Postscript: A pandemic read on African health and environmental histories

Tamara Giles-Vernick

Postscript: A pandemic read on African health and environmental histories

Tamara Giles-Vernick

Anthropology & Ecology of Disease Emergence Unit, Institut Pasteur, 25-28 rue du Docteur Roux, 75724 Paris Cedex 15, France

Abstract:

This postscript reflects on this special issue's contributions for readers preoccupied with the COVID-19 pandemic. First, these articles on African environment and health underscore that past processes and interventions into land use and human health have cumulative effects on disease emergence and re-emergence. Relatedly, although multiple epidemics have affected the African continent and other parts of the world over the past century, global health institutions and actors have sidelined or forgotten these epidemics. These analyses draw our attention to the historical production and mobilization of specific concepts which frame what questions are asked, how they are answered, and the material solutions provided or withheld. And finally, these pieces highlight the ethical stakes of agricultural, conservation, and health interventions, reminding us that the African continent's histories are fraught with inequities from colonial and postcolonial extractive relations and racist assumptions that have undermined livelihoods, food security and health. As African states, institutions, and global health critics politick for vaccine equity and deplore the inequitable access to COVID-19 vaccines in African countries compared to the rest of the world, these articles remind us that these long-standing inequities should catalyze fundamental change.

Keywords: COVID-19, disease emergency, equity, environmental history, global health

Highlights:

- Contributions highlight cumulative effects of past processes on disease emergence and re-emergence

- The past century has been characterized by multiple epidemics and pandemics
- Historical analyses of specific concepts underscore neglect of long-term health problems in Africa
- African histories of inequity echoed in present COVID-19 vaccination inaccessibility

This special issue, which brought together analyses of specific human-environment-health relations in African countries, should really be essential reading for global health specialists and practitioners. The articles collectively offer powerful insight into the complex historical processes shaping the epidemiologies of malaria, yellow fever, and liver disease, as well as the human-animal engagements that facilitate disease and safeguard health. Read through the optic of the COVID-19 pandemic, they also provoke reflection on the contemporary disease burdens, inequities, and unresolved ethics of global health in Africa. As these contributions reveal, these problems are not new. This postscript highlights four major contributions that the articles in this issue make to current reflections on the COVID-19 pandemic.

First, these contributions highlight the value of fine-grained historical analyses and the importance of accounting for the *cumulative* effects of past processes on disease emergence and re-emergence. Such analyses are of course enriching in themselves. But they also underscore how flattened and downright inappropriate the historical narratives are that biomedical literatures use to explain disease emergence and re-emergence. Biomedical explanations for HIV emergence, for instance, have correlated estimated timing of spillover and emergence with proximate large-scale historical processes and accompanying technological introductions, including colonial rule, urbanization, and escalating human mobility (e.g. Faria et al. 2014). These explanations, however, are rightly criticized on multiple grounds. Rather than building historical arguments based on evidence, they cherry-pick from concurrent processes and deploy them as explanations (Schneider, 2022). They also sheer off longer-term ecological and social processes that contribute to disease emergence or re-emergence (Narat et al. 2017). Indeed, explanations for the "origins" of the SARS-CoV-2 pandemic pivot on the Wuhan wet market or the Wuhan Institute of Virology

and thus focus on proximate potential causes; they do not account for the historically messy processes that play out over time and erupt in highly specific ways and sites (Napier, 2022).

In contrast, the contributions here demonstrate that historical insights enrich our contemporary understandings of disease emergence and re-emergence. They show that specific health and environmental interventions do not simply disappear after they end. They have consequences that extend into the present. Hence, Jean Faye and Yvonne Braun argue that the burden of liver cancer from aflatoxins and food insecurity among Serer peanut farmers in Senegal results from multiple interventions and processes: the colonial imposition of peanut monoculture, market liberalization, external investment, climate change. Danson Mwangi powerfully shows that colonial and contemporary conservation has had very long-term consequences for the livelihoods and health of people and animals living in Kenya. Melissa Graboyes and Judith Meta highlight that the "afterlife" of the Malaria Eradication Programme in Zanzibar, which ended in 1968, manifested as rebound malaria in the 1970s and 80s. In this COVID-19 era, these contributions should remind us that efforts to control zoonotic spillovers and pandemic transmission have diverse, long-term consequences for different populations (Finlay, et al. 2021).

