

to focus on the audience and to set clear educational goals. Koslow quotes Evert Routzahn's pragmatic exhibit philosophy: 'the tuberculosis exhibit is in no sense a revolutionary force: it does not overthrow things; it will not bring an immediate reorganization of the universe', but 'it is expected to awaken interest, to impart information, to lead to activity, and to suggest work to be done and plans for doing it' (p. 46). In this period, exhibits were challenging and expensive to conceptualize, develop, tour and maintain, and the Routzahns served as a clearing house for exhibition information, providing practical detail on materials and strategies. Like today's exhibit professionals, 'they argued for less text' (p. 50). Their 1918 book *The ABC of Exhibit Planning* is available free online through the Russell Sage Foundation and is a charming exposition of both the philosophical and the practical sides of public-health exhibit practice.

Knowing one's audience was a key question for public-health exhibit proponents, as Koslow demonstrates with the story of an exhibit destroyed by its subjects. In 1913, the Presbyterian Board of Home Missions commissioned a study on social conditions in Morristown, New Jersey, turning the report's findings into an exhibit at a local school. After a local newspaper published offensive items from the report, Italian parents stormed the exhibit and forcibly deinstalled it. One man, Pellegrino Venecio, destroyed a picture of his own wife and baby captioned 'The foreign born must be taught how to care for their children'. While proponents argued that the exhibit's purpose was to decry that poverty and poor conditions were allowed to persist in Morristown, it is clear that many public-health exhibitions in this period were extremely patronizing to immigrants and the poor and focused on individual rather than systematic solutions to social ills. Nevertheless, wrote the editors of the *Survey* in their response to the Morristown controversy, 'the exhibit is probably the best single medium for presenting the survey findings in attractive and convincing fashion in the community' (p. 87). Although public-health exhibitors believed strongly in the value and efficacy of their medium, the movement slowly subsided through the 1920s and 1930s. Koslow provides an interesting snapshot of this lesser-known episode in public health, social reform and museum practice.

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## **Kalle Kananoja, *Healing Knowledge in Atlantic Africa: Medical Encounters, 1500–1800***

**Cambridge: Cambridge University Press, 2021. Pp. 272. ISBN 978-1-108-49125-9. \$29.99 (paperback).**

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Kalle Kananoja's new book explores the circulation of medical knowledge across the Atlantic before 1800, with a clear focus on Africa and in particular on Angola. The book has seven chapters. The first four focus in turn on the Portuguese in Angola (two chapters), on the Dutch in the Gold Coast, and on the British in Sierra Leone, highlighting the similarities in how Europeans and Africans understood and treated sickness and diseases. Europeans knew that they were living in a region with different plants, which

fostered new medical experimentation and treatments for tropical illnesses as well as more familiar ones. African knowledge of which plants were particularly useful, and how to prepare those plants for medicinal use, was taken by Europeans and applied directly or adapted to suit European medical ideas. The final three chapters return to Angola, exploring Portuguese medical practice in Africa, including medicines, therapies and how Portuguese medics understood the challenges of practising medicine in a new and challenging environment.

The emphasis on Angola is very much to be welcomed since it permits Kananoja to delve much further back in time. Much of the existing literature on Atlantic medicine is anglo-centric, concentrating on British North America or the British Caribbean islands. If Africa comes into the equation, then it is Sierra Leone or other small British settlements in West Africa that are foregrounded. Inevitably this means that the focus is really on the eighteenth century, and blossoms further in the nineteenth century. By foregrounding Angola, this book goes back into the sixteenth and seventeenth centuries and this is important because not only were medical ideas different, but ideas about race more generally were different. Kananoja establishes that the Portuguese were more than willing to learn from African practices and medical knowledge in this era, finding out from African healers which plants were the most effective in treating illnesses old and new, and in general demonstrating few of the prejudices about indigenous knowledge that became so prevalent among Europeans in the eighteenth and nineteenth centuries. This knowledge then circulated in the Atlantic, particularly to Brazil, and sometimes returned to Africa with improvements to techniques or medicines, the obvious example being bark from *cinchona* trees from South America that was used to treat malaria.

