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Pythagoras' Riddles. The Use of the Pythagorean *Akousmata*

In modern times, Pythagoras' teaching became a paradigm for esotericism. But obscurity was already recognized by ancient authors as a distinctive feature both of the master's speech and of the transmission of his reserved knowledge to the initiate. Within Pythagorean circles, the authority of the founder was acknowledged by a phrase grown proverbial: "He said" (*autos ephā*). It is therefore not surprising that the *akousmata*, or "things heard" (*sc.* from Pythagoras' mouth), were at the core of ancient Pythagoreanism and that the preserved set of such dicta gives us the best insight into a tradition which proved rich in later developments.

In this contribution to a broad comparative enquiry I do not aim at commenting on the content of the original doctrine, but rather at stressing several aspects of its circulation that seem highly relevant to the topic suggested. In particular, I shall emphasize the interest of the alternative designations used in our sources: *sumbola* ("symbols") and *ainigmata* ("riddles," "enigmas"). They may indeed point out the peculiar *form* of these sayings, but also the implications of the *speech* they once realized or were believed to witness to.

Such a study involves distinguishing between the different times at which these prestigious tokens of obscure discourse are employed and discussed: at least the original sect around Pythagoras (c. 570-c. 480 BCE) and the Pythagorean milieus derived from it (6th-4th c. BCE), the subsequent writings dealing with the subject, especially the characteristically biased treatment by the Neo-Platonists (3rd-4th c. CE), and the modern, scholarly point of view on this "culture of the *akousmata*." In this cursory account of the uses and receptions of a revered riddling language, we will find ample and typical evidence of several ways in which the authority of the word and the authority of the text work, become extinct and are resurrected or usurped within a single tradition.

1. Things heard, Riddles, Symbols: Cures for Obscurity

My interest in this corpus of maxims stems from the study of Athenaeus, a Greek compiler (fl. c. 200 CE) who devoted a section of his extant work to *griphoi* (another term for “riddles”), drawing heavily upon the otherwise lost treatise on the subject by the Peripatetic Clearchus (4th c. BCE). In his collection we read six of the most common *akousmata*, taken from a first-century BCE author. I quote the whole passage as an introduction to the genre:

The riddles of Pythagoras, again, are of such a kind as the following [καὶ τὰ Πυθαγόρου δὲ αἰνίγματα τοιαῦτά ἐστιν], as Demetrius of Byzantium says in the fourth book of *On Poetry*: “Eat not the heart,” instead of “Cultivate apathy to pain.” “Poke not the fire with a knife,” instead of “Wrangle not with an angry man”; for anger is fire, and wrangling is a knife. “Step not over the beam of the balance,” instead of “Avoid and hate all mean advantage, and seek for equality.” “Walk not on the main-travelled roads,” instead of “Follow not the opinion of the many”; for every man answers too rashly, as it happens to please him; but one should go the straight road, using judgment as his guide. “Sit not on the corn ration,” instead of “Consider not merely the things of to-day, but be ready for the day to come.” “When on a journey turn not back at the boundaries”; for the bounds and limit of life is death; death, then, he forbids us to approach with pain and worry.¹

How is it possible that the archetype of authority should be alluded to as a propounder of riddles? Such a statement seven centuries after Pythagoras' life is in no way idiosyncratic. It is rooted in one of the traditional approaches to Pythagoreanism.

To the available ancient sources we owe around a hundred sayings to which scholars usually refer as *akousmata*.² They are said to have been in use among Pythagoras' disciples and in groups inspired by his founding of a community in sixth-century Magna Graecia. In most cases, the testimonies give them as samples of the master's oral teaching, or even as typical of the language he and his followers cultivated. They consist in brief definitions or prescriptions often characterized as obscure due to their pithiness³ and the odd conceptions underpinning them. Their importance partly relies on the fact that some Pythagoreans—this

¹ Athenaeus, *The Deipnosophists*, X 452 d-e. Translation by C. B. Gulick, slightly modified, notably by a graft from W. D. Ross' rendering in KIRK-RAVEN-SCHOFIELD 1999: 232 (on the *akousmata*: 229-238).

² The masterly, standard treatment is BURKERT 1962: 150-175 (in Chapter II, “Die älteste Pythagorastradition”). It integrates and discusses the groundbreaking monographs by HÖLK 1894 (who listed 75 *akousmata*) and BOEHM 1905, as well as DELATTE 1915. Among more recent publications, see PHILIP 1968: 134-150; ZHMUD 1997: 93-104; GIANGIULIO 2000: vol. I, 131-149; RIEDWEG 2002: 84-119 & 129-149. STRUCK 2004: 96-110 & 192-203 will deserve special notice here. Annotated editions of Diogenes Laertius, Porphyry and Iamblichus are also valuable: some titles are cited in the bibliography.

