

142a-c Herophilus [says] that one kind of motion is perceptible by reason, the other by the senses.

3 Respiration

143a Aëtius Doxographus, *Placita* 4.22.3 (DG, pp. 413-14)

143b Ps.-Pitarchus, *Placita* 4.22 (*Moralia* 903F-904B, vol. V.2.1 (Teubner), pp. 130-1 Mau)

Ἡρόφιλος δυνάμεις ἀπολαμβάνει περὶ τὰ σώματα τὰς κινητικὰς ἐν νεύροις, ἐν ἀρτηρίαις, ἐν μυοῖ· τὸν οὖν πνεύμονα νομίζει μόνον ὀρεγέσθαι διαστολῆς τε καὶ συστολῆς φυσικῶς. [εἶτα δὲ καὶ τῶλλα.] ἐνέργειαν μὲν < οὖν > εἶναι τοῦ πνεύμονος τὴν ἕξωθεν γινόμενης ἐφέλκεται· παρακείμενος δὲ διὰ τὴν δευτέραν ὄρεξιν ἕρ' αὐτὸν ὁ θώραξ τὸ πνεῦμα μετοχευέει, πληρωθεὶς δὲ καὶ μηκέτι ἐφέλκεσθαι δυνάμενος πάλιν εἰς τὸν πνεύμονα τὸ περὶ τὸν ἀντιμεταρρεῖ, δι' οὗ πρὸς τὰ ἑκτὸς τὰ τῆς ἀποκρίσεως γίνεται, τῶν σωματικῶν μερῶν ἀντιπαραχόντων ἀλλήλοις, ὅτε μὲν γὰρ διαστολῆ, < ὅτε δὲ συστολῆ, > γίνεται πνεύμονος, ταῖς ἀλλήλων ἀντιμεταλήψεις πληρωσέως τε καὶ κενώσεως γινόμενης, ὡς τέσσαρας μὲν γίνεσθαι κινήσεις περὶ τὸν πνεύμονα, τὴν μὲν πρώτην καθ' ἣν ἕξωθεν ἀέρα δέχεται, τὴν δὲ δευτέραν καθ' ἣν τὸ ἕξωθεν ἀεροειδὲς ἐξέρχεται, τὴν δὲ τρίτην καθ' ἣν τὸ ἀπὸ τοῦ θώρακος συστελλόμενον αἷθις εἰς αὐτὸν ἐκδέχεται, τὴν δὲ τετάρτην καθ' ἣν τὸ ἕξωθεν ἀεροειδὲς ἐν αὐτῷ γινόμενον θύραζε ἕξερᾷ· τοῦτων δὲ τῶν κινήσεων δύο μὲν εἶναι διαστολὰς, τὴν τ' ἕξωθεν τὴν τ' ἀπὸ τοῦ θώρακος· δύο δὲ συστολὰς, τὴν μὲν ὅταν ὁ θώραξ ἕρ' αὐτὸν τὸ πνευματικὸν ἐκλύσῃ, τὴν δ' ὅταν αὐτὸς εἰς τὸν ἑκτὸς ἀέρα ἀποκρίνη· δύο γὰρ μόναι γίνονται περὶ τὸν θώρακα, διαστολὴ μὲν ὅταν ἀπὸ τοῦ πνεύμονος ἐφέλκηται, συστολὴ δ' ὅταν τοῦτ' αὖ πάλιν ἀντιπροσθῶ.

2 μόνον *codl.*: πρῶτον *Diels* 3-4 εἶτα δὲ καὶ ἄλλα *E.* εἶτα δὴ τὰ ἄλλα *B: del. Diels* δὲ... πνεύμονος *om. M* 4 οὖν *suppl. Diels sc.*
Galen. 6 ἐφέλκεται *codd.*: < ἐπείδ' ἀν μηκέτι > ἐφέλκεται, *vel* πούεται *coni. Mau Galeno (T143c) collato, fort. recte* 6 παρακείμενος... ὄρεξιν *del. Mau ut glossama* 6 περιεχόμενος *coni. Mau* 7 ἕρ' αὐτὸν *MPI*

