

Human Dissection and Scientific Method in Greek Medicine

The fragments of the third-century BCE physician Herophilus are remarkable for what they seem to say about scientific method (cf. Kudlien 1964; von Staden 1989: 115–37; Tieleman 1995; Vegetti 2018). The details are hard to pin down from the available evidence, but there are clearly some theoretical affinities between Herophilus and the later Empiricist doctors (cf. von Staden 1989: 115–37; Hankinson 1990; regarding the Empiricists cf. Frede 1990; Berrey 2014).

Herophilus is, however, most prominent in the history of medicine for his dissection of human corpses, something that not known to have been practiced in antiquity apart from him and the somewhat later physician Erasistratus. One might be tempted to think that dissection of human corpses would have appealed to the Empiricist school that emerged soon after Herophilus, but in fact they seem to have been outspoken opponents. The Empiricists insisted that differences between the body in the context of dissection and the normal, living body are too great (cf. Nutton 2013: 151): one cannot simply make observations from dissection and apply them to the case of a patient (Celsus *De Medicina Prohoem.* 23–6 = T63a von Staden; Ioannes Alexandrinus, *Commentaria in librum De sectis Galeni* 5ra35–42 = T63b von Staden). An obvious question, then, is the following: is there something in Herophilus' theoretical commitments that especially justifies dissection?

In this paper I argue that we can find such a motivation for human dissection in Herophilus' methodological ideas. Herophilus' theoretical approach to medical inquiry (when compared with Empiricist and later “Rationalist” attitudes) makes human dissection especially important for medical science. At the same time, though we do not find arguments against human dissection attributed to “Rationalists,” crucially Herophilus seems to have insisted on the

primacy of direct observation in a way that later non-Empiricist doctors did not (*Anon. Londin.* XXI.18–29 = T50a von Staden; Gal. *De exper. med.* 13.6 = T52 von Staden). If reasoning from first principles is sufficient to explain the causes of disease and discover treatments without cutting open the body, it surely must have been difficult to justify human dissection: there was a powerful cultural taboo against it (cf. von Staden 1992), and so if medicine did not seem to require the practice, physicians surely would have foregone it (on the preeminence of theory in Rationalist medicine cf. Polyb. 12.25d2–6 = T56 von Staden).

To understand the theoretical underpinning here, I look at several other aspects of Herophilus' study of the human body, most of all his famed work on pulse lore (regarding which cf. Pigeaud 1978). What emerges from this discussion is that, while Herophilus was happy to engage in theorizing and classification in a way that Empiricists would reproach, he nevertheless insisted on doing so without—to put it succinctly but crudely—departing too far from the phenomena, and this I explain is crucial for understanding the place of human dissection in Herophilus' scientific method.

Works Cited

- Berrey, M., 2014. “Early Empiricism, Therapeutic Motivation, and the Asymmetrical Dispute Between the Hellenistic Medical Sects”. *Apeiron* 47.2: 141–71.
- Frede, M., 1990. “An Empiricist View of Knowledge: Memorism”. In S. Everson ed., *Epistemology: Cambridge Companions to Ancient Thought*, 225–50. Cambridge.
- Hankinson, R.J., 1990. “Saying the Phenomena”. *Phronesis* 35.2: 194–215.
- Kudlien, F., 1964. “Herophilos und der Beginn der medizinischen Skepsis”. *Gesnerus* 21.1: 1–

- Nutton, V., 2013. *Ancient Medicine* (2nd ed.). London and New York.
- Pigeaud, J.-M., 1978. “Du rythme dans le corps: Quelques notes sur l’interprétation du pouls par le médecin Hérophile”. *Bulletin de l’ Association Guillaume Budé* 1978.3: 258–67.
- Tieleman, T., 1995. “Dialectic and Science: Galen, Herophilus and Aristotle on Phenomena”. In P.H. van der Eijk, H.F.J. Horstmanshoff, and P.H. Schrijvers eds., *Ancient Medicine in its Socio-Cultural Context* (vol. 2), 487–95. Amsterdam and Atlanta.
- Vegetti, M., 2018. “L’epistemologia della medicina ellenistica”. *Lexicon Philosophicum: International Journal for the History of Texts and Ideas* special issue (F. Verde and M. Catapano eds., *Hellenistic Theories of Knowledge*): 264–78.
- von Staden, H., 1989. *Herophilus: The Art of Medicine in Early Alexandria*. Cambridge.
- 1992. “The Discovery of the Body: Human Dissection and Its Cultural Contexts in Ancient Greece”. *Yale Journal of Biology and Medicine* 65: 223–41.