Disease and African Society

Introduction

Disease in Africa has been the subject of a large number of rich studies. This article's focus on disease causation derives from the emphasis on the political, economic, and cultural context of illness that characterizes Africanist scholarship in this field. A prominent strand of writing has examined how Africa's relationship with external forces, from imperial conquest through the development of tropical medicine to neoliberal privatization, has shaped how disease has both spread and been interpreted. Scholars have noted the continuities in the depiction of Africa and Africans as particularly prone to disease from the era of Western exploration, through colonization, missionization, and industrialization, into modern discourses around *Global Health*, emerging tropical diseases, and chronic illness. Within this narrative, debates around the relative significance of race and environment have proven remarkably resilient, due, in part, to commercial interest in genetic vulnerability to disease and investigations into the relationship between zoonoses and cancer. Significant research has also explored how the scientific sureties of Western biomedicine have often been filtered within Africa through faith-based organizations' spiritually infused healthcare, particularly in the early colonial period and in response to the recent sidelining of public provision associated with structural adjustment and the international prioritization of vertical programs targeting specific illnesses. This interest is matched by explorations of evolving indigenous traditions of disease explanation, so often tinged with a concern for spiritual as well as physical healing, and with public as well as personal health. While the article is structured broadly around chronological shifts in thinking and practice, a number of specific diseases or groups of diseases—HIV/AIDS, malnutrition, mental illness, sleeping sickness, and STDs—have been selected to serve as case studies, due either to their significant role within the history of Africa or to the global importance of the academic writing on these conditions.

General Overviews

Jamison, et al. 2006 provides a useful overview of disease patterns in contemporary Africa. Schumaker 2011 is a helpful guide to scholarly debates. Janzen 1978 is an important example of work that focuses on the patient, indigenous theories of disease causation and perceptions about the relative strengths of local and biomedical therapies. Africans' encounter with biomedicine, particularly in the colonial period, is the focus of Bado 1996, Feierman and Janzen 1992, and Vaughan 1991. The political contexts of, and cultural responses to, contemporary Africa's encounter with chronic disease, *Global Health*, *HIV/AIDS*, and medical experimentation are best approached through Graboyes 2015 and Livingston 2005.

Bado, Jean-Paul. *Médecine coloniale et grandes endémies en Afrique 1900–1960*. Paris: Karthala, 1996. [ISBN: 9782865376537]

Examines the colonial tendency to focus on epidemic disease in French West Africa, and the comparative neglect of endemic conditions such as leprosy, onchocerciasis, and sleeping sickness.

Feierman, Steven, and John Janzen, eds. *The Social Basis of Health and Healing in Africa*. Berkeley, CA: University of California Press, 1992. [ISBN: 9780520066809]

Influential collection, critical of colonialism's impact on African health.

Graboyes, Melissa. *The Experiment Must Continue: Medical Research and Ethics in East Africa, 1940–2014*. Athens, OH: Ohio University Press, 2015. [ISBN: 9780821421734]

Significant examination of the history of a series of medical experiments across East Africa, from the 1940s to the early 21st century. Analyzes the power imbalances and ethical issues surrounding medical research in both colonial and postcolonial Africa.

Jamison, Dean, Richard G. Feachem, Malegapuru W. Makgoba, et al., eds. *Disease and Mortality in Sub-Saharan Africa*. Washington, DC: World Bank, 2006. [ISBN: 9780821363973]

Useful reference text. Chapters focus on a range of key diseases in Africa. Update since first edition adds considerably to consideration of HIV. Valuable data. Designed to support the World Bank's work in the health sector.

Janzen, John. *The Quest for Therapy in Lower Zaire*. Berkeley, CA: University of California Press, 1978. [ISBN: 9780520032958]

Discusses indigenous conceptions of disease, and the willingness of the ill to seek medical support from both local and biomedical healers.

Livingston, Julie. *Debility and the Moral Imagination in Botswana*. Bloomington: Indiana University Press, 2005. [ISBN: 9780253346377]

Examines the production of chronic illness by local patterns of poverty, labor migration, and familial relationships. Important for its focus on ageing, and indigenous conceptions of wellbeing.

Schumaker, Lyn. "History of Medicine in Sub-Saharan Africa." In *The Oxford Handbook of the History of Medicine*. Edited by Mark Jackson, 275–279. Oxford: Oxford University Press, 2011. [ISBN: 9780199546497]

Valuable discussion of recent scholarship around disease in Africa.

Vaughan, Megan. *Curing Their Ills: Colonial Power and African Illness*. Cambridge, UK: Polity, 1991. [ISBN: 9780745607818]

Important analysis of both how Africans viewed Western biomedicine and how secular and missionary medicine understood African mental and physical illness.

Racial and Environmental Theories of Disease

See also section *Epidemiological Transition Theory, Lifestyle Diseases, and Chronic Illness*. The argument that Africa's history has been shaped by the exceptionally high level of disease from which it

suffers has been made most persuasively in Iliffe 2007, whose geographical explanation for this epidemiological pattern emphasizes Africa's tropical disease environment and its proximity to Eurasia and its diseases of urbanization. Between the 18th and early 20th centuries, whether the severe and distinctive pattern of disease experienced by Africans resulted from their inherent racial characteristics or from the peculiarities of the environments in which they lived divided medical, and administrative, opinion. Curtin 1964 provides the best introduction to the contemporary debates, discussing the assumed relevance of humoral and miasmic theories to African conditions, as well as racial beliefs that Africans experienced different kinds of diseases to Europeans, or that disease affected Africans and Europeans differently. The counterintuitive hardening of racial segregation after the emergence of germ theory was explained in Curtin 1985 and Swanson 1977 as a consequence of the persistence into the early 20th century of racial preconceptions about Africans' innate unhealthfulness, as well as misunderstandings or misapplications of science. The assumption, which often had racial overtones, that Africans were largely unaffected by "diseases of civilization," such as cancer, was overturned in the late colonial period by medical researchers who combined a liberal position on issues of race with a commitment to statistical epidemiology. Davies, et al. 1958 reported that there had been little difference in overall levels of cancer in Uganda and Western societies since 1900, but that the types of cancer recorded varied. The implied environmental causation of cancer that was implied by the uneven incidence recorded across Uganda's ethnicities and regions was confirmed in Burkitt 1958, which, as a groundbreaking study, established a connection between viral infection, insect-borne disease, and cancer. The assumption that Africa's distinctive epidemiological patterns were shaped by environmental more than racial factors remained dominant until the turn of the century, when genetic research within Africa and among peoples of African descent stimulated new interest in racial/ethnic predisposition to particular medical conditions, particularly to lifestyle diseases. As Jamison, et al. 2006 demonstrates, however, the weight of the evidence continues to support the primary importance of environmental factors.

Burkitt, Denis. "A Sarcoma Involving the Jaws in African Children." *British Journal of Surgery* 46.197 (1958): 218–223. [doi:10.1002/bjs.18004619704]

Burkitt's observation that the unusual manifestations and geographical clustering of a pediatric cancer indicated viral origin, and some association with insect-borne disease, stimulated important research in the role of viruses and environmental factors in the etiology of cancer.

Curtin, Philip. *The Image of Africa: British Ideas and Action, 1780–1850*. Vol. 1. Madison: University of Wisconsin Press, 1964.

Comprehensive study exploring Western debates in the 18th and 19th centuries around differential disease rates between Africans and Europeans. Discusses theories explaining this difference in terms of diet or miasmic poisons, and those often linked to polygenesis, which held that racial difference explained why Africans seemed to suffer tropical diseases that Europeans rarely contracted, while possessing immunity to other local diseases.

Curtin, Philip. “Medical Knowledge and Urban Planning in Tropical Africa.” *American Historical Review* 90.3 (1985): 594–613. [doi:10.2307/1860958]

Discusses the application of germ theory within tropical medicine. Discusses how ideas of vector-borne disease and parasitology were distorted by racial preconceptions about, for example, mosquitoes’ preference for African blood. Residential segregation in Africa emerged from a confused interplay of environmental and racial disease theories.

Davies, Jack, Barbara Wilson, and John Knowelden. “Cancer in Kampala: A Survey in an Underdeveloped Country.” *British Medical Journal* 2.5093 (1958): 439–443. [doi:http://dx.doi.org/10.1136/bmj.2.5093.439]

Established cancer, formerly regarded as a “disease of civilization,” as a core field of research and therapy in Africa. Demonstrated that cancer was as common among Ugandans under forty-five as it was in Western societies, that cancer incidence had remained constant for fifty years, but that cancers recorded not only differed from those typical in the West but also varied across Uganda’s regions. This implied environmental causation had global ramifications.

Iliffe, John. *Africans*: *The History of a Continent*. Cambridge, UK: Cambridge University Press, 2007. [ISBN: 9780521864381]

A history of Africa structured around demographic change and Africans’ embattled relationship with a hostile disease environment. Iliffe argues precolonial African societies were shaped by a unique prevalence of disease, as the continent suffered both devastatingly heavy childhood mortality due to endemic disease and intense crisis mortality, which worsened in severity as Africa was integrated into the disease networks of the Old World.

Jamison, Dean, Richard G. Feachem, Malegapuru W. Makgoba, et al., eds. *Disease and Mortality in Sub-Saharan Africa*. Washington, DC: World Bank, 2006. [ISBN: 9780821363973]

Extensive survey of current morbidity trends. Chapters by specialists surveying recent studies on conditions such as cardiovascular disease, diabetes, and malaria indicate that environmental factors, which in the early 21st century include sedentary lifestyles, smoking, and Western diets, are more significant epidemiologically than genetic predisposition. Even in the case of hypertension, which several studies have associated with genetic factors, environmental contributors seem at least as important.

Swanson, Maynard. “The Sanitation Syndrome: Bubonic Plague and Urban Native Policy in the Cape Colony, 1900–1909.” *Journal of African History* 18.3 (1977): 387–410. [doi:http://dx.doi.org/10.1017/S0021853700027328]

Discusses how, in the early-20th-century Cape, evolving medical knowledge provided legitimacy to racial prejudice, so that outbreaks of bubonic plague were blamed on the assumed incompatibility between African urbanization and public health. Plague was attributed to the poor hygiene of uncivilized Africans, producing a sanitation syndrome that enabled local authorities to impose policies of segregation and quarantine.

