

LANGUAGE, VOCAL ORGANS AND *BARBARÓPHŌNOI*: STRABO, 14.2.28

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Abstract

The geographer Strabo, commenting on the Homeric term “*barbarophōnoi*”, upholds the onomatopoeic origin of the term *barbaros* and outlines an history of its usage, which goes from the meaning of “speak roughly” to the one of “mispronunciation” of Greek (*Geog.* 14.2.28). In order to interpret the passage, pertinent texts from the medical and acoustic-musical are discussed. It is concluded that Strabo is familiar with the ideas about voice and language from the Greek tradition, which lead him to a definition of *barbaros* based, mainly, on a linguistic criterion.

Keywords: Strabo, language, vocal organs, *barbarophonoi*.

1 - Introduction

In the description of southern Anatolia in the fourteenth book of his *Geography*, Strabo (63 BC – AD 24) reflects, in an excursus, on the Homeric term βαρβαρόφωνος (“speaking a foreign tongue”) and its choice by the poet instead of βάρβαρος (“barbarous”). This philological chapter (14.2.28) pertains to the general description of Ionia and Asia Minor (Caria, Lycia, Cilicia and Pamphylia)¹, drawing on information available

¹For the source of Strabo’s passage, cf. Almagor (2000: 134 n.5) with bibliography; for a general historical-geographical commentary, cf. Biffi 2009 and Radt 2009.

in the poetic tradition. For the description of the Carians, Strabo quotes an Homeric verse with an evident critical aim: *Il.* 2.867, Μάσθλης αἶ Καρῶν ἠγήσατο βαρβαρόφωνων². In his comment on the Homeric usage of the adjective βαρβαρόφωνος, the Thucydidean argument (1.3.3) about the self-perception of the Greeks as an ethnic unity (*Hellenes*) is polemically alluded to, as well as the philological argument of the grammarian Apollodorus (*FGrH* 244 F 207). These testimonies are completed with Homeric passages (*Od.* 1.344, 15.80) that supposedly explain the reading βαρβαρόφωνος instead of βάρβαρος³. The question of self-perception as *Hellenes* and opposition to the barbarian has been extensively studied, among others, by R.-A. Santiago⁴ with a careful examination of the Thucydidean passages and other terms that indicate, in his opinion, the “early usage of linguistic diversity as a criterion for differentiation between peoples by the Greeks”. The opposition between Greek and barbarian is complex in Strabo, since the notion of Roman and civilized are mixed⁵. Along with 14.2.28, Strabo’s comment on Eratosthenes in 1.4.9 about who is barbarian or Greek offers the criterion, undoubtedly accepted by Strabo, of ἀρετή (“excellence”) or κακία (“badness”); however, Bowersock⁶ has also pointed out that in the process of “barbarization”, from the Greek’s perspective, the perception of a linguistic change inevitably converged

² In Homeric *vulgata* Νάστης is the common reading; there is no doubt a contamination with verse 964.

³ Aristarchus agrees with Strabo as opposed to Thucydides, cf. schol. *Er. Il.*, ad loc.

⁴ Cf. Lévy 1984: 13-14 and Santiago 1998: 35-36, with the examination of similar terms such as ἀγριόφωνος, ἀλλόθροος, ἀλλόγλωσσος or ἑτερόφωνος, which appear in the Homeric poems or in other sources (Herodotus, Aeschylus). Lévy 1984: 10 maintains that, in its evolution, the term *barbaros* “a dès l’origine une valeur péjorative ... et qu’il s’y ajoute au vie siècle, dans certains milieux, une valeur descriptive, apparemment neutre, pour désigner les non-Grecs” (Greeks may be ἀλλόγλωσσοι according to Hdt., 2.154, or ξεῖνοι, 9.11, that is, with a reversible sense and not “Hellenocentric” as in the case of βάρβαρος according to Lévy). This being so, Strabo maintains the symmetry between “barbarians” (foreigners who mispronounce Greek) and “us” (Greeks who try to speak other languages).

⁵ Van der Vliet 2003: 261 maintains that Strabo’s consideration of ethnicity starts from dichotomies with which he distinguishes between “us” and “them” (Greeks / barbarians, Romans / non-Romans, civilized / uncivilized), but the dichotomies are developed and nuanced according to the history of the peoples themselves. For this scholar, Strabo’s consideration of the Carians as barbarians is stereotyped (cf. 14.5.25, which necessarily maintains that in “mixed” peoples one character or another predominates).

⁶ Bowersock 1995: 5-6.

(as seen in Ath. 14, 632a = fr. 124 Wehrli). In fact, for Herodotus (c. 484 – 425 BC), in his ethnographic description, belonging to an ethnic group is linked to language⁷; for Strabo, a linguistic variation is enough to change ethnicity⁸. The case of the Carians is used by Strabo to point out an incorrect or divergent way of pronouncing Greek⁹, a criterion that would define one of the ways of being barbarian in cases of bilingualism¹⁰. The dichotomy, now linguistic, is for Strabo (14.2.28) that of *κακοστομία* (“faulty pronunciation”) and *βαρβαροστομία* (“barbarous way of speaking”) versus *ἀρτιστομεῖν* (“accurately speaking”)¹¹.

The aim of this article is to study the way in which Strabo articulates ideas and concepts taken from various sources, such as the human phonatory apparatus, the physics of sound and the mimetic capacity of language. The combination of all of them converges in Strabo with the question of the diversity of languages¹² and the physiology associated with it. We will be in a better position to properly assess his contribution to the concept of *barbarian* as one whose language is simply different and has difficulties with Greek pronunciation, and not as one whose language is *by nature* faulty.