7 μετοχευέειν *MPI* 9 ἀντιμεταρρεῖ *coni. Bernardakis* 11 ὅτε δὲ συστολὴν *add. Diels* 11 πνεύματος *B* 13 μὲν *del. Reiske*
 15 ἐντοῖς] ἑκτὸς *coni. Bernardakis* 16 μεταρρεῖν *M:* μεταρρ
Bernardakis 17 τὸν αὐτὸν *B* ἦν καὶ τὸ *PI* 18 γινόμενον *MB* 20 ὁ *om. M.* ἦρ' αὐτὸν *BT:* ἦρ' αὐτὸ *M:* *corr. Diels*
 21 ἑκτὸς] κόλπου *PI* 23 ταῦτ' ὁ *MB:* αὐτὸ *AE: corr. Diels*

143a-b Herophilus admits motor capacities for bodies in the nerves, arteries, and muscles. He thinks that the lung alone has a natural tendency to dilate and contract. The drawing in of pneuma from outside, he says, is accordingly the activity of the lung, and it draws it in through the repletion which occurs without. Next, on account of a second [natural] tendency, the thorax diverts the pneuma to itself, and when it is filled and no longer capable of drawing it in, it lets the excess flow back again into the lung, through which the exhalation of what is excreted occurs. The parts of the body are thus affected in turn. For now dilation, then contraction of the lung occurs, since filling up and emptying occur through reciprocal exchange, so that four motions in fact occur in the lung: the first is the one by which it receives air from outside; the second by which the pneuma which it has received from outside changes its flow internally toward the thorax; the third by which it receives again into itself the contracted pneuma from the thorax; the fourth by which it evacuates to the outside that which is in it after rounding the turn. Of these motions of the lung, he says, two are dilations – the one from outside and the one from the thorax – while two are contractions, namely one when the thorax draws the pneumatic substance to itself, the other when the lung itself excretes pneuma into the external air. Only two motions, you see, occur in the thorax: dilation when it draws pneuma from the lung, contraction when it delivers it back again to the lung.

143c Ps.-Galenus, *De historia philosopha* 103 (DG, p. 639)

Ἡρόφιλος δὲ δύναται ἀπολαμβάνει περὶ τὰ σώματα κινητικὴν ἐν νεύροις καὶ ἐν ἀρτηρίαις καὶ μυοῖ· τὸν οὖν πνεύμονα νομίζει προσορέγεται διαστολῆς τε καὶ συστολῆς φυσικῆν ἐνέργειαν μὲν οὖν εἶναι τοῦ πνεύμονος τὴν ἕξωθεν τοῦ πνεύματος ὀκλήν, ἡτ' οὖν δὲ τῆς πληρωσέως τῆς ἕξωθεν γινόμενης ἐφέλκεσθαι μὴ δύνασθαι, εἰς τὸν θώρακα τὸ περιττὸν ἀναστρέψαι, τὸν δὲ εἰς τὸν ἕξωθεν ἀέρα ἀποκρίνειν.

154 Galenus, *De pulsuum usu* 4 (V, pp. 163-4K; pp. 208-10 Furley/Wilkie)

ταύτης δὲ τῆς διπλῆς καὶ συνθέτου τῶν ἀρτηριῶν κινήσεως, ἣν δὴ καὶ σφυγμὸν ὀνομάζομεν, ἐξηγεῖται μὲν ἡ καρδία, καθότιερ καὶ ἡμῖν ἐν ἑτέροις καὶ μυρίοις ἄλλοις πρὸς ἡμῶν ἀποδέδεται, οὐ μὴν καθ' ὃν Ἐρασιστρατος ὑπελάμβανεν τρόπον, ἀλλ' ὡς ἡρόφιλος τε καὶ Ἰπποκράτης καὶ σχεδὸν οἱ δοκιμώτατοι πάντες τῶν παλαιῶν ἱατρῶν τε καὶ φιλοσόφων.

3 πρὸς ἡμῖν. S: πρὸς ἡμῖν. *Alit. corr. Kühn* (ante nos *Linacri interpretatio*)

154 This double, compound motion of the arteries, to which, of course, we also give the name 'pulse' (*sphygmos*), is governed by the heart, as has been demonstrated both by me in my other works and by countless others before me – I do not mean the way in which Erasistratus assumed that it happens, but the way Herophilus as well as Hippocrates and almost all very reputable ancient physicians and philosophers assumed it happens [sc. the *dynamis* in the body of the heart, by which it expands and contracts, flows out through the arterial coats to all the arteries, expanding and contracting them].