³ See e.g. Menander Rhetor, *Διαίρεσις τῶν ἐπιδεικτικῶν*, p. 337 Spengel.

unanimously attested opacity notwithstanding—took them not only as dogmas but actual rules for the conduct of their life; hence the appellation of *akousmatikoi*.

As we examine further this tradition or, as it were, unpack this preliminary account, we'll see that the picture becomes more complex and significant. For, if the *akousmata* “belong to the unresolved problems of Pythagoreanism,”⁴ they are nevertheless central to the ancient and modern interpretations of a movement that exerted an everlasting influence in the Western world, bringing into play such momentous oppositions as orality versus writing and religion versus science.

A salient feature of the *akousmata* as a whole is the diversity both of their contents and of the phrasing in which they came to us.⁵ One can observe that they fall into two main categories, namely tenets (1) and precepts (2). This first distinction between theory-oriented and practical sayings can be elaborated somewhat. They may be:

1a. Doctrinal assertions (“What is the truest thing one can tell? That men are miserable”; “Toils are a good thing, whereas the pleasures are a thoroughly bad one”; “What is the most beautiful? Harmony”).

1b. Doctrinal explanations of physical phenomena (“the echoing sound of the bronze when it is struck is the captured voice of a demon”; “Iris⁶ is like a ray of the sun”).

1c. Definitions and elements of nomenclature. They are reported either in the question–answer form (“What are the isles of the blessed? Sun and moon”) or as the direct imparting of a name (“he called the sea ‘tear <of Kronos>’ [...] and the Pleiades ‘lyre of the Muses’”).

2a. Precepts. They vary greatly in scope, from the most general (“tell the truth”) to the most particular (as the one specifying the side of the cup one should be using in his libations to the gods).

2b. These rules are mostly prohibitions,⁷ on food (“abstain from beans”; the famous and dubious “abstain from living things”) or pertaining to behaviour (“do not speak in the dark”; “do not let a swallow into the house”).

⁴ ZHMUD 1997: 93.

⁵ For the references of the *loci*, see the table appended to the present paper. A more detailed presentation is beyond my purpose here.

⁶ I.e. the messenger of the gods *and* the “rainbow.”

⁷ Almost all the items in the extensive list provided by Iamblichus' *Protrepticus* are in fact proscriptions.

It is obvious that the hazards any ancient oral teaching is faced with partly account for this baffling lack of unity. But the *akousmata* do not lay out the principles of a system, as the so-called *Golden Verses* or the numerous pseudepigraphal writings attributed to Pythagoras tend to.⁸ Rather, they exhibit the malleability of wisdom apophthegms. As such, they can easily be converted from one formulation to another. It should be noted that an ancient threefold classification was devised in order to rationalize these Pythagorean items: “some of them signify what a thing is, some of them what is the most such and such, some of them what one must do or not do.”⁹

The sources can diverge on the presence of a negative word or offer semantically decisive variants (“Avoid the main roads and walk on the lanes” vs. “Walk not out of the main roads”). The original casts remain all the more unattainable as the ancient mode of quotation and paraphrase makes it difficult to ascertain the limits of each maxim (we have seen that they were regularly accompanied by some kind of elucidatory material); more interestingly, the shift from the explicit listing of *akousmata* to broader doxographical matters (“he also considered that,” etc.) can prove insensible.¹⁰

However, the bulk of the statements and exhortations clearly point to archaic religious prescriptions, mostly related to demons, to heroes, or to the dead. And the sayings should accordingly be viewed as the components of a practical model, however dimly motivated they might seem.

Two attitudes are therefore possible towards the *akousmata*. One can accept their literal meaning and reconstruct corresponding practices, the circumstances in which utterance and compliance made sense. Or one can regard them as the medium of another, higher meaning, merely hinted at by the “master of truth.” If they are considered to be too shallow or uneven, that is to say separately or collectively unfit for their alleged status, then the paradox should be remedied by restating the speaker’s intention. Hence the recourse to one of the structural and pragmatic models for (deliberate) double meaning: riddling speech.