⁷ Cf. Hdt., 1.57.3, 1.58. For Herodotus there is a perfect correspondence between the idea of being Greek and having only one language (8.144.2), although he recognized dialects (1.142.2). *Βαρβαρόφωνος* also appears in two oracles in Hdt., 8.20 and 9.43 as a synonym of *βάρβαρος* (see Lévy 1984: 7).

⁸ Cf. Strab., 8.1.2. In 14.5.26 Strabo (despite certain nuances) equates the Greek ethnic groups with their respective dialects (in an anachronistic way, see Dandrow 2017: 119). Dandrow 2017: 121 maintains that, for Strabo, “being Greek is a matter of becoming Greek, an ethnocultural choice to embrace the Greek lifestyle or to settle among the Greeks and assimilate”, although Strabo is well aware that the term *barbaros* may be debatable in linguistic usage (*κατεχρησάμεθα*

⁹ Strabo points out later that the same is true of Greeks who speak another language). Cf. Arist., *Po.* 1458a 26 ff.: by barbarism (*βαρβαρισμός*) is understood the use of unusual words (Diog. Bab., fr. 24 *SVF* 3.214 = D. L., 7.59); Plato (*Cra.* 409d) understands it with the sense of linguistic loan.

¹⁰ Cf. D. S., 11.60.4, Hdt. 1.146, Paus. 7.2.6. Dzino 2008: 375 points out Strabo’s different approaches to hybrid or mixed cultures (among them the Carians), regarding which contemporary sources do not have a good opinion (Cf. Liv. 38.17.9, among others); see Almagor 2000: 137.

¹¹ On these terms, see Almagor 2000: 134 n. 5.

¹² That is, going beyond the simple observation of the strange character of non-Greek languages, Cf. Aesch., *Ag.* 1050 and *Pers.* 406, Ar., *Au.* 199-200, Porph., *Abst.* 3.4.

2 - The question of onomatopoeic creation

After exposing the question of the adjective βαρβαρόφωνος in the quoted Homeric verse, Strabo reflects on the onomatopoeic origin of some terms, as for instance, βάρβαρος:

οἶμαι δὲ τὸ βάρβαρον κατ' ἀρχᾶς ἐκπεφωνῆσθαι οὕτως κατ' ὀνοματοποιίαν ἐπὶ τῶν δυσεκφόρων καὶ σκληρῶς καὶ τραχέως λαλούντων, ὡς τὸ βατταρίζειν καὶ τραυλίζειν καὶ ψελλίζειν. εὐφυέστατοι γὰρ ἔσμεν τὰς φωνὰς ταῖς ὁμοίαις φωναῖς κατονομάζειν διὰ τὸ ὁμογενές· ἢ δὴ καὶ πλεονάζουσιν ἐνταῦθα αἱ ὀνοματοποιαί, οἷον τὸ κελαρύζειν καὶ κλαγγὴ δὲ καὶ ψόφος καὶ βοή καὶ κρότος, ὧν τὰ πλεῖστα ἤδη καὶ κυρίως ἐκφέρεται· πάντων δὲ τῶν παχυστομούντων οὕτως βαρβάρων λεγομένων, ἐφάνη τὰ τῶν ἀλλοεθνῶν στόματα τοιαῦτα, λέγω δὲ τὰ τῶν μὴ Ἑλλήνων.

I suppose that the word “barbarian” was at first uttered onomatopoeically in reference to people who enunciated words only with difficulty and talked harshly and raucously, like our words “battarizein”, “traulizein”, and “psellizein”; for we are by nature very much inclined to denote sounds by words that sound like them, on account of their homogeneity. Wherefore onomatopoeic words abound in our language, as, for example, “celaryzein”, and also “clangê”, “psophos”, “boê”, and “crotos”, most of which are by now used in their proper sense. Accordingly, when all who pronounced words thickly were being called barbarians onomatopoeically, it appeared that the pronunciations of all alien races were likewise thick, I mean of those that were not Greek¹³.

Strabo introduces in this passage, on the one hand, the traditional idea that there is an imitative component in the lexical creation of language by virtue of shared *homogeneity*, which allows *mimesis* (precisely the speech of non-Greek peoples is imitated by the term βάρβαρος); on the other hand, he refers to a doctrine (both in philosophy and in poetics) according to which there are certain words, of onomatopoeic origin (some of them are quoted by Strabo), that have aesthetic potential; finally, he unexpectedly mixes the idea of a *harsh speaking* (which in translation renders παχυστομέω, a term halfway between metaphor and literalness) with that of a *harsh language* -and, therefore, barbarian-, as Strabo himself points out a few lines later¹⁴:

¹³ Translation by H. L. Jones (1929: 6, 305).

¹⁴ As seen in the expression τραχυτάτη ἢ γλῶττα τῶν Καριῶν, due to Strabo's source, Apollodorus (see Almargor 2000: 135).

ἐκείνους οὖν ἰδίως ἐκάλεσαν βαρβάρους, ἐν ἀρχαῖς μὲν κατὰ τὸ λοιδορον, ὡς ἂν παχυστόμους ἢ τραχυστόμους, εἶτα κατεχρησάμεθα ὡς ἐθνικῶ κοινῶ ὀνόματι ἀντιδιαροῦντες πρὸς τοὺς Ἕλληνας.

Those, therefore, they called barbarians in the special sense of the term, at first derisively, meaning that they pronounced words thickly or harshly; and then we misused the word as a general ethnic term, thus making a logical distinction between the Greeks and all other races.

