

of early modern domestic recipes books by discussing the paper technologies found within them.¹ Her research on paper as a *materia medica*, used for example to make plasters, is particularly interesting. Interactions between domestic and scholarly spheres are also considered in Simon Werrett's essay on the reuse of eighteenth-century wastepaper, including for hairdressing techniques bound up with contested notions of femininity and masculinity. Moving into the modern period, Carla Bittel and Linker both explore how innovative paper tools facilitated bodily knowledge among medical practitioners and patients. Bittel argues that charts studying the human skull enabled phrenologists to construct authoritative, gender-specific identities and simultaneously allowed laypeople to subvert gender stereotypes. The 'schematograph' is Linker's focus; she shows how tracing paper could protect women's privacy during posture examinations, becoming an instrument of female power within science. Anna Maerker also demonstrates how the materiality of new medical technologies, specifically papier-mâché anatomical models, shaped and challenged gender perceptions. By portraying mechanistic rather than aesthetic bodies, the models both empowered and restricted their female makers and users across different imperial contexts.

Another recurring, though more subtle, theme is the link between materiality and morality. Several essays refer to the appropriation of paper technologies by certain communities to claim moral superiority, and socio-political authority, over others. For example, Chapter Four sees Szalay argue that different male groups' engagement with paper, through intellectual book knowledge, artisanal physical labour and commercial acumen, was central to their competing claims for masculine honour. Serrano's outstanding contribution explores how a female philanthropic association, the Junta de Damas, asserted power over the Madrid Foundling Hospital through traditionally feminine management practices, rather than masculine commercialism. Von Oertzen similarly examines the permeability of the domestic-bureaucratic boundary through paper. She explains how domestic data-processing supported nineteenth-century Prussian governance as housewives sorted, counted and organised census cards at home. By emphasising the value of household 'orderliness' to the state, this essay foregrounds the relationship between micro- and macro-level institutions which underpins several other chapters.

In conclusion, *Working with Paper* makes an original and significant contribution to the histories of knowledge, work and gender through the lens of one extremely important material. It is itself a valuable epistemic paper tool for students and experts alike.

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doi:10.1017/mdh.2021.31

Kalle Kananoja, *Healing Knowledge in Atlantic Africa: Medical Encounters, 1500–1850* (Cambridge: Cambridge University Press, 2021), pp. xii + 258, \$99.99, hardback, ISBN: 9781108491259.

While Kikongo and Kimbundu-speaking healers prospected for novel min'kisi, such as statues of Our Lady of Conception, Portuguese and Italian-speaking missionaries and soldiers sought takula, enkasa, seahorse genitalia and other drugs in medical exchanges throughout West Central Africa. Pluralism and curiosity over medicine, anatomy and the salubrity or noxiousness of diverse environments shaped interactions between Atlantic Africans and Europeans between the first decades of the sixteenth century until the middle of the nineteenth century. Kalle Kananoja explores how practices and ideas blended in West Central and West Africa as individuals combined and remade medicine from multiple cultural

¹Elaine Leong, *Recipes and Everyday Knowledge: Medicine, Science and the Household in Early Modern England* (Chicago: University of Chicago Press, 2018).

traditions. Kananoja argues that African creativity and inquiry drove these creolised therapeutic mixtures as much as European concerns arising from the overwhelming problem of disease and death that settlers and others faced on the continent. Kananoja makes use of manuscripts, particularly drug lists, printed materials and historical linguistics to analyse how people in both regions entered into highly pluralistic encounters. The book moves between chapters focussed on West Central Africa – primarily the Kingdom of Kongo and Portuguese Angola – and West Africa.

Banganga ia nzumbi, xinguilas, Kimpasi societies and other healers who used animal drugs like jaguar nails and antelope claws, plants and mineral medicines including pemba clay, appear in Inquisition records and the accounts of Capuchin missionaries like Giovanni Antonio Cavazzi. Europeans understood these figures to be similar to popular folk doctors and ritualists in Europe. Kimbando healers – such as Sebastião/Sebastiana, a non-binary person who appears to have identified themselves as neither a man or woman – drew on spirits and natural materials in therapeutic practices that disturbed and intrigued foreign observers. Portuguese clergy and soldiers sought out indigenous cures and tools like cupping horns to treat illnesses that beleaguered European physicians. Enslaved healers like João Inácio attended to slaves, free people and priests of the Jesuit college in Luanda. Inácio himself consulted other slaves, such as Hieronimo, during difficult cases. Soldiers purchased slave healers to care for them during their time in Angola, including Victoria, a Mbundu woman known as a ‘master of divination’ and surgery (48).

Political, military and ecclesiastic networks facilitated the movement of plants from West Central Africa to Europe. In 1565, a Ndongo ruler forwarded specimens of kikongo wood to King Sebastião of Portugal, aiming to impress his fellow monarch with botanical diplomatic gifts. Soldiers collected numerous medicinals in Angola including mutututu tree, mubango tree and Kisama salt. Sergeant-Major Francisco de Buitrago produced a manuscript book, *Arvore da vida*, detailing the virtues of enkasa bark, a plant he promoted as the ‘sister of the tree from which the cross of the crucified Christ has been made’ (62).

