

## Ancient Musical Theory in Byzantine Environments.

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Judging from the number of extant manuscripts we observe that the Byzantines apparently took a considerable interest in ancient musical theory. The very existence of these manuscripts demands an explanation. Why did the Byzantines, who were living within the tradition of liturgical chant, occupy themselves so intensively with the copying, the studying and the teaching of the musical theory of the pagan past?

It is my contention that some Byzantine teachers and scholars were inspired by the old musical theory, using ancient terms and methods in the process of establishing a theory of their own chant tradition. They may even have employed features from ancient theory in their practical instruction. In short, I believe that the Byzantines did not copy and study - at least not exclusively - as a scholarly exercise or to pay veneration to the ancient past; they felt it to be useful to their own purposes. The medieval reception of the ancient musical theory is often characterized with the word "misunderstanding", but I think that the employment of this ancient theory at the same time may be described as experimental and dynamic.

The present paper investigates some possible relations between the two main groups of Byzantine musical theory, the chant manuals and the manuals on ancient theory. The active use of the ancient theory will be exemplified by means of the manual ascribed to Bacchius Senex. Then I will try to look at a few more detailed examples of the Byzantine use of the ancient theory in connection with the chant tradition; these examples are centered around the Hagiopolites treatise, ms Paris BN Ancien fonds grec 360, fourteenth cent.

The tradition of liturgical chant reaches far back in the history of the church and the synagogue, but has no or very dubious connections with the musical theory of the classical era.

Its music is vocal and its transmission is in principle independent of a musical theory; the ancient theory is based on the instrumental music of the fourth or third century B.C., its notation being a sort of tabulature of the lyre, as stated by Sachs in the beginning of this century (1).

In spite of this, a common feature may be seen in both areas of musical culture: an increasing activity from the tenth century onwards. On the one hand new types of notation were developed for use in the liturgical manuscripts. This activity is reflected in the neume-lists and early material of the type represented by the Hagiopolites treatise. This material, I think, represents the earliest and rudimentary experiments in the establishing of a theory of church music. On the other hand we find an increasing interest in copying, excerpting and commenting on the remains of ancient theory. It is an accepted fact that these activities were centered around two different milieus in the Byzantine society, the church on the one side and the scholarly circles of quadrivial study on the other. But I think there are some very important points or areas of contact and interaction between these milieus.

The traditional division of the Byzantine musical theoretical treatises is stated by Christian Hannick in the "Byzantinisches Handbuch" in the chapter concerning musical theory (2), where he characterizes two types of texts: "Die Lehrschriften der klassisch-byzantinischen Musik" and "Die Lehrschriften der byzantinischen Kirchenmusik".

Under the first heading are placed the Aristoxenus fragments, then the texts representing the bulk of ancient theory - Ptolemy, Cleonides, Theo of Smyrna and Nicomachus of Gerasa, all of whom belonging to the second century A.D. - together with the slightly later Porphyry and Aristides Quintilianus. Further are

included Gaudentius, the Anonymi Bellermanni, Bacchius Senex and the text with the incipit "te techne mousike". The group ends up with the four greater Byzantine "antikisierende" treatises, Ps.Psellus (Anonymus Heiberg)(3), Anonymus in cod. Matr. N62 (4), Bryennius and Pachymeres, all of whom use one or more of the afore-mentioned texts as their source of material. The main source of the ancient theory is a great body of Greek manuscripts dating from the eleventh to the the sixteenth century. It should be stressed that this group comprises genuine classical texts as well as early Byzantine compilations and late Byzantine syntheses.

The other group, the treatises of church music, consists of the παπαδικαί or ψαλτικαὶ τέχναι, the standard manuals of Byzantine chant, and a number of related, but more advanced texts (5). The earliest extant παπαδικαί date from the fourteenth century, but they embody material from an earlier period.