155 Galenus (ex Aristoxeno?), *De pulsuum differentiis* 4.2 (VIII, pp. 702-3K)

ἔτι δὲ μεῖζων ἄλλη διαφορά τοῖς ἱατροῖς ἐκ παλαιοῦ περὶ τῶν ἀρτηριῶν ἐγένετο, τινῶν μὲν ἠγουμενων αὐτὰς ἐξ αὐτῶν σφύζειν, σύμφυτον ἔχουσας ὁμοίας τῇ καρδίᾳ τὴν τοιαύτην δύναμιν, ὧν ἔστι καὶ ὁ Πραξάγορας, ἐνίων δὲ σφύζειν μὲν αὐτοῦ τοῦ χιτῶνος αὐτῶν διαστελλομένου τε καὶ συστελλομένου, καθότιερ ἡ καρδία, τὴν δύναμιν δὲ οὐκ ἔχουσῶν σύμφυτον ἢ τοῦτο δοῦσιν, ἀλλὰ παρὰ καρδίας λαμβανουσῶν. ἥς γνώμη τις ἔχεται καὶ Ἡρόφιλος. Ἐρασιστράτῳ δὲ οὐδέτερον ἀρέσκει . . .

5 post αὐτοῦ *interpretati Kühn* 7 καρδίας *ABL: καρδίας vulg.*

155 A still bigger difference arose among physicians of ancient times concerning the arteries. Some, among them also Praxagoras, thought that the arteries pulsate by themselves, possessing – like the heart – an innate faculty of such a kind. Others, by contrast, thought that while they pulsate because the arterial coat itself dilates as well as contracts,

just like the heart, it is not because they possess an innate faculty by means of which they do this, but rather because they receive [this faculty] from the heart. To this judgment Herophilus, too, adhered. But Erasistratus held neither of these views . . .

156 Galenus (ex Aristoxeno?), *De pulsuum differentiis* 4.10 (VIII, p. 744K)

τῷ δ' ὑπὸ ζωτικῆς καὶ ψυχικῆς δυνάμεως γίνεσθαι τὸν σφυγμὸν ὑπὸ Χρυσέπμου λελεγεμένῳ προσεθήκει ὁ Ἡρακλείδης τὸ πλεον- τοδυναμούσης, ἐπειδὴ καὶ ἄλλα τινὰ συντελεῖν εἰς τὴν τῶν σφυγμῶν γένεσιν ὁ Ἡρόφιλος αὐτὸς φησι καὶ πάντες οἱ ἀπ' αὐτοῦ κληθέντες Ἡροφίλαιοι. (*Vid. infra HE.20; Cr. 1-2; Caput x.a.*)

156 To what was said by Chrysermus, namely that the pulse arises through the agency of a vital and psychic faculty, Heraclides added 'which is dominant', since Herophilus and all those who are called 'Herophilians' after him say that other things, too, contribute to the generation of the pulses. (*See Chapters x.a, xx.a, xxiv.a infra.*)

157 Galenus (ex Aristoxeno?), *De pulsuum differentiis* 4.10 (VIII, pp. 747-8K)

ἀλλὰ τὰ μὲν τοιαῦτα πρὸς τοὺς ἀφ' ἑτέρων αἰρέσεων ἀμφοσβη- τεῖται καὶ τοῦτῳ καὶ τοῖς ἄλλοις Ἡροφίλαιοις, αὐτῷ δὲ τῷ Ἡροφίλῳ φαίνουτ' ἂν διαφερόμενος ἐν τῷ τὸν σφυγμὸν ἐνέρογεναν μὲν εἶναι νομίζειν ἀρτηριῶν καὶ καρδίας, μέγη δ' αὐτῷ τίθεσθαι τὴν διαστολὴν τε καὶ συστολὴν καὶ ποτε καὶ τὰς ἡμεῖας, ἐν γὰρ ἀκριβῶς ἔπηται τοῖς Ἡροφίλου δόγμασιν, ἢ συστολὴ μὲν ἐνεργεῖα τῶν ἀρτηριῶν ἔστιν, ἢ διαστολὴ δὲ εἰς τὴν οἰκείαν τε καὶ φυσικὴν κατάστασιν τοῦ σώματος αὐτῶν ἐπινοῶδος. βούλεται γὰρ, ὡσπερ ἔπι τῶν πενηνῶτων ὁράται διεστῶς ὁ χιτῶν τῆς ἀρτηρίας, οὕτω κατὰ τῶν ζώωντων ὅσον ἐφ' ἑαυτῷ διεστῶναι, τῶνναυτιῶν Ἀσκληπιάδου δοξάζοντος.

157 Both he [Aristoxenus; *Chapter xxv*] and the other Herophilians argue about such points [pulse definitions] against adherents of other

NR