Hence, this passage confirms Santiago's statement¹⁵ that the notion of *barbarian* contains the idea of segregation based on the language (in fact, modern scholars consider βάρβαρος as an onomatopoeic creation)¹⁶. The first idea, then, is that of imitation. According to Strabo, the Greeks have the capacity, by nature (εὐφυέστατοι ... ἐσμὲν), "to denote sounds by words that sound like them": the pure onomatopoeic creation that is treated *in extenso* by Plato both from the philosophical (*Cra.* 423b ff.) and poetic (*R.* 396b 5-7) point of view.

Strabo supplies two types of onomatopoeia: the first, in his opinion, belong to the type of βάρβαρος; in the sources, in fact, their connection with imitation¹⁷ or with a barbarian¹⁸ character is maintained. This first group is different from the second, where Strabo limits himself to following the tradition of epic terms (βοή, κρότος, κλαγγή, κελαρύζω)¹⁹, rightly or wrongly considered onomatopoeic, and analyzed in the field of poetics²⁰. The difference is that the first group of onomatopoeia (including βάρβαρος) entails a defect in pronunciation (in the case of the second, Strabo points out that they have already become common nouns). Thus, for example, Galen affirms that τραυλίζειν ("to mispronounce a letter") and ψελλίζεσθαι ("to speak inarticulately") are an affectation of the speech, not of the voice, although Strabo mixes the pure difficulty of pronunciation with a characteristic of the phonatory apparatus expressed with σκληρῶς and τραχέως,

¹⁵ Santiago 2008.

¹⁶ See Beekes 2010: 201, *s. u.*; Lévy 1984: 8.

¹⁷ Cf. Hsch, *s. u.* βατταρίζειν (κατὰ μίμησιν τῆς φωνῆς πεποιησθαι). Herodotus (4.155) explains the proper name Battus by naming a child ισχύοφονος καὶ τραυλός.

¹⁸ Cf. *EM*, *s. u.* βατταρίζειν.

¹⁹ Cf. Hom., *Il.* 2.408, 15.453, 1.49, 11.813.

²⁰ For example, D. H, *Comp.* 16.2-3 and D. Chr., 12.68; cf. Phld., *Po.* 1.106 J., Epic., fr. 335 Us., Ptol., *Harm.* 1.3, Procl., in *Cra.* 16.6 Buss., Amm., *In int.* 25.19-25, Dem., *Eloc.* 94 ff., Ps. Plut. *V. Hom.* II, 16, p. 345 Bern.

as we will see²¹. The case of βάρβαρος is associated with this “difficult, harsh and raucous” way of talking, but it is not easy to determine what the opposite is (which for the Greeks, according to Strabo, is innate): “to denote sounds by words that sound like them, on account of their homogeneity”. It could be thought that homogeneity refers to the fact of producing faithful onomatopoeias, but in our opinion, Strabo slides, in passing, the thesis of *natural* correspondence (εὐφύεστατοι) between objects (or facts) and the Greek language²².

If the idea of the conventional origin of language has its best exponent in Aristotle (*Int.* 16a), that of its natural origin is based precisely on correspondence and imitation, as defended by Cratylus in the homonymous Platonic dialogue and accepted by the Stoics (see *SVF* 2.146). Epicurus developed the naturalist thesis, although for him the cause of the original creation of words lies in πάθη, “affections” (whose diversity explains the diversity of languages, as well as the diversity of peoples)²³. In Aristotle’s conventionalist version πάθη and ὁμοιώματα (*Int.* 16a 7) are connected by stating that affections are the same for everyone, as well as the facts of which affections are similarities (ὁμοιώματα). That the affections are like the facts is not well established in the Aristotelian treatise, a question for which several solutions have been proposed²⁴.

²¹ Gal., 17a.51 and 16.590 (= *CMG* 5.9.2, 13, 15-17), τὴν γλῶτταν δὲ οὐ φωνητικόν, ἀλλὰ διαλεκτικὸν ὄργανον ἴσμεν οὖσαν, καὶ διὰ πασχούσης αὐτῆς τε καὶ ψελλίζειν συμβαίνει κατὰ τὰς διαλέκτους; therefore, Galen does not agree with the assessment of these two terms of Strabo, since the adjectives refer, in his report, necessarily to the organs of phonation. Cf. Arist., *HA* 536b 8.

²² The expression εὐφύεστατοι ... ἔσμεν has two interpretations: that of the fidelity of the Greek language to the named object, and that of the capacity of the Greeks as to their physical constitution for such action.

²³ Cf. Epic., *Ep. Hdt.* 75-76; see Reinhardt 2008: 128 with commentary.

²⁴ Ammonius (*In int.* 17.20 ff., 22.19) maintained that the affections in the soul are the concepts (νοήματα), an interpretation that has been particularly successful (Ackrill 1963: 114 follows without quoting him). Long 1971: 121 guessed that Aristotle was referring to mental images derived from sense impressions, in a similar way to the Epicurean προλήψεις; more recently, Lo Piparo (2003: 170-178) has relied on the sense it has in Greek mathematics ὁμοιος (“proportionality”, as ἀνάλογον), so that “l’uomo può pensare il mondo e parlarne perché le operazioni logico-cognitive della sua anima e i fatti di cui è intessuto il mondo hanno conformazioni simili”. The inconsistencies of the notion of similarity in Aristotle (developed, moreover, in *De anima*) are exposed by Charles 1994: 41-49, but its formal analysis, in our view, owes much to Ammonius.

