

y en la percepción de esta enfermedad como un mal del cuerpo y del alma de los otros.

En *Uncertainty, Anxiety, Frugality*, Leo van Bergen nos presenta un riguroso y bien documentado estudio sobre medicina colonial en el que se desvelan algunas de las claves que explican el modo en que se diseñaron las políticas de lucha contra la lepra en los territorios coloniales, desde una concepción de la enfermedad ajena a las culturas de quienes la padecieron y basada exclusivamente en los postulados médicos, éticos, políticos y religiosos de una metrópoli que, como señala su autor, vio en esta enfermedad no tanto un problema de salud para la población como un problema de salud para las arcas de quienes ejercieron el control de sus vidas, de sus territorios y de sus recursos. ■

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Jutta Schickore. *About Method. Experimenters, Snake Venom, and the History of Writing Scientifically*. Chicago and London: University of Chicago Press; 2017, 316 p. ISBN: 978-02-26449-98-2. 50 \$

Although «integrated history and philosophy of science» is still a relatively fresh methodological principle towards philosophical problems, treasures came to the surface already from time to time. One of them is Jutta Schickore's second monograph, published by the University of Chicago Press in 2017, titled *About Method: Experimenters, Snake Venom, and the History of Writing Scientifically*. The book is not an easy piece of reading, but it worth our time and efforts as we gain many fresh insights into history and philosophy of science even perhaps without recognizing them at first glance.

While the book has «snake venom» in its title and the very stylish cover shows various figures of snake teeth and other parts, it is a more general piece of scholarship; the history of how snake venom was investigated in the (early) modern period, the question of how venom was conceived to function *exemplify* Schickore's comprehensive story about the evolvement of experimentation's methodological and procedural steps. As it is well known for many, experiments provide the cornerstone of scientific investigations; thought their significance

is often overemphasized, especially at the expanse of creative thinking and theoretical sophistication, there is still much to be discussed from a historical point of view. The main results and narrative junctions of Schickore's story are expressed concisely in her last chapter: as Paul Feyerabend famously claimed that the history of science might convince anyone that there is no such thing as «the» scientific method, the author argued that a more painstaking look at the history of science «shows that there is a sense in which strategies and tools of experimentation transcend the concrete research situation» (p. 226.), that is, various methodological tools and steps were refined, often in direct and explicit reference to each other over a course of time and place. Though Feyerabend's name surfaces only at the last page of the book, the whole monograph might be seen as a treatise about scrutinizing his general observations about method; not about «the» method of science, but «about method» and its advancement.

Snake venom research is not an ad hoc choice from Schickore; though there is a vast amount of literature on the subject, publications did not focus on how reports and treatises on snakes documented methodological issues, or, to use Schickore's own term, how they codified «methods discourse». The term is the author's own choice to note a broader range of issues; discourse is a «nontechnical [expression] to refer to all kinds of methods-related statements in scientific writing about experimentation, including explicit commitments to experimentalism, descriptions of protocols, explanations of methodological concepts, and justifications of strategies of experimentation» (p. 7.). And in fact, due to the social organization (or more probably, the lack of something like that) of the snake venom research community, the majority of the published scientific essays contained remarkable sophisticated and longish descriptions of methodology in general and experimentation in particular. That is, snake venom research is important not because it instantiated something unexpected or flagrantly novel in the history of the life sciences, but because it made explicit those commitments and values that materialized implicitly in scientific practice.

We start the story around the sixteenth century and follow it (sometimes in overlapping order, sometimes with minor temporal jumps) until the second half of the twentieth century. Schickore deals with an impressively large group of scholars; from Francesco Redi, Moysé Charas, Robert Boyle, and Felice Fontana to Richard Mead and S. Weir Mitchell are all discussed in great details, often in more than one chapter, but many others get a word or two as well. For this reason, it would have been quite helpful for the reader (especially for those who lack substantive background-knowledge on the history of snake venom research) to have a short biographical list of all those major figures that were considered as

important enough to present their case as an argumentative element in the big story. Nonetheless, the historical knowledge of Schickore and the way she handles all her data, stories, and materials are exceptional and makes a case about how to do integrated history of philosophy and science.