Indigenous Traditions of Diagnosis and Healing

Indigenous healing was typically characterized in early European sources as fundamentally superstitious and traditional in nature, in contrast with the scientific rationality of Western biomedicine, constantly progressing due to its "open" culture of experimentation and observation. Even sympathetic, ethnographically informed observations such as Gelfand 1964 and Horton 1967, which emphasized the rich plant-based knowledge of herbalists, sustained beliefs in African medicine's religious character and adherence to tradition into the late colonial period. Recent scholarship has sought to challenge these perspectives. Significant research into the deep history of indigenous healing systems has revealed their evolving role in maintaining public as well as personal wellbeing (Kodesh 2010). Work such as Flint 2008 and Janzen 1982 examines how several of Africa's healing traditions engaged with the opportunities and tensions arising from societies' engagement with global trading networks and colonial economic and political expansion. Feierman 2000 and Janzen 1978 emphasize the vital importance of evaluating cultures of healing on their own conceptual terms, if the experimental, pragmatic qualities of African medicine are to be appreciated, if the role of individuals' relationships with their community in shaping both illness and therapeutic decision making is to be understood, and if a skeptical medical pluralism is not to be mistaken for random, ignorant flitting between popular and Western medical systems. The absorption of biomedical theories and exotic therapies into indigenous therapeutic systems demonstrate their capacity to evolve, but should not override the quest for individual balance, social harmony, and caring health care that seem to continue to shape a number of local traditions.

Feierman, Steven. "Explanation and Uncertainty in the Medical World of Ghaambo." *Bulletin of the History of Medicine* 74 (2000): 317–344. [10.1353/bhm.2000.0070]

Product of fieldwork over several decades in postcolonial Tanzania. Argues that definitive diagnosis among the Shambaa follows the elimination of possible causes through the serial usage of alternative forms of treatment, such as herbalism, anti-sorcery, and biomedicine. Challenges the thesis in Horton 1967 by cataloguing patients' questioning of the validity of competing bodies of medical knowledge and healers' quest for new knowledge and techniques. Emphasizes local interest in the social and moral context of illness.

Flint, Karen. *Healing Traditions: African Medicine, Cultural Exchange, and Competition in South Africa, 1820–1948*. Athens, OH: Ohio University Press, 2008. [ISBN: 9780821418499]

Rich, chronologically extensive case study. Demonstrated that precolonial healers used surgery and pharmacology, as well as spiritual intervention, and that Zulu medicine adapted to new epidemiological challenges, greater engagement with the outside world, and an emerging consumer culture. Examined the role of medicine in maintaining the health of the body politic. White antagonism toward healers' proximity to power resulted in the criminalization of divination and registration of herbalism.

Gelfand, Michael. *Witch Doctor: Traditional Medicine Man of Rhodesia*. London: Harvill, 1964.

Often perceptive, detailed account of Shona indigenous medical practice in the mid-20th century. Sympathetic, avoiding exoticization (despite the title imposed by the publisher), but by emphasizing the

universal similarity and traditional nature of African healing, sustained the view that it was an anti-modern, "closed" intellectual system, lacking in history. Concludes that indigenous medicine is the primary obstacle to enlightened civilization.

Horton, Robin. "African Traditional Thought and Western Science." *Africa* 37.2 (1967): 155–187. [doi:http://dx.doi.org/10.2307/1158253]

Critique of African healing traditions' supposed lack of logical reasoning in their systems of explanation of affliction. Argued traditional medicine could not progress when problems were interpreted through divination rather than diagnosis. Whereas medical science is "open" to alternative interpretations of signs and symptoms, African medicine is "closed," as established causative explanations cannot be disproved.

Janzen, John. *The Quest for Therapy in Lower Zaire*. Berkeley, CA: University of California Press, 1978. [ISBN: 9780520032958]

Influential analysis of the criteria shaping how local and cosmopolitan medical systems are used in combination. Discusses the primary role of kin-based therapy-management groups in diagnosis and selection of appropriate treatment on behalf of the patient. Notes Kongo diagnosis categorizes most illnesses as either natural (requiring pharmaceutical treatment) or due to human intervention (requiring the restoration of community harmony through possession-based ritual).

Janzen, John. *Lemba, 1650–1930: A Drum of Affliction in Africa and the New World*. New York: Garland, 1982. [ISBN: 9780824093068]

Important challenge to perceptions of African healing's passivity, localism, and incongruity with the forces of globalization. Analysis of indigenous texts and material culture relating to healing practices that addressed the illness-inducing malice and divisiveness that followed international trade. Examines Lemba's ability to transcend ethnic divisions and survive conquest.

Kodesh, Neil. *Beyond the Royal Gaze: Clanship and Public Healing in Buganda*. Charlottesville: University of Virginia Press, 2010. [ISBN: 9780813929279]

Examines the role of clan-based healing systems in shaping the development of the kingdom of Buganda and maintaining its precolonial collective health.

Religion and Disease

As Jennings 2008 argues, religion has played so prominent a role in African healing in large part because of the limited provision offered by secular medicine. Although the medical traditions associated with the world religions were intolerant of African healing and sought to emphasize the distinctiveness of their scientific approach (Ranger 1981), in practice the power of prayer played a powerful role within Christian and Islamic healing. Vaughan 1991 argues that medical mission held that it could prevent as well as cure illness. This belief that conversion to both Christianity and Western civilization would limit Africans' exposure to disease, through the adoption of new codes of hygiene and morality, set

missionary medicine apart from the more pessimistic interventions of secular colonial health providers. In reality, missionary medicine, as Kalusa 2007 shows, was less distinctive than it imagined, in part because African medical auxiliaries employed indigenous therapeutic concepts to translate Christian biomedical ideas for the patients they cared for. African healing rituals have continued to evolve, as Janzen 1992 demonstrates, but so too has the Christian response. The power of healing ministries in modern Africa has been analyzed in a number of studies, with several, such as Ter Haar 1992, examining the recategorization of illness-inducing traditional spirits as demons. Fewer studies interrogate Islamic healing, but as Beckerleg 1994 shows, claims to possess the power of spiritual healing are no less controversial within Muslim societies today.

Beckerleg, Susan. "Medical Pluralism and Islam in Swahili Communities in Kenya." *Medical Anthropology Quarterly* 8 (1994): 299–313. [doi:10.1525/maq.1994.8.3.02a00030]

Islamic healing traditions are understudied within Africa. This example analyzes lay understandings of Islamic humoral medicine among the Swahili. The growing strength of Islamic reformers has undermined healers whose claimed descent from the prophet underpins their spiritual therapy, and fostered an interpretation of illness focusing only on physical causation.

Janzen, John. *Ngoma: Discourses of Healing in Central and Southern Africa*. Berkeley, CA: University of California Press, 1992. [ISBN: 9780520072657]

Important analysis of the deep and contemporary historical significance of *ngoma* ritual associations in equatorial and southern Africa. Employs ethnographic and historical linguistic methodologies to argue *ngoma* is an ancient therapeutic institution within Bantu-speaking Africa, which provides for social reproduction and offers support to the sub-/infertile today.

Jennings, Michael. "'Healing of Bodies, Salvation of Souls': Missionary Medicine in Colonial Tanganyika, 1870s–1939." *Journal of Religion in Africa* 38.1 (2008): 35–40. [doi:10.1163/157006608X262700]

Challenges the claim by colonial medical providers that they focused on preventive work and mass provision, whereas mission medicine was concerned with the individual and curative work. Argues mission medicine provided most healthcare in colonial rural Africa, targeted particular vulnerable groups, and focused heavily on maternity care.

Kalusa, Walima. "Language, Medical Auxiliaries, and the Reinterpretation of Missionary Medicine in Colonial Mwinilunga, Zambia, 1922–51." *Journal of Eastern African Studies* 1.1 (2007): 57–78. [doi:10.1080/17531050701218841]

Argues African auxiliaries employed in missionary medical institutions appropriated concepts and vocabulary from indigenous medicine in order to translate the practices and language of missionary medicine. Consequently, Christian biomedicine came to be internalized by patients as a variant of Lunda healing.

Ranger, Terence. "Godly Medicine: The Ambiguities of Medical Mission in Southeastern Tanzania 1900–45." *Social Science & Medicine* 15 (1981): 261–277. [doi:10.1016/0160-7987(81)90052-1]

Influential article highlighting missionaries' concern that healing through the Holy Spirit might sustain local traditions of spiritual healing, and so explaining the strength of biomedicine within Christian missionization in Africa.

Ter Haar[non-invertible], Gerrie. *Spirit of Africa: The Healing Ministry of Archbishop Milingo of Zambia*. London: Hurst, 1992. [ISBN: 9781850651123]

Important study of the adaptive integration of African healing traditions within Christian churches, in this case by the association of indigenous spirits with Satan, and the categorization of physical affliction as symptoms of demonic possession. That Milingo did not sustain the indigenous healing tradition of social reconciliation helps explain his downfall.

Vaughan, Megan. *Curing Their Ills: Colonial Power and African Illness*. Cambridge, UK: Polity, 1991. [ISBN: 9780745607818]

Contains an important chapter on missionary medicine, which argues that mission personnel typically viewed the advance of Christianity and Western civilization as the ultimate cure for the pervasive sickness that they believed stemmed from Africa's backwardness, immorality, and poor hygiene. Vaughan contrasts this approach with the colonial perception that detribalization was the primary threat to African health.

Disease and Conquest

See also *Sleeping Sickness*. The perception that the imperial conquest of Africa was dependent on a radical transformation of white morbidity is well established. Curtin 1961, famous research on the exceptionally high mortality experienced by white soldiers and officials in West Africa in the late 18th and early 19th centuries, provides the best introduction to the epidemiological obstacles to European colonization. Headrick 1981, research on the transformative effect of quinine on white survival rates, has further strengthened the perception that conquest required a technical response to an unsustainable burden of disease. Cohen 1983, an investigation of Francophone sources, has challenged this assumption, demonstrating that French imperial expansion preceded white mortality decline. The impact of conquest on indigenous patterns of morbidity is similarly contested. Several studies, such as Dawson 1981 and Kjekshus 1996, argue that the European takeover was accompanied by the introduction of new diseases, the transformation of local disease environments, and limitations on African capacity to adapt to changing epidemiological conditions. Other works from the radical pessimist school, such as Turshen 1984, further assert that conquest established a politico-economic system that undermined indigenous healing systems and the sustainability of the domestic economy, making high levels of morbidity, much of it related to nutritional deficiency, the norm. Koponen 1988 and Patterson 1975, by contrast, emphasize that some of these problems preceded conquest, being initiated by Africa's integration into global networks of capitalist trade.

Cohen, William. "Malaria and French Imperialism." *Journal of African History* 24.1 (1983): 23–36. [doi:http://dx.doi.org/10.1017/S0021853700021502]

Argues that the conquest of disease, particularly malaria, did not precede and facilitate French imperialism in Africa. The French made little use of quinine, and white death rates from malaria remained high during conquest. Instead, empire expanded through the increasing use of indigenous troops, while white death rates fell due to the improvement in communications and death rates that followed conquest.