Strabo, then, supports the idea that the Greeks are, by nature, the most capable of naming things or events with similar sounds, especially when creating onomatopoeia (why couldn't the barbarian peoples -to whom Strabo accords to have authentic languages- coin good metaphors?)²⁵. In view of what he says later, Strabo seems to suggest that the shape of the mouth should be related to the characteristics of linguistic utterance, although this is denied by admitting that dealing with non-Greek peoples qualifies the concept of barbarian. However, this punctuation or nuance is incompatible with the idea of the perfect correspondence of Greek words with respect to the events of reality. In fact, the second group of examples of onomatopoeias is nothing more than the confirmation that part of the Greek lexicon (which now has its own meaning, *κυρίως*), had an imitative origin, in full *homogeneity* (*ὁμογενές*). Behind that full symmetry, we find the doctrine, expounded much earlier by Plato in *Cratylus* and *Sophist*, that phonemes have mimetic virtues with respect to the real world²⁶. We also find the discussion that Peripatetics and Epicureans held regarding the shape of the air and the mouth. Almost two hundred years before Strabo, the philosopher Epicurus denied that the air adopts a certain form through the work of the emitted voice (*Ep. Hdt.*, 10.53.1-7)²⁷:

οὐκ αὐτὸν οὖν δεῖ νομίζειν τὸν ἀέρα ὑπὸ τῆς προιεμένης φωνῆς ἢ καὶ τῶν ὁμογενῶν σχηματίζεσθαι· πολλὴν γὰρ ἔνδειαν ἔξει τοῦτο πάσχων ὑπ' ἐκείνης. Hence, it is not to be thought that air itself acquires a figure, due to voice projection or similar factors, since it is highly improbable to be affected in that by it.

While Epicurus explains that the pronunciation of a word is produced by the movement of particles that form a fluid and denies factors of similarity, among Peripatetics it is held that the form (*σχῆμα*, *σχηματισμός*) of the mouth is linked to the sound and its sharpness, for example in *Ps. Arist.*,

²⁵ According to Strabo, 14.2.28. Note that in Epicurus' theory people develop their languages symmetrically (that is, there is no trace of a Hellenic privilege regarding language) according to ethnicity and place, so that this first idea of Strabo is not compatible with Epicurus' thesis.

²⁶ Cf. *Plat., Phlb.* 17a ff., *Cra.* 423e ff., *Phld., Po.* 1.94 (p. 301 J.), *D. H., Comp.* 14, *Aristid. Quint.*, 2.13.

²⁷ Epicurus relies on the budget of the corporeality of the *φωνή*, cf. *Ps. Plut., Plac. Phil.* 902 F 3.

Pr. 11.23 and 11.51 (this is also criticized within the same school, cf. *Ps. Arist., Aud.* 800a 3 and 21 ff.)²⁸. Now, the basis of these discussions is found in Aristotle's *Categories* (10a 10 and 16),

τέταρτον δὲ γένος ποιότητος σχῆμά τε καὶ περὶ ἕκαστον ὑπάρχουσα μορφή (...) καὶ κατὰ τὴν μορφήν δὲ ἕκαστον ποιόν τι λέγεται. τὸ δὲ μανὸν καὶ τὸ πυκνὸν καὶ τὸ τραχὺ καὶ τὸ λεῖον δόξειε μὲν ἄν ποιὸν σημαίνειν.

A fourth kind of quality is shape and the external form of each thing (...). And in virtue of its form each thing is said to be qualified somehow. "Open-textured" and "close-textured" and "rough" and "smooth" might be thought to signify a qualification²⁹.

It is important to note that these qualities (rough, smooth, etc.) belong to the type that Strabo evokes in barbaric accents. However, Aristotle established that the quality of things is said *paronymously* (παρώνυμως) from them (see *Cat.*, 10a 27), that is to say, that paronymy is the means by which we can talk about things. Indeed, later (11a 15 ff.) Aristotle states that such qualities are not exclusive to quality, but that similarity and dissimilarity are (ὅμοια δὲ καὶ ἀνόμοια). This quality of similarity underlies Strabo's expression διὰ τὸ ὁμογενές, since it is a category that allows him to affirm that the barbarians would speak παχυστόμους ἢ τραχυστόμους ("thickly or hashly"), while the homogeneity of the Greek language (with respect to the world) would allow for an accumulation of common lexicon with onomatopoeic origin (in other words, lexicon of mimetic, *natural* origin)³⁰. In sum, Strabo's position is not completely defined: as we have seen, he maintains the superiority of the Greek language for *mimesis*, but at the same time he equates all languages and defines the barbarian as one who simply speaks with his own accent; then, he adopts a naturalistic perspective on the origin of language (if the Greeks make the best onomatopoeias and these become common lexicon, then, since onomatopoeias are *mimesis* of the type ὁμογενές or "homogeneous", the symmetrical language of the world is Greek). Simultaneously, Strabo admits that there is no defect in the organs of phonatory of the barbarians, but "peculiarities of their numerous languages".

²⁸ Cf. Thphr., fr. 716 Fort. (= Porph., *In Ptol.* 64.88 D.); Barker 1989: 116 n. 31, Raffa 2016: 750 ff.

²⁹ Translation by Ackrill 1963: 27.

³⁰ See Ptol., *Iudic.* 4.3-6, where the correspondence between language and reality occurs by virtue of a πρὸς τὸ οἰκεῖον ἐφαρμογή.

