during many long nights with great labor by a man most dedicated to you. **48** May you cherish it in the company of your Antiquario, a man most erudite in literature, **49** and may the entire choir of singers applaud you with sweetest harmony. **50** Deign to inspect (as far as your occupations permit) what this latest inspiration has been capable of in me. **51** If (as I hope) [the work] will be well received, **52** I urge that, ornamented and perfected by your generous recommendation, **53** this book be regarded as worthy to reach the public on soaring wings. Farewell.

TO THE READER

Whoever you are whose fingers turn the leaves of these lessons as long as it be some good person who turns them—do I please you? Or is my work the only reward?

My intention was to help by pleasing—or is the weight of my merits empty?

I am unsure. Does gratitude despise the merit which I have gained?

There is no gratitude. Gratitude does not have any solid worth.

What does [Hrabanus] Maurus say? Will the Prince read this? He will read it. A deeper anxiety troubles [us].

That he reads it himself will be the fruit of praise.

Let him carefully read it through; someone will follow his example and read it also. My work is dedicated to this man; under his auspices may this work go forth.

All beginnings are hard. The subsequent joy usually softens spirits.

Thus the study which ensues aids by art.

Someone who occupies his leisure with mathematics passes time in such a way that there is no idleness.

Nevertheless, leisure is desirable to the provident.

Music ravishes the sky, earth, sea, bird, wild animals, stars, gods, humans and hell.

At first, music consisted by its nature in practice, but now it is examined in art.

Now finally it is a science. First was a desire [for music].

BOOK ONE

Chapter **One**
Musicians, [their] accomplishments, and also the excellence of musical knowledge

1 By reading and daily study I have perceived that in ancient times the discipline of music was embraced among the poets with the greatest honor of the most learned men—**1a** indeed, as Josephus **1b** and the Holy Scriptures relate that Jubal, from the tribe of Cain, was the first to have instituted [music] by the kithara and the organ, **1c** after he had searched out [this music] diligently from the various sounds of the hammers.

2 Many believe that others first distinguished themselves in various and diverse melodies and instruments. **3** Heraclides Ponticus, **3a** whom Plato, before sailing to Sicily, had appointed head of the Academy, reported **3b** that Amphion, the son of Jupiter and Antiope, was the original creator of the playing of the kithara and of the song with kithara [accompaniment], and he was instructed on the kithara by his father, Jupiter. **4** Others believed that the eminent Linus first discovered the lyre; **4a** he was from Calchos [on the island] of Euboea, the son of Apollo and Terpsichore, or, according to others, born from Amphimarus or Mercury as father and from Urania as mother. **5** So Linus wrote lamentations in lyrical song, as Anthes from Anthedonia, who at the same time also composed hymns. **6** Furthermore, many other people are said to have lived during the same time, as well as Pierius from the Macedonian mountain of Pierius, who composed poems on the Muses. **7** We read that Philamon of Delphi, who first established the times of that temple when it was at Delphi, proclaimed the origin of Leto, Diana, and Apollo in melody. **8** Thamyras, too, the son of Philamon himself, is said to have sung more sonorously and

1a Joseph. *AJ* 1.64, 68–72.
1b Ugol. *Decl.* 5.31.2, 4; Genesis 4.20–21.
1c Ugol. *Decl.* 5.31.3.
3, 3b Plut. *De mus.* 1131F–1132A; Heraclid. *Fragm.* 157 (ed. Wehrli).
4, 5–6 Plut. *De mus.* 1132A. In the transmission of this legend, Gaf. perhaps followed Cens. *DN* 12. Concerning Linus, see Hannelore Thiemer, *Der Einfluss der Phryger auf die altgriechische Musik,* vol. 29 of *Orpheus-Schriftenreihe zu Grundfragen der Musik,* ed. Martin Vogel (Bonn-Bad Godesberg: Verlag für Systematische Musikwissenschaft, 1979), pp. 91–93.
7 Plut. *De mus.* 1132A; Pherec. *Fragm.* 120 (ed. Jacoby).
8 Plut. *De mus.* 1132A; Hom. *Il.* 2.594–600.

melodiously than any in that day and age. **9** Demodocus of Corfu, a not at all unknown musician among the ancient writers, **9a** as Heraclides himself mentions, **9b** wrote songs about that overthrow [of Troy] **9c** and about the adultery of Venus and Mars. **10** Phemius [from the island] of Ithaca described in a poem the return of those who came back from Troy with Agamemnon.

