

BOOK REVIEW

Fabian Kraemer, *A Centaur in London: Reading and Observation in Early Modern Science*

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Fabian Kraemer's *A Centaur in London* provides a rich analysis of early modern epistemology through the lens of the discourse on monsters in that era. The study is an abridged and revised iteration of his earlier work, *Ein Zentaur in London: Lektüre und Beobachtung in der frühneuzeitlichen Naturforschung* (2014). The English version has been published in Johns Hopkins University Press's Information Cultures series, edited by Ann Blair, Anthony Grafton and Earle Havens. The study spans from the mid-sixteenth century to the mid-eighteenth, narrating the discourse on monsters and curiosities in light of early modern scholarly practices in the Republic of Letters.

Kraemer argues that new observational methods linked to the Scientific Revolution were not solely grounded in experimentation but were also deeply rooted in reading practices. He examines how 'epistemic genres' such as *observatio*, *mémoire*, *historia*, *autopsia* and *copia* facilitated the dissemination of scientific knowledge and contributed to an epistemic shift from prodigious or divine to naturalized explanations of monstrous phenomena. Kraemer builds on the earlier scholarship and guidance of Katharine Park, Lorraine Daston, Gianna Pomata and Ann Blair in his investigation of the monstrous and the reading practices of the early modern period. This places his study among current and relevant discussions of early modern intellectual history and the history of science.

The book is structured in an orderly manner and draws valuable parallels using geographical distinctions. It also explores intellectual practices – both of learned societies and of individual scholars – bounded, in the author's own words, by the figures of Ulisse Aldrovandi (1522–1605), an Italian naturalist, and Albrecht von Haller (1708–77), a Swiss anatomist.

The book is divided into four chapters. The first analyses the 'explosion of the discourse of monsters' (p. 15) in late sixteenth- and early seventeenth-century natural-history literature. Kraemer employs Blair's definitions of 'factoids' (tidbits or morsels of knowledge) to illustrate how earlier publications influenced subsequent studies through replication of texts and images, for example in Johann Georg Schenck's *Monstrorum Historia* (1609), Conrad Lycosthenes's *Prodigiorum ac Ostentorum Chronicon* (1557), or Sebastian Münster's *Cosmographia* (1544).

Chapter 2 focuses on Aldrovandi's handwritten encyclopedia of his natural-history collection (*Pandechion epistemonicon*). Kraemer examines his reading practices, visual representations of monsters (especially centaurs), the question of authority and the nature of observations. Particularly compelling is Kraemer's attention to the physical aspects

of the book and the techniques used in producing such compendia (cutting and pasting excerpts, layout of the page, typography and so on). Kraemer also presents various representations of centaurs and the printing blocks and plates that Aldrovandi used to better demonstrate the circulation of knowledge. This section highlights the uncritical attitude of the authors, for whom reading and collecting factoids was a form of empirical practice of observation in the absence of first-hand experience. By analysing the copying practices of early modern naturalists, Kraemer keenly observes that changing the contexts in which such factoids appeared could alter their 'epistemic status' (p. 51).

As the book unfolds, it becomes visible how naturalists gradually distanced themselves from previous knowledge and ancient authorities. The third chapter ('Observing correctly') elucidates how European learned societies approached questions of monsters and preternatural phenomena. Special emphasis is placed on the *Academia Naturae Curiosorum* (Leopoldina), founded in Schweinfurt by Johann Laurentius Bausch in 1652, and its journal, *Miscellanea Curiosa* (published since 1670). This part explores the epistemic genre of *observatio* – the assumed genre for the journal – highlighting how single experiences had to be meticulously documented without references to ancient authorities or old iconography. The historian could not merely be a collector of past knowledge but had to author these observations, which marked the advent of a new discourse. There was also a growing emphasis on collected and repeated observations, which helped eradicate errors. Furthermore, the model of the 'right observer' emerged, characterized by expert knowledge, diligence and discipline. These qualities stood in stark contrast to common people's view of monstra as prodigious or as bad omens.

The final chapter revisits the rumour of a centaur in London, tracing its origins to eighteenth-century satires. It examines the notion of fables and folk belief, which scholars such as Albrecht von Haller aimed to discard in an attempt to naturalize what was considered strange by practising medical investigation. Kraemer also reinforces earlier claims by Daston and Park that eventually dissociating the divine and prodigious from the discourse of monsters (that is, religious and political agendas) allowed for the naturalization of monsters and their incorporation into modern medical discourse.

The book is significant, as it showcases various aspects of epistemic categories, linking reading practices and genres to the rise of modern scientific discourse. It also highlights the change in epistemic values of knowledge and uses the monstrous as a significant *topos* in that discussion. The study illustrates the evolving modes of observation, knowledge collection and transformation of that knowledge.

References to visual materials, printed works and knowledge circulation bind the contexts of European learned societies. The text emphasizes that scientific methods were also shaped by contesting vulgar (or past) discourses. Incorporating observations of nature into knowledge systems was crucial for advancing natural sciences, as was the revised approach to reading, which was no longer based on collecting ancient examples but involved critical analysis and investigation.

Featuring black-and-white illustrations that effectively convey the ideas discussed, the book presents a clear and persuasive argument, though it is intended for seasoned readers familiar with the intricacies of early modern scientific and epistemological discourse. Frequent signposting certainly helps navigate the rich content. The successful translation of the book into English broadens its audience, enabling more readers to appreciate its insights.