Remarkably, there is a passage in the sources about the human voice that conjugates the same ideas presented by Strabo: the fact of the mimetic character of the language through the *configuration* of the mouth. The Alexandrian astronomer and philosopher Claudius Ptolemy (AD 100 – c. 170) connects these two elements as follows (*Harm.* 1.3, 7.10-15 D.):

περιποιεῖ δὲ διὰ μὲν τοῦ σχήματος ἐπὶ μὲν τῶν τὸ τοιοῦτον ἐπιδεχομένων, οἷον τῶν γλωσσῶν καὶ τῶν στομάτων, σχηματισμοὺς ὥσπερ τινὰς νόμους τοῖς ψόφοις, παρ' οὓς ὀνοματοποιοῦνται πάταγοι καὶ δοῦποι καὶ φωναὶ καὶ κλαγγαὶ καὶ μύρια ὅσα τοιαῦτα, μιμουμένων ἡμῶν ἐκάστους τῶν σχηματισμῶν τῷ λογικώτατον καὶ τεχνικώτατον ἡγεμονικὸν ἔχειν τὸν ἄνθρωπον.

Through shape, in the case of things that admit such a variation, such as tongues and mouths, it makes configurations -modes, as it were- for the sounds, in correspondence with which names are coined such as clatters, thuds, voices, clangs, and a thousand like them; and we ourselves imitate each of the configurations through man's possession of the most rational and skillful ruling principle³¹.

For Ptolemy, the *hēgemonikón* (an intellectual organ, of Stoic origin) is in charge of carrying out this whole process, but he accepts the Peripatetic theory of the shape of the mouth together with the idea that sound is struck air³² (although his assumptions about the origin of language are clarified by this author in *Iudic.*, 4.3-6, in a theory that combines naturalism and convention). Strabo cites Homeric terms as onomatopoeias integrated in the common lexicon (in the tradition that, as has been said, starts with Plato and goes as far as Latin grammar), while Ptolemy cites as onomatopoeias other terms³³ without making it clear whether he considers them true onomatopoeias or already common lexicon. However, Strabo does not allude to any form or figure of the mouth or air but adopts a terminology that alludes to the physical conditions of the phonatory apparatus (and that paronymously defines the barbarian speech). The coincidences in the passage make it clear that Strabo and Ptolemy are relying on earlier material and a far-reaching discussion that, as we shall see, is not only linked to reflection on language, but is also shared by medicine and music.

³¹ Translation by Barker 1989: 280.

³² Cf. Ptol., *Harm.* 1.1 (p. 3.2 D.); sources in Bobo de la Peña 2009: 549-550; commentary in Barker 1989: 282 and Raffa 2016: 244 n.17. The comparison with the *aulós* was a *locus communis* from Archytas (47B 1 DK).

³³ In the list of both authors, *κλαγγαί* is shared.

3 - The question of sound or voice emission conditions

The second of the questions raised by the passage of 14.2.28 is that referred to the conditioning in voice emission (φωνή), which in Strabo acquires, as mentioned before, the opposition between κακοστομία or βαρβαροστομία versus ἀρτιστομεῖν. This question of sound is dealt with by medical sources (in particular, in their study of the phonating organs) and by musical sources (these have, among their objectives, to establish the conditions of the production of sound and its qualities). As we have seen in the passages already quoted, Strabo uses a terminology that fixes the debate around the question of βαρβαρόφωνοι. Firstly, the barbarians are those who speak in a dry and rude way:

οἶμαι δὲ τὸ βάρβαρον κατ' ἀρχὰς ἐκπεφωνῆσθαι οὕτως κατ' ὀνοματοποιίαν ἐπὶ τῶν δυσεκφόρως καὶ σκληρῶς καὶ τραχέως λαλούντων.

I suppose that the word “barbarian” was at first uttered onomatopoeically in reference to people who enunciated words only with difficulty and talked harshly and raucously.

Secondly, the barbarians were called in that way at first because of the rudeness of their accent:

ἐκείνους οὖν ἰδίως ἐκάλεσαν βαρβάρους, ἐν ἀρχαῖς μὲν κατὰ τὸ λοιδορον, ὡς ἂν παχυστόμους ἢ τραχυστόμους.

Those, therefore, they called barbarians in the special sense of the term, at first derisively, meaning that they pronounced words thickly or harshly.

In this way, σκληρῶς (“hardly”, “harshly”) and τραχέως (“raucously”) evoke the same thing as παχυστόμους (“thickly”) and τραχυστόμους (“harshly”, “raucously”). This terminology is consistent with the description that philosophical and medical sources make of the human phonatory apparatus. Already in Aristotle (*HA* 581a 17 ff.) the voice of the adolescent is spoken about as τραχύτερον καὶ ἀνωμαλέστερον (“harsh and irregular”)³⁴, something that the physician and philosopher Galen (AD 129 – c. 201) treats at the same time in *De usu partium* (4.172) in a similar way. Here we should remember that Galen compared (as Ptolemy did, as we will see later on) the physiology of the larynx with the mechanism of an *aulós* (a

³⁴ Cf. Zirin 1980. The change of voice is also dealt with by Galen (4.172).

pipe), understood as a “double” of the former: Baumgarten and Raffa have studied this comparison (sometimes not explicitly) in the sources, pointing out the seventh book of the aforementioned Galen’s treatise (3.553 ff.)³⁵. But, with respect to Strabo’s passage, it is interesting to quote another passage from Galen taken from the *Ars medica* (1.351):

καὶ γὰρ ἡ λεία φωνὴ λειότητι τῆς ἀρτηρίας ἔπεται, καθάπερ ἡ τραχεῖα τραχύτητι. λειότης μὲν οὖν ἀρτηρίας συμμετρία κράσεως ἔπεται, τραχύτης δὲ ξηρότητι.

Indeed, the soft voice is a consequence of the softness in the larynx, in the same way as the rough one is due to its roughness. Softness is, consequently, a mix provided in the larynx, while roughness is due to dryness.

