Hieke Huistra, *The Afterlife of the Leiden Anatomical Collections*. *Hands On, Hands Off* (London/ New York: Routledge, 2019, 173 pp., ISBN 9781472461070).

Most of us have some part of our body stored in a medical collection somewhere: for example, a blood or skin sample, a kidney stone, or cancer cells preserved as microscopic slides. In her groundbreaking study *The Afterlife of the Leiden Anatomical Collections: Hands On, Hands Off,* historian of science Hieke Huistra makes you wonder what will happen to these bits of your body in the future: in the coming decades, or, perhaps, even in the coming centuries. She does so by unfolding the afterlife of the Leiden anatomical collections, the oldest institutional collections in Europe. More precisely, Huistra studies how and why old collections remained relevant in the nineteenth century, a period in which medical research and teaching changed profoundly.

Historians of science have been among those who have paid close attention to the material turn. Since the 2000s, the importance of things has been underlined in various histories of science, for instance, on the development of academic networks, the formation of disciplines, and the circulation of knowledge. As part of this larger trend, anatomical preparations and models in recent years have been the subject of numerous monographs, edited volumes and articles. A few studies have focused on the history of the Leiden anatomical collections in earlier periods. Huistra also stands on the shoulders of scholars such as Samuel Alberti, Erin McLeary and Jonathan Reinarz, who have refuted the idea that anatomical collections became redundant in an era of hands-on learning, clinical teaching, experimentation, and laboratory research. We now know that anatomical collections did not disappear in the nineteenth century. On the contrary: they flourished. They were not replaced, but supplemented by the laboratory. They did not become historical artefacts, but were used within the new scientific medicine.

Huistra builds on this abundance of historical scholarship. For example, she draws on Alberti's ideas about the flexibility and dynamic nature of anatomical collections, and confirms that the image of the laboratory replacing the museum is 'plain wrong' (157). Yet Huistra is also able to add new insights to the rich existing historiography. Her book broadens the geographical scope of our knowledge, as previous studies mainly focused on Britain and the United States. More importantly, she offers new and stimulating insights on the re-use, re-interpretation and accessibility of anatomical collections in the nineteenth century.

The first two chapters are on the continued use of anatomical collections by students (Chapter 1) and researchers (Chapter 2). Chapter 1

argues that students did not just gaze at preparations from a distance, but handled them 'lids off and hands on' (19). Collections were used for practical teaching in many ways: for instance, they prepared students for dissecting (also emotionally) and served as empirical material in laboratories. Huistra convincingly argues that, unlike in Britain, touching preparations was routine for students in continental Europe. In addition, Huistra sheds light on distinctions between collections for 'display' and collections for 'handling': the first were museum showpieces, the second were meant for 'touching, feeling, squeezing, and poking' (31).

Chapter 2 shows that 'old' preparations could not only teach students 'new' medicine, but also could be used in 'new' research. Medical researchers were able to reinterpret eighteenth-century preparations because they were, as Huistra puts it, 'made of what they represent' (58). Precisely because they were composed of actual body parts, anatomical preparations could 'answer questions other than the ones they were made to answer' (59). In other words, anatomical preparations could transform from representations of knowledge to empirical material. Huistra illustrates this point beautifully by studying the afterlife of the collection of anatomist Sebald Justinus Brugmans (1763-1819), for instance, drawing attention to the microscopic reinterpretation of macroscopic preparations and to the practice of re-dissecting.

Whereas the first two chapters focus on medical audiences' continued use of collections in the nineteenth century ('hands on'), Chapter 3 and Chapter 4 explain why non-medical audiences stopped using them ('hands off'). Huistra argues that lay visitors lost access when the Leiden collections moved to a new teaching complex in 1860. The move to a distant and unwelcoming building went hand in hand with a scientific rearrangement of the collections. Whereas anatomical preparations used to be accompanied

- 1 For example Caroline Cornish, 'Nineteenth-century museums and the shaping of disciplines: potentialities and limitations at Kew's Museum of Economic Botany', Museum History Journal 8:1 (2015) 8-27; James Secord, 'Knowledge in transit', Isis 95:4 (2004) 654-672.
- 2 For example Rina Knoeff and Robert Zwijnenberg (eds.), The Fate of Anatomical Collections (Burlington 2015); Anna Maerker, Model Experts: Wax Anatomies and Enlightenment in Florence and Vienna, 1775-1815 (Manchester 2011); Lucia Dacome, Malleable Anatomies: Models, Makers, and Material Culture in Eighteenth-Century Italy (Oxford 2017); Elizabeth Hallam, The Anatomy Museum: Death and the Body Displayed (London
- 2016); Schultka Rüdiger and Josef Neumann (eds.), Anatomie und Anatomische Sammlungen im 18. Jahrhundert (Berlin 2007).
- 3 Most notably Marieke Hendriksen, Elegant Anatomy: The Eighteenth-Century Leiden Anatomical Collections (Leiden/Boston 2015).
- 4 Samuel Alberti, Morbid Curiosities: Medical Museums in Nineteenth-Century Britain (Oxford 2011); Jonathan Reinarz, 'The Age of Museum Medicine: The Rise and Fall of the Medical Museum at Birmingham's School of Medicine', Social History of Medicine 18:3 (2005) 419-437; Erin Hunter McLeary, Science in a Bottle: The Medical Museum in North America, 1860-1940 (PhD dissertation, University of Pennsylvania 2001).

by tablets with (often moralizing) tales, they were now stripped of the meanings and narratives that made them interesting for lay visitors (Chapter 3). Furthermore, the new scientific arrangement implied the reclassification and relabelling of numerous preparations, and hence disconnected old preparations from their past. The university lost a status symbol in the process: university governors could no longer use the old preparations to connect the university's present to its glorious history (Chapter 4). As a whole, *The Afterlife of the Leiden Anatomical Collections* tells a compelling story about the flexibility of anatomical collections. The ease with which preparations could be reinterpreted was a blessing for researchers and students, but a curse for non-medical audiences, who lost the collections and the stories that used to accompany them.

Each chapter deftly navigates between the history of the Leiden collection and other examples, mostly from Western Europe. Even though Huistra recognises that local variations occurred (159), for example between Dutch and British anatomical teaching, she tends to emphasise uniformity over difference, broad evolutions over local variations. As a consequence, it remains somewhat difficult to appreciate whether all the collections discussed could easily be reduced to a common pattern, and if and how specific national, urban or institutional contexts mattered. Perhaps this is related to the scope of the study: because of her strict focus on collections, Huistra largely overlooks social histories of anatomy, which have paid ample attention to the ways in which local sensitivities influenced the procurement and use of bodies. The Afterlife of the Leiden Anatomical Collections nonetheless is a splendid study that will be an essential resource for historical scholarship on the material culture of anatomy, and of science more broadly. It is novel and insightful, humorously and eloquently written.

And what about your own tissue? What about all those blood samples and microscopic slides kept in contemporary biobanks? History teaches us that medical institutions will be tempted to keep most of it, and that it will be used in medical practices and research in unforeseeable ways. Perhaps a historian will write a book about it someday.

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