

## Galen on Nature and the Possible, or The Centaur Cannot Hold

In *de Usu Partium* 3.1-3 (3.168-184 K=1.123-134 Helmreich) Galen digresses from his account of the structural anatomy of the legs to quote from Pindar's *Pythian 2* and to explain the impossibility of the existence of centaurs. Galen presents first a teleological argument and argues that, since equine forelegs impair the function of the human hands, the centaur cannot do human *technai*. Galen's second argument is taxonomic, arguing that the centaur would violate standard categories of animals, e.g. that all vertebrate animals possess straight spines, whereas the centaur would possess a right-angled spine. We should have expected the teleological argument, since *UP* is the most thorough teleological account of the body from antiquity. But there is no obvious motivation for Galen's taxonomic argument. This paper will argue that neither the teleological nor the taxonomic argument alone are sufficient; rather, both are necessary to argue Galen's claim. The two arguments in tandem further Galen's broader claims in *UP* about the limits of demiurgic *phusis*.

Pindar's mythic centaurs are the bridge between humans and animals, between civilization and wilderness. Once Galen's teleological argument has shown the centaur's anatomical inability to accomplish typically human tasks – reading books on its knees, jumping, climbing ladders – the beast retains only its monstrous qualities. The taxonomic argument then shows that the creature does not fit in known categories of animals: not among the carnivores, who have digitized feet, nor among the herbivores, who have hooves, but incline their heads to the ground to eat. The mixture of qualities which made the centaur a transitional figure do not admit it into the natural animate world.

These empirical claims about the implausibility of the centaur's existence lend credibility to Galen's *a priori* claims in *UP* about the purposiveness and limited power of nature. As he says in the famous passage comparing his demiurge with the god of Moses (*UP* 11.14, 3.904-906 K=2.158-159 Helmreich), creative nature chooses from among the possible what is best to be done. What is possible follows natural laws; creation is not *ex nihilo*. For Galen, then, natural law must include a categorical element – that no species is a category to itself – and a prescriptive teleological element – that the body of an animal functions as best as possible. The centaur does not satisfy natural possibilities and therefore cannot exist.

Hankinson, R.J. 1988. "Galen Explains the Elephant," in Matthen and Linsky eds.

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Lloyd, G.E.R. 1983. *Science, Folklore and Ideology*. Cambridge.

May, Margaret. 1968. *Galen On the Usefulness of the Parts of the Body*. Ithaca.