In accordance with Richter (6), Hannick states that the opposition between the two branches of ancient musical theory, the Aristoxeneans or μουσικοί, and the Pythagoreans, called ἀρμονικοί or κανονικοί, continued to be of importance in the Byzantine period. I think that this must be taken with considerable modifications; except for the sole classic Aristoxenus and his late antique follower Cleonides you can hardly find any treatise which only uses material from one of these two branches. It is my opinion that the contamination of the traditions increases in the Byzantine period. Even in the manual of the ultra-Pythagorean Nicomachus we find the Aristoxenean standard definition of φθόγγος, a tone with a distinct pitch, (7)

φθόγγον δὲ <sc. φαμεν εἶναι> φωνῆς ἐμμελοῦς ἀπλατῇ τάσιν

This combination of the two traditions led v. Jan to delete the line mentioned, although he several times in his preface admits

the very eclectic state of many of these texts. For example he characterizes the text of Bacchius with the names of cento and farrago. His main interest was the establishing of a text as an object for "Quellenforschung". Regarded from this point of view, the tradition of the ancient theory seems to be very complicated. This is, I think, due to the active use of these texts in the Byzantine period. It might be rewarding to look at such texts as more than simple carriers of the ancient musical theory; in fact, the remains of ancient musical theory carry the marks and signs of having been used in general studies of musical theory, not necessarily in an attempt to reconstruct the ancient music. The Byzantines seem to have been interested in ancient theory of any kind.

This calls for a revaluation of the texts belonging to the middle group of the "klassisch-byzantinische" treatises. Let me demonstrate this by means of Bacchius Senex, a manual in dialogue form.

The Byzantine codices of musical theory usually contain a number of treatises, extracts and fragments together with texts from some of the other disciplines of the quadrivium. They are often written successively by several hands or consist of parts from different manuscripts bound together into one volume. Genuine classical texts, texts from the middle group and authors like Bryennius, Barlaam from Calabria and Maximus Planudes are intermingled (8). I think that books of this kind were produced for the purpose of teaching and that it was the contents, not the origin of the texts which was considered important. Certain series of texts reappear in several manuscripts. The text of Bacchius Senex is found in such a unit of transmission, the oldest extant manuscript being the Venice codex Marcianus gr. app. cl. VI, 10, dating from the twelfth century (9). The Marcianus is obviously written by the same hand but in two parts judging from a difference in the density and size of the script (10). The last part forms the unit mentioned above

and has the following contents: Aristides Quintilianus, Anon. Bellermannii, Bacchius Senex, Τῇ τέχνῃ μουσικῇ and the hymns of Mesomedes. Between the two last items, the Τῇ τέχνῃ μουσικῇ and the hymns are found the following trimeters of dedication (11):

Τῆς μουσικῆς ἔλεξε Βακχεῦτος Γέρων  
τόνους τρόπους μέλη τε καὶ συμφωνίας.  
Τούτῃ συνφθὰ Διονύσιος γράφων  
τὸν παμμέγιστον δεσπότην Κωνσταντῖνον  
σοφὸν ἐραστὴν δείκνυσι τεχνημάτων,  
τὸν τῶν ἀπάντων γὰρ σοφῶν παιδευμάτων  
ἐφευρετὴν τε καὶ δότην πεφηνότα  
ταύτης προσῆκεν οὐδαμῶς εἶναι ξένον.

v. Jan still believed this wise and science-loving emperor to be Constantine the Great, but in 1970 it was finally established by Egert Pöhlmann (12) that the poem refers to Constantine VII Porphyrogennetus (911 - 959). It mentions a certain Dionysios as redactor of the manual of Bacchius "the old man" and as author of Τῇ τέχνῃ μουσικῇ. Some of the descendants of this Venice manuscript which contain the same unit of texts, carry the ascription Διονυσίου in the marginal notes to Τῇ τέχνῃ μουσικῇ (13).

The text of Bacchius contains doctrines known only from Aristides Quintilianus and Gaudentius and material known from nowhere else. v. Jan considered Bacchius a parallel tradition of the ancient theory (14), but now we have to see the text as a Byzantine compilation of partly known, partly unknown remains of ancient theory. It is very hard to identify the various elements in this kind of texts which move in the area of general definitions and elementary teaching. The author worked with a marked eclecticism regarding the doctrines, but has stuck to the traditional "Aristoxenean" disposition of the material, as found in its most regular form in Cleonides (15). This way of presenting the theory systematically may have been chosen for

educational reasons, and it all corresponds with the first couple of lines in the poem, the total seven parts of the musical theory according to this concept being the doctrines of sound, interval, melody, "genera", scale, composition and rhythm.