11 Truly, they all wrote in verses, to which they later added melodies, as Terpsichorus and the remaining ancient lyric poets and poets of songs were accustomed to do. **12** Terpander, the first to write nomoi for the lyre, built the heptachord into the lyre; **12a** nevertheless several writers credited Philamon with adding separate melodies to fit each of his nomoi of kitharody **12b** and also to fit the verses of Homer. **13** In the same manner Clonas, the elegiac poet and the first epic [poet], established the aulodic nomoi and harmonies. **14** Following him, Polymnestus of Colophon pursued the same compositions in verse.

15 But two nomoi for kithara were discovered much earlier than those for the aulos and were established during the times of Terpander. **16** For Terpander himself was the first who named the nomoi and melodies for the kithara, now Boeotian, now Aeolian, another time Trochaic, and then acute, yet another time Cepionic and Terpandric. **17** [Terpander] also wrote prooemia [preludes] for the kithara, **17a** although Alexander—**17b** in his collec-

9, 9b Plut. *De mus.* 1132B; Hom. *Od.* 8.499–520; 8.266–366.

9c Gaf. changed the original Plut. text which mentions the marriage of Aphrodite (latinized Venus) and Hephaestus (latinized Vulcanus).

10 Plut. *De mus.* 1132B; Hom. *Od.* 1.325–327.

12 Though not explicitly expressed here, this statement is in clear reference to a later passage in Plut. *De mus* 1132D; cf. Poll. 4.65.

12a Plut. *De mus.* 1132C in a slightly altered form ("Terpander also, who was a composer of nomoi sung to the cithara, set to music in each nome hexameters"); see Procl. *Chrest.* 45.

12b Plut. *De mus.* 1132C.

13–14 Plut. *De mus.* 1133A.

15–17 Plut. *De mus.* 1132D; Poll. 4.65.

16 The Latin text has "Boetium," obviously a misspelling in the *Theorica musice,* which should read "Boeotium" in reference to that nomos named after the district of Boeotia in central Greece.

17a Plut. *De mus.* 1132F; Alex. *Not. on Phr.* (*Fragm.* 77, ed. Jacoby).

17b Humanist translators of scientific texts tended to follow the Scholastic process of word-for-word conversion of Greek into Latin, maintaining as much of the word order, inflection, and syntax as possible. For further information on this point, see Deno John Geanakoplos, *Constantinople and the West* (Madison: University of Wisconsin Press, 1989), pp. 82, 283. For specific examples, see Palisca, *Humanism,* p. 120, and Thomas J. Mathiesen's response to Claude V. Palisca, "The Impact of the Revival of Ancient Learning on Music Theory" in *International Musicological Society: Report of the Twelfth Congress Berkeley 1977,* ed. Daniel Heartz and Bonnie Wade (Kassel: Bärenreiter, 1981), p. 880.

The Greek refers to Alex.'s *Not. on Phr.* (ἐν τῇ Συναγωγῇ τῶν περὶ Φρυγίας [literally in the collection of things concerning Phrygia]) wherein it is stated that (1) Olympos brought instrumental music (κρούματα) to the Greeks, (2) so did the Idaean Dactyls, (3) Hyagnis was

tion of those who were versed on the Phrygian rhythms—**17c** narrates that the Phrygian Olympus was the first who carried forth the art of aulos playing and dactylic verse composing to the Greeks—**17d** and that, indeed, during the times of the reign of the Phrygian Midas it was he who first invented the oblique aulos.

18 But the one who first employed the aulos [a1v] was Hyagnis, and **18a** thereafter his son Marsyas, who, carried away by pride, boasted that he was the inventor of the art of aulos playing, **18b** to the extent that he challenged Apollo to a musical contest; **19** Apuleius and Diodorus related that Marsyas was conquered by Apollo and skinned alive. **20** In fact, afterward Apuleius and Diodorus mention that there was an Olympus, a disciple of this Marsyas, who was born before the Trojan war **20a** and therefore older than the Phrygian Olympus, whom we have mentioned. **21** Indeed, Apuleius and Diodorus say that Terpander imitated the verses of Homer but the melodies of Orpheus. **22** Nevertheless Orpheus is said to have imitated no one, inasmuch as there was not yet anyone besides the aulodic poets. **23** But the songs Orpheus sang have no resemblance to the songs of those poets. **24** On the other hand, it is well known that not long after Terpander there was Clonas, a composer of nomoi for the aulos—according to Archades a citizen of Tegea, but according to the Boeotians a Theban. **25** After these two, Terpander and Clonas, Archilocus is placed, **25a** although certain historians report that it was a certain Ardalus of Troezen prior to Clonas, who established aulodic music. **26** However, others claim that it was Polymnestus.

