

vivisection

vivisection Squeamishness about the dissection (let alone vivisection) of animals is a mark of much ancient medicine and zoology, and there is no firm evidence for vivisection in those Hippocratic works (see [HIPPOCRATES \(2\)](#)) which are generally dated to the 5th or 4th cent. BC. (The passage in the Hippocratic treatise *On the Heart* describing the vivisection of a pig (9. 80 Littré) is generally dated to the 3rd cent. BC.) Physicians and zoologists from [Aristotle](#) onwards do, however, seem to have vivisected animals and in some cases even humans. Practitioners themselves rarely show signs of concern with the morality of causing animals suffering in the name of knowledge, although such concern was voiced in other quarters (see [ANIMALS, ATTITUDES TO](#) and [KNOWLEDGE ABOUT](#)).

Two ancient physicians are notoriously connected with the practice of human vivisection. [A. Cornelius Celsus](#) reports that the Alexandrian anatomists [Herophilus](#) and [Erasistratus](#) vivisected criminals provided for them by the king (see [ANATOMY AND PHYSIOLOGY](#), § IV). Erasistratus at least seems to have been motivated by the belief that the bodies of the living and the dead differ in important physical respects, and that conclusions drawn from the study of a cadaver will not necessarily hold for a living man. Celsus remarks (*De medicina* 1, Proem 26) that the practice had its supporters, who argued that agony for a few is justified by the widespread benefits that accrue from increased understanding of the body's vital functions, but Celsus himself regards it with distaste. The other major ancient witness, [Tertullian](#) (*De anima* 10), manifests his Christian horror at the practice. The truth of these reports has been fiercely disputed in modern times. Some feel that it is difficult to *prove* that human subjects were ever used—and they add that there is very little evidence that the practice was subsequently used in antiquity. Moreover, Galen himself based much of his own human anatomy on his dissections and vivisections of the Barbary ape and the Rhesus monkey, creatures which he thought most closely resembled humans. The implication is that, for Galen at least, humans were not possible subjects. The balance of modern opinion, however, seems to be in favour of accepting the veracity of Celsus' and Tertullian's reports.

LITERATURE

The evidence for Herophilus and Erasistratus is collected and discussed, with a general summary of earlier work, in H. von Staden, *Herophilus: The Art of Medicine in Early Alexandria* (1989), ch. vi; G. E. R. Lloyd, in *Methods and Problems in Greek Science* (1991).

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