Due to the state of our evidence and his powerful influence, it may seem compulsory to turn to Aristotle, when we want to explore the reasons for this enigmatic tag attached to the Pythagorean aphorisms. It will be sufficient here to recall his definition: the *ainigma* consists

⁸ See THESLEFF 1965: 155-186.

⁹ Iamblichus, *De uita pythagorica*, 82. Translation from KIRK-RAVEN-SCHOFIELD 1999: 232.

¹⁰ E.g. Diogenes Laertius, 35 or *Suda*, pi entry 3124.

in “telling actual things by joining together impossible ones.”¹¹ He then goes on to emphasize, perhaps in a manner too terse to be really illuminating, the intimate link between riddles and metaphors.¹² At the core of this phenomenon, there would be the gap between the words and the objects of reality they designate. Their relation is blurred, the process of signification is thwarted by the inadequacy of a combination of words. The problem lies in the syntax, in the fact that the signifiers—specifically through the insertion of “improper”, metaphorical terms—do not vouchsafe a stable meaning, and hence do not permit denotation. One is confronted with an impossible conjunction, a sentence that is paradoxical, unexpected, or odd: in the eyes of the philosopher, this is clearly a failure and a danger of communication, if not a trifling game or a sophistic weapon.

One of our earliest testimonies is indeed Tryphon's *On Tropes*. This first-century BCE rhetor mentions *akousmata* as examples of “riddles [effected] through analogy.”¹³ It is tempting to acknowledge the validity of this analysis for the five items selected in his list; they are identical or similar to the ones we found in Athenaeus. The precept “Do not step over a yoke” thus receives a moral interpretation: being a double metaphor, it means “Do not overstep justice”. But all the attested sayings cannot be reduced to such a *simple form*, ready to be so to say technically unravelled.¹⁴ Nor could the physical and moral positive principles form the basis of the actions prescribed. But all our sources endeavour to overcome this seeming arbitrariness.

The predominant label in this tradition justifies a larger conception of the riddle, whose critical use blends into the field of what we call symbolic interpretation.¹⁵ Most of the time, Pythagoras' maxims are called *sumbola*, “symbols.” Although the term *akousma* (used in one of Iamblichus' *loci*) is an ancient one and matches the supposed oral origin and transmission

¹¹ *Poetics*, 1458a.

¹² *Rhetoric*, III 1405b.

¹³ Αἰνίγματα καθ' ὅμοιον. “Analogy” is the central mechanism in Aristotle's concept of metaphor, which relies on the interconnection of words semantically distinct but possessing something in common (ὅμοιον). Tryphon's text is to be found in SPENGEL 1856: 189-206; the volume comprises other treatises quoting some *akousmata* without reference to Pythagoras, but rather as stock material for specialists of tropology (see the third anonymous work, and the one by [Choeroboscus]).

¹⁴ Cf. JOLLES 1972 on the notion.

¹⁵ A scholium to Iamblichus' *Protrepticus* (in manuscript F) symptomatically states: “πυθαγορικῆ] ἀντὶ τοῦ αἰνιγματώδεις, μυστικῆ· αἰνιγματώδη γὰρ καὶ συμβολικὰ τὰ Πυθαγόρου πρὸς ἀρετὴν παραγγέλματα” (“*Pythagorean*: instead of enigmatical, mystic; enigmatical and symbolic indeed are Pythagoras' exhortations to virtue”). A strong case is made by STRUCK 2004, who advocates the emergence of an underestimated practice of symbolic literary interpretation along the better known development of allegorical reading. In this movement, he suggests, the reception of the Pythagorean “symbols” has been pivotal and was instrumental in the association of the symbol with enigmatic language.