For those familiar with nineteenth-century ideas about race, the early modern idea that the 'functioning of European and African bodies was understood to be identical' (p. 184) comes as a surprise. Portuguese medics do not seem to have given much credit to the idea that white and black bodies were in any way different. Rather, all people with similar symptoms were treated in similar fashion. Differences between susceptibility to disease were ascribed to a 'seasoning' process whereby a period of sickness after arrival in a new place was thought to be somewhat inevitable.

The discussion of how to provide soldiers for Angolan garrisons was particularly illuminating in this context. A century before the British began to struggle with exactly the same problem, the Portuguese were faced with chronic sickness and high mortality among their military personnel. Indeed, the Portuguese experimented with importing soldiers to Angola from the hottest parts of Portugal, Madeira and even Brazil, but with little actual difference in outcomes. It does not seem to have occurred to the Portuguese to enlist Africans or Afro-Brazilians in place of white men, which was the solution eventually adopted by most other European powers involved in Africa in the nineteenth century. This is where evolving attitudes towards race were important. The enlistment of non-whites was precisely because by around 1800 black bodies were deemed to be more resistant to tropical diseases. Absent that belief, there was probably little point in enlisting Angolan natives since the hope was that Europeans who survived the 'seasoning' would be as fit and able as native Africans.

There is much to admire about Kananoja's book. The detailed research in Angolan and Portuguese archives is very commendable and adds considerably to our knowledge of the Atlantic world in the early modern era. The coverage of other parts of Atlantic Africa is far more patchy, due to the dearth of sources. The source base is rich for Angola, much less so for the Gold Coast or Sierra Leone until the very end of the eighteenth century. One cannot blame the author for that, and what we are left with is an important contribution to our understanding of how medical knowledge was generated and then circulated largely in Portuguese circles between Portugal, Angola and Brazil. The book is an important corrective to works that largely focus on the anglophone Atlantic in the eighteenth

and nineteenth centuries and should be read seriously by historians of medicine and of early colonialism.

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## **Lina Zeldovich, *The Other Dark Matter: The Science and Business of Turning Waste into Wealth and Health***

**Chicago: University of Chicago Press, 2021. Pp. 259. ISBN 978-0-226-61557-8. \$26.00 (cloth).**

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Human waste can tell us a great deal. At the most straightforward level, our attitudes towards it reveal what we think about sanitation and hygiene. However, human waste also carries far wider connotations: conceptualizations of disgust, cultural attitudes to reuse and the natural world and a reflection of urban–rural distinctions, amongst many other things. Taking this as the premise, Lina Zeldovich embarks on an enlightening tour that blends together the personal, historical, scientific and speculative. *The Other Dark Matter* is arranged across three sections covering in turn some pasts, presents and futures of waste in relation to health and commerce. At the outset, we learn of Zeldovich’s passion for the value and virtues of human waste. This stems from her early family life on a farm in Russia, steeped in the process of converting septic-tank waste into the richest of fertilizer. She weaves a thread of powerful advocacy through the whole text, rooted in personal experience and her belief that a renewal of practices can transform our relationship – currently too distant, too sanitized – with excreta.

Zeldovich, a journalist and writer, is a superb guide. The book is brisk, wide-ranging and thoroughly engaging. She takes the reader in rapid succession through a series of vignettes and inflection points in early human activity, through the advent of farming and the close relationship ancient civilizations maintained with what today we might term the circular economy of waste. She intersperses occasional reflections from scientists working in the present, who provide insight into the chemical processes underlying managed decomposition. Although it is revealing to have these punctuate the narrative, this comes at cost. To hear those working in modern labs declare themselves to be ‘impressed by the Chinese peasants’ ability to maintain their soil fertility’ (p. 35) is to privilege the present over the past. Equally, some of the generalizations Zeldovich deploys are unwarranted. For example, her assertion that ‘urban Europeans didn’t put their waste to good use’ and instead focused on ‘finding the most efficient ways to eliminate it from their homes’ (p. 43) will likely irk historians who have long recognized the subtle nuances present across social status, geography and faith when considering attitudes towards effluence across all periods. Although Zeldovich makes full use of the freedom of expression that comes from playing fast and loose with chronology – a chapter on the insanitary state of the river Thames in the nineteenth century is followed by an immediate return to Antoine van Leeuwenhoek’s ‘animalcules’ two centuries earlier – the historical section of her account therefore feels rather untethered from appropriate contextualization.