Medical hybridities also proliferated across West Africa and into the Atlantic world. In 1657, Ambassador Bans of the Kingdom of Arda travelled to Cartagena de Indias in part to obtain Spanish medical expertise. In the early eighteenth century, the director-general of Cape Coast Castle preferred the protective fetishes made by his multiracial partner over the advice of English surgeons. Dutch and Danish officers on the Gold Coast learned medicine from their marriages with Akan women. Others, such as Hans Christian Monrad, paid nearby healers to acquire medical secrets involving indigenous herbs and roots.

Atlantic Africa played a further role in the facilitation of global medical exchanges between Europe, Africa, the Americas and Asia. Kananoja discusses the career of a Malaccan healer in early seventeenth-century Bañun who later traveled to Angola. Buitrago collected Asian medicines including Maldivian coconuts, tobacco from São Domingos and ‘Root of thousand men’ from Bahia. European naturalists, especially those sent by Carl Linnaeus and Joseph Banks, relied on the skill and labor of Temne-speaking collectors like Amarah, Peter and Duffa, whose botanical collections made up the bulk of plant shipments sent from Sierra Leone to Sweden and England. Slavers likewise contributed to eighteenth-century botany, including Betsy Heard, a multiracial Susu-speaker in Freetown who instructed Europeans such as Adam Afzelius and Thomas Winterbottom in medicinal plants. Numerous plant specimens later appeared in European herbaria with their autochthonous names, such as a plant Kru-speakers termed ‘*Sassara Winghee*’ (111).

Academic, ecclesiastic and popular healing converged in urban spaces around Benguela and Luanda. Building on David Gentilcore’s framework of medical pluralism, Kananoja demonstrates how disparate kinds of healers interacted and competed for authority in city infirmaries, markets and other public spaces. Patients turned to Portuguese hospitals and African barber surgeons for bloodletting, or to obtain drugs like cinchona bark, opium and Água de Inglaterra from druggists.

Atlantic Africa entered into global histories of health in the early modern period as writers like Leonhard Ludwig Finke assembled new medical geographies. European and African health concepts were not incommensurable, as ideas such as a hot/cold binary, bodily humors and imbalances, and the

power of spiritual forces existed in both medical cultures. Ideas about mental illness further linked Europe and Africa as diagnoses of banza – the psychological affliction of longing for home, derived from the Kimbundu word banza – emerged from the dungeons of the Atlantic slave trade and middle passage voyages during which many enslaved people suffered intense depression and committed suicide.

Healing Knowledge in Atlantic Africa pushes historians of medicine to consider Atlantic Africa as a dynamic intellectual zone within the early modern globe. Franciso Buitrago's list of herbal remedies from *Arvore da vida* is included as an appendix, and is a valuable text for appreciating the commingling of medical traditions in early eighteenth-century Angola. Kananaja's discussion of individuals like Peter, Duffa and Betsy Heard provides an opportunity for scholars to consider the Atlantic African foundations of early modern science. Kananaja's narrative engages a considerable archive of manuscript and printed materials, as well as material culture. One wonders to what extent their primarily textual research might link up to investigations into the colonialist histories of institutional repositories like academic herbaria, gardens and seed vaults. Kananaja's book is a valuable addition to early modern histories of Atlantic African medicine, and will be of particular interest to scholars of West and West Central Africa, Atlantic history and global histories of scientific exchange.

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doi:10.1017/mdh.2021.32

Sunil Pandya, *Medical Education in Western India: Grant Medical College and Sir Jamsetjee Jejeebhoy's Hospital* (Newcastle upon Tyne: Cambridge Scholars Publishing, 2019), pp. xxiv+561, £70.99, hardback, ISBN: 9781527518056.

The East India Company Act 1813, also known as the Charter Act 1813, was an important landmark in the history of the Company rule in India. Although it renewed the charter issued to the British East India Company, the Company's commercial monopoly was ended except for the tea and opium trade and the trade with China. The proponents of liberalism were behind this abolition of the Company's monopolistic trade regime. The liberals also incorporated a clause in the East India Company Act of 1813 allowing the Governor General-in-Council to spend not less than one lac (ie. 100 000) of rupees for the promotion of knowledge of the sciences among the inhabitants of the British territories of India. It marked the beginning of, however humble, the British efforts to educate Indians. It naturally led to a heated debate between the Anglicists and the Orientalists over the kind of education best suited for the British patronage in India. This debate eventually settled with the historic Macaulay's minute of 1835 wherein the Anglicist opinion prevailed over the Orientalist outlook.

Incidentally, much before the Macaulay's minute the Governor of Bombay, Mountstuart Elphinstone (1819–27), made serious efforts to communicate to the natives of India 'a vast store of the useful knowledge' possessed by the English (p. 64). This led to the establishment of the first Native Medical School on the island of Bombay in 1826 with Dr. John McLennan as its superintendent. However, this experiment turned into a blunder as by 1832 not a single student was deemed qualified by the Superintendent although more than 2000 rupees were spent on each of the seventy pupils admitted to the school till that date (p. 72). In such a circumstance, the Government of Bombay was forced to shut down the Native Medical School on 20 June 1832. The future of western medical education in India was now in limbo. However, with the appointment of Robert Grant – whose liberal father, Charles Grant, was the key figure behind the inclusion of the clause of expenditure on education in the Charter Act of 1813 – as Governor of Bombay in 1834, the question of education of Indian doctors in western medicine resurfaced.

Robert Grant in his minute dated 5 March 1838 not only reviewed the fate of the Native Medical School examining the detail reasons for its failure and inherent defects, but also emphasised on the