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the first to play the aulos, and so on. The interlocking indirect discourse has caused the Latin translator to misconstrue the phrase as *ἐν τῇ Συναγωγῇ τῶν περὶ Φρυγίας κροὺματα* . . . instead of *ἐν τῇ Συναγωγῇ τῶν περὶ Φρυγίας* kroùmata . . . ; he consequently takes it as "in (*ἐν*) eorum (*τῶν*) collectione (*τῇ Συναγωγῇ*) Phrygii (*περὶ*) pulsationes (*κροὺματα*) versati sunt" (because the final coordinating verb seems to be missing in the Greek, the translator supplies it from the context). This information was kindly communicated to the translator by Professor Thomas Mathiesen on 4 February 1992.

17c Plut. *De mus.* 1132F; Clem. Al. *Strom.* 1.16.76.6 (ed. Stählin); Clem. Al. *Anecd. Oxon.* (ed. Cramer, Vol. 4, p. 400.19); *Suda* (ed. Adler, vol. 3, p. 522.22).

18 Plut. *De mus.* 1132F; Dios. *Anth. Pal.* 9.340; Non. *Dion.* 41.374.

18a Plut. *De mus.* 1132F; Philip. *Anth. Pal.* 9.266; Apul. *Flor.* 3; Non. *Dion.* 10.233.

18b Apul. *Flor.* 3; Luc. *Dial. D.* 16.2 (cf. Thiemer, *Der Einfluss der Phryger,* pp. 53–54).

19 Apul. *Flor.* 3; Diod. 3.58 (cf. Thiemer, *Der Einfluss der Phryger,* p. 54).

20 Plut. *De mus.* 1132F; Alex. *Not. on Phr.* (*Fragm.* 77, ed. Jacoby).

20a Cf. above 1.1.17a.

21 Plut. *De mus.* 1132F; Alex. *Not. on Phr.* (*Fragm.* 77, ed. Jacoby).

22 Plut. *De mus.* 1132F; *Orphicorum Fragm.* 56–58 (ed. Kern).

23 The assumed reference is to Glauc. (*Hist. Chron.*), who seems to refer to Ardalus of Troezen (cf. Plut. *De mus.* 1133A and below to 1.1.25).

24–25 Plut. *De mus.* 1133A.

25a Plut. *De mus.* 1133A; Pliny *HN* 7.204; Paus. *Des. Graec.* 2.31.3.

26 Plut. *De mus.* 1133A.

27 The kitharody of Terpander was preserved entirely in simple form all the way to the generation of Phrynis of Mytilene. **28** At that time this very experienced Phrynis left behind this kind of kitharody handed down from Terpander, under the guidance of kitharist Aristoclides. **29** This Phrynis was the first to begin to alter this ancient and simple music and to transpose [it] into new harmonies and rhythms. **30** Truly, Olympus the Phrygian, **30a** whom we have just mentioned previously, **30b** laid down the aulodic nomos in honor of Apollo. **31** This Olympus was one of those who proceeded from that first Mysian Olympus, the disciple of Marsyas, by whom the nomoi and melodies to the gods were instituted, which afterward he carried to Greece. **32** Yet others contend that the Polycephalus [nomos] was not the work of the Phrygian Olympus but of Crates, whom Olympus taught. **33** The Italian Glaucus [of Rhegium], however, in his *Historical Chronicles of the Ancient Poets* asserts that the Chariot nome **33a** was a melody of Olympus, which also may be understood from Terpsichorus Hymenaeus, **33b** for Glaucus imitated neither Orpheus nor Terpander nor Archilochus nor Thales, but solely Olympus. **34** Likewise, some say that this nomos was discovered by the Mysians, who were among the ancient auletes. **35** For they sang elegies made up of melodies. **36** They also handed down that there was Sacadas, an Argive, a composer of these kinds of melodies, a good composer and a three-time winner at the Pythian games.

37 There are those who seek this invention farther back. **38** They would have it that the inventor was Apollo, who first invented not only the kithara but also the aulos long before Marsyas or Olympus or Hyagnis. **39** At least, this fact is evident from these choruses and the sacrifices, which, as Alcaeus writes in a certain hymn, antiquity offered to the god Apollo with auloi. **40** In addition, his statue, which was at Delos, is said to have held a bow in its right hand, and in the left the Graces, who each bore in their hands separate instruments of music, one the lyre, the other auloi. **41** The Grace in the middle held a syrinx to her mouth.

