

BOOK REVIEW

Colin Webster, *Tools and Organisms: Technology and the Body in Ancient Greek and Roman Medicine*

Chicago: University of Chicago Press, 2023. Pp. 320. ISBN 978-0-226-82877-0. \$45.00 (cloth).

Vivian Nutton

University College London

Colin Webster has written a fascinating and challenging book that ranges far more widely than its title suggests. It examines how the human organism was viewed by writers in ancient Greece and Rome using their experiences of and with technology, but many of his arguments apply also to later debates, for instance those on vitalism and mechanism.

Technology he defines in a broad sense as both making things and what is made. It can include both structures like machines and pumps and processes such as cooking or the mixing of herbs, all of which were part of the experience of the ancient doctor, who in turn used them to explain or, as metaphors, to describe what was taking place in the body. He follows Brooke Holmes in positing a gradual development of ideas about the body from Hippocratic times onwards, and stresses that it may be better to see it as a conglomerate of different perceptions of its parts. It is an organism, a collection of tools, *organa*, although the word seems to have been first used by Plato to signify the internal organs. Less is said about specifically medical tools and how they were used, although their increasing sophistication is noted. The attention rightly given to Galen's use of technological explanations can be amplified by two recent discoveries. Galen reveals in *Avoiding Distress* that he devised his own instruments that he then handed over to an instrument maker to be produced, and the loss of his collection in the Great Fire of Rome in 191 CE was a major blow. The *Commentary on Airs, Waters and Places* also contained new information on his and his father's expertise in astronomy, which would have involved some complex instrumentation. Galen's nimble fingers would have been valuable here just as much as in surgery.

How these technologies, whether as objects or processes, helped to form the mental universe of all those dealing with the human body is the book's theme. They are ubiquitous, and, for that reason, are not always easy to characterize or to assess. They include static fishing nets, used by Plato to explain digestion, as well as automata and the clepsydra (water clock). More might have been said about torsion engines and about cookery, frequently associated with generation, but the author rightly concentrates on the tools that deal with fluids and air, sometimes combined as in the clepsydra, used as an explanation for breathing by the fifth-century BCE philosopher Empedocles. Metaphors from garden irrigation, and even aqueducts, explain how substances can be transported around the body or come to be blocked by waste or excess material. The processes of blowing and suction appear throughout ancient medicine. There are excellent discussions of the new developments in the late fourth century and the early third with Aristotle, Herophilus and Erasistratus, where the rise of dissection coincides with that of mechanics. The links

between Erasistratus' mechanical view of some bodily processes and Asclepiades' world of channels and 'atoms' two centuries later might have been taken further, and there is no need to stress the role of aqueducts and bathing establishments as contributing to the success of Asclepiades and, still more, of the later Methodists. They rejected most aspects of the display culture of anatomy: their most famous author, Soranus, thought it useless and mere ornamental learning. But, as Webster points out, Soranus and some others at least talk of the results of dissection, unlike their contemporaries, the Empiricists, who seem to have viewed the body as a mere canvas on which to observe the symptoms of illness that required treatment. But, at best, the Methodist body was a framework that constrained the movement of atoms through its universal channels, and the theory behind it was far more simplistic, and arguably more understandable, than that of the believers in the four humours.

Webster emphasizes that the idea of the living human being needing to use tools in order to live, inside as well as outside the framework of the body, is found throughout ancient medicine. It is an idea that is compatible with an Aristotelian or Galenic belief in teleology as well as with opposition to it. It also helps to explain phenomena that have often troubled historians, such as the apparent failure of investigators to discover the movement of the pulse or the belief in a thorax that does not expand during respiration. Sometimes the argument is overemphasized in the light of the fragility of much of our evidence and the absence of much context, but there are provocative insights on almost every page. Above all, it enlarges our understanding of the development of Greek medical ideas by providing a bridge between medical and non-medical ideas of the human organism and between the words of philosophers and physicians and the unheard world of the artisan craftsman.