

Book Review

Cagle, Hugh. *Assembling the Tropics: Science and Medicine in Portugal's Empire, 1450-1700.* Cambridge UP, 2018.

Assembling the Tropics studies the creation of the idea of the “tropics” as a coherent global region in early modern Portuguese empire, using writings on fever, medicine, natural history, plants and drugs, and disease as the basis of analysis. It investigates how the conjuration of the tropical and intertropical regions of the globe brings to light a complex interplay of politics, trade, cultural negotiation, religion, and learning in imperial practices, and focuses on the largely-neglected role of medicine in the propagation of empire and its associated print culture. The study submits well-known books to analysis, such as Garcia de Orta’s *Colóquios dos simples e drogas e cousas medicinais da Índia* (1563) and Ambrósio Fernandes Brandão’s *Diálogos das grandezas do Brasil* (c. 1618), as well as incorporates other documents (including maps) and lesser-known writings that, in one way or another, substantiate the book’s central thesis that “[i]n Portugal’s empire, global geography, febrile disease, and professional medicine proved mutually constitutive” (16).

Assembling the Tropics ties together many of the current research interests of Hugh Cagle, Associate Professor of History at the University of Utah, who specializes in Latin American (especially Brazilian) history, the history of science, and comparative colonial history. Cagle enlists his expertise in tropical medicine, Iberian science, and natural history to provide a wide-ranging yet detailed study on “important material and ideological relationships between the Atlantic and Indian Ocean worlds” (17). Endeavoring to “make sense of important differences between [these two] theatres of Portuguese colonization” (23), he reveals a narrative that “refuses the centripetal pull of imperial histories of science, especially Iberian science, that focus primarily on metropolitan outlooks and transformations” (17).

The book is divided into three major sections: “The Coast of Africa, 1450–1550,” “The Indian Ocean World, 1500–1600,” and “The Portuguese Atlantic,

1550–1700.” “The Coast of Africa” examines experiences along the west African coast by travelers—such as the Venetian Alvise da Cadamosto—who dispel the legend of the “torrid zone.” They note that Africa beyond the Senegal River is anything but uninhabitable and is, instead, a geographical area of verdant abundance and healthy people. Gomes Eanes de Zurara, who succeeded Fernão Lopes as national *cronista* and keeper of the royal archive, reports the same in his *Chronica do descobrimento e conquista de Guiné*. Yet geographers, like Duarte Pacheco Pereira in *Esmeraldo de situ orbis*, puzzle over the prevalence of dysentery and fever in such an apparently salubrious climate, evidenced in part by ill native Africans captured for the Atlantic slave trade. Cagle points out that “the combination of verdure and fever encountered beyond the Senegal would become emblematic of the entire intertropical world” (35), tracing how ancient and medieval authors (such as Hippocrates) dealt with human and environmental differences and their relation to natural causes. Epidemiological attempts to explain the presence of fever and disease in quasi-paradisiacal locales, Cagle argues, initiated a long-standing, if uneven, imperial medical infrastructure. Cagle’s arguments link the related topics of therapeutic and commercial exchange, patronage, and various *materia medica* (e.g., salt, kola nuts, and balamban) used in treatments for fever.

“The Indian Ocean World” centers on the colonial city of Goa, the center of Portuguese Asian empire and a thriving hub of trade. Orta’s *Colóquios* is studied as a compendium of knowledge that the royally appointed physician-general collected from rulers, merchants, soldiers, and indigenous healers. Cagle analyzes it as a product of the trading and medical cultures of Goa itself. Apart from Orta, other inventories of plants and *naturalia* had a direct influence on the mapping of colonial India and are telling exercises on how to communicate effectively Asian natural realities to readers back in Europe. Cagle studies differences between Orta’s book and its translation into Latin by Carolus Clusius (*Aromatum et simplicium*), which was, in fact, a re-organization and re-conceptualization of Orta’s specialized tome. The translation reveals “the generational shifts in the study of nature and the presentation of natural knowledge” (107) and ultimately “the ways in which naturalists imagined the globe” (111). In this context, the evidence of the senses (such as taste), Cagle shows, could be culturally determined. Interestingly, the reliance on native Indian knowledge of medicine and healing, and the use of *naturalia* like betel leaves,

became imbricated in the ideological postures of Catholic views about Hinduism and could therefore be perceived as subversive.

“The Portuguese Atlantic” surveys the classification of Brazilian nature as at once healthful and harmful and scrutinizes the role of the Jesuits (Company of Jesus) in the politics of natural description, disease, and healing. The fevers and pox of Brazil made recruitment of colonists difficult, especially since the Portuguese Crown was initially uninterested in the newly found American land. Cagle examines a range of attempts to explain (or rationalize) the presence of illness in this Edenic setting and traces how the Company earned a reputation as “Brazil’s foremost colonial naturalists” (240). The documents studied include Brandão’s *Diálogos* and other books from the seventeenth century, such as Aleixo de Abreu’s *Tratado de las siete enfermedades* and Francisco Morato Roma’s *Luz da medicina*. As another example of how a seemingly luxuriant and wholesome nature could foster outbreaks of sickness, Brazil witnesses a continuation of interest in the Hippocratic-Galenic theories of environment and health seen in west Africa.

The many skeins of inquiry running through the book, Cagle concludes, buttress the reading of colonial, scientific history as a practice of “[i]mprovised arrangements—commercial and curative alike—[that] hinged on transgressing the very lines of race, ethnicity, culture, and religion meant to demarcate boundaries between colonized and colonizer” (308). Cagle’s arguments are meticulously presented and draw on a vast consultation of archival sources from three continents. *Assembling the Tropics* is notable for the rigor of its conceptualization and interpretation as much as for the thoroughness and originality of its analyses and conclusions. It is a major contribution to the study of Portuguese empire.

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