Second, when non-historians breathlessly claim that COVID-19 is the first pandemic in a century, these contributions remind us that the past century has *not* been devoid of epidemics, either on the African continent or elsewhere. Malaria, yellow fever, rabies, HIV, tuberculosis, cholera, and innumerable other diseases have emerged and re-emerged, but for multiple reasons, have been historically sidelined and even forgotten by global health institutions and actors in the Global North (Webb, 2014; Webb 2019). Moreover, contributions to this issue also emphasize that an exclusive focus on COVID-19 can have deleterious consequences for tackling longer term, ongoing public health problems. COVID-19 may constitute just one of many illnesses with which publics must contend (Geissler and Prince, 2020). Multiple studies have noted that COVID-19 responses have siphoned off resources that might otherwise improve infrastructures, capacity building, prevention and treatment of these other diseases and conditions (Aborode et al. 2021; Bliznashka et al. 2022; Hakizimana et al. 2022; Taylor et al. 2022; Zimmer et al. 2021).

Third, these articles demonstrate that historical attention to the production and mobilization of specific concepts really does matter. These concepts shape what questions are asked, how they are answered, and the material solutions provided – or not. Take, for instance, the term "endemic". As politicians in wealthy countries insist that COVID-19 is now "endemic", implying that the pandemic is "over", several contributions in this issue offer some sobering reminders. "Endemic" diseases still constitute a major threat to human health and can re-emerge as epidemic disease with fatal consequences. Additionally, a recent commentary about premature and unfounded claims of COVID-19 "endemicity" observed that "Western notions of endemicity have enabled those in the Global North to neatly shelf the diseases as problems of economic development" (Steere-Williams, 2022), Melissa Graboyes and Judith Meta demonstrate that when global health institutions sidelined malaria in favor of other global health priorities, this neglect resulted in skyrocketing malaria mortality. Jennifer Tappan reveals that the different conceptualization of yellow fever disease ecology in Africa offered a pretext for not investing prevention resources through vaccination on the continent. Danson Mwangi, in contrast, provides us some hope. Turning his attentions to lay concepts and interrelated practices around human, animal, and environmental health in Kenya, he productively extends One Health to describe what he calls a "lay One Health". It would be thrilling to see "lay One Health" adopted and taken seriously, to derail the privileging of biomedical knowledge in global health and to embrace alternative ways of inhabiting and sharing places with other life forms.

Finally, these pieces all recall the fundamental ethical stakes of agricultural, conservation, and health interventions as they have played out in the continent's past. Melissa Graboyes and Judith Meta tackle the ethical problems head on in their treatment of rebound malaria, which WHO officials recognized and predicted even before the MEP intervention ended. Stunningly, Zanzibari participants in this program had no knowledge of it, even though they spoke of malaria epidemics following the end of this intervention. In somewhat different ways, Jean Faye and Yvonne Braun and Danson Mwangi remind us that land use interventions and extractive relations in a more distant past, undertaken by powerful outsiders, can also have long-lasting and negative health consequences. In both studies, interventions impoverished local inhabitants, rendering their livelihoods and food

sources more precarious. Jennifer Tappan argues that yellow fever remains a re-emergent public health problem on the continent when Latin Americans benefited from successive yellow fever vaccines because of colonial and postcolonial racist suppositions about Africa. As African states, institutions, and global health critics politic for vaccine equity and deplore the unequal and inequitable access to COVID-19 vaccines in African countries compared to the rest of the world (Aborode et al. 2021), these articles powerfully remind us in different ways that the African continent's histories are fraught with inequities that *should* scandalize readers and should be the grounds for fundamental change.

