Hugh Cagle, *Assembling the Tropics: Science and Medicine in Portugal's Empire, 1450-1700*, Cambridge: Cambridge University Press, 2018. xix + 364 p. ISBN 9781107196636. \$49.99.

Assembling the Tropics encompasses Portuguese thought on tropical diseases and treatments in Africa, India, and Brazil. Foreshadowed in the title, the construction of early modern latitudinal and nautical knowledge was deeply connected to the nuanced and complex assembly of scientific and medicinal knowledge associated with the idea of the Torrid Zone. The universal equivalence of this latitudinally defined region that circumscribes the planet (just under 23.5 degrees north and south of the equator) allowed the Portuguese to make truly global, epidemiological comparisons; they also allow Cagle to build on distinct historiographical concerns to create a globally relevant take on Portuguese imperial science.

For each region, Cagle describes the construction of knowledge in the field of epidemiology according to the historically contingent necessities of that specific temporal and regional epistemic locus. Thus, Cagle's study uncovers tensions that are specific to each region, but also works through transversal aspects. These include tensions between notions of environmental salubrity and epidemiological hostility, and also between ancient teachings, medicine practices in continental Portugal, and new, practical knowledge gleaned in other parts. By the late fifteenth century, West African remedies were already known in Lisbon through the account of Duarte Pacheco Pereira (49). In India, as in Africa and Brazil, febrile concerns were met from 1498 onwards with a recognition that local botanical knowledges and practices were more efficacious than the medicine practiced by Portuguese physicians. Garcia da Orta used diplomatic authorities in order to consult with Hindu *vaidyas* (155-165). In Brazil, the epidemic spread of disease was linked with evangelical expansion, but Jesuits considered the plight of sickness to be a punishment and maintained their faith in European medicine until it became clear to them that Tupí shaman knowledge had to remain "central to colonial therapeutic practices" (240).

Cagle presents the nuanced manners in which Portuguese actors managed the tension between European and non-European knowledge to their best advantage at given historical moments. Covering two centuries, he argues the result was that a uniform understanding of "the tropics" as a coherent environmental, vegetal, and epidemiological region did not materialize until the mid-seventeenth century work of Duarte Ribeiro de Macedo, whose commercial motivations advocated for the transference of valuable global commodities from the East to the salubrious climate of Brazil. Cagle thus offers a view of the historiographical cultural construction of the tropics that has not been

challenged since the histories of Theodore Vogel and Alexander von Humboldt. He builds on a wealth of data gleaned from manuscript and printed chronicles, works of natural philosophy and medicine, maps, and other works created by a range of Portuguese actors from various epistemic contexts. Among his key figures are Duarte Pacheco Pereira (sailor, soldier), Garcia da Orta (physician), and José de Anchieta (Jesuit missionary). An ample secondary bibliography, further supported by a list of acknowledgements testifying to Cagle's sustained engagement with Anglophone and Lusophone scholars, attest to Cagle's ambition to situate the Iberian experience within wider European narratives of the history of science. However, Cagle also draws on the constructivism of Edmundo O'Gorman, referring to the Mexican historian's seminal work on the "Invention" of America, and insisting on the practices of "assemblage" alluded to in the title. On such grounds, the scope and range of the European and extra-European networks explored sits well with a growing body of decolonial studies on the making of Western hegemonic aspirations.

Cagle analyzes the assembly of the tropics with great effect in terms of depicting the cross-cultural medical exchanges. In this way, Cagle moves well beyond Eurocentric narratives of an Iberian scientific revolution. He advocates for the connected and entwined nature of European sciences reliant on alternative forms of knowledge production. His accounts of European engagements with local actors offer a sense of the plurality of discourses available at the colonial nexus. The range of thought in this work is admirable. However, whilst the chapters of this monograph are anchored to the rhetoric of a nautical lexicon (and Cagle makes great use of his turn of phrase in the titling and captioning throughout the book), the importance of latitudinal conceptions of the globe appears underplayed. The Tropics of Cancer and Capricorn defined an analytical framework utilized to subject nature, disease, and human custom to knowledge, allowing for revolutionary epistemic change. It would thus make sense to tie the study of such a framework to the growing body of literature that discusses the coeval shift toward latitudinal charts in what we still call "Iberian cartography."

That said, the identification of latitude as a universal comparative framework is in itself of great importance, and Cagle's ample bibliographical references reflect a thorough analysis of the Portuguese experience in tropical Africa, India, and Brazil. This book offers an impressive narrative of the historical process leading towards the obfuscation of regional nuance and complexity and the creation of a homogenized system of thought about the human and non-human world.

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