of the dicta, from the very beginning in the tradition of collecting and interpreting we find the word *symbolon*. It appears to have then specialized from its meaning of “token allowing recognition (*sc.* of various links and memberships),” used in particular in the context of mystery cults. We know of the works by Anaximander of Miletus (*Interpretation of Pythagorean Symbols*, c. 400 BCE), by Philocorus (*On Symbols*, 4th-3rd c. BCE, entirely lost) and by Androcydes (*On the Pythagorean Symbols*, 1st c. BCE); in addition, rather early in this scholarly tradition, there was a Peripatetic book *On the Pythagoreans* (4th c. BCE). We mostly catch glimpses of this research in the extant treatments and allusions. The first group is composed of authors devoted to allegorical reading.¹⁶ Anaximander, who was a specialist of hidden meanings in Homer (*huponoiai*),¹⁷ has not been especially influential, while Androcydes is the main source of the later writers, notably of Porphyry and Iamblichus. But the Aristotelian, more rationalizing explanations found their way to the pages of Iamblichus, Diogenes Laertius and Aelian. They display a tendency to apply a critical method to the letter of the transmitted texts, with occasional symbolic hues added to it. What we read for example in Diogenes Laertius is a double account: the first list is clearly of an allegorical character (“he meant,” “that is to say”); the second one adduces one or several causes that might explain each quotation, which explicitly derive from Aristotle. A fine illustration is the urging “not to break the bread”: it should not be done because “friends once had the habit of getting together around one loaf, as the barbarians still do nowadays. Some people link this prohibition to the judgment [*sc.* of souls] in Hades, others explain that it makes one a coward when the time to fight has come, while it is also said that unity is the principle of the universe.”¹⁸ Social and almost ethnographic aetiology, duly adducing the parallel of barbarian customs, is not exclusive of symbolic potentialities here.

Needless to say, this second trend is the one developed in modern scholarship. Folk materials were used by F. Boehm, who focused on the category of *tabu*. W. Burkert, among other critics, gathered the evidence of the links with Greek mystery rites (regarding alimentary rules, clothing, etc.), with temple prohibitions, with various categories of sages and mages denounced as charlatans. The “What is the most?” type of questions had been

¹⁶ On which the fundamental works are PÉPIN 1976 and LAMBERTON 1986, as well as subsequent books by the same scholars.

¹⁷ See Xenophon, *Symposium*, III 6.

¹⁸ Diogenes Laertius, 35.

recognized already in Antiquity as akin to the mottoes of the Seven Wise Men,¹⁹ while a text as old and revered as Hesiod's *Works and Days* offers striking older parallels.²⁰ The current view on the *akousmata* may be called a cultural one. Against their late archaic–early classical cultic background, the riddles of Pythagoras no doubt look less exceptional.²¹ Their inspiration is very ancient, and before turning into a legend Pythagoras by his teaching initiated the corpus — “a product of accretion in time and, probably, of editorial manipulation.”²²

2. Contexts: The Causes of Obscuration and Clarification

Pythagoras is nevertheless more than an average *theios anêr* (“divine man”), if I can put it this way, in that the tradition related to his person and pronouncements is rooted in the existence of a school and had direct bearing on later issues. Returning to the notion of paradigm with which I opened this discussion, I would like to present briefly why the problem of the designation of the *akousmata* as obscure *and* wise utterances brings to light strategies of appropriation. Something is at stake in the upholding of such a tradition.

The original context of the *akousmata* is obviously the community set up in Croton by the master, who is supposed to have immigrated there from Samos. The narrative of its establishment, *modus operandi* and catastrophic ending has aroused fascination. In the texts we depend on, it became the primal scene of the practice of secrecy.

The operating model is that of a sect, rather than of a religious community.²³ A dissenting group, it is based on the way of life recommended by a leading figure, in this instance on the *pythagorikos bios*. It has a special organisation of time and material matters; a strong integration brought about by common beliefs that are enacted through regular practice;

¹⁹ The remark is Iamblichus'. Pythagoras belongs indeed to some lists.

²⁰ In his edition, WEST 1978 comments on v. 727, 729, 742-743 and 748-749 by drawing upon Indian examples (e.g. from Manu) as well as Frazer's *Golden Bough*.

²¹ Though they are more numerous than most *tabus* recorded in a single group and are purportedly extended to everyday life (ZHMUD 1997: 98); whether it is conceivable that anyone ever tried to respect them is an open debate: BURKERT 1962 points out the difficulty but thinks the *akousmata* should be taken seriously.

²² PHILIP 1968: 147. An oddity sometimes highlighted is the absence in this construction of the main Pythagorean credo, namely metempsychosis.

²³ Modern research benefited from sociological approaches to the phenomenon, from M. Weber's work to recent assessments; see BRISSON 1995, BRISSON-SEGONDS 1996: XXXVI-L, and most recently RIEDWEG 2002: 129-136. However, it should be borne in mind that the possibility of such an organised community has its opponents: it is altogether anachronistic according to PHILIP 1968, and there was no secret doctrine (*Geheimlehre*) according to ZHMUD 1997. But this *caueat* is less relevant here, since I am mainly expounding the scenario found in the texts. For a reading in the light of the notion of spiritual direction, see MACRIS 2006.

