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EDITORIAL

The first issue of the sixth volume of the journal is dedicated to Ancient Music. The issue contains five articles and six translations. After a short systematic introduction and a bibliographic outline the authors develop Ancient musical theory from Pythagoras to Archytus, study the origins of the concept of 'harmony', and explore the history of ancient musical education as it is reflected in a treatise *De musica*, ascribed to the pen of Plutarch. The articles are followed by a series of new Russian translation of a number of Ancient musical works, including the *Problems, concerned with music* of the *Corpus Aristotelicum*, Pseudo-Euclidean *Sectio Canonis*, extracts from musical writings of Theophrastus and *The Pythagorean Elements of Music* by Ptolemaïs of Kyrene, a chapter from the musical compendium by Aristides Quintilianus, and an anonymous treatise, entitled *Ptolemy's 'Music'*, which along with two different translations of the *Manual of Harmonics* by Nicomachus of Gerasa in Vols. 2.2 (2008) and 3.1 (2009) of the journal and musical sections of *The Mathematics Useful for Understanding Plato* by Theon of Smyrna in Vol. 3.2 (2009) amounts to a good selection of Ancient musical sources in a new Russian translation. The texts are prepared for the participants of educational project "TEXNH. Theoretical foundations of Arts, sciences and technology in the Greco-Roman World" (Novosibirsk, Russia), supported by the Open Society Institute (Budapest).

Our next thematic issue (January 2013) will be dedicated to natural sciences in Antiquity. Studies and translations are due by November 2012. Interested persons are welcome to contribute.

I wish to express my gratitude to all those friends and colleagues who participate in our collective projects and seminars and would like to remind that the journal is abstracted / indexed in *The Philosopher's Index* and *SCOPUS*, wherefore the prospective authors are kindly requested to supply their contributions with substantial abstracts and the lists of key-words. All the issues of the journal are available online at the following addresses: www.nsu.ru/classics/schole/ (journal home page); www.elibrary.ru (Russian Index of Scientific Quotations); and www.ceeol.com (Central and Eastern European Online Library).

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ABSTRACTS

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ANCIENT MUSIC: GENERAL INTRODUCTION AND SELECT BIBLIOGRAPHY

LANGUAGE: Russian

ISSUE: ΣΧΟΛΗ 6.1 (2012) 8–22

KEYWORDS: Music, the musicians, musical instruments, the science of Harmonics

ABSTRACT: This introductory paper discusses Ancient musical practices, outlines the sources of the science of Harmonics in Classical Greece, and reveals the role of music in the society. The exposition is supplemented with a series of color illustrations and a select bibliography.

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THE DEVELOPMENT OF THE THEORY OF MUSICAL HARMONY

FROM PYTHAGORAS TO ARCHYTAS

LANGUAGE: Russian

ISSUE: ΣΧΟΛΗ 6.1 (2012) 23–57

KEYWORDS: Mathematics in antiquity, the science of harmonics, the Pythagoreans, Plato, Philolaus, Archytas

ABSTRACT: The paper outlines the Pythagorean science of harmonics in its historical and theoretical aspects. It is intended to be a chapter in the history of ancient mathematical studies of nature, although the author occasionally touches upon such related areas as the history of philosophy and the history of music, and hopes that his work will be interesting to scholars working in these fields. After a short introduction the author first turns to the phenomenology of harmony and then analyses in considerable details the harmony as a structure of numerical relations and – alleged or real – acoustic experiments designed to establish the qualities of sound, as well as consonant and dissonant intervals.

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THE BIRTH OF HARMONY OUT OF THE SPIRIT OF *TEKHE*

LANGUAGE: Russian and English

ISSUE: ΣΧΟΛΗ 6.1 (2012) 58–75

KEYWORDS: Philosophical terminology, Empedocles, Heraclitus, ancient art and technology

ABSTRACT: Mycenaean Greek exerted a considerable influence on the formation of the very meaningful word *harmonia*. Even early Greek philosophers, who viewed *harmonia* as an organizing, joining and fastening principle, could not help hearing ancient repercussions of this word, and probably unconsciously chose an appropriate, technical, context. As P. Ilievski has convincingly shown, the ancient Greek noun *harmonia* and the verb *harmodzo* are traced back to the Mycenaean word (*h*)*armo* (meaning a “wheel” in the form of a felloe having an inner connection by means of spokes). Heraclitus explains the *harmonia* by means of lyre

and bow, making us understand that this presupposes something more than visible connection, – certain hidden and secret nature, – and he chooses lyre and bow because they symbolize the same innate connection which makes the wheel lighter and stronger. Empedocles connects *harmonia* with Aphrodite – one of the creative powers. It was important for him to represent the multifaceted character of *harmonia* by means of different crafts. In his philosophical views we can clearly see the process of development of the term of *harmonia* from its technical to abstract meaning.