Curtin, Philip. "'The White Man's Grave': Image and Reality, 1780–1850." *Journal of British Studies* 1 (1961): 94–110. [doi:10.1086/385437]

Presents extensive data indicating that infectious disease, especially malaria and yellow fever, caused immensely high mortality among Britons in West Africa during the early 19th century. Careful, systematic observation of disease patterns resulted in the prophylactic adoption of quinine and the reduced use of dangerous curative practices. These sharply reduced morbidity levels, fostering a new optimism about European prospects in Africa.

Dawson, Marc. "Disease and Population Decline among the Kikuyu of Kenya, 1890–1925." In *Proceedings of a Seminar Held in the Centre of African Studies, University of Edinburgh, 29th and 30th April 1977*. Vol. 2 of *African Historical Demography*. Edited by the Centre of African Studies, 121–138. Edinburgh: University of Edinburgh, 1981. [class:conference-proceeding]

Argues conquest created an ideal environment for the unprecedented dissemination of communicable diseases, as new systems of labor migration and transportation resulted in new levels of population mobility, while urbanization fostered localized high population densities. Epidemics of dysentery, meningitis, plague, smallpox, and Spanish influenza caused exceptionally high mortality during and immediately after conquest.

Headrick, Daniel. "Malaria, Quinine, and the Penetration of Africa." In *The Tools of Empire: Technology and European Imperialism in the Nineteenth Century*. By Daniel Headrick, 58–79. New York: Oxford University Press, 1981. [ISBN: 9780195028324]

Argues advances in medical technology, particularly the production of cheap, standardized quinine, drastically reduced European mortality levels in Africa during the 19th century, making conquest more financially and politically feasible.

Kjekshus, Helge. *Ecology Control and Economic Development in East African History: The Case of Tanganyika 1850–1950*. London: James Currey, 1996. [ISBN: 9780821411322]

Argues that precolonial populations managed their local disease environments effectively; disease vectors such as the tsetse fly were restricted in their distribution. Blames conquest for declines in livestock and cultivated land, which damaged nutrition, as well as epidemics of jiggers, smallpox, and other diseases.

Koponen, Juhani. *People and Production in Late Precolonial Tanzania: History and Structures*. Helsinki: Finnish Society for Development Studies, 1988. [ISBN: 9789518915129]

Argues that the development of long-distance commerce prior to conquest facilitated the spread of new diseases along trade routes and disrupted local management of disease ecology.

Patterson, K. David. “The Vanishing Mpongwe: European Contact and Demographic Change in the Gabon River.” *Journal of African History* 16.2 (1975): 217–238. [doi:http://dx.doi.org/10.1017/S0021853700001134]

Suggests increased commercial contact with the outside world in the decades prior to conquest altered local behaviors as well as integrated the West African coast into global disease networks, fostering the spread of both social diseases, such as alcoholism and STDs, and Eurasian contagions, such as smallpox.

Turshen, Meredith. *The Political Ecology of Disease in Tanzania*. New Brunswick, NJ: Rutgers University Press, 1984. [ISBN: 9780813510309]

Hard-hitting critique of the epidemiological impact of the colonial takeover. Focuses primarily on the political ecology of disease: how imposed changes in local environmental conditions provoked vector-borne epidemics. Also emphasizes that conquest destabilized gender relations within the domestic economy, producing high levels of often subclinical illness, particularly among women and children. Argues levels of health declined, yet populations grew due to pronatalist pressures associated with colonial demands for labor.

Tropical Medicine

See also *Global Health*. On one level, a medical specialism deriving from recognition by clinicians such as Patrick Manson that tropical diseases, in contrast to cosmopolitan diseases such as tuberculosis, were largely restricted to specific climatic zones and latitudes, and caused by parasites spread by specific vectors. Yet, as Chakrabarti 2014 shows, the discipline of tropical medicine was the product less of the new germ theory of the late 19th century and more a consequence of a new competitive and constructive imperialism, which sought to apply science to expansionist colonization. This dual imperative, to make Africa safe for white settlement through structured research into the etiology of specific diseases, can, as Curtin 1964 demonstrates, be traced back to the mid-19th century, when sustained empirical observation laid the foundations for the systematic regulation of disease prevention and treatment among Britons in West Africa. Simultaneously, as the essays within Arnold 1996 show, French medical geographers constructed North Africa as a zone of tropical disease, where the risk of infection was to be managed in part by segregation. The narrowness of tropical medicine as an approach has been emphasized in Farley 1991 and Worboys 1976. The marginalization of indigenous communities within their treatment and the tendency to adopt vertical systems of provision targeting specific illnesses, and indeed disease agents in isolation, would with time see tropical medicine give way to alternative approaches, public health and global health.

Arnold, David, ed. *Warm Climates and Western Medicine: The Emergence of Tropical Medicine, 1500–1900*. Amsterdam: Rodopi, 1996. [ISBN: 9789051839111]

Valuable collection. Particularly useful are the chapters on French North Africa by Moulin and Osborne, which examine the role of medical geography within French expansionism and explain how a nontropical region became tropical by virtue of the decadence of its population rather than a distinctive epidemiology. Conceptual chapters by Arnold and Worboys are also useful.

Chakrabarti, Pratik. *Medicine and Empire: 1600–1960*. Basingstoke, UK: Palgrave Macmillan, 2014. [ISBN: 9780230276369]

Valuable overview. Analyzes tropical medicine as an invented tradition; as a specialism institutionalized in Berlin, Liverpool, and London; and as an approach shaped by the concerns of empires rather than indigenous populations. Discusses the emergence of the British focus on parasitology in competition with French and German bacteriological expertise.

Curtin, Philip. "Tropical Medicine." In *The Image of Africa: British Ideas and Action, 1780–1850*. Vol. 2. By Philip Curtin, 343–362. Madison: University of Wisconsin Press, 1964.

Identifies the crucial role played by West Africa in the middle decades of the 19th century in the development of tropical medicine. The exceptionally high mortality suffered by Europeans stimulated systematic data collection and experimentation. On this empirical basis, British authorities imposed regulations on disease prevention and treatment in the African tropics that halved expatriate mortality within a decade.

Farley, John. *Bilharzia: A History of Imperial Tropical Medicine*. Cambridge, UK: Cambridge University Press, 1991. [ISBN: 9780521400862]

Valuable case study whose focus on one medical condition reflected the vertical nature of colonial interventions against tropical disease. Links interventions to white commercial and political interests, compares British with American traditions of tropical medicine, and investigates the role of private foundations and international agencies in refining and sustaining the specialism. Argues the noninvolvement of communities affected by health problems typified the tropical medicine approach.

Worboys, Michael. "The Emergence of Tropical Medicine: A Study in the Establishment of a Scientific Speciality." In *Perspectives on the Emergence of Scientific Disciplines*. Edited by Gerard Lemaine, Roy MacLeod, Michael Mulkay, and Peter Weingart, 75–98. The Hague: Mouton, 1976. [ISBN: 9789027977434]

Important contribution, explaining how tropical medicine became a scientific specialism rather than a mere branch of public health, and why it acquired a metropolitan rather than a satellite focus. Emphasizes the role of imperial expansion in providing the structure and impetus for the development of medical science and training institutions allied to colonization. An approach that prioritized assault on disease agents rather than complex public health interventions made tropical empire affordable.

Sleeping Sickness

Sleeping sickness represents an important case study, given the huge mortality it caused in early colonial Africa, its enduring threat, and the global scientific significance of trypanosomiasis-related research. The classic starting point is Ford 1971, which has inspired several generations of researchers interested in historical disease ecology. Tilley 2004 emphasizes that the intellectual contribution of sleeping sickness was still wider between the wars, as research investigating the interplay of infective agent, the trypanosome; its vector, the tsetse fly; the human, livestock, and game populations on which it fed; and the environment within which it lived played a large part in the emergence of the subfield of disease ecology. The complexity of sleeping sickness transmission prompted an array of responses, varying across imperial and colonial boundaries. As Hoppe 1997, Lachenal 2014, and Lyons 1992 demonstrate, these interventions did share a universal tendency toward coercion, though as Webel 2013 observes, they also became a means for local populations to engage with or avoid colonial and indigenous power. White 1995 discusses the relationship between the alienating nature of colonial control strategies and the emergence of rumors of mal-intent. The contemporary belief that the great Lake Victoria epidemic of the early 1900s resulted from the importation of the *gambiense* form of the disease from western Africa has recently been challenged by genetic evidence and by a reinterpretation of early colonial medical records in Fèvre, et al. 2004.

Fèvre, Eric, Paul Coleman, Susan Welburn, and Ian Maudlin. “Reanalyzing the 1900–1920 Sleeping Sickness Epidemic in Uganda.” *Emerging Infectious Diseases* 10.4 (2004): 567–573. [doi:10.3201/eid1004.020626]

Reinterpretation of early colonial data by epidemiologists, providing compelling evidence that the early-20th-century Lake Victoria epidemic was the *rhodesiense* not *gambiense* form of sleeping sickness, and that it was the product of changes in an endemic situation rather than the result of the introduction of foreign trypanosomes.

Ford, John. *The Role of the Trypanosomiases in African Ecology: A Study of the Tsetse Fly Problem*. Oxford: Clarendon, 1971.

Pioneering study of the ecological context of tsetse expansion. Argues colonialism obstructed local environmental management techniques that sought to try to control the tsetse fly, while colonial interventions attempted to provide an absolute, fixed solution to an evolving, multidimensional ecological problem. Hugely influential due to careful documentation of historical change, backed up by the authors own entomological fieldwork over many decades.

Hoppe, Kirk Arden. “Lords of the Fly: Colonial Visions and Revisions of African Sleeping Sickness Environments on Ugandan Lake Victoria, 1900–1962.” *Africa* 16.1 (1997): 86–105. [doi:http://dx.doi.org/10.2307/1161271]

Discusses the emergence of contrasting approaches to sleeping sickness control within British East Africa, one dominated by resettlement and curative efforts in Uganda, another focused on the elimination of the tsetse in Tanganyika.

Lachenal, Guillaume. *Le médicament qui devait sauver l'Afrique: Un scandale pharmaceutique aux colonies*. Paris: La Découverte, 2014. [ISBN: 9782359250879]

Analyzes the ambition and ethical problems of late colonial prevention campaigns in French Africa. Discusses how the colonial state, determined to eradicate sleeping sickness through mass campaigns of "preventive lomidinization," ignored or concealed reports that the new wonder drug was dangerous and ineffective.