a mechanism of retaliation against deviants who are regarded as traitors to the socially unorthodox views taught by the authoritative, charismatic leader. We find evidence of all these characteristics in the descriptions by Porphyry and Iamblichus, some aspects being supported by other, less detailed sources. The most important for our purpose is the initiation to which applicants are submitted: after an examination begins a probationary period, during which silence is required—if they prove fit for this life, they eventually become *esoterikoi*, “insiders”, disciples privy to the full knowledge of Pythagorean arcana. The restrictions to speech, for example the ban on Pythagoras' name, is yet another facet to be compared with the religious mysteries. A special language is even in use among the members. This *Sondersprache*, which employs Dorian Greek, features some words apparently coined ad hoc or having specialized meanings: it is claimed it bequeathed to the surrounding Greek society the use of *philia*, *kosmos* or *philosophia*!²⁴ This alternation of silence and private terminology is the ultimate fulfilment of the need to dissimilate and protect.

Pythagoras himself is reported not to have committed his teachings to writing. This is a prototypical occurrence of a philosophical *topos*: the distrust of the written word.²⁵ His style in setting forth his wisdom is more interesting. The accounts call on all the constituents of obscure speech as a factor of prestige. They dwell upon the symbolic, enigmatic, and oracular nature of the master's discourse, which is understood as a test and a goad to exegesis. Unsurprisingly, an important moment of Pythagoras' biography is the reciprocal recognition that follows his frequentation of the Egyptian priests, who themselves as a caste epitomized esotericism for the Greeks. We now see better how the use of the semantic field of the enigma in our testimonies on the *akousmata* can be contextualized; all the associated values of riddling speech and symbolic interpretation are condensed in the full narratives of the Neo-Platonists.²⁶

A detail of this treatment should be stressed. It integrates another essential topic, the mathematical activity of the Pythagoreans, which is similarly justified by the intellectual effort it requires. Their scientific contribution was evident eight centuries later. The role of the founder is much less clear than the renowned theorem might lead one to think. A consensual appraisal of the development would be that a speculative transplant took place on a suitable

²⁴ On this last contention, see RIEDWEG 2002: 120-128, who endorses its likeliness.

²⁵ It is obviously associated to some aspects of the Platonic tradition. The Pythagorean influence on Plato and the reverse question of what we can know of a pre-platonic Pythagoreanism are traditional problems. But this is another authority.

²⁶ To some extent, this can be checked against Diogenes Laertius' text.

tradition, which indeed thematized the importance of number (*arithmos*) and proportions. The capacities bestowed on Pythagoras and his followers are in fact connected with the quite different rationale advanced by Porphyry and Iamblichus. They mention distinctions within the group. We have seen that an intermediary category between the outside world and the true Pythagoreans was that of disciples still under probation. The most important division is that of the *akousmatikoi* and the *mathematikoi*, variously glossed in the tradition.²⁷ It has to do with the form of the knowledge taught and recognized within the original circle and the ones derived from it. Pythagoras had to adapt to the audience he found in the community at Croton, we are told. Either because of the unequal faculties of the individuals, or because of the lesser efforts elder people were capable of,²⁸ he devised an alternative way to impart science to his disciples. This shorter introduction to Pythagoreanism is to get accustomed to the *akousmata*. The difficult, truly philosophical or dialectical exposition is for apt students only. The first one is summary, the second one is methodical, but both would reach the same goal. Other explanations for the distinction of these groups make it a later schism.

What matters here is that the existence of a “scientific” branch has to be accounted for without imperilling the prestige of the master’s obscure delivery. In fact, the danger is that the *akousmata* could be considered as second-rate, practical rudiments of philosophy. This seems to have been the case at some point, about a century after Pythagoras’ death. From the scant information we have on the *Pythagorean Maxims* by Aristoxenus of Tarentum (4th c. BCE), it is probable that he defended in them a higher doctrine against a vulgarized form of Pythagoreanism, too similar to the one professed in comedies by filthy ignoramuses.²⁹

The project of the Neo-Platonists is indeed a comprehensive one.³⁰ Their praise of or apology for Pythagoras’ symbolic speech is somewhat erratic, since it can be his normal style or a secondary language, a protective device or a pedagogical tool, the way he discoursed with all his disciples or with a certain fraction of them. In any case, the exaltation of the riddle-like quality of the *akousmata* is functional in the culture of commentaries³¹ which philosophy has become. Once allegorized, they let the readers confer on the remote author the

²⁷ In addition to the *loci* in the final table, see the important passage in Iamblichus, *De communi mathematica scientia*, 25.

