



**More-than-human worlds: humans, nonhuman animals,
and pathogens Journal of the Royal Anthropological
Institute**
Kelley Sams

► **To cite this version:**

Kelley Sams. More-than-human worlds: humans, nonhuman animals, and pathogens Journal of the Royal Anthropological Institute. Journal of the Royal Anthropological Institute, In press, 28 (3), pp.1053-1056. 10.1111/1467-9655.13782 . hal-03747893

HAL Id: hal-03747893

<https://hal.science/hal-03747893>

Submitted on 9 Aug 2022

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Long review

More-than-human worlds: humans, nonhuman animals, and pathogens

Journal of the Royal Anthropological Institute

Kelley Sams, University of Florida

FEARNLEY, LYLE. *Virulent zones: animal disease and global health at China's pandemic epicenter*. 288 pp., illus., bibliogr. Durham, N.C.: Duke Univ. Press, 2020. £20.99 (paper)

KECK, FREDERIC. *Avian reservoirs: virus hunters and birdwatchers in Chinese sentinel posts*. x, 245 pp., illus., bibliogr. Durham, N.C.: Duke Univ. Press, 2020. £20.99 (paper)

PORTER, NATALIE. *Viral economies: bird flu experiments in Vietnam*. 240 pp., illus., bibliogr. Chicago: Univ. Press, 2019. £22.00 (paper)

In the aftermath of SARS (2003), the West Africa Ebola epidemic (2014-16), and other pandemic threats, emerging infectious disease preparedness as a ‘distinctive paradigm’ has become increasingly central to global health approaches (Caduff 2015; Lakoff 2017).

Long before the first cases of COVID-19, social scientists had begun to examine critically the imaginary of an anticipated pandemic and its impacts. Anthropology is adept at shedding light on how ‘expert’ scientific knowledge often does not fully consider practical concerns or the social and political relationships that fuel perceived threats. In the context of pandemic preparedness, anthropologists have highlighted the ‘geography of blame’ surrounding places like China or sub-Saharan Africa as epidemic epicentres (Caduff 2015; Kleinman, Bloom, Saich, Mason & Aulino 2008; Sams, Grant, Desclaux & Sow 2022), and the importance of community-led ‘practical learning’ in preventing and responding to outbreaks (Parker, Hanson, Vandi, Sao Babawo & Allen 2019; Richards 2016).

These three books all address a similar question: what does ‘preparedness’ and infectious disease control look like in places in Asia that have been identified as ‘hot spots’ of epidemic threats related to domestic avian production? Through fieldwork in China

(Fearnley and Keck) and nearby countries of Vietnam (Porter), Hong Kong, Singapore, and Taiwan (Keck), the authors examine: (1) why viruses emerge where they do; (2) how global health observes, predicts, and makes meaning from epidemic risk; and (3) how ‘experts’ and ‘non-experts’ balance the priorities of pandemic prevention with practical constraints. The authors investigate the practical applications of One Health approaches, their impacts, and shortcomings. These books will be of particular interest to students and professionals in animal sciences, public health, and anthropology, especially as these disciplines attempt to make sense of the current COVID-19 pandemic and what this means for future preparedness.

It is worth noting that these books, published in 2019 and 2020, are likely among the last important contributions to anthropological literature about zoonosis and epidemics in a pre-COVID-19 world. Only Fearnley’s *Virulent zones* was published in time to include an added chapter about this emerging pandemic, two months after the initial cases were discovered in Wuhan. In this postscript, he describes how the emergence of COVID-19 reignited ‘Orientalist’ responses about ‘unruly Chinese consumers’ (p. 210) and further increased divisions between rural farmers and veterinary ‘experts’ through epidemic responses that did not take into consideration the true impacts on everyday lives of measures such as bans on wildlife economies.

The ‘anticipatory imagination’ (Lakoff 2017) inherent in pandemic preparedness usually focuses on a single point of origin or a single cause of an epidemic threat. However, the reality is much messier and more multifaceted than this simplified story of cause and effect. Each of the three books attempts to describe and question the multiple factors that

create risk. Relationships are at the centre of these analyses: relations between people, (nonhuman) animals, and viruses. As Porter writes in her book *Viral economies: bird flu experiments in Vietnam*, '[V]iruses, in fact, are fundamentally relational entities' (p. 19). We know that place matters very much in public health, but place alone does not create infectious disease risk, rather it is a receptacle for a convergence of forces. In *Virulent zones: animal disease and global health at China's pandemic epicenter*, Fearnley describes the 'erasure of context' that occurs when we ignore the convergence of the intermediaries that create disease (in his example, wild birds that transport the virus, small- and large-scale poultry operations, and economic systems). By ignoring these actors and the contexts of places, he writes, '[S]ource and consequence, pathogen emergence and global epidemic, are conflated' (p. 192).