Lyons, Maryinez. *The Colonial Disease: A Social History of Sleeping Sickness in Zaire, 1900–1940*. Cambridge, UK: Cambridge University Press, 1992. [ISBN: 9780521403504]

Important study, adapting the theory in Ford 1971 that precolonial societies were sufficiently stable for occasional inoculation to provide premunity against sleeping sickness. Believes 1890s disruption created unusually dense colonies of tsetse in formerly unaffected areas, triggering epidemics. Details Belgian focus on curative approach, with enforced treatment in resettlement camps. Suggests sleeping sickness offered European administrations unparalleled opportunities to exert control over African populations.

Tilley, Helen. "Ecologies of Complexity: Tropical Environments, African Trypanosomiasis, and the Science of Disease Control in British Colonial Africa, 1900–1940." *Osiris* 19 (2004): 21–38. [doi:10.1086/649392]

Valuable discussion of the emergence of the science of disease ecology between the wars, and the central role of trypanosomiasis research within this intellectual shift.

Webel, Mari. "Medical Auxiliaries and the Negotiation of Public Health in Colonial Northwestern Tanzania." *Journal of African History* 54.3 (2013): 393–416. [doi:https://doi.org/10.1017/S0021853713000716]

Analyzes how colonial disease and public health interventions intersected with broader political and social change in early-20th-century German East Africa. Focuses on indigenous auxiliaries' role as political intermediaries as well as medical aids.

White, Luise. "Tsetse Visions: Narratives of Blood and Bugs in Colonial Northern Rhodesia, 1931–9." *Journal of African History* 36.2 (1995): 219–245. [doi:10.1017/S0021853700034125]

Discusses the systematic concentration of population within interwar Tanganyika; how arguments about tsetse control in Northern Rhodesia reflected anxieties about overpopulation, land degradation, game preservation, and colonial authority; and the relationship between African ideas about the forcible extraction of vital fluids, rumors of vampires, and European ideas about sleeping sickness.

STDs

See also the sections *HIV/AIDS* and *Reproductive Health*. STDs' significance in the early 21st century relates primarily to their role in facilitating HIV infection (Setel, et al. 1999) and in negatively affecting fertility. In the early colonial period, syphilis received more attention than perhaps any other disease in Africa, due to its association with high levels of pregnancy loss and infant mortality, and its assumed

relationship to a perceived crisis of morality and gender and generational tensions. Jochelson 2001, Summers 1991, and Vaughan 1992 provide detailed case studies of the roles played by chiefly authorities, employers, missions, and state officials in early-20th-century control campaigns. Doyle 2013 emphasizes the diversity of approaches to STD control within colonial Africa, the tendency toward liberalization as decolonization approached, and the complex impact of antibiotics on STD prevalence and sexual behavior. De Schryver and Meheus 1990 notes the high prevalence levels of the 1980s, compared to the 1950s–1960s, and the significance of chlamydia, a condition that is likely to have been misdiagnosed as nonspecific urethritis in the past.

de Schryver, Antoon, and André Meheus. "Epidemiology of Sexually Transmitted Diseases: The Global Picture." *Bulletin of the World Health Organization* 68.5 (1990): 639–654. [doi:10.1016/0264-410X(89)90083-2]

Valuable summary of STD prevalence data from a number of African countries, mostly from the 1980s. Generally high reported infection rates. Particularly useful on chlamydia, a disease that before the 1980s was probably diagnosed as nonspecific urethritis or drug-resistant gonorrhea.

Doyle, Shane. *Before HIV: Sexuality, Fertility and Mortality in East Africa, 1900–1980*. Oxford: Oxford University Press, 2013. [ISBN: 9780197265338]

Compares the history of STDs in Tanganyika/Tanzania and Uganda before 1980. Emphasizes Uganda's growing liberalism from the 1920s, contrasted with Tanganyika's persistent coercion; the differential impact of antibiotics of prevalence trends in rural and urban societies; and the significance of drug resistance.

Jochelson, Karen. *The Colour of Disease: Syphilis and Racism in South Africa, 1880–1950*. Basingstoke, UK: Palgrave, 2001. [ISBN: 9780333740446]

Analysis of racialized and gendered discourses around syphilis. Social constructionist discussion of established interests' transformation of concerns about social upheaval into moral crises requiring political intervention. Discusses health officials and employers' discriminatory rejection of effective treatments for Africans on cost grounds.

Setel, Philip, Milton Lewis, and Maryinez Lyons, eds. *Histories of Sexually Transmitted Diseases and HIV/AIDS in Sub-Saharan Africa*. Westport, CT: Greenwood, 1999. [ISBN: 9780313297151]

Useful collection providing a number of country-focused overviews. Introduction discusses continuities between colonial era STDs and HIV. Particularly valuable are chapters on Côte d'Ivoire and Senegal, given the paucity of studies in English on those societies, and Lyons's discussion of the problems of differential diagnosis of syphilis and other treponematoses.

Summers, Carol. "Intimate Colonialism: The Imperial Production of Reproduction in Uganda, 1907–1925." *Signs* 16.4 (1991): 787–807. [doi:10.1086/494703]

One of several important analyses of the early colonial STD crisis in Uganda. Discusses the varying strands of control measures: coercion, moral campaigning, and maternity-focused efforts to remake the Ugandan family.

Vaughan, Megan. "Syphilis in Colonial East and Central Africa: The Social Construction of an Epidemic." In *Epidemics and Ideas: Essays on the Historical Perception of Pestilence*. Edited by Terence Ranger and Paul Slack, 269–302. Cambridge, UK: Cambridge University Press, 1992. [ISBN: 9780521402767]

Analyzes the politics of syphilis campaigns in early colonial Africa, noting the prominent contribution of indigenous authorities, and the tensions between missionary and official positions.

Malnutrition

See also the section *Epidemiological Transition Theory, Lifestyle Diseases, and Chronic Illness*. Iliffe 1987 provides the starting point for any investigation of this theme, a classic account emphasizing that malnutrition displaced famine as the primary nutritional problem in Africa, due to growing population pressure, inequality, and dependence on high-yielding, less-nutritive crops. This depiction of a new crisis of malnutrition, shaped by colonial transformation, is a common theme in the scholarship. The Marxist analysis in Watts 1983 condemned the commodification of agriculture and social relations for increasing the vulnerability of the poor to inadequate diet. Richards 1939 analyzed the corrosive impact of male labor migration on domestic food production. Colonial regimes acknowledged the significance of malnutrition between the wars, though, as Worboys 1988 shows, the problem was initially framed in a narrow sense as one requiring a change in agricultural practice. Investment in postwar nutritional research did result in real scientific achievement (Trowell, et al. 1954) and significant investment in dietary enhancement, though the underlying explanatory framework of late colonial regimes was consistently critical of indigenous dietary practice (Doyle 2016). The analysis of new sources has produced a more nuanced sense of colonial change, with Moore and Vaughan 1994 revisiting Richards 1939, and with the indication that rural food economies were more robust than previously thought. Moradi 2009 meanwhile argues that precolonial diets were less secure than critics of empire have suggested, and that dietary change stimulated a sustained rise in average heights between the 1920s and 1970s.

Doyle, Shane. "Social Disease and Social Science: The Intellectual Influence of Non-medical Research on Policy and Practice in the Colonial Medical Service in Tanganyika and Uganda." In *Beyond the State: The Colonial Medical Service in British Africa*. Edited by Anna Greenwood, 126–152. Manchester, UK: Manchester University Press, 2016. [ISBN: 9780719089671]

Examines the evolution of nutrition science in postwar Uganda, from a focus on cultural causation (carbohydrate-heavy weaning foods, abrupt weaning methods) toward explanations emphasizing maladaptation to modernity (inappropriate usage of bottle-feeding, familial breakdown, child neglect).

Iliffe, John. *The African Poor: A History*. Cambridge, UK: Cambridge University Press, 1987. [ISBN: 9780521344159]

Influential, richly detailed study arguing that a shift from conjunctural to structural poverty and from labor to land shortage, combined with anti-famine policies, that saw drought-resistant, low-labor crops displacing more nutritious staples, produced a transformation in the nature of food insecurity within African societies, with endemic malnutrition replacing recurrent, catastrophic famine.

Moore, Henrietta, and Megan Vaughan. *Cutting Down Trees: Gender, Nutrition, and Agricultural Change in the Northern Province of Zambia, 1890–1990*. London: James Currey, 1994. [ISBN: 9780852556627]

Important revision of the study in Richards 1939, arguing indigenous agricultural systems were more complex and robust, and less male dependent, than was previously indicated. Discusses households' wide-ranging networks of support, how cash sustained subsistence and kinship, and the role of migration within the life course. Argues food security depended not only on women's food production, but also on their ability to secure assistance from others.

Moradi, Alexander. "Towards an Objective Account of Nutrition and Health in Colonial Kenya: A Study of Stature in African Army Recruits and Civilians, 1880–1980." *Journal of Economic History* 69.3 (2009): 719–754. [http://dx.doi.org/10.1017/S0022050709001107]

Employs original source material, military recruitment records, and anthropometric survey data to show that average adult height changed little for men born between 1880 and 1920, but then increased substantially in the mid-, late-, and postcolonial periods. Argues this indicates that colonial and postcolonial policies improved nutritional status and tended to reduce regional inequalities.

Richards, Audrey. *Land Labour and Diet: An Economic Study of the Bemba Tribe*. London: Oxford University Press, 1939.

Detailed examination of women's work, gender relations, and diet in 1930s Northern Rhodesia, arguing male labor migration undermined the sexual division of agricultural work, contributing to endemic malnutrition. Influential critique of how colonial economies worsened African health.

Trowell, Hugh, Jack Davies, and Rex Dean. *Kwashiorkor*. London: Edward Arnold, 1954.

Influential publication arguing protein-energy malnutrition as the primary nutritional problem in Africa, promoting a shift from curative to preventive and educational work, and sustained governmental support of a dietary shift toward mass consumption of milk, meat, and high-protein vegetable crops.

Watts, Michael. *Silent Violence: Food, Famine and Peasantry in Northern Nigeria*. Berkeley, CA: University of California Press, 1983. [ISBN: 9780520043237]

Although focused on famine, an important analysis of the evolution of hunger among the Hausa. Argues food insecurity changed fundamentally due to colonial capitalism. A shift from food to export crop production, integration in a larger exploitative economic system, and monetization, among other factors, created widespread indebtedness, the decline in patron-focused systems of food redistribution, growing inequality, and, ultimately, a rise in the incidence of food scarcity.