²⁸ In one version, the elder partisans of Pythagoras do not have the leisure to learn the hardest way, for they are involved in local politics.

²⁹ Aristoxenus’ treatise is known through Iamblichus and Stobaeus. Our testimonies on the parodic image of Pythagoreanism are to be found in Athenaeus. See GIANGIULIO 2000: 151-182 & 183-199.

³⁰ Its monument being the extensive compendium of Pythagorean philosophy by Iamblichus, of which we have been using three of the four remaining books.

³¹ See e.g. HADOT 1998.

privilege of being the one who introduced philosophy in the world—philosophy being another name for a revealed theology.³²

The enigmatic dimension of this tradition is therefore embedded in the practice of a charismatic man and a community. It so happens that our chief sources also provide an example of how authority can be used through interpretation: such is the case in the neo-platonic accounts. Reaching this stage, we are also able to understand better why Clement of Alexandria, when he wants to demonstrate in an equally impressive undertaking that the Greeks and the Barbarians used the symbolic style in philosophy, refers to the Pythagorean “symbols” as “what they said in riddling language, speaking allegorically”.³³ And we are not surprised to see that this obscurity had become proverbial quite early³⁴ and that the “symbols” were almost acknowledged as specific literary items. The steady circulation of collections and exegeses was needed, but it also made it natural for learned people to think of the *akousmata*, called *sumbola*, as *ainigmata*.³⁵ Hence the friendly allusions between erudite banqueters in Plutarch; hence the material available to Athenaeus and the idea of inserting the sayings of Pythagoras into his anthology of riddles.

³² The formulation belongs to BRISSON-SEGONDS 1996: L. See also p. LVII-LVIII their final quotation from Proclus' *Platonic Theology*: Pythagoras comes after Orpheus and before Plato.

³³ Clement of Alexandria, *Stromata*, V 8: see the appendix.

³⁴ Long before the paroemiographer quoted in the final table: see Plutarch, *Table Talks*, VII 4, 703 E-F.

³⁵ This reception of the “symbols” will be just as important in the Renaissance, after “Pythagoras' Return”: see VUILLEUMIER-LAURENS 2000.

