Stephen Gaukroger

*The Natural and the Human – Science and the Shaping of Modernity, 1739-1841*


The declared goal of Stephen Gaukroger’s planned six-volume book series *Science and the Shaping of Modernity*, of which the present volume is the third, has from the outset been to answer the grand question ‘how was the scientific enterprise validated, such that it was able to occupy a central place in Western culture and gradually shape all cognitive values around its own?’ (6).¹ In the first two volumes, *The Emergence of a Scientific Culture* (2006) and *The Collapse of Mechanism and the Rise of Sensibility* (2010), which covered the period spanning the 13th to the middle of the 18th century, Gaukroger was primarily occupied with the first part of the question, namely how a scientific culture emerged before merging into new sensibilist forms. In the third volume, the second part of the question takes center stage: how did cognitive values come to be regarded as something in need of scientific explanation? As such, this volume is about the emergence of the human sciences.

In order to answer this admittedly very broad question, Gaukroger develops a claim about *naturalization* which he defines as “the translation of questions that had previously been taken as exclusively conceptual or *a priori* matters, and had been treated accordingly, into a form in which empirical evidence becomes appropriate to answering these questions” (117). Gaukroger recognizes that an array of phenomena could count as empirical evidence in the period, and that naturalization took a variety of forms. While it is conventional to identify naturalization with a reduction to the matter of physics, as in Cartesian corpuscularianism, or the matter of the brain, as in modern-day physicalism, Gaukroger argues that naturalization did not take a reductionist form. Rather, naturalizing strategies used other empirical resources, namely cognitive values such as language, thought and emotions which were not discussed in universal, ahistorical, *a priori* terms, but naturalized and historicized through new disciplines. Gaukroger identifies these different naturalizing projects which studied human behavior as something in need of explanation itself, and shows how exponents of these new scientific disciplines thought it possible to provide the explanations.

The volume is divided into three parts comprising seven chapters, an introduction and a conclusion, and it spans the period from the publication of Hume’s *Treatise of Human Nature* in 1739 to that of Feuerbach’s *Das Wesen des

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¹ Formulations of this question (almost verbatim) may be found on the first page of both the first and the second volumes.
Christentums in 1841. The first part discusses the different identities, or *personae*, of those who studied human nature, and the changing views of what nature consisted of. Gaukroger shows how late-18th century philosophy was divided between two competing models of philosophizing, one pursued by the *Popularphilosophen*, who earned this name not by providing watered-down versions of theories by more enlightened philosophers, but through their conception of philosophy as something to be performed in the public sphere, and one pursued in *Schulphilosophie*, the exponents of which did everything to professionalize their studies. While the first group focused on history, aesthetics, pedagogy, and the art of conversation, the latter group mainly focused on metaphysics.

The second chapter works to bridge the gap from the previous volume as it dismantles the common belief that mechanism, once installed in the Scientific Revolution, was a lasting commitment in natural philosophy. The main point here is that the conception of nature, or, more specifically, the nature of matter, changed from the 17th to the 18th century from something passive, inert, and dead to a new matter not exhausted in physics, but best studied in the burgeoning disciplines of chemistry, electricity and the life sciences. But these matter theories did not remain separate as breakthroughs, such as Galvani’s experiments on animal electricity and Trembley’s discovery of the self-generating freshwater polyp, gave way to the proto-Romantic notion that all of nature is alive and active, though in different degrees (105–10). Especially convincing are the examinations of the new experiments in electricity, and Galvani’s in particular, as these show how mechanical explanations fell short not only in matters pertaining to life, but also in what we today believe to be a core discipline in physics. Chemistry provides another example (78–101), and one that plays into the discussion of Kant’s opposition against other sciences than those built on rational mechanics later in the analysis (ch. 4).

That matter in itself, the nature that different phenomena are being naturalized to, was active and in some cases even mind-like, is an important point for Gaukroger as he is trying to free the concept of naturalization from the neighboring concept of reductionism. Moreover, it also provides him with the stepping stone into part two, in which he discusses four different naturalizing projects: anthropological medicine (ch. 3), philosophical anthropology (ch. 4), the natural history of man (ch. 5), and social arithmetic (ch. 6).

Gaukroger begins by discussing anthropological medicine as a way to naturalize and render empirical human psychology in the work of the *médecins philosophes* such as Bordeu, Ménuret, Barthez, La Caze and Cabanis. Next, turning to Germany, he explores the controversy between Herder and Kant over whether anthropology (the study of man through a form of empirical