Worboys, Michael. “The Discovery of Colonial Malnutrition between the Wars.” In *Imperial Medicine and Indigenous Societies*. Edited by David Arnold, 208–225. New York: Manchester University Press, 1988. [ISBN: 9780719024955]

Analyzes the emergence of nutritional science in interwar Africa, shaped by metropolitan interest in vitamin deficiency and local concerns about low productivity. Investigations emphasized colonial policies had contributed to indigenous populations’ poverty and lack of nutritional knowledge, but defined malnutrition narrowly as a problem of agricultural development, not public health.

Diseases of Rural and Industrial Development

Postcolonial scholarship has largely rejected the, at times, triumphalist narrative of medical histories such as Clyde 1962, which emphasized the role played by colonial health services in facilitating the economic and social modernization of Africa. One common critique, exemplified in Echenberg 2011 and Hughes and Hunter 1970, emphasized the unintended negative health consequences of infrastructural development through the increased exposure to infection risk associated with the facilitating of population movement or the creation of new disease environments. Still more common is the perspective that argues that the structures of colonial and postcolonial capitalist economies entrenched poor health. In relation to western and eastern Africa, this approach reached its apogee with the ascendancy of theories of dependency and underdevelopment in the 1970s and 1980s, as discussed in Stock 1986. In southern Africa, the history of extreme and sustained racial discrimination sustained a subgenre of particularly influential work, based on unusually rich empirical evidence. McCulloch 2002 and Packard 1989 detail the shocking negligence of business and state in relation to the health risks to which mineworkers, and their families and communities, were exposed. These analyses indicate that the Apartheid economy, based on ultracheap black labor shuttled between industrial and rural environments, caused catastrophic levels of morbidity and mortality. Packard 1993 examines the way in which African illness was constructed as a form of racial weakness, while McGregor and Ranger 2000 explores settler and indigenous perspectives on the displacement of upland African farmers into malarial lowlands to facilitate white expansion.

Clyde, David. *A History of the Medical Services of Tanganyika*. Dar es Salaam, Tanzania: Government Printer, 1962.

Detailed account of colonial achievements in medical provision, transforming African productivity.

Echenberg, Myron. *Africa in the Time of Cholera: A History of Pandemics from 1817 to the Present*. Cambridge, UK: Cambridge University Press, 2011. [ISBN: 9781107001497]

Building on earlier work on plague, this study examines the role of new modes of transportation and the movements of colonial armies in accelerating the spread of contagions in the late 19th and early 20th centuries, and the postcolonial impact of war, refugee crises, state collapse, and climate change in local outbreaks of cholera.

Hughes, Charles, and John Hunter. “Disease and ‘Development’ in Africa.” *Social Science & Medicine* 3 (1970): 443–493. [doi:10.1016/0037-7856(70)90022-3]

Extended examination of development’s tendency to destabilize local disease ecologies. Discusses the role of dams and irrigation schemes in spreading river blindness (onchocerciasis), bilharzia (schistosomiasis), malaria, and a range of intestinal infections.

McCulloch, Jock. *Asbestos Blues: Labour, Capital, Physicians and the State in South Africa*. Oxford: James Currey, 2002. [ISBN: 9780852558638]

Detailed study of corporate and state negligence. Demonstrates mining companies knew of asbestos’ health risks from the 1930s, yet the industry was unregulated until the 1980s. Asbestosis, lung cancer, and mesothelioma were suffered by mineworkers, their families, and people living in the vicinity of the mines. Inaction stemmed from the industry’s marginal viability, and its ability to ignore the risks to which its largely African and Coloured workforce was exposed.

McGregor, Joanne, and Terence Ranger. “Displacement and Disease: Epidemics and Ideas about Malaria in Matabeleland, Zimbabwe, 1945–1996.” *Past & Present* 167 (2000): 203–237.

Discusses the initial enthusiasm of postwar southern African governments for the World Health Organization–backed chemical eradication of malaria, and the rapid recognition that new lands safe for white settlement would require the displacement of Africans from the highlands rather than the removal of malaria from lowlands.

Packard, Randall. *White Plague, Black Labor: Tuberculosis and the Political Economy of Health*. Berkeley, CA: University of California Press, 1989. [ISBN: 9780520065741]

Argues African health suffered due to the refusal of South African industry to pay for the reproduction of labor. Poor working conditions, inadequate diets, and overcrowded housing led to a tuberculosis epidemic among Africans drawn to South Africa’s mines and cities after the 1880s. Short-term contracts, and the systematic dismissal and repatriation of the sick, spread the disease back to the increasingly impoverished countryside.

Packard, Randall. “The Invention of the ‘Tropical Worker’: Medical Research and the Quest for Central African Labor on the South African Gold Mines, 1903–36.” *Journal of African History* 34 (1993): 271–292. [doi:10.1017/S0021853700033351]

Discusses South Africa’s mining industry’s efforts to secure access to Central African labor, despite the exceptional levels of pneumonia suffered by these migrants. Rather than improve working and living conditions, mineowners blamed the imagined cultural and biological peculiarities of a new, constructed social category, “tropical workers,” and directed research toward a “magic bullet” inoculation.

Stock, Robert. “Disease and Development or the Underdevelopment of Health.” *Social Science Medicine* 23.7 (1986): 689–700. [doi:10.1016/0277-9536(86)90117-6]

Revision of Hughes and Hunter 1970. Rather than following Hughes and Hunter's critique of the unintended consequences of development, Stock argues African health suffered due to systematic underdevelopment, related to the structural impoverishment and neglect of labor.

Mental Illness

Despite the marginalized position of psychiatric illness within colonial health systems, an extensive analytical scholarship has developed. As McCulloch 1995 shows, colonial-era writings were shaped predominantly by ideas of race. Carothers 1953 was broadly typical of colonial ethnopsychiatry in its view of Africans as characterized by incomplete maturation, easily disturbed by their encounter with modernity. Fanon 1959 famously defined colonialism as imposing a kind of madness on the oppressed, creating a fundamental alienation. The argument in Vaughan 1983 that Foucault's early emphasis on Western psychiatry's fixation with confinement and the separation of the rational from the irrational does not apply to colonial Africa has been particularly influential. Keller 2007 provides an important study of French orientalist categorizations of the insane in Algeria, while Bullard 2007 and Parle 2007 provide valuable examples of pluralist psychiatric traditions.

Bullard, Alice. "Imperial Networks and Postcolonial Independence: The Transition from Colonial to Transcultural Psychiatry." In *Psychiatry and Empire*. Edited by Sloan Malone and Megan Vaughan, 197–219. London: Palgrave MacMillan, 2007. [ISBN: 9781403947116]

Part of a rich collection, particularly valuable due to its examination of indigenous cultural understandings of madness. Analyzes non-Africans' acceptance of African medicine, and the transformation of colonial psychiatry into transcultural psychiatry, shaped by both psychoanalysis and traditional therapies.

Carothers, John. *The African Mind in Health and Disease*. Geneva, Switzerland: World Health Organization, 1953.

Important example of colonial ethnopsychiatry. Claimed the African suffered underdeveloped personality. Played a crucial role in the initial British interpretation of Mau Mau, presenting it as an unsurprising symptom of Africans' inability to adapt to Westernization.

Fanon, Frantz. *A Dying Colonialism*. Paris: Maspero, 1959.

Condemned the racialized categorization of Africans as mentally weak, arguing instead that colonialism itself was mad and maddening, its racist violence denying Africans their subjectivity.

Jackson, Will. *Madness and Marginality: The Lives of Kenya's White Insane*. Manchester, UK: Manchester University Press, 2013. [ISBN: 9781526106551]

Discusses the mental illness suffered by colonial Kenya's poor whites, arguing that the racial burden of maintaining superiority without the material means or emotional support they needed often precipitated their psychiatric problems. Importantly, addresses the role of the law and other social institutions in dealing with psychiatric disturbance.

Keller, Richard C. *Colonial Madness: Psychiatry in French North Africa*. Chicago: University of Chicago Press, 2007. [ISBN: 9780226429724]

Examines the impact of the Algiers School, shaped by orientalist assumptions of Algerian racial inferiority and cultural primitivism. Important study of the psychiatric impact of colonial violence, the work of Frantz Fanon, and the postindependence shift to a psychiatry dominated by the use of psychotropic drugs.

McCulloch, Jock. *Colonial Psychiatry and the African Mind*. Cambridge, UK: Cambridge University Press, 1995. [ISBN: 9780521453301]

Wide-ranging study of colonial ethnopsychiatry, which represented black psychiatric patients as incurable and normal Africans as psychologically deviant.

Parle, Julie. *States of Mind: Searching for Mental Health in Natal and Zululand, 1868–1918*. Scottsville, South Africa: University of Kwa-Zulu-Natal Press, 2007. [ISBN: 9781869140984]

Discusses the development of professional psychiatry in South Africa, in a context of dynamic medical pluralism. Psychiatrists competed with healers from three interacting medical traditions, indigenous African, Indian, and Western. Important discussion of the causes of and responses to spirit possession and suicide.

Vaughan, Megan. "Idioms of Madness: Zomba Lunatic Asylum, Nyasaland, in the Colonial Period." *Journal of Southern African Studies* 9.2 (1983): 218–238. [doi:10.1080/03057078308708058]

Often cited, argues Foucauldian psychiatric theory did not apply in Africa, as Africans were treated as collective others, and were viewed as inherently irrational and childlike. Considers that what were defined as indigenous expressions of insanity, such as spirit possession, were viewed as relatively harmless, whereas idioms of madness which were western were associated with dangerous exposure to education. Notes there was no great confinement in Africa.

Reproductive Health

See also *STDs*. Caldwell and Caldwell 2000 provides the best introduction to the demographic and medical literature on fertility problems in Africa, the severity of which are ascribed here primarily to high prevalence of chlamydia and gonorrhea. This emphasis on the role of pelvic inflammatory disease arising from STDs in causing infertility and subfertility also features in Collet, et al. 1988 and Rétel-Laurentin 1979. The high prevalence of female genital cutting/mutilation in Africa has been investigated by a number of scholars, with Boddy 1989 examining it as part of a package of reproductive concerns associated with the practice of spirit possession, and Thomas 2003 discussing its encouragement in colonial Kenya as a means of averting abortion. Colonial interventions in the realm of reproduction are also the subject of an examination in Hunt 1999 of the impact of the medicalization of childbirth on indigenous practice and thinking. The mismatch between external interventions and indigenous concerns around reproduction is further explored in the contemporary period in Allen 2002 and Bledsoe

2002. These studies examine how international programs designed to foster fertility limitation often run up against local women's experience of fertility failure.