Bibliography

- BOEHM, F. 1905: *De Symbolis Pythagoreis* (dissertation). Berlin.
- BRISSON, L. 1995: "Usages et fonctions du secret dans le pythagorisme ancien". In *Orphée et orphisme dans l'Antiquité gréco-romaine*. Aldershot.
- BRISSON, L. and SEGONDS, A.-P. 1996: *Jamblique. Vie de Pythagore*. Paris: Les Belles Lettres.
- BURKERT, W. 1962: *Weisheit und Wissenschaft: Studien zu Pythagoras, Philolaos und Platon*. Nürnberg: Carl. Translation by E. L. Minar (revised by the author) 1972: *Lore and Science in Ancient Pythagoreanism*. Cambridge, Massachusetts: Harvard University Press.
- DELATTE, A. 1915: *Études sur la littérature pythagoricienne*. Paris: Champion ("Le Catéchisme des Acousmatiques," pp. 217-312).
- DES PLACES, É. 1982: *Porphyre. Vie de Pythagore, Lettre à Marcella*. Paris: Les Belles Lettres.
- DEUBNER, L. and KLEIN, U. 1975: *Iamblichus. De Vita pythagorica liber*. Stuttgart.
- DIELS, H. and KRANZ, W. 1951: *Die Fragmente der Vorsokratiker* (6th ed.). Berlin: Weidmann.
- GIANGIULIO, M. 2000: *Pitagora. Le Opere e le Testimonianze*. Milano: Mondadori.
- GOULET-CAZÉ, M.-O. (ed.) 1999: *Diogène Laërce. Vies et doctrines des philosophes illustres*. Paris: Le Livre de Poche.
- HADOT, P. 1998: *Études de philosophie ancienne*. Paris: Les Belles Lettres ("Philosophie, exégèse et contresens," pp. 3-11; "Théologie, exégèse, révélation, Écriture dans la philosophie grecque," pp. 27-58)
- HÖLK, C. 1894: *De Acusmatis siue symbolis Pythagoricis* (inaugural dissertation). Kiel.
- JOLLES, A. 1972: *Formes simples*. Paris: Seuil.
Translation of: ID. 1982 [1929]: *Einfache Formen. Legende, Sage, Mythe, Rätsel, Spruch, Kasus, Memorabile, Märchen, Witz*. Tübingen: Niemeyer.
- KIRK, G. S., RAVEN, J. E. and SCHOFIELD, M. 1999 [1957, 1983 (2nd ed.)]: *The Presocratic Philosophers*. Cambridge: Cambridge University Press.
- LAMBERTON, R. 1986: *Homer the Theologian. Neoplatonist Allegorical Reading and the Growth of the Epic Tradition*. Berkeley: University of California Press.
- LE BOULLUEC, A. and VOULET, P. 1981: *Clément d'Alexandrie. Les Stromates. Stromate V*. Paris: Le Cerf.
- LONG, H. S. 1964: *Diogenis Laertii Vitae Philosophorum*. Oxford: Clarendon Press.
- MACRIS, C. 2006: "Autorità carismatica, direzione spirituale e genere di vita nella tradizione pitagorica". In FILORAMO, G. (ed.), *Storia della direzione spirituale*, vol. I, *L'età antica*. Brescia. Pp. 75-102.
- PÉPIN, J. 1976: *Mythe et Allégorie. Les Origines grecques et les contestations judéo-chrétiennes*. Paris: Études augustiniennes.
- PHILIP, J. A. 1968: *Pythagoras and Early Pythagoreanism*. Toronto: University of Toronto Press.
- RIEDWEG, C. 2002: *Pythagoras: Leben, Lehre, Nachwirkung. Eine Einführung*. München: Beck.
Translation by S. Rendall 2005: *Pythagoras. His Life, Teaching, and Influence*. Ithaca: Cornell University Press.
- SPENGLER, L. 1856: *Rhetores Graeci*. Vol. 3. Leipzig: Teubner.
- STRUCK, P. T. 2004: *Birth of the Symbol. Ancient Readers at the Limits of Their Texts*. Princeton: Princeton University Press.
- THESLEFF, H. 1965: *The Pythagorean Texts of the Hellenistic Period*. Åbo: Åbo Akademi.
- VUILLEUMIER-LAURENS, F. 2000: *La Raison des figures symboliques à la Renaissance et à l'âge classique. Études sur les fondements philosophiques, théologiques et rhétoriques de l'image*. Genève: Droz.
- WEST, M. L. 1978: *Hesiod. Works and Days*. Oxford: Oxford University Press.
- ZHMUD, L. 1997: *Wissenschaft, Philosophie und Religion im frühen Pythagoreismus*. Berlin: Akademie Verlag.

Appendix: Table of the texts quoting the *akousmata*

EXPLICIT SOURCE	DESIGNATION USED FOR THE <i>AKOUSMATA</i>	
-	(not relevant)	1
-	(not relevant)	2
Androcydes , <Περὶ Πυθαγορικῶν συμβόλων> – 1 st c. BCE (or earlier?)	αἰνίγματα καθ' ὅμοιον	3
-	τοῦτ' ἀναδιδάσκειν [...] αἰνιττόμενος διὰ συμβόλου	4
-	τοῦτο δὲ παρήγγειλε καὶ Πυθαγόρας αἰνίγμασιν ἄπερ ἐγὼ παραθεῖς ἐξηγήσομαι	5
-	σύμβολα	6
-	παραγγέλματα	7
-	σύμβολα	8
-	(not relevant)	9
-	παραγγέλματα	10
-	τὰ Πυθαγόρεια σύμβολα	11
-	τοιαῦτα καὶ οἱ Πυθαγόρειοι ἠνίσσοντο [...] ἀλληγοροῦντες	12
-	(not relevant)	13
-	δι' ὑποσυμβόλων	14
Demetrius of Byzantium, <i>Περὶ ποιημάτων</i> , IV – 1 st c. BCE	καὶ τὰ Πυθαγόρου δὲ αἰνίγματα	15
Aristotle , <Περὶ τῶν Πυθαγορείων> (for items 18-22) – 4 th c. BCE	σύμβολα	16
Aristotle , <Περὶ τῶν Πυθαγορείων> (for chapter 41 only?)	σύμβολα	17
-	σύμβολα	18
-	<i>ἀκούσματα</i>	19
-	ξυμβολικῶς [...] τὰς παραινέσεις προσέφερε	20
-	σύμβολα	21
-	εἰπὼν [...] δι' αἰνιγμάτων	22
-	τοῦτο τὸ αἶνιγμα	23
Anaximander of Miletus , <i>Ἐξηγήσεις</i> [or <i>Περὶ</i> ?] <i>συμβόλων Πυθαγορείων</i> – c. 400 BCE	ἔγραψε συμβόλων Πυθαγορείων ἐξηγήσιν	24
-	Πυθαγόρα τὰ σύμβολα	25
Demetrius of Byzantium, <Περὶ ποιημάτων, IV> (through Athenaeus)	τὸ Πυθαγόρειον [...] τὸ ῥηθὲν Πυθαγόρειον αἶνιγμα	26
-	τοῦτο τὸ αἶνιγμα (= Pseudo-Nonnus)	27