References

Aborode AT, Olofinsao OA, Osmond E, Batubo AP, Fayemiro O, Sherifdeen O, Muraina L, Obadawo BS, Ahmad S, Fajemisin EA. 2021. Equal access of COVID-19 vaccine distribution in Africa: Challenges and way forward. Journal of Medical Virology 93, 9, 5212-5215.

Bliznashka L, Ahun MN, Velthausz D, Donco R, Karuskina-Drivdale S, Pinto J, Yousafzai AK, Jeong J. 2022. Effects of COVID-19 on Child Health Services Utilisation and Delivery in Rural Mozambique: A Qualitative Study. Health policy and planning, czac009. Advance online publication. https://doi.org/10.1093/heapol/czac009

Faria NR, Rambaut A, Suchard MA, Baele G, Bedford T, Ward MJ, Tatem AJ, Sousa JD, Arinaminpathy N, Pépin J, Posada D, Peeters M, Pybus OG, Lemey P. 2014. HIV epidemiology. The early spread and epidemic ignition of HIV-1 in human populations. Science 346, 6205, 56-61.

Finlay BB, Amato KR, Azad M, Blaser MJ, Bosch TCG, Chu H, Dominguez-Bello MG, Ehrlich SD, Elinav E, Geva-Zatorsky N, Gros P, Guillemin K, Keck F, Korem T, McFall-Ngai MJ, Melby MK, Nichter M, Pettersson S, Poinar H, Rees T, Tropini C, Zhao L, Giles-Vernick T. 2021. The hygiene hypothesis, the COVID pandemic, and consequences for the human microbiome. Proceedings of the National Academy of Science 118, 6, e2010217118.

Geissler PW, Prince RJ. 2020. Layers of epidemy: Present pasts during the first weeks of COVID-19 in Kenya. Centaurus 62, 248–256.

Hakizimana D, Ntizimira C, Mbituyumuremyi A. et al. 2022. The impact of Covid-19 on malaria services in three high endemic districts in Rwanda: a mixed-method study. Malaria Journal 21, 48.

Narat V, Alcayna-Stevens L, Rupp S, Giles-Vernick T. 2017. Rethinking Human-Nonhuman Primate Contact and Pathogenic Disease Spillover. Ecohealth 14, 4, 840-850.

Napier, A.D. 2022. 'No Ground Zero? Pandemics are Social Events with Biological Consequences.' *Le Monde diplomatique* (English edition) No 2203, March: 8-9.

Schneider, W.H. 2022. The histories of HIVs: The multiple viruses that caused the AIDS epidemic. In W.H. Schneider, ed. The Histories of HIVs: The emergence of the multiple viruses that caused the AIDS epidemic. Ohio University Press, Athens.

Steere-Williams J. 2022. Endemic Fatalism and Why It Won't Resolve COVID-19**.** BMJ Medical Humanities. https://blogs.bmj.com/medical-humanities/2022/02/08/endemic-fatalism-and-why-it-wont-resolve-covid-19/**.** Downloaded 27 March 2022.

Taylor MK, Kinder K, George J, Bazemore A, Mannie C, Phillips R, Strydom S, Goodyear-Smith F. Multinational primary health care experiences from the initial wave of the COVID-19 pandemic: A qualitative analysis. 2022. SSM - Qualitative Research in Health 2, 100041.

Webb JLA Jr. 2014. The Long Struggle Against Malaria in Tropical Africa. Cambridge University Press, Cambridge.

_____. 2019. The Guts of the Matter: A Global History of Human Waste. Cambridge University Press, Cambridge.

Zimmer AJ, Klinton JS, Oga-Omenka C, Heitkamp P, Nawina Nyirenda C, Furin J, Pai M. 2022. Tuberculosis in times of COVID-19. Journal of Epidemiology and Community Health 76, 3, 310-316.