Allen, Denise Roth. *Managing Motherhood, Managing Risk: Fertility and Danger in West Central Tanzania*. Ann Arbor: University of Michigan Press, 2002. [ISBN: 9780472112845]

Case study examining a safe motherhood initiative, revealed as focusing almost exclusively on fertility control. Discusses how external experts defined motherhood in terms of risk, specifically of excessive childbearing. Local women's primary reproductive concerns, infertility, miscarriage, and pregnancy loss were largely ignored.

Bledsoe, Caroline. *Contingent Lives: Fertility, Time, and Aging in West Africa*. Chicago: University of Chicago Press, 2002. [ISBN: 9780226058528]

Often-cited critique of population control programs in Africa. Argues African women use contraception to enhance maternal health, defer aging, and sustain reproductive potential rather than to achieve fertility limitation per se. Important discussion of the use of contraception following miscarriage and stillbirth.

Boddy, Janice. *Wombs and Alien Spirits*: *Women, Men and the Zar Cult in Northern Sudan*. Madison: University of Wisconsin Press, 1989. [ISBN: 9780299123109]

Ethnographically rich analysis of Sudanese spirit possession and its relationship to reproductive disorder.

Caldwell, John, and Pat Caldwell. "From STD Epidemics to AIDS: A Sociodemographic and Epidemiological Perspective on Sub-Saharan Africa." In *Infertility in the Modern World: Present and Future Prospects*. Edited by Gillian Bentley and Nicholas Mascie-Taylor, 153–186. Cambridge, UK: Cambridge University Press, 2000. [ISBN: 9780521643641]

Useful survey, emphasizing STDs as the major cause of pelvic inflammatory disease (PID) in Africa, though acknowledging limited data on unhygienic abortion and delivery.

Collet, M., J. Reniers, E. Frost et al. "Infertility in Central Africa: Infection is the Cause." *International Journal of Gynecology and Obstetrics* 26.3 (1988): 423–428. [doi:10.1016/0020-7292(88)90340-2]

Study emerging from the most important longitudinal survey of infertility in Africa, reported very high level of female primary and secondary sterility in Gabon in the 1980s, predominantly due to tubal occlusion.

Hunt, Nancy Rose. *A Colonial Lexicon of Birth Ritual, Medicalization and Mobility in the Congo*. Durham, NC: Duke University Press, 1999. [ISBN: 9780822323310]

Influential examination of the development of mid-century Africa's most ambitious system of maternity care. Focuses on the complex translation of concepts of medicalized childbirth, and its adaptation by local women.

Rétel-Laurentin, Anne. *Un pays à la derive: Une société en regression démographique; Les Nzakara de l'est centrafricain*. Paris: J. -P. Delarge, 1979. [ISBN: 9782711301263]

The richest analysis of infertility in Francophone West Africa during the middle decades of the 20th century. Argues subfertility resulted not from voluntary limitation but from high STD prevalence, and marital breakdown due to miscarriage or delayed conception.

Thomas, Lynn. *Politics of the Womb: Women, Reproduction, and the State in Kenya*. Berkeley, CA: University of California Press, 2003. [ISBN: 9780520235403]

Exceptionally rich history of reproduction in Meru, Kenya. Best known for its analysis of colonial officials' interwar pronatalism, which saw them attempt to enforce the practice of "female genital cutting" at an earlier age than was customary in order to reduce the incidence of the abortion of children conceived prior to initiation into adulthood.

Epidemiological Transition Theory, Lifestyle Diseases, and Chronic Illness

This highly influential approach, which emerged out of modernization and demographic transition theories, argues that all societies will replicate the Western transition from epidemics of infectious disease to a health pattern dominated by chronic, lifestyle conditions. Omran 1971 provides a classic introduction to the theory. Notkola, et al. 2000 offers an unusually detailed case study of falling mortality in one society, which notes that the African "transition" varied from the model both in the unusually high mortality among adults in the past and in the resurgence of infectious disease since the 1980s, in the form of HIV/AIDS. The distinctive evolution of chronic disease in Africa is also emphasized in Zimmet 2000, which suggests that both ancient genetic adaptations to infectious disease and contemporary global inequalities have made the impact of chronic diseases particularly severe in marginalized African societies. The theme of inequity is further developed in Prince and Marsland 2014 and Livingston 2012, with both sources noting how chronic conditions are neglected within a medical system that remains heavily focused on contagion. Livingston further challenges Omran's model by noting that chronic conditions in Africa often result from infection, and in both of Livingston's 2012 and 2005 books, criticizes universalist epidemiological theories that underplay the significance of local contexts of disease causation and response. Webb 2014, a case study of malaria, provides another critique of the Omran narrative by highlighting infectious diseases' capacity to adapt to and recover from intermittent efforts at eradication and control.

Livingston, Julie. *Debility and the Moral Imagination in Botswana*. Bloomington: Indiana University Press, 2005. [ISBN: 9780253217851]

Important, original contribution, particularly rich on how chronic illness has been shaped by local patterns of poverty, labor migration, and familial relationships; its relationship with ageing; and how it has been understood within Tswana conceptions of well-being and morality.

Livingston, Julie. *Improvising Medicine: An African Oncology Ward in an Emerging Cancer Epidemic*. Durham, NC: Duke University Press, 2012. [ISBN: 9780822353270]

Critiques the fixation with infectious disease in local and global public health programs, and assumptions that chronic disease would displace infection as Africa "modernized." Argues a growing cancer crisis is partly due to environmental factors and tobacco multinationals seeking new markets, but also to infectious disease. Particularly important on the clinical adaptation, by clinicians, patients, and relatives, of biomedical knowledge due to limited resources and embedded notions of healing and pain.

Notkola, Veijo, Ian Timaeus, and Harri Siiskonen. "Mortality Transition in the Ovamboland Region of Namibia, 1930–1990." *Population Studies* 54.2 (2000): 153–167. [doi:10.1080/713779086]

Detailed case study, using parish registers, indicating large gains in life expectancy between the 1930s and 1980s, partly due to gradual improvements in income, education, and public health, but particularly to the rapid expansion of curative medicine in the late 1940s and 1950s. This saw adult mortality, formerly very high, fall sharply, creating the pattern of relatively high child mortality commonly assumed to be characteristic of Africa.

Omran, Abdel. "The Epidemiological Transition: A Theory of the Epidemiology of Population Change." *Millbank Memorial Fund Quarterly* 49 (1971): 509–538. [doi:10.1111/j.1468-0009.2005.00398.x]

Argued all societies would move through three stages, from a high, fluctuating mortality pattern, through a period of declining pandemics, to one characterized by degenerative, "man-made" disease. Widely criticized academically, but remains influential in shaping assumptions about the impact of growing prosperity and "Western" behavioral patterns on African epidemiology.

Prince, Ruth, and Rebecca Marsland, eds. *Making and Unmaking Public Health in Africa: Ethnographic and Historical Perspectives*. Athens, OH: Ohio University Press, 2014. [ISBN: 9780821420577]

Chapters by Mulemi and Whyte analyze the impact of chronic conditions neglected by both governments and global health programs, cancer in Kenya and diabetes in Uganda.

Webb, James. *The Long Struggle against Malaria in Tropical Africa*. Cambridge, UK: Cambridge University Press, 2014. [ISBN: 9781107052574]

Analyzes the evolution of malaria control strategies from the precolonial period to the early 21st century. Emphasizes the tendency for intervention campaigns to decline in efficacy over time, causing problems of lost partial immunity among older populations. Notes the similarities between current strategies of eradication and those of the past.

Zimmet, Paul. "Globalization, Coca-colonization and the Chronic Disease Epidemic: Can the Doomsday Scenario be Averted?" *Journal of Internal Medicine* 247 (2000): 301–310. [doi:10.1046/j.1365-2796.2000.00625.x]

Explores the epidemic of type 2 diabetes in the Global South through a case study of Mauritius. Argues that the impact of Western lifestyle diseases is unusually severe in marginalized non-Western societies. Discusses the debate around the possible role of genetic adaptation to dietary fluctuation and in utero

malnutrition. Raises important concerns about the ethical issues associated with research into genetic susceptibility to lifestyle diseases.

HIV/AIDS

See also the article on HIV/AIDs by Brooke Grundfest Schoepf. The best introduction to the literature on the emergence and spread of HIV in Africa remains Iliffe 2006, though it is now somewhat out of date. Giles-Vernick, et al. 2013 provides a useful update on recent developments in the scholarship on the emergence and early dispersal, as well as a critical commentary on non-historians' use of historical archival material. The distinctive features of the African pandemic—very high prevalence and transmission predominantly through heterosexual sex—have prompted researchers to look for unusual aspects of African sexual behavior. Caldwell, et al. 1989 controversially asserted that African sexual culture has always been characteristically unconstrained, a view condemned as ahistorical and dismissive of cultural diversity by a number of scholars, including Shane Doyle (see Doyle 2013). The intersection of past and present has been further examined in Boyd 2015, which examines the tensions between two morally conservative responses to HIV, one based on neotraditionalism, the other on evangelical sexual purity. The recent work of geneticists, such as in Faria, et al. 2014, in dating and locating the emergence of the virus's various groups and subtypes has focused historical research on the key moments in HIV's development into a pandemic: the transfer of the simian immunodeficiency virus to humans in early-20th-century Cameroon, the transportation of the human immunodeficiency virus from rural Cameroon to Léopoldville (Kinshasa), and its subsequent dispersal eastward and southward. Pépin 2011 provides the most complete single-volume analysis of how HIV was spread in different environments and periods by both sexual change and iatrogenic transmission (through blood transfusion and the reuse of unsterilized needles and syringes during mass vaccination campaigns and compulsory examination and treatment for diseases such as sleeping sickness). Pineda-Peña, et al. 2016 provides an important correction to the neglect of the role of Lusophone countries in the story of HIV.

Boyd, Lydia. *Preaching Prevention: Born-Again Christianity and the Moral Politics of AIDS in Uganda*. Athens, OH: Ohio University Press, 2015. [ISBN: 9780821421697]

Important recent study examining how the President's Emergency Plan For AIDS Relief (PEPFAR) pro-abstinence prevention strategies intersected with contemporary and historical anxieties concerning sexual morality, marriage, kinship, and gender relations within Uganda. Valuable analysis of growing moral conservatism and homophobia.

Caldwell, Jack, Pat Caldwell, and Pat Quiggin. "The Social Context of AIDS in Sub-Saharan Africa." *Population and Development Review* 19.4 (1989): 185–234. [doi:10.2307/1973703]

Often-cited though much-criticized article arguing that HIV was so severe in Africa because it emerged out of an ancient sexual pattern that prioritized the expansion of the lineage over fidelity within the family.