	TEXT	DATE	Nb. OF ITEMS
1	Aristotle, <i>Analytica posteriora</i> , 94b	384-322 BCE	1
2	[Aristotle], <i>Oeconomica</i> , 1344a	[End of the 4 th c. BCE?]	1
3	Tryphon, <i>Περὶ τρόπων</i> , 193	1 st c. BCE	5
4	Philo, <i>Quod omnis probus liber sit</i> , 2	1 st c. BCE-1 st c. CE	1
5	[Plutarch], <i>De liberis educandis</i> , 12 D-F	Before CE 50-after CE 120	10
6	Plutarch, <i>Aetia Romana et Graeca</i> , 281 A	Before CE 50-after CE 120	2
7	Plutarch, <i>De Iside et Osiride</i> , 354 E-F	Before CE 50-after CE 120	4
8	Plutarch, <i>Quaestiones coniuales</i> , VIII 7	Before CE 50-after CE 120	6
9	Plutarch, <i>Quaestiones platonicae</i> , 1007 B	Before CE 50-after CE 120	1
10	Plutarch, <i>Numa</i> , XIV 4-6	Before CE 50-after CE 120	5
11	Clement of Alexandria, <i>Stromata</i> , V 5	c. CE 150-211/216	8
12	Clement of Alexandria, <i>Stromata</i> , V 8	c. CE 150-211/216	2
13	Aelian, <i>Varia historia</i> , IV 17	CE 165/170-230/235	10
14	Hippolytus, <i>Refutatio omnium haeresium</i> , VI 27-29	c. CE 170-c. 236	7
15	Athenaeus, <i>Deipnosophistae</i> , X 452 d-e	Fl. c. CE 200	6
16	Diogenes Laertius, <i>Vitae philosophorum</i>, VIII 16-18 & 34-35	First half of the 3 rd c. CE	22
17	Porphyry, <i>Vita Pythagorae</i>, 41-45	CE 234-c. 305	22
18	Iamblichus, <i>Protrepticus</i>, 21	c. CE 245-c. 325	39
19	Iamblichus, <i>De uita Pythagorica</i>, 82-86	c. CE 245-c. 325	28
20	Theodoret, <i>Graecarum affectionum curatio</i> , VII 48	c. CE 393-466	4
21	Philoponus, <i>In Aristotelis de anima comm.</i> , pp. 116-117 Hayduck	c. CE 490-570s	5
22	Olympiodorus, <i>In Platonis Phaedonem comm.</i> , 1, 13 Westerink	6 th c. CE	3
23	Pseudo-Nonnus, <i>Scholia mythologica</i> , IV 17	6 th c. CE	1
24	<i>Suda</i> , s.v. Ἀναξίμανδρος (alpha entry 1987)	End of the 10 th c. CE	3
25	<i>Suda</i> , s.v. Πυθαγόρειοι ἄνδρες (pi entry 3124)	End of the 10 th c. CE	17
26	Eustathius, <i>Comm. ad Hom. Odysseam</i> , II, p. 188 Stallbaum	12 th c. CE	1
27	Michael Apostolius, <i>Collectio paroemiarum</i> , 15, 11	15 th c. CE	1

While this list of the texts quoting the *akousmata* is quite comprehensive, the number of items is mainly provided to suggest their value as sources, since the identification of the sayings in doxographical passages is sometimes subject to one's interpretation. See above on the form of the *akousmata*.

The section on “*Akousmata* and *symbola*” (58 C) in DIELS-KRANZ 1951 includes the following texts: Aristotle (1 & 2), Aelian (13), Diogenes Laertius (16), Porphyry (17), Iamblichus (18 & 19), the *Suda* (24, on Anaximander).

The bold characters indicate: in col. 1, the *loci* specifically dealing with Pythagoras; in col. 4, the most important ancient sources attested, though lost or extremely fragmentary (Aristotle's treatise *On the Pythagoreans*); and in col. 5, the designations in which the word *ainigma* and its cognates occur.