Porter's research, which she describes as 'multispecies ethnography' (p. 17) aims to advance 'nonhumans as significant social and political actors' (p. 19). Her *Viral economies* focuses on a series of avian influenza control programmes in Vietnam from their policy development through to their implementation in rural farming communities. By studying the different spaces where policies are created and negotiated, she offers the reader an easy-to-read thick ethnographic description and analysis of experiments and programmes designed to reduce the infectious risk of poultry production. She examines the struggles between the state and its citizens and produces a detailed reflection on how social marketing campaigns are used to sell specific behaviours to consumers. Through ethnographic fieldwork in a place that she refers to with the pseudonym 'Placid Pond', Porter observes how a family of hen producers negotiates the priorities of daily life in the context of the challenges added by One Health programmes: for example, requirements around 'quick fix' vaccinations and antibiotic use. Her work also touches upon questions

of exchange relations and virus surveillance worldwide (especially in chap. 5, ‘How to own a virus’), fuelled by fieldwork in Hanoi and biosecurity experiments (chap. 1, ‘Experimental entrepreneurs’) and mass poultry vaccination (chapt. 2, ‘Enumerating immunity’) alongside a field veterinarian working in flu control in a rural area of the Mekong Delta region.

Like Porter, Fearnley produces a detailed ethnography that analyses different levels of influence on the control and emergence of zoonotic disease, this time centred on China. In *Virulent zones*, he argues that the most important barriers to addressing ‘pathogenic landscapes’ are ‘the horizontal *stratifications* separating lab sciences from field sciences, bioscience experts from livestock farmers, and humans from nonhumans’ (p. 206). Fearnley’s anthropological analysis also takes us to a body of fresh water – China’s largest: Poyang Lake. Each of the three sections of this book highlights a different stratum of the construction of China as a ‘pandemic epicenter’: part 1, ‘Ecology’, uses archival research to examine how pandemic influenza research in global health began to move towards a ‘hypothetical epicenter’ (p. 22); part 2 explores the intersections of ‘expert’ scientific models and the practices of rural farmers around Poyang Lake; and part 3 analyses the negotiations between global health projects and state agencies about claims on biological resources. Fearnley engages Bruno Latour’s notion of ‘scientific displacement’ as way to study the transformation of assumptions of scientists coming to study at Poyang Lake. He writes, ‘As scientists turned from the virus to the nonvirological and attempted to turn the context of influenza viruses into a research object, their inquiry was repeatedly displaced by their encounters with the artifacts of human practices’ (p. 21).

Keck's book *Avian reservoirs: virus hunters and birdwatchers in Chinese sentinel posts* contains the least ethnographic detail of the three, despite half of the book being devoted to the broad strokes of empirical analysis of techniques of preparedness in Hong Kong, Singapore, and Taiwan. The first part of the book offers a substantial (sometimes too hefty to be clear) theoretical overview of the 'stakes of preparedness for social anthropology' (p. 4). The book's aim to examine 'the anticipation of the future in the global circulation of biotechnologies with debates about relations between humans and animals in local contexts' (p. 173) seems to get stuck in the weeds of language and theory, thus preventing a full analysis of what this all means for the daily lives of the people who live in his sites of analysis. The book begins with three theoretical chapters that examine preparedness as 'a mode of causality (justifying governmental interventions), a technique of language (connecting nature and the laboratory), and a form of visibility (producing accumulation and classification)' (p. 5). Keck's analysis focuses on three techniques (sentinels, simulations, and stockpiling) that influence the 'global imaginary' of preparedness and are used to anticipate the future. He uses the anthropology of hunter-gatherer societies to examine how microbiologists, birdwatchers, and others 'hunt' for semiotics and signalling and 'collect' virus specimens of the past to prepare for the future.

These works all examine how new global health strategies have been developed to go beyond human health and relate these transitions to broader historical and political contexts. Porter and Fearnley provide an intricate analysis of the historical development of the One Health approach and how its application occurs within increasingly neoliberal contexts marked by shifts away from state monopolies on health services and towards private services and self-treatment. Porter argues that livestock animals have 'long

played a critical role in the history of capitalist formations' (*Viral economies*, p. 17) and does an excellent job of untangling the economic factors that have led to economic reform and demand for poultry in many places in Asia. Keck's analysis of animal-human relationships could benefit from further description of the economic systems that shape food production and therefore the positions of the scientist 'hunter-gatherers'. However, along with the other two authors, Keck shares an important critique of current approaches of preparedness based primarily on the roles of individual nation-states, approaches that do not fully consider the full scope of factors that shape disease transmission routes. Porter echoes this more clearly when she writes, 'One Health governance fails to properly account for the conditions under which farmers and fowl actually live' (*Viral economies*, p. 4).