Doyle, Shane. *Before HIV: Sexuality, Fertility and Mortality in East Africa, 1900–1980*. Oxford: Oxford University Press, 2013. [ISBN: 9780197265338]

Traces the history of sexual attitudes and behavior in the region where Africa's first mass rural epidemic emerged, emphasizing precolonial variation in ethnic norms and growing uniformity over the colonial period, due to labor migration and new forms of socialization. Suggests the sexual patterns that facilitated rapid transmission emerged before the 1970s. Emphasizes both the frequency of short-term sex and changes in the nature of concurrency.

Faria, Nuno, Andrew Rambaut, Marc A. Suchard, et al. "The Early Spread and Epidemic Ignition of HIV-1 in Human Populations." *Science* 346.3 (2014): 56–61. [doi:10.1126/science.1256739]

Important summary and interpretation of phylogenetic investigations into HIV's dispersal from the Cameroonian rainforest to the cities of eastern and southern Africa. Provides a valuable chronological framework for future research.

Giles-Vernick, Tamara, Didier Gondola, Guillaume Lachenal, and William H. Schneider. "Social History, Biology, and the Emergence of HIV in Colonial Africa." *Journal of African History* 54 (2013): 11–30. [doi:http://dx.doi.org/10.1017/S0021853713000029]

Important discussion of how historians should respond to new genetic evidence dating HIV's emergence and dispersal. Commentary on scientists' often noncritical, non-contextualized use of archival sources. Attempts to provide greater historical depth to the evolution of both human-simian contact and commercialized sexual relationships in equatorial Africa.

Iliffe, John. *The African AIDS Epidemic: A History*. Oxford: James Currey, 2006. [ISBN: 9780821416884]

Still the best single-volume history of the African epidemic, which Iliffe explains was so severe because it was so well established by the time the virus was identified. Particularly strong on why the epidemic developed differently in western, eastern, and southern Africa, and on South Africa's President Mbeki's assertion that AIDS was the product of poverty, malnutrition, and poor health.

Pépin, Jacques. *The Origins of AIDS*. Cambridge, UK: Cambridge University Press, 2011. [ISBN: 9781107006638]

Based on extensive archival research, epidemiologist-physician's account provides a comprehensive account of the evolution of HIV in colonial West Africa. Examines the role of colonial disruption; population expansion; forced labor; and mass, unsterile injection campaigns in facilitating the transmission of HIV from the Cameroonian "cut hunter" to the cities of Brazzaville and Kinshasa, where gender imbalances, new kinds of sexual relationships, STDs, and population mobility fostered an epidemic.

Pineda-Peña, Andrea-Clemencia, Jorge Varanda, João Dinis Sousa, et al. "On the Contribution of Angola to the Initial Spread of HIV-1." *Infection, Genetics and Evolution* 46 (2016): 219–222.

Building on important Lusophone research on the history of HIV-2, this multidisciplinary team traces Angola's role in the early dispersal of HIV-1 from the Léopoldville epicenter.

Privatization, Economic Growth, and Population Health

See also *Emerging Tropical Diseases*. Since the early 1980s, African health-care systems have been transformed due to the adoption of structural adjustment programs, commonly at the insistence of the International Monetary Fund (IMF) and World Bank. These programs sought to reduce inefficiencies in state provision and overall state expenditure by lowering levels of employment in governmental institutions, cutting salaries and other state expenditure, and opening up aspects of public provision to the market. The implications of these goals for health provision were spelt out in International Bank for Reconstruction and Development 1987, which recommended that patients at state facilities should pay user fees and that private insurance and nongovernmental providers should be integrated into national medical systems. The negative impact of cuts in state health care for the poor were already visible by this time, yet international lenders' response was not to recommend specific protections for the poor, but to develop a new mechanism, the Disability Adjusted Life Year (DALY), that would guide African governments on how to best invest their health budgets to achieve maximum returns. The production of a definitive evaluation of the overall epidemiological impact of macroeconomic policy, in isolation from other factors, has not yet been achieved. Growing prosperity has been associated with improvements in health and longevity in some African countries such as Ghana, achieved, it is claimed, though a larger tax base and greater efficiency, though even here, as Kotoh and van der Geest 2016 shows, medical insurance systematically marginalizes the poor. The bulk of the scholarship on liberalization is profoundly critical. According to Turshen 1999, the channeling of international aid through nongovernmental organizations has undermined an already fragile state health system, skewing the market and creating a disconnected series of providers that, as McCoy, et al. 2005 shows, has struggled to respond coherently to AIDS and other major health problems. Claims of enhanced efficiency have been challenged by close case studies, such as Foley 2010, which note that privatization and centralization contributed to staff demoralization, declining quality of care, a brain drain from the public sector, and heightened tensions between clinicians and patients. Analyses such as Kawachi and Wamala 2007 have highlighted that the inequality and economic insecurity associated with structural adjustment's wider reforms have impacted on health in complex, negative ways by limiting access to education, increasing the cost of food and basic services, and fostering transactional sex. An alternative approach, exemplified in Allotey, et al. 2003, which also seeks to draw out the broader implications of liberalization, emphasizes that medical systems' use of the DALY fails to take full account of the social and economic losses consequent on illness.

Allotey, Pascale, Daniel Reidpath, Aka Kouamé, and Robert Cummins. "The DALY, Context and the Determinants of the Severity of Disease: An Exploratory Comparison of Paraplegia in Australia and Cameroon." *Social Science & Medicine* 57.5 (2003): 949–958. [doi:10.1016/S0277-9536(02)00463-X]

Argues the severity of disease is not universal across all societies, and so attempts to impose a global system of medical accountancy are problematic. Builds on earlier critiques of medical cost effectiveness, based on concerns of ethics, equity, and human rights. Disputes the underlying assumptions of the DALY, which ignore context and so risk exacerbating inequalities by undervaluing the burden of disease in less-developed countries.

Foley, Ellen. *Your Pocket Is What Cures You: The Politics of Health in Senegal*. New Brunswick, NJ: Rutgers University Press, 2010. [ISBN: 9780813546674]

Examines the local impact of structural adjustment on the delivery of health services. Discusses how user fees profoundly damaged health units while forcing the poor to take on the cost of medical provision, legitimized by a discourse of state-citizen partnership.

International Bank for Reconstruction and Development. *Financing Health Services in Developing Countries: An Agenda for Reform[http://documents.worldbank.org/curated/en/468091468137379607/pdf/multi-page.pdf]*. Washington, DC: World Bank, 1987. [ISBN: 9780821309001] [class:report]

Advocated, and set out the mechanisms for, the privatization of health services. Proposed that government services should be decentralized and should charge user fees, private insurance should be introduced, and nongovernmental organziations should be allowed to compete in the medical market. Marked the Bank's displacement of the World Health Organization in the formation of global health policy.

Kawachi, Ichiro, and Sarah Wamala, eds. *Globalization and Health*. Oxford: Oxford University Press, 2007. [ISBN: 9780195172997]

Important edited collection examining the impact of globalization and neoliberalism on health. Has a particular focus on gender biases in the health costs of adjustment. Chapter by Breman and Shelton is especially useful.

Kotoh, Agnes, and Sjaak van der Geest. "Why Are the Poor Less Covered in Ghana's National Health Insurance? A Critical Analysis of Policy and Practice." *International Journal for Equity in Health* 15.34 (2016): 1–11. [doi:10.1186/s12939-016-0320-1]

Examines the impact of the National Health Insurance Scheme, introduced in Ghana to reduce inequity in health-care access due to user fees. Although the premium is heavily subsidized and exemption is provided for the poorest, lowest income groups are least enrolled in the scheme. Explained as due to policymakers' and implementers' lack of commitment to the goal of equity.

McCoy, David, Mickey Chopra, Rene Loewenson, et al. "Expanding Access to Antiretroviral Therapy in Sub-Saharan Africa: Avoiding the Pitfalls and Dangers, Capitalizing on the Opportunities." *American Journal of Public Health* 95.1 (2005): 18–22. [doi:10.2105/AJPH.2004.040121]

Argued the fragmented medical provision engineered by structural adjustment was ill-quipped to provide mass treatment for AIDS, and sustained investment in a comprehensive, integrated state system was required to ensure effective policy implementation. Notes the continued opposition from the IMF and World Bank to such a position.

Pfeiffer, James, and Rachel Chapman. “Anthropological Perspectives on Structural Adjustment and Public Health.” *Annual Review of Anthropology* 39 (2010): 149–165. [doi:10.1146/annurev.anthro.012809]

Valuable overview of the history of structural adjustment and health privatization. Reviews the scholarship on the impact of these policies, emphasizing the immiseration of the poor that has resulted.

Turshen, Meredeth. *Privatizing Health Services in Africa*. New Brunswick, NJ: Rutgers University Press, 1999. [ISBN: 9780813525808]

Argues that World Bank reforms have been driven by a desire to foster international global capital investment and production, rather than improve health. Emphasizes the negative impact of liberalization on the effectiveness of state services, and the particular suffering of rural women that resulted.

Global Health

See also *Emerging Tropical Diseases*. The global health approach to epidemiology and disease management is motivated by a recognition that pathogens pay little heed to national borders and by a commitment to reducing global health inequities. Generally associated with the emergence of the World Bank group and the United Nations agencies, particularly the World Health Organization, in the aftermath of the Second World War, global health took on recognizable form following the 1978 Alma Ata commitment to achieve “Health for All” through the development of effective primary health-care systems across the globe. Global health as a distinctive program, and subject of intellectual debate, took shape in the 1990s and gathered pace with the adoption of the Millennium Development Goals in 2000 and Sustainable Development Agenda in 2015. The best introduction to the institutional history of global health is Medcalf, et al. 2015. Giles-Vernick and Webb 2013 provides the most valuable analysis of how global health evolved in ideological and practical terms within African countries. Although nationalist movements and newly independent states in the 1950s and 1960s viewed global health through the liberatory and anti-imperial lens of universal health care, critiques of global health have often emphasized its power imbalances and the tendency of Western states and institutions to regard it as a problem of the developing world, and to associate it with national biosecurity. Prince and Marsland 2014, a valuable collection of local case studies, focuses on the weakening position of the African state since the 1980s, hollowed out by structural adjustment and no longer governing health interventions, but rather serving as a gatekeeper for global health agencies. This theme is taken further in Geissler 2015, whose collection explores the problematic ethics of global health research shaped by extreme power inequities and the self-interested logic of biosecurity. Fairhead, et al. 2006 emphasizes the transactional nature of global research in African contexts and its reliance on subjects’ inadequate access to alternative sources of health care. Further insight into the problematic nature of the research activities operating under the title of global health is provided in Gilbert 2013, whose examination of how science overlaps with the global organization of biocapital explains HIV-2’s marginalization within the global-scientific economy. The problematic nature of treatment in the era of global health is explored in Feierman, et al. 2010 and Nguyen 2010. These studies stress how global programs are

undermined by the obstacles to the acquisition of knowledge of local realities that they help to create, and how global health is shaped by a consensus about international policy that largely excludes African voices.