The choice of a dialogue form also points in the direction of the pedagogical intentions of Bacchius. Rudolf Schäfke (16) contended that the treatise as we know it is a Byzantine arrangement into dialogue form of an ancient non-dialogue treatise. This suggestion is based on the existence of some late manuscripts of musical theory obviously containing some excerpts from Bacchius, but without questions and answers (17). Now, these Bacchius-excerpts form part of a unit of transmission consisting of excerpts from Theo Smyrnaeus, some diagrams from Theo, the excerpts from Bacchius, § 103 of the Anon. Bellermanni, a diagram named Ἡ κοινὴ ὁρμασία - also known from the so-called Excerpta Neapolitana - and some further diagrams of unknown origin. This unit is found in at least six manuscripts of musical theory (18). The excerpts from Theo and Bacchius have exactly the same incipit and explicit, but are written in a further abbreviated form in the late Spanish manuscript Escorial Y.I.13, fifteenth century, which Schäfke referred to (19). But in some of these excerpts from Bacchius are found traces of a dialogue form, namely in the Munich gr. 104, as already v. Jan noticed (20), and in the oldest extant manuscript of ancient musical theory, the Heidelberg Pal. gr. 281, dating from 1040. This manuscript was recently reintroduced in the discussion by J. Raasted (21) and I had the opportunity to inspect the Bacchius excerpts on a microfilm. I found that in this manuscript too the non-dialogue excerpts in one incident betrayed a dependence on the dialogue form. In fol. 180v the manuscript reads:

Πλοκῆς δὲ μέλος τί ἐστὶ;

( = v. Jan p. 304, line 3 )

Elsewhere no questions of this kind are found in the ms. This

detail suggests that the treatise of Bacchius never existed as an ancient non-dialogue manual, but is a Byzantine product. Bacchius can hardly be much older than Dionysius (22), and it seems reasonable to connect them with the flourishing period of literature and education in the tenth century. I have a suspicion that the Anon. Bellermanni, the excerpts of Nicomachus and the Excerpta Neapolitana, i.e. the other texts of the middle-group, could be viewed in a similar way. They all deal with the same sort of material as Bacchius and seem to have been generated for educational purposes. This idea, of course, needs further investigation in each case. It seems likely that the interest in musical theory resulted in the creation of new texts on the basis of remains of the ancient theory, and for educational reasons the texts were collected in books, and excerpts were made and transmitted. Now, the music on the basis of which the ancient theory was created was probably but a scholarly reconstruction and a faint reminiscence already to late antiquity and for example to an author like Aristides. To the Byzantines it must have been even stranger, as it is clear from the evidence of the few witnesses we have on this matter (23). Not very much is known about the secular music of the Byzantines but it is a common opinion that it had nothing to do with the ancient music of the third and fourth centuries B.C. The marked interest in the theory of this music then could be a result of a general veneration for the classical texts and a conservative preservation of the traditional quadrivial studies. But I think a supplementary explanation is needed to account for the above-mentioned activities in the field of musical theory among the Byzantines.

The recent investigation in the transmission of the Hagiopolites treatise, may serve as a step towards an understanding of this problem (24). I will try to pursue some of the possible points of contact between the material of ancient theory and the theory of Byzantine chant found in the Hagiopolites. My interpretation implies that the juxtaposition and the order of

the two types of material not are due to mechanical events in the transmission, as supposed by Raasted (25), but that it is a result of a conscious redaction. Dietmar Najock (26) has once presented a similar view about the contents and order of the ancient material, but without going into details.

The Hagiopolites is composed of different parts concerning the theory of Byzantine chant (§§ 1 - 55) and some concerning ancient theory (§§ 56 - 105). The ancient material comprises a great portion of the Anon. Bellermanni in a confused order and a smaller part of ancient theory not known from elsewhere (§§ 90 - 105).