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MUSIC EVOLUTION IN ANCIENT GREECE AND THE VALUE OF MUSIC EDUCATION
IN PSEUDO-PLUTARCH'S *DE MUSICA*

LANGUAGE: English

ISSUE: ΣΧΟΛΗ 6.1 (2012) 76–86

KEYWORDS: Ancient musical theory, the musicians, education, tradition and innovation

ABSTRACT: A treatise *De musica*, ascribed to Plutarch (the 2nd c. AD), reflects the music evolution from the beginning of this art in archaic Greece until the early Hellenistic period. Initially, within the spiritual life and the education of the citizens the importance of music education was extremely high. Gradually, during the years, and even since the last part of the 5th c. BC, music, after centuries of dominance, appeared in the spiritual life of the Greeks not as a prevailing feature but as a subsiding one. It was even difficult to maintain its position in the educational system. The participants of the dialogue (the rich host Onesicrates, a musician Lysias and an educated man Soterichus) have been gathered to discuss, investigate and highlight the reasons why this decadence of the role of music has happened, by citing the musicians and recollecting the innovations they brought in the musical practise since the beginning of its history. In the book, apart from the list of musicians and the technical developments they invented, we find information about the views of Pythagoras, Plato, Aristotle and others about the value that music used to have in ancient Greece. The paideutic and moral value of music was the reason why it played a very important role in the education and the three men adopt the most traditionalistic approach and conclude that the technical improvements made it lost ground in favor of the literary studies.

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CORPUS ARISTOTELICUM. PROBLEMS, CONCERNED WITH MUSIC

Introduction, Russian translation and notes

LANGUAGE: Russian, translated from the Ancient Greek

ISSUE: ΣΧΟΛΗ 6.1 (2012) 87–97

KEYWORDS: Ancient acoustic science, harmonics, experiments with musical instruments, the transmission of sound, pitch and velocity, the Pythagorean ratio theory

ABSTRACT: A collection of questions and answers on the subject of music, Book XIX of the Aristotelian vast *Problemata*, translated into the Russian for the first time, was compiled, as the majority of scholars agree, in Lyceum during and after Aristotle's time, in the late fourth and the early third centuries BCE. Unlike later manuals, the collection is marked by its diversity: it proposes a range of working hypotheses and offers alternative explanations for the same phenomenon, a rare witness of vivid school discussions of the scientific matters.

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THE EUCLIDEAN *SECTIO CANONIS*

Introduction, Russian translation and notes

LANGUAGE: Russian, translated from the Ancient Greek

ISSUE: ΣΧΟΛΗ 6.1 (2012) 98–110

KEYWORDS: Axiomatic method, harmonics, musical intervals, concords and ratios, musical instruments

ABSTRACT: Although a work of several hands, rather than of Euclid (active around 300 BCE), this short treatise (an introduction and 20 propositions formulated in the manner of theorems, preserved independently and, partially and slightly differently, in Porphyry and Boethius), is counted among the most important writings on ancient mathematical harmonics. The central part of the treatise could indeed be written by the great mathematician himself, undoubtedly, on the basis of the works of early authors, such as Archytas, while the rest, esp. the introduction, is admittedly a later addition. Despite few logical incontinences, the treatise as a whole is a unique early attempt at the composing of a systematic mathematical harmonics, based both on the empirical observations and an intrinsic logic of the division of the musical *kanon*. The treatise is translated into the Russian for the first time.

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THEOPHRASTUS ON MUSIC

Introduction, Russian translation and notes

LANGUAGE: Russian, translated from the Ancient Greek

ISSUE: ΣΧΟΛΗ 6.1 (2012) 111–134

KEYWORDS: Educational and therapeutic value of music, psychological sources of melody, quantitative approach to music, a criticism of

ABSTRACT: The heir of Aristotle Theophrastus of Eresus (the head of Lyceum from 322 to c. 287 BCE) wrote voluminously on a great variety of subjects, including music. Unfortunately, not much survived intact, and for recovering his highly original approach to music we have to rely on a series of testimonies in later authors (fr. 714 ff. Fortenbaugh), and a relatively long extract from his treatise *On Music*, quoted by Porphyry in his *Commentary to Ptolemy's Harmonics*. He seems to be especially concerned with educational and therapeutic value of music and, most importantly, while criticising standard Pythagorean, Platonic and Peripatetic mathematical harmonics as well as contemporary acoustical theories, have proposed a new qualitative approach to music, based on a re-evaluation of common empirical considerations and a very problematic (due to the lack of sufficient evidence) theory of the psychological nature of musical consciousness, and special power of music, manifested in the movement productive of melody which occurs in the human soul when it reveals itself in a melodic voice. The fragments of Theophrastus' musical works, translated here into the Russian for the first time, are supplemented with other evidences, also quoted by Porphyry, such as the most important musical fragment of Archytas (fr. 1 DK), extracts from the Peripatetic *De audibilibus*, as well as quotes from such otherwise unknown musical writers as Panaetius, Heraclides, and Aelianus, all on the subject of Pythagorean harmonics and acoustic theory.