Fairhead, James, Melissa Leach, and Mary Small. “Public Engagement with Science? Local Understandings of a Vaccine Trial in the Gambia.” *Journal of Biosocial Science* 38 (2006): 103–116. [doi:http://dx.doi.org/10.1017/S0021932005000945]

Anthropological analysis of clinical trial experiences detailing how impoverished Gambians who join a research community provide a safety net for families with limited access to health care. Explores how transactions, visible and invisible, shape global research within Africa, complicating the provision of care.

Feierman, Steven, Kearsley Alison Stewart, Paul Farmer. and Veena Das. “Anthropology, Knowledge-Flows and Global Health.” *Global Public Health* 5.2 (2010): 122–128. [doi:10.1080/17441690903401338]

Discusses how power inequities have negative effects on global health programs, which are isolated from local realities of professional practice and patients’ lives. Argues the shift of authority over health care from national to global levels has weakened the influence of local knowledge even more.

Geissler, Wenzel, ed. *Para-states and Medical Science: Making African Global Health*. Durham, NC: Duke University Press, 2015. [ISBN: 9780822357353]

A collection of essays examining the African state’s growing dependence on, and reshaping by, external funding provided by transnational agencies and private partners. Contributors argue that much bioscientific work conducted in Africa operates through para-statal frames, that international funders create experimental societies within Africa, and that public health interventions are shaped and legitimized by rhetoric of global biosecurity.

Gilbert, Hannah. “Re-visioning Local Biologies: HIV-2 and the Pattern of Differential Valuation in Biomedical Research.” *Medical Anthropology* 32.4 (2013): 343–358. [doi:10.1080/01459740.2013.773328]

Analyzes how not only lives but also pathogens are valued differently due to global biopolitical calculations. Discusses how global health funding shapes local research and practice around a local virus, HIV-2, that has “gone global.”

Giles-Vernick, Tamara, and James Webb, eds. *Global Health in Africa: Historical Perspectives on Disease Control*. Athens, OH: Ohio University Press, 2013. [ISBN: 9780821420683]

Multidisciplinary collection tracing the evolution of global health since the colonial period. Contributors examine the evolving ideological basis of interventions, the imbalance between technology and resources on the ground, and the significance of local narratives in the analysis of medical programs.

Medcalf, Alexander, Sanjoy Bhattacharya, Hooman Momen, Monica Saavedra, and Margaret Jones, eds. *Health for All: The Journey of Universal Health Coverage*. York, UK: Centre for Global Health Histories, 2015. [ISBN: 9788125059004]

Part of a series of global health histories, the introduction traces the history of global health through the concept of universal health care. While noting the role played by global organizations such as the World Health Organization, emphasis is placed, through a series of local studies, on the role played by South Africa, Uganda, and other developing countries in the evolution of global health.

Nguyen, Vinh-Kim. *The Republic of Therapy: Triage and Sovereignty in West Africa's Time of AIDS*. Durham, NC: Duke University Press, 2010. [ISBN: 9780822348740]

Clinician-anthropologist's exploration of the logic underpinning the 1990s international policy consensus that antiretrovirals could not be deployed universally in Africa due to logistical challenges and high costs, focusing on the global and local inequities that caused lives to be valued differently. Examines the concept of biological citizenship as a means of understanding how individuals secured treatment through forms of advocacy and self-definition that fitted external measures of entitlement.

Prince, Ruth, and Rebecca Marsland, eds. *Making and Unmaking Public Health in Africa: Ethnographic and Historical Perspectives*. Athens, OH: Ohio University Press, 2014. [ISBN: 9780821420577]

Draws on ethnographic and historical perspectives with case studies from Nigeria, Senegal, Kenya, Uganda, and Tanzania. Argues that the decay of government-controlled health services since the 1980s saw the state become primarily a coordinator of proliferating private and nongovernmental organizations that target specific health-care needs. Associates this process with a transition from public to global health.

Emerging Tropical Diseases

See also the article on Ebola by Adia Benton. See also *Global Health*, *HIV/AIDS*, and *Sleeping Sickness*. Contrary to the view that chronic not infectious disease will dominate humanity's future patterns of morbidity, researchers working on emerging tropical diseases depict a world vulnerable to cataclysmic pandemic zoonoses, infections that leap from animals to humans. Many scholars have depicted emerging tropical diseases as the inevitable consequence of Africans' intensifying engagement with their natural environments. Dubos 1959 provides an early conceptual example of this catastrophist analysis of the ecology of disease. Garrett 1995 is a valuable update, more focused on the African context. In this view, rapid population expansion into the wilderness has prompted an increase in hunting for bushmeat and forest clearance for cultivation and pasture, and therefore outbreaks of vector-borne disease. An alternative view is that trans-species infections have been ever present in African history, and that new epidemics are only identified as such because modern communications and urbanization enable emerging diseases to affect people visible to medical authorities and to threaten the health of populations beyond the tropics (Farmer 2014). This international dimension to emergent tropical diseases has attracted significant academic attention. Wolfe 2011 emphasizes the crucial importance of enhanced investment in diagnostic capacity and vaccine research to prevent

inevitable outbreaks from causing globally destructive pandemics. Other works, such as Wilkinson and Leach 2015, have highlighted the power differentials, global and local, that shape pandemics' development. Africa's crumbling public health infrastructure, undermined by structural adjustment, has undermined local capacity to contain outbreaks. From the perspective of Lakoff 2010, the apparatus of *Global Health*, which primarily protects Western interests, incorrectly focuses on "securitization" against the existential threat of new diseases through highly technical surveillance and simulation. Global health strategies focus on monitoring the fitness of pathogens and the pathways along which they travel, rather than understanding their emergence within local health systems, ecologies, and social relations. Nguyen 2014 argues that investing in adequate staffing and equipment in Africa's hospitals is crucial not only to global "preparedness" against immediate epidemic threats, but also to preventing such outbreaks from destroying the future capacity of local health systems by killing unprotected and overworked medical staff. The 2013–2015 Ebola outbreak has further sharpened the debate on how best to respond to such epidemics. International agencies have tended to advocate the "camp" model of quarantine; standardized prevention messages; and specialist, isolated treatment facilities. Such a security-focused approach has been questioned in Chandler, et al. 2015, which argues that it reflects and reproduces global power inequities, and is unlikely to reduce the stigma of infection or the likelihood of future outbreaks. Nguyen 2014 suggests that community-oriented programs, which seek to find socially acceptable alternatives to risk-associated behaviors through negotiation and which aim to train and equip relatives and survivors as caregivers, are more achievable in rural contexts.

Chandler, Clare, James Fairhead, Ann Kelly, et al. "*Ebola: Limitations of Correcting Misinformation[http://dx.doi.org/10.1016/S0140-6736(14)62382-5]*." *The Lancet* 385.9975 (2015): 1275–1277.

Highly critical analysis of international responses to Ebola, emphasizing the need to understand the logic behind local reluctance to engage with prevention and control messages and interventions.

Dubos, René. *Mirage of Health: Utopias, Progress, and Biological Change*. New York: Harper, 1959.

Somewhat outdated in its concepts and language, but an important early contribution to the subject. Dubos argues that emerging diseases are inevitable because human societies constantly evolve, and so are never perfectly adapted to their environments.

Farmer, Paul. "The Largest Ever Epidemic of Ebola: 1 October 2014." *Reproductive Health Matters* 22.44 (2014): 157–162. [doi:http://dx.doi.org/10.1016/S0968-8080(14)44819-5]

Discusses how the devastation of Ebola has further weakened West African health services, already undermined by global funding models that question the cost-effectiveness of comprehensive primary care for the poor. Criticizes exoticization of cultural practices, noting that eating bushmeat or washing the dead are neither new nor illogical.

Garrett, Laurie. *The Coming Plague: Newly Emerging Diseases in a World Out of Balance*. New York: Penguin, 1995. [ISBN: 9780374126469]

Journalistic account focusing on the scientists who identify and combat emerging diseases. Tells the story of a series of zoonoses, from AIDS to Ebola. Repeatedly notes how outbreaks were linked to humans' intensifying involvement in the natural, disease-bearing world around them. Emphasizes that the growing, and more interconnected, population of Africa facilitates virulent mutation within microbes by accelerating genetic swapping. Notes the dangers associated with drug resistance.

Lakoff, Andrew. "Two Regimes of Global Health." *Humanity: An International Journal of Human Rights, Humanitarianism, and Development* 1.1 (2010): 59–79. [doi:10.1353/hum.2010.0001]

Critique of the biosecurity strand within *Global Health*, arguing that Western powers and international agencies focus their efforts on technical interventions that will be of little benefit to the developing countries most affected by emerging tropical diseases.

Nguyen, Vinh-Kim. "*Ebola: How We Became Unprepared, and What Might Come Next[http://www.culanth.org/fieldsights/605-ebola-how-we-becameunprepared-and-what-might-come-next]*." *Cultural Anthropology Online* (2014).

Critiques the hegemonic "camp" model of dedicated treatment facilities initiated by international agencies as a short-term, vertical response to emerging diseases. Advocates community and public health support, ensuring families are provided with basic medicine, food, infection control tools, and training to enable them to care for ill relatives.

Wilkinson, Annie, and Melissa Leach. "Briefing: Ebola—Myths, Realities, and Structural Violence." *African Affairs* 114.454 (2015): 136–148. [doi:10.1093/afraf/adu080]

Argues Ebola emerged in West Africa in 2013 because of the structural violence of international exploitation, which impoverished local medical systems and engendered distrust of governmental and external health interventions. Critiques policies that attribute infection primarily to "dangerous" local customs, and the coercive and defensive response from the West in the name of *Global Health*.

Wolfe, Nathan. *The Viral Storm: The Dawn of a New Pandemic Age*. New York: Times Books, 2011. [ISBN: 9780805091946]

Emphasizes the role of the virus hunter in ensuring global preparedness for new pandemics of emerging tropical diseases. Advocates a highly technical, commercial approach, focusing on the creation of an armory of magic bullets.