In §§ 2, 10 and 23 we find the term *μουσική* which reappears in §§ 101 and 103 (27). It could be the common name of string instruments with 4, 7 or 15 strings, used for the purpose of demonstration. This instrument may have represented the pitches of a tetrachord, two conjunct tetrachords or a classically inspired system of two conjunct tetrachords, a disjunction and again two conjunct tetrachords. All these possibilities are mentioned in the Hagiopolites. Obviously this feature of ancient Pythagorean theory was considered useful at a certain level of chant instruction. We do not have conclusive evidence on the use of such instruments in chant instruction, but if we consider the amount of material on these instruments, their scales and tunings in the treatises by Pachymeres and Bryennius, we can not, I think, exclude the possibility that this tool of ancient musical theory and some of its terms were employed in certain scholarly circles for the purpose of demonstrating intricate chant phenomena.

The term *ᾠδα* of § 15 and 21 seems to represent an obsolete chant repertoire, perhaps connected with a notation which was no longer commonly known (28). This paragraph presents a mixture of material concerning Paleobyzantine notation and the string names of the *μουσική* of §§ 102 - 105. The word *ᾠδα* itself reappears in §§ 90 and 93 of the ancient part. The author may have introduced the string names in order to establish a connection between a list of Paleobyzantine neumes and the theory of the *μουσική* with seven strings. A demonstration of



the step values ascribed to these neumes is a possible interpretation of his intentions: the first string gives ison, the second gives oligon etc. This implies the use of the instrument for the demonstration of melodic intervals; two successive plucks on the first string demonstrate the interval of a prime and illustrates the ison, from the first to the second gives oligon etc. This use of the instrument seems to establish a connection with the ancient material of § 91. Here the same method is employed on an instrument with seven strings in a demonstration of consonance and dissonance. Furthermore a diagram in § 102 describes this system of seven tones. In fact, the widespread use of this sort of diagrams constitutes a very evident link between the ancient treatises and the chant manuals.

The order in which the ancient theory of the last part of the Hagiopolites is found seems to reach far back in the transmission of the text, and it is probably connected with the old Heidelberg manuscript mentioned above (29). At the points where it differs from the order of the "normal" Anon. Bellermanni, a thematical continuity can be seen. The main subject from § 86 onwards is Harmonike whereas the material is placed in connection with Melopoia in the "normal" Anon. Bellermanni. The new position of the doctrines seems to make sense as well. A verbal and thematical connection bridges the transition between the two portions of ancient material in §§ 89 - 90.

One final feature deserves to be mentioned. The ancient theory of §§ 8, 10, 21 and 31 is referred to in the past tense. A similar "historic" conscience is observed in the last part of the ancient material, §§ 90 - 105. Now and again the ancient theory is exposed to criticism, as in the §§ 23 and 95. These features, I think, point towards a very conscious employment of the ancient material in the Hagiopolites.

In the *Harmonics* of Manuel Bryennius, around 1300, technical terms of the Byzantine chant and ancient theory occur side by side (30). In some instances Bryennius even harshly criticises features of ancient theory which he considers of no use to a student of musical theory (31). In principle Bryennius connects the ancient and the Byzantine theory in the same way as observed in the Hagiopolites. The ancient theory has a certain value of utility when applied to intricate phenomena of the Byzantine chant; it is drawn upon in order to explain these phenomena or connect them with the ancient tradition of the universal music.

The few examples investigated above have concentrated on what we might call the interaction between the two hemispheres of the musical culture of Byzantium. They imply that the Byzantines took a far more active and dynamic interest in the ancient musical theory than usually accepted.