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PTOLEMAÏS OF KYRENE. *THE PYTHAGOREAN ELEMENTS OF MUSIC*

Introduction, Russian translation and notes

LANGUAGE: Russian, translated from the Ancient Greek

ISSUE: ΣΧΟΛΗ 6.1 (2012) 135–143

KEYWORDS: Female scholars in Antiquity, Pythagorean science, Aristoxenus' harmonics, *kanonike*, the division of the monochord, the place of observations in science

ABSTRACT: Extracts of the musical treatise of Ptolemaïs of Kyrene, the only female musical theorist in Antiquity, preserved by Porphyry in his *Commentary to Ptolemy's Harmonics*, are important, first of all, because, they belongs to those very scanty testimonies that witness continuous development of the musical science from the time of Aristoxenus to this of Nicomachus of Gerasa. In this respect the present study supplements two earlier our publications: the musical sections of *The Mathematics Useful for Understanding Plato* by Theon of Smyrna (the 2nd c. CE), which contain material taken from Thrasyllus (the beginning of the 1st c. CE) and Adrastus (the end of the 1st c. CE) [cf. Vol. 3.2 (2009) of the journal, translated by A. Schetnikov], and some passages from Heraclides the Younger (active in the time of Claudius and Nero), Didymus the Musician (active in the time of Nero), Panaetius the Younger (unknown date), and Aelianus (the end of the 2nd c.), preserved by Porphyry and translated as supplements to our study on Theophrastus [included in this volume]. Apparently Porphyry quotes Ptolemaïs on the basis of the work of Didymus and gives absolutely no information about her live. Most recently Levin (2009) speculated that this Ptolemaïs could be a woman of noble origin and live in Alexandria in the time of Eratosthenes (c. 275–194 BCE), which would be nice but cannot be proved. The extracts introduce the notion of the science of *kanonike* and contribute to the famous polemics between the *mathematikoi* and the *mousikoi*, which lead to 'reason-based' Pythagorean and 'perception-based' Aristoxenian approaches to musical theory, and Ptolemaïs apparently prefers the latter despite the title of her work, given by Porphyry.

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ARISTIDES QUINTILIANUS. *DE MUSICA*, II 1–5

Introduction, Russian translation and notes

LANGUAGE: Russian, translated from the Ancient Greek

ISSUE: ΣΧΟΛΗ 6.1 (2012) 144–156

KEYWORDS: Music as an educational and therapeutic tool, aesthetical importance of music, cosmic order, Platonism

ABSTRACT: In his extensive treatise *On music* Aristides Quintilianus (the late 3rd c. CE, according to Mathiesen 1983) tried to collect everything relevant to the study of musical theory and practice. Although somewhat eclectic, this massive compilation is unique in many re-

spects, both providing us with access to the sources unknown otherwise and offering a unifying and personalized vision of music and musical education in the structure of human society and cosmos. The first book largely deals with the technical side of the Aristoxenian harmonics, rhythmic, and metrics; the most original and well structured second book focuses on the educational and therapeutic value of music, the ethical and emotional ('male and female') characters of melody as well as the peculiarities of various musical instruments; while the last third presents a metaphysical outlook, influenced by (Neo-)Pythagorean and Platonic inclinations of the author, and includes the 'Pythagorean' number theory (the division of *kanon*, concordant relations, etc.) and 'physics' (presented as a correlation between musical and physical realms, mostly in Platonic terms). The chapters, presented in this study in a new Russian translation, concern the pedagogical aspects of music. The work will be continued.

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THE PTOLEMAEN *MUSICA*

Introduction, Russian translation and notes

LANGUAGE: Russian, translated from the Ancient Greek

ISSUE: ΣΧΟΛΗ 6.1 (2012) 157–191

KEYWORDS: music and astrology, harmonics, rhythmic, four elements

ABSTRACT: An often neglected small treatise, conventionally entitled *The Ptolemaean 'Musica'* (apparently dated to the Late Antiquity), is translated into the Russian for the first time. The work is a compilation of various sources, which include the Aristoxenian rhythmic, the Neopythagorean numerology and harmonics as well as the Ptolemaean geocentric astrology. According to its author the planetary cycles in their unity are closely related to the musical proportions. This approach further allows correlating the planetary rhythms with the musical rhythmic.

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