For Galen it is clear that physical configuration of the larynx³⁶ is a consequence of the *quality* of the voice, considered paronymously (to a rough physiology, a rough timbre)³⁷. This paronym is, in fact, a metaphorical way of identifying the sounds, associated to a certain physiology³⁸.

The metaphorical terminology to designate the vocal timbre is also shared by the writings of acoustics and music. It is already found in Plato (*Ti.* 67c), and we read it especially in the Peripatetic sources: for example, in *Problem* 11.11 (900a 10 ff.) roughness and irregularity in the larynx are linked:

ἡ μὲν γὰρ τραχύτης διὰ τὴν ἀνωμαλίαν, ἡ δὲ βαρύτης διὰ τὴν ἔμφοραξιν.

For roughness is caused by unevenness, while low pitch is caused by obstruction³⁹.

The idea of a sound quality based on a physiological quality of the phonating organ is the same in medicine as it is in acoustics and music:

³⁵ The parts of the larynx are compared to *aulós* in *De usu partium* (3.553 and 561); for the sources, see Baumgarten 1962: 121, 164, 171 ff. and Raffa 2008: 178 ff. (for the same topic in the Latin sources, cf. Schulz 2016: 147-148).

³⁶ About ἀρτηρία as larynx, see Calero 2016: 40 ff. and Pino Campos 2007: 180.

³⁷ In medical texts, τραχεῖα ἀρτηρία designates the trachea, cf. Cic., *N. D.* 2.136 and Gal., 3.491. For confusion in the texts between trachea and larynx, cf. Schulz 2016: 152 and Calero 2016: 102.

³⁸ Metaphorization also occurs in the terms ὀξύς and βαρύς, “acute” and “grave” in the musical tradition. Galen also notices, in medical practice, the metaphorical use (see 16.509 = *CMG* 5.9.2, p. 13, 9).

³⁹ Translation by Barker 1989: 87.

hence the recurrent comparison with the *aulós*, as well as the acoustic investigations with strings and with the vocal range. In Greek musical writings the concept of sound as struck air is assumed (a common place of stoic origin, although present in all the philosophical schools that dealt with music)⁴⁰. In the Peripatetic treatise *De audibilibus* the sound becomes rough (τραχύνεσθαι, 803b 2) when the air disperses on its way to the ear, and (as in the case of Strabo) the qualities in the sound παχύς and τραχύς are shared:

παχεῖαι δὲ γίνονται καὶ τῶν τραγιζόντων καὶ τῶν βραγχιόντων, καὶ μετὰ τοῦς ἐμέτους, διὰ τὴν τραχύτητα τῆς ἀρτηρίας (804a 17-19)⁴¹.

Voices are also thick in people whose voices are breaking, or whose throats are sore, or after vomiting, because of the roughness of the windpipe⁴².

The key lies, then, in the physiological characteristics of the larynx, which in its interaction with the air will produce one type of voice or another. A good example of the development that acquired the study of the quality of the sound in the music treatises is, again, Ptolemy's *Harmonics* (3.3). Indeed, if Aristotle compared the change of the human voice (ἐπὶ τὸ τραχύτερον καὶ ἀνωμαλέστερον) to the strings of a badly tuned instrument and *rough* strings (φαινομένη ταῖς καὶ τραχείαις χωρδαῖς, *HA* 581a 23), Ptolemy, like Galen, compares the larynx to a natural *aulos* (3. 3, 9.6)⁴³, and in exposing the conditions of sound production, as well as its height, he establishes that one of the factors is the primary configuration of that which produces percussion in the air (*Harm.*, 3.3, 7.6-8):

ἡ δὲ παρὰ τὰ δι' ὧν αἱ πληγαὶ παραλλαγὴ λαμβάνεται μὲν ἐνταῦθα παρὰ τὰς πρώτας τοῦ σώματος συστάσεις, τουτέστι δι' ἃς μανόν ἐστιν ἕκαστον ἢ πυκνὸν καὶ λεπτὸν ἢ παχύ, καὶ λεῖον ἢ τραχύ, καὶ ἔτι παρὰ τὰ σχήματα.

⁴⁰ Cf. Arist., *De an.* 2.8, *Aud.* 800a; D. L., 7.55 (also in the Pythagorean-Platonic tradition, cf. 67b-c, Eucl., *Sect. Can.* 148 J.). See, for an assessment of the dating of this idea and the consequences for the attribution of *De audibilibus*, Gottschalk 1968: 445.

⁴¹ On the text transmitted by Porphyry (*in Ptol.* 75-76), see Raffa 2016: 722, n. 448 and 771, n. 433. According to Raffa, the exposition of the types of voice in this treatise would refer to the singer and perhaps also to the orator.

⁴² Translation by Barker 1989: 108.

⁴³ ἀλλῶ γάρ τι καὶ τὸ περὶ τὰς ἀρτηρίας ἔοικεν. Raffa 2008: 181 conjectures with convincing arguments that Galen is following the Ptolemaic text (*Harm.* 3.3) where the parts of the *aulós* are studied; cf. Calero 2018: 194.

The variation related to the things with which the impacts are made is found here in correspondence with the primary constitution of their body, the constitution, that is, which makes a thing diffuse or dense, thin or thick, smooth or rough, and again in correspondence with their shapes⁴⁴.