Throughout the chapters of *About Method*, Schickore shows and contextualizes how her snake venom scholars discussed their own values and commitments towards experimentalism. We go back and forth between pro and contra arguments about each of those specific features of experimentation that are still in the scholarly focus of philosophers of science: repetition (what to expect by making the same experiment hundreds of time), variation (what to expect by making the same experiment hundreds of time but with certain specific and intentional alterations), standardization (rigidifying steps and norms of experiments and their records), exceptions, instrumental settings, operational principles, decisions, stability, exploration, protocols, theory, induction and deduction, value sets, and so on. Though the author notes at the end of the book that what we have seen is not a typical story of success and objective development, we still get a fresh look on how we arrived at our *current* practices. While most of the presented figures in the sixteenth and seventeenth centuries expressed their form of experimental engagement in protracted but still rich qualitative descriptions of settings, initializations of experiments and causes and effects in their context, in time all of these were reduced to only a few quantitative remarks about causal relations and dependencies and short proper names of instruments (without describing their functions). In order to see how we arrived at our contemporary costumes, Schickore's book provides a neat story.

History of experimentation evolved through many things, like trials and errors, correspondences and accusations, contingent local factors, and on how given individuals were able to reach out to people and for materials. Schickore shows, for example, that the attention of the snake venom research community turned towards the venom of Brazilian rattlesnake was quite contingent. As she claims in her conclusion, «methodological advancement means increasing awareness of the obstacles and limitations of experimentation: the unknown but suspected contingencies, the countless circumstances, the variations among living beings, the complexity of organic bodies, and the uncertainties related to techniques and instruments for the study of subvisible phenomena» (pp. 226-227). Without making a sharp thesis about evolution and progress of science, Schickore dissects her own rich materials in countless many possible ways (that is what makes the book a bit hard to give a focused reading), hinting at various feasible causes and further directions for science studies.

There is only one thing that might leave the reader a bit disturbed. While Schickore argues convincingly (or perhaps draws a well-ordered and comprehensive picture) how method advanced in the last four centuries, it is not at all evident that her studies about snake venom research might be generalized for science in general, or even about the life sciences in particular. Isn't it possible that the peculiar situation of snake venom researchers forced itself on their methodological settings (something seemingly close to what the author also says), thus we learn something more about the social history of the field and not about the theoretical issues per se? In short, is the work more philosophical or more «just» historical?

About Method is a valuable work on how scientific knowledge and practice could be fruitfully historicized. Schickore's book presents a strong case for pursuing philosophy in new ways and convinces the readers not to be afraid to look for unrevealed fields and seemingly minor topics and questions since history was done at all levels. ■

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■ **Richard Grusin, ed. *After Extinction*.** Minneapolis: University of Minnesota Press; 2018, 264 p. ISBN: 978-1-5179-0289-6. 25 \$.

¿Qué es lo que viene después de la extinción? ¿Qué es lo que sucede después de pensar en la extinción? Estas preguntas fueron el desafío de Richard Grusin, director del Center for 21st Century Studies (C21) de la Universidad de Wisconsin-Milwaukee, a los participantes de la tercera conferencia del centro dedicada a ese debate sobre el Antropoceno y la Sexta Extinción que es moda en ciencias de toda índole desde que P. J. Crutzen y E. F. Stoermer lo lanzaron en el año 2000. Las anteriores conferencias del C21, que también dieron lugar a sendos libros, se centraron en incorporar «giros» recientes de disparejas ciencias sociales al debate: por un lado, cuestionando la construcción de la centralidad del sujeto humano en los sistemas biológicos, animales, geológicos y tecnológicos, sin abogar por las propuestas posthumanistas (*The Nonhuman Turn*, 2015); y, por otro, contes-