27 Plut. *De mus.* 1133A; Pol. 4.66; Procl. *Chrest.* 46.
30, 30b, 31 Plut. *De mus.* 1133D; see also 1132F.
30a Cf. above 1.1.17a.
33, 33b The Latin text has "harinatium," an incorrect Latin transliteration of the Greek (latinized "harmatium"). Plut. *De mus.* 1133F. Concerning the explanation of this nomos, see *Etym. Magn.* 145.25–47 and Eur. *Or.* 1384.
34 Plut. *De mus.* 1133F.
36 Plut. *De mus.* 1134A; Paus. *Des. Graec.* 10.7.4.
38 Plut. *De mus.* 1135F; cf. also 1133F.
39 Plut. *De mus.* 1135F–1136A; Alc. *Fragm.* 3 (Bergk, *Poet. Lyr. Gr.* 3, p. 147) and *Fragm.* 307 (Lobel and Page, *Poet. Lesb. Frag.*, p. 259).
40–41 Plut. *De mus.* 1136A; Paus. *Des. Graec.* 9.35.3.

42 The Egyptians say that Mercury was the first observer of the course of the stars and that he invented the harmonies to correspond. **43** He built a three-string lyre [as] an image of the three seasons of the year, **44** that is, he instituted three pitches, the high, the low, and the middle, deriving the high from the summer season, the low from the winter, and the middle from the spring. **45** The Egyptians also report that Osiris [a2r] was accustomed to be delighted by musicians and choirs. **46** A multitude of musicians and nine adolescent virgins, accustomed to sing and to be taught other things, used to follow Osiris. **47** These virgins the Greeks called Muses. **48** Apollo is said to have taught these virgins, for which reason he is called "musicus."

49 The Arcadians were said to have been the first to bring these instruments, which were called the lyre, the trigonon, and the lydi, into Italy. **50** In fact, this people formerly made use of no other skill beyond the pastoral pipes. **51** They also relate that Clonas was the composer of a tripartite nomos which is made up of the Dorian, the Phrygian, and the Lydian modes. **52** Finally, it is recorded that Thales and Xenodamus, Xenocritus and Polymnestus, **52a** and also Zetus, **52b** Arion, Timotheus, Antigenidas, Polixenus, and many others were famous during this period of time.

42–44 Cassiod. *Var.* 2.40.14. "Egyptii" is perhaps a reference to the Alexandrian astronomer Hypsicles.

51 Plut. *De mus.* 1134A.

52 Plut. *De mus.* 1134B–C. Plut. provides the native town of these authors, namely, "Thaletus of Gortyn, Xenodamus of Cythera, Xenocritus of Locri, Polymnestus of Colophon, and Sacadas of Argos." Thaletas of Crete is mentioned in Boet. *De inst. mus.* 1.1.181.23 (cf. Wille, *Musica Romana,* p. 659), in Varro, *De mus.* (lost) (cf. Wille, *Musica Romana,* p. 446), and in Cap. *De nup.* 9.493.6–7 (cf. Wille, *Musica Romana,* p. 446). The remark of the latter author is cited in *Theorica* 1.1.86. Together with Xenocritus, Xenodamus, Polymnestus, and Sacadas (all mentioned in Plut. *De mus.* 1134B–C and in *Theoricum* 1.1.13–14; the name Sacadas is deleted in the *Theorica*), Thaletas belonged to the second School of Music in Sparta, where he was credited with instituting the *gymnopaediai,* an annual festival held at Sparta to honor Apollo with gymnastic exercises and dances (cf. Solon Michaelides, *The Music of Ancient Greece: An Encyclopaedia* [London: Faber & Faber, 1978], pp. 125, 330). Polymnestus of Colophon is also mentioned in *Theorica* 1.1.14, adopting a statement from Plut. De mus. 1132C, 1133A, as well as in *Theorica* 1.1.3, adopting a statement from Plut. De mus. 1131F–1132A. Both Pindar (frag. 178) and his contemporary, the comic dramatist Cratinus (frag. 305), mention Polymnestus (cf. Warren Anderson, "Polymnestus of Colophon," *New Grove* 15:54).

52a Cic. in his *Her.* 2.27.43, mentions Amphion together with his twin brother Zetus as son of Jupiter and Antiope (cf. Wille, *Musica Romana,* p. 552).

52b Pliny (*HN* 9.8.28) and Hdt. (*Nat. Hist.* 1.23) mention the famous account of Arion, the kitharode. Together with Terpander, Arion is cited by Boet. (*De inst. mus.* 1.1.185.17–20) in reference to the healing of grave diseases through song. Gaf. gives the respective accounts in his *Theorica* 1.1.65, 90. Gell. (*NA* 16.19.2–17) and Ov. (*Fast.* 2.83–118) also include references to the Arion mythos (cf. Wille, *Musica Romana,* pp. 553–554). Cap. (*De nupt.* 9.480.16) mentions Arion, Orpheus, and Amphion in a blending of their lyres (cf. Wille, *Musica Romana,* p. 640). Both Procl. (A.D. 412–485) (*Chrest.* 12) and Arist. (*Poet.* 1449a 1.11)