Ptolemy makes this point in a general way, so that the conditions are the same for the voice as for any instrument. However, here the shape (in this case, of the mouth) is accepted as a factor in sound configuration, something that *De audibilibus* rejects⁴⁵. Moreover, from the rest of Ptolemy's chapter we can infer that the human being is capable, thanks to the *hēgemonikón*, of imitating the configurations (σχηματισμοί) already present in nature and that precisely give rise to the creation of those onomatopoeic terms that later become integrated into the common lexicon⁴⁶ (in a more complex way than the type βρεκεκεκεξ or κόκκυξ), not only by imitating the sounds but by naming them, as Raffa underlines⁴⁷. In this way, such configurations would act in a primitive stage of the language (Ptolemy refers to it with the expression τὸ οἰκεῖον in *Iudic.* 4.3-6) and would develop, in the later conventionalist stages⁴⁸, a whole nominal system. According to Raffa, “Tolemeo ritiene che l'anima sia in grado di cogliere alcuni aspetti formali del suono e tradurli in nomi”⁴⁹. If this is so and such are the σχηματισμοί (“configurations”), these configurations and those of the mouth would be, to the greatest extent possible, symmetrical (which would make possible the good onomatopoeia), and would provoke the aporia of the existence of several languages (is not *hēgemonikón*

⁴⁴ Translation by Barker 1989: 280. Here the subtext is again Arist., *Cat.* 9a 28-31 (the ποιότητες παθητικαί) and 10a 11-29, although the concept of σχῆμα has to do with that of *De audibilibus* (see Raffa 1999: 122) and not with that of “phonic figure” of D. H., *Comp.* 14.

⁴⁵ Cf. Ps. Arist., *Aud.* 800a 3 (τὰς δὲ φωνὰς ἀπάσας συμβαίνει γίνεσθαι καὶ τοὺς ψόφους ἢ τῶν σωμάτων ἢ τοῦ ἀέρος πρὸς τὰ σώματα προσ-πίπτοντος, οὐ τῷ τὸν ἀέρα σχηματίζεσθαι, καθάπερ οἶονταί τινες); also rejected by D. H., *Comp.* 14.8.

⁴⁶ Ptol., *Harm.* 1.3., 7.10-13. Ptolemy does not refer here to the *schemata* or figures of the dance, nor to the melodic structures that receive such a name (see Raffa 2009: 117-118).

⁴⁷ See Raffa 1999: 123.

⁴⁸ Ptol., *Iudic.* 4.3-4, p.7.17 ff. Lammert; cf. Verlinsky 2005: 71 ff. (a study of the relations between Ptolemaic theory and the Epicurean doctrine regarding the origin of language).

⁴⁹ Raffa 2016: 244 n.22. Bobo de la Peña's statement (2009: 571) seems insufficient -that σχηματισμός in the mouth “has, as a result, that of the formants and overtones of the sound emitted, that is, the variation in its timbre”.

universal in its *mimesis*, because of rational, or is it exclusive to the Greeks?)⁵⁰. Likewise, the *aporia* of the jump from the natural level to the onomatopoeic⁵¹. If -as Ptolemy maintains- the sounds are rough or dense depending on the configuration of the larynx, then the notion (rejected) of barbarian in Strabo would lead to the idea that all barbarians have a larynx with physical characteristics not present in those of the Greeks (which force a metaphorical description of their language analogous to their physiology); moreover, probably (by not having a tongue with the criterion of *homogeneity*), they are not able to imitate with the configuration of the mouth the configurations of reality.

4 - Conclusion. Towards a universal physiology of the human phonatory apparatus

Despite the elusive character of texts like Ptolemy's -an author who certainly recognized the diversity of languages but did not clarify how *hēgemonikón* imitates the real *continuum*-, it is not defensible that the description of the physiology of the larynx in medical or musical texts describes only that of the Greeks and not that of all human beings⁵² (for example, the Spartan Clearchus is described by Xenophon, the historian and disciple of Socrates, as τῆ φωνῆ τραχύς, “rough-voiced”)⁵³. Undoubtedly, although the Greeks were aware that their language was one among others,

⁵⁰ The rational disposition of the *hēgemonikón* is already made explicit in *SVF* 2.839 and in Ptol. *Iudic.*, who places it, like Galen, in the brain. Ptolemy focuses, in *Harm.*, on the σχηματισμοί, but in *Iudic.* he refers to the πάθη (following Epicurus, who refers to the ἴδια φαντάσματα) as the initial engine of the naturalistic process of linguistic creation.

⁵¹ This is clearly seen in Porphyry's commentary on the passage (*In Ptol.* 47.18 ff.). The question, then, is how the *hēgemonikón* notices “configurations” in the sound continuum of reality (Raffa 2016: 244 points to the δοξαστική υπόληψις mentioned by Porphyry (*In Ptol.* 13.27); one should also cite D. H., *Comp.* 8, where σχηματισμός refers to the modal articulation of the proposition.

⁵² It is true that when Dionysius of Halicarnassus describes the position of the mouth when producing the sounds of the Greek (*Comp.* 14) he does it from an almost auletic perspective (see Raffa 2008: 182), but this does not invalidate the affirmation about the universality of the description mentioned in the sources.

⁵³ X., *An.* 2.6.9. Hippocrates also endorses this (*Morb.* 2.1.8). The approach of a text like Ps. Arist., *Pr.* 11.32 (902b 36 ff.) is a good example of the universal perspective of the reflection on the voice in Greece (cf. Porph., *in Ptol.* 75.25-30, Ps. Arist., *Aud.* 804a 10).

they did not show great interest in them; on the contrary, they focused on the Greek εὐφωμία (“euphony”) both on a physical and poetic level⁵⁴.