The themes of exchange, transparency, and ownership are woven throughout the reflections of these three scholars, especially as related to China and the country's interactions with other nation-states. Even in the studies that are not specifically focused on China itself (Porter's research in Vietnam, for example, or Keck's work in Hong Kong, Singapore, and Taiwan), the country's political relationships with these other nations frames the analyses. The figure of the virus hunter is particularly strong in the work of Fearnley and Keck. Keck writes that 'difficulties communicating with public health officials about preparedness for disease outbreaks ... were often bypassed through the romantic image of the virus hunter' (*Avian reservoirs*, p. 37). While both authors approach this role in their analysis as a critical actor in the imagination of epidemic threats, Fearnley describes with detail how infectious disease surveillance and response is increasingly dependent on co-operation and exchange. He writes,

In contrast to the figure of the virus hunter that singlehandedly confronts unruly ecologies and microbial contamination in order to extract pathogens and bring them back to the biosafety of the lab, global health researchers ... found that access to virus samples required political finesse, compromise, and exchange with China's state agents (*Virulent zones*, p. 196).

Both Fearnley and Porter base their research in part on these signals, through interviews conducted with farmers raising animals around lakes where viruses pass between wild birds and domesticated flocks. Porter brings forward the notion of 'viral chatter', coined by microbiologists and used to describe the process of viruses moving from one species to another. For the reader unfamiliar with how pathogenic forms of viruses are shared between these two groups, both books provide interesting examples of these 'perfect storms' that fuel viruses to mutate into highly pathogenic strains that spread across borders and potentially cross over to infect humans.

The conclusions of these books might be surprising to a reader looking to understand how the disciplines of global health or anthropology can conquer emerging infectious diseases. The three authors highlight the fact that human health does not exist in a vacuum. They point towards a need for new ways of thinking about our world that privilege the health of the environment and the lives of nonhuman animals rather than human health alone. Instead of offering the anthropologist or public health professional up as a saviour figure, these authors call for, in the words of Keck, a shift 'from the short temporality of emergencies to the long temporality of ecologies [that can] decenter humans by showing their dependence on other species' (*Avian reservoirs*, pp.177-8).

Porter, who concludes *Viral economies* with a chapter subtitled ‘All lives have equal value’, critiques current One Health programmes for privileging short-term outcomes in human health over other considerations. She ends her book by writing,

Ultimately, the story of bird flu in Vietnam forces us to accept that we are all – human and non-human – implicated in the global regime of health experimentation. Let us therefore recuperate experiment, as a concept and a set of practices, through which we can imagine *and enact* more inclusive, more-than-human worlds (p. 188).

Reading these pre-pandemic books during the current pandemic context solidifies many of these points for the reader. Although the research for them took place in some cases almost a decade earlier (Porter’s fieldwork in Vietnam, for example, was conducted from 2009 to 2013), the warning signs of a large-scale upcoming health emergency were already in place. As we work to mitigate damage from COVID-19, what can we, as social scientists, and humans, do to prevent (and prepare for) another pandemic? Keck tell us that, ‘The ecology of infectious diseases has showed that viruses are not intentional entities aimed at killing humans, but signs that the equilibrium between species in an ecosystem has been disrupted’ (*Avian reservoirs*, p. 178). These three books argue the need for a healthy operating space for humans, including improved relationships with nonhuman animals and the environment.

Fearnley describes a recent initiative known as planetary health, championed by the Rockefeller Foundation in collaboration with the *Lancet*, based on the idea that ‘human

health must be considered in conjunction with the overall health of planetary ecosystems' (*Virulent zones*, p. 205). He writes, 'I believe that the figure of the veterinarian offers the best opportunity for building transversal connections between the strata where life is treated as an object of knowledge and those where life is treated as a means of production' (p. 206). Ultimately, it seems like all three authors would like the readers of their books to take away the following point: working towards equity and equilibrium requires a transformation of values as well as interdisciplinary collaborations. While social inequity, climate change, and consumerism are not the primary foci of these books, in the end these topics seem to rise to the top as some of the issues that matter most.

KELLEY SAMS

University of Florida

REFERENCES

- CADUFF, C. 2015. *The pandemic perhaps: dramatic events in a public culture of danger*. Oakland: University of California Press.
- KLEINMAN, A.M., B.R. BLOOM, A. SAICH, K.A. MASON & F. AULINO 2008. Asian flus in ethnographic and political context: a biosocial approach. *Anthropology and Medicine* **15**, 1-5.
- LAKOFF, A. 2017. *Unprepared: global health in a time of emergency*. Oakland: University of California Press.
- PARKER, M., T. HANSON, A. VANDI, L. SAO BABAWO & T. ALLEN 2019. Ebola and public authority: saving loved ones in Sierra Leone. *Medical Anthropology* **38**, 440-54.
- RICHARDS, P. 2016. *Ebola: how a people's science helped end an epidemic*. London: Zed Books.
- SAMS, K., C. GRANT, A. DESCLAUX & K. SOW, K. 2022. Disease X and Africa: how a scientific metaphor entered popular imaginaries of the online public during the COVID-19 pandemic. *Medicine Anthropology Theory*. 9(2), 1-28.
<https://doi.org/10.17157/mat.9.2.5611>