- (1) cf. Curt Sachs, *The Rise of Music in the Ancient World*, New York 1943.
- (2) *Die hochsprachliche profane Litteratur der Byzantiner*, vol. II, pp. 181 - 218. Ed. Herbert Hunger, München 1978.
- (3) *Anonymi Logica et Quadrivium*, ed. Johan Ludvig Heiberg, Det Kongelige Videnskabernes Selskabs Historisk-filologiske Meddelelser XV, 1, Copenhagen 1929.
- (4) This treatise was edited from a sixteenth century manuscript by Ruelle in *Archives des missions scientifiques et litteraires* III, II, Paris 1875.
- (5) New critical editions of these texts are forthcoming in the MMB-series, *Corpus Scriptorum de Re Musica*, Wien 1985 -. The first and second volume comprise the treatises by Gabriel Hieromonachus and Manuel Chrysaphes. For other texts see *L'Antica Melurgia Bizantina*, pp. 145 - 260, ed. Lorenzo Tardo, Grottaferrata 1938.
- (6) *Antike Überlieferungen in der byzantinischen Musiktheorie*, *Deutsches Jahrbuch der Musikwissenschaft* 1961, Leipzig 1962.
- (7) *Musici Scriptores Graeci*, pp. 242 - 43, ed. Carl v. Jan, Leipzig 1895. The substance of this definition is repeated p. 261, here ascribed to νεώτεροι.
- (8) The example is taken from the Naples codices Neap. gr. III, C3 and C4, fourteenth cent.

- (9) Described by D. Najock in *Anonymi Bellermanni, Drei anonyme griechische Traktate über die Musik*, Göttinger musikwissenschaftlicher Arbeiten 2, Göttingen 1972, p. 36.
- (10) According to Najock.
- (11) *Musici Scriptores Graeci*, ed. v. Jan, Leipzig 1895, p. 285
- (12) In his article "Bakcheios, pseudo-Bakcheios und Anonymi Bellermann" in *Musik in Geschichte und Gegenwart*, Supplement I, Kassel 1970.
- (13) In the vat. gr. 1364, neap. III, C4 and the vat. urb. 77.
- (14) Carl v. Jan, *Die Metrik des Bacchius*, Museum XLVI, 1891, p. 557.
- (15) Cleonides is treated from this point of view by Manfred Fuhrmann, *Das systematische Lehrbuch, Ein Beitrag zur Geschichte der Wissenschaften in der Antike*, Göttingen 1960.
- (16) Rudolf Schäfke, *Aristeides Quintilianus*, Berlin 1937, p. 8.
- (17) Hannick p. 184, (see note 2).
- (18) The Heidelberg codex pal. gr. 281, 1040 A.D., the vat. gr. 192, fourteenth cent., the Munich gr. 104, the vat. reg. gr. 108 (except for Bacchius), the Florence laur. acq. don. 64 and the Escorial. gr. Y I 13, the last three from the sixteenth cent.
- (19) See note 16.
- (20) *Musici Scriptores Graeci*, Leipzig 1895, p. XLVIII.
- (21) Jørgen Raasted, *Quis, Quid, Ubi, Quibus Auxiliis etc.*, to be published in a forthcoming issue of *SCRIPTORIUM*.
- (22) This is contended by Pöhlmann, see note 12.
- (23) E.g. in the description of the Church of the Apostles in Constantinople by Nikolaos Mesarites, edited by A. Heisenberg, *Grabeskirche und Apostelkirche*, Leipzig 1908, vol. II pp. 92 - 94 and in a letter by Michael Psellus on music, first edited by Ruelle in *Archives des missions scientifiques et litteraires* III, II, Paris 1875, and later by Hermann Abert in *Sammelbände der internationalen Musikgesellschaft* 2, Berlin 1901, p. 333 - 36.
- (24) Preliminary edition by Jørgen Raasted, *Cahiers de l'institut du moyen-age grec et latin* 45, Copenhagen 1983.
- (25) Jørgen Raasted, *The manuscript tradition of the Hagiopolites, A preliminary investigation..*, in *Texte und Untersuchungen zur Geschichte der altchristlichen Litteratur* 125, ed. Franz Paschke, Berlin 1981, p. 465 - 78.
- (26) Dietmar Najock, *Anonymi Bellermanni etc.* (see note 9) p. 215.
- (27) cf. the edition by Jørgen Raasted (see above note 2) p. 11 note 3 and p. 17 note 1.
- (28) cf. the edition by Jørgen Raasted p. 23 note 3.
- (29) See note 21.
- (30) Edition by G.H. Jonker, *The Harmonics of Manuel Bryennius*, Groningen 1970, c.f. pp. 164 sqq. and pp. 308 sqq.
- (31) Jonkers edition p. 164 and p. 304.