Now, in view of the texts commented upon, we can assess that, in its assessment that the barbarians “spoke roughly or rudely” or “in a dry and rough manner”, there is in Strabo’s passage an echo of a widespread terminology which, in a metaphorical way, would allude to a certain configuration of the larynx. It is clear, moreover, that Strabo was aware of this terminology. It is important to return to Strabo’s text quoted above,

πάντων δὴ τῶν παχυστομούντων οὕτως βαρβάρων λεγομένων, ἐφάνη τὰ τῶν ἀλλοεθνῶν στόματα τοιαῦτα, λέγω δὲ τὰ τῶν μὴ Ἑλλήνων.

In his translation in Loeb, H. L. Jones renders στόματα as “pronunciations”. The translation is problematic, given that Strabo’s treatment of the terminology involved is both metaphorical and literal; the question is whether there is a barbarian physiology (and, therefore, a form of the mouth) as opposed to the Greek one in the phonatory apparatus. The decision to understand a literal or metaphorical usage for στόμα is determined, in our opinion, by how παχυστομέω is understood. Indeed, in the text we find the verb παχυστομέω and παχύστομος (together with τραχύστομος, “of rough pronunciation”), which recall the term used by Galen δασύστομος (“with hoarse voice”, without a metaphorical meaning) when speaking of a type of voice⁵⁵. According to Liddell and Scott’s *Lexicon*, παχυστομέω has a metaphorical meaning (“to speak with an accent”). It is true that there is a metaphor in the use of these words, but παχυστομέω, in its conformation, reveals that the “roughness of speech” was physical (στόμα, “mouth”), in view of εὐστομία as “good taste in the mouth” in Strabo himself (15. 1.20) and παχύστομος (referred to the oyster) in Aristotle (fr. 304 R.). On the other hand, its opposite εὐστομία (“euphony”) is metaphorical (as used by Plato in *Cratylus* to designate a phonetic variation even voluntary)⁵⁶. So, if we take into account what has been said about the presence of the terms used by Strabo (σκληρῶς, τραχέως, παχυ-) in medical and acoustic-musical texts, it is not easy to completely discard the literal meaning of παχυστομέω and, therefore, of στόμα.

⁵⁴ The Stoics thought that sound was corporeal (cf. *Dox. Gr.*, p. 638, 17-20, schol. D. T., 482.5-32 Hilgard).

⁵⁵ Gal., 16.509 = *CMG* 5.9.2, p. 13, 1 and 9 (on the metaphorical use of terminology).

⁵⁶ Cf. Plat., *Cra.* 404d, 412e, 414c, 426d.

Consequently, this would evidence a certain naturalistic perspective in language, both in its physiology and in its internal structure (with all the doctrine on the appropriate combination of phonemes or ἀρμογή, “fitting together”⁵⁷, which is consistent with the idea of an imitative capacity of the Greek language διὰ τὸ ὁμογενές, “on account of their homogeneity”)⁵⁸. But Strabo corrects the naturalism included in the idea that Greek is the only euphonic language:

καὶ γὰρ δὴ τῇ πολλῇ συνηθείᾳ καὶ ἐπιπλοκῇ τῶν βαρβάρων οὐκέτι ἐφαίνετο κατὰ παχυστομίαν καὶ ἀφυΐαν τινὰ τῶν φωνητηρίων ὀργάνων τοῦτο συμβαῖνον, ἀλλὰ κατὰ τὰς τῶν διαλέκτων ιδιότητα.

The fact is, however, that through our long acquaintance and intercourse with the barbarians this effect was at last seen to be the result, not of a thick pronunciation or any natural defect in the vocal organs, but of the peculiarities of their several languages.

If the metaphorical use of “speaking harshly” would define the barbarian peoples, Strabo derives the meaning of this terminology from an implicit barbarian physiology to the observation of the difference between Greek and the other languages, and the phenomenon of incorrect pronunciation. Strabo’s passage, therefore, implies the notion of a universal conformation of the human phonatory apparatus and the notion of correct Greek -understood by ἑλληνισμός, whose criteria lies in ἀρμογή, συνήθεια (“habituation”, mentioned by Strabo) and τέχνη (“skill”), and opposed to βαρβαροστομία (“barbarous way of speaking”)⁵⁹-, and the consequent cancellation of the paronymy (or metaphor) that establishes that, if the language is rude, rude is the throat.

⁵⁷ Cf. Pausimachus quoted by Phld., *Po.* 94, p. 301 J., who calls it ἑλληνισμός.

⁵⁸ In *Harm.* 1.27 (35, 10-17 Da R.), Aristoxenus points out that syllable formation (as well as the combination of musical notes) occurs by nature. Heraclides Ponticus (quoted by Porph., *In Ptol.* 32.23 ff.) alludes to antimelodic or melodic sounds (ἐκμελεῖς, ἐμμελεῖς): the former “irritate our perception or move abnormally” (ἐκμελεῖς μὲν ὀπόσαι τραχύνουσι αἰσθησιν ἡμῶν ἢ ἀνομάλως κινουῖσι, *ibid.* 32.26): see Raffa 2016: 730 n. 135 (the passage derives the discussion towards the sensory perception of intervals). The consideration of the word (ὄνομα) as λείον or τραχύ is read in Demetr., *Eloc.* 176.

⁵⁹ Cf. Pausimachus quoted by Phld., *Po.* 94, p. 301 J.; Diog. Bab., *SVF* 3.214 (see Schenkeveld 1990: 96-97); schol. D. T., pp. 446.6-447.28 Hilgard, with the definition. Crates held that ἑλληνισμός lies in the observation of linguistic use (Brogiato 2001: xxxvii).

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