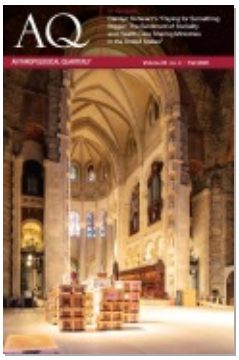
Viral Ethnographies: Humans, Animals, and One Health Governance in a Zoonotic Age



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BOOK REVIEW ESSAY

Viral Ethnographies: Humans, Animals, and One Health Governance in a Zoonotic Age

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Nadal, Deborah. 2020. *Rabies in the Streets: Interspecies Camaraderie in Urban India*. University Park, Pennsylvania: The Pennsylvania State University Press. 278 pp.

Porter, Natalie. 2019. *Viral Economies: Bird Flu Experiments in Vietnam*. Chicago: University of Chicago Press. 240 pp.

While theories continue to proliferate about the emergence of SARS-CoV-2, epidemiologists remain unsure about the origins of the virus.[1] All that is clear is that it must have made its way into the human population via an animal vector, much like the Ebola, Zika, and avian influenza viruses. Zoonoses—illnesses caused by those trailblazing pathogens that jump across the species barrier into humans—comprise more than 60 percent of all infectious diseases and 75 percent of all new or "emerging" diseases. Climate change and deforestation, among other factors, drive the growing emergence of zoonotic illnesses, causing stressed-out animals to "shed" new viruses and pass them into other creatures nearby.

Acknowledging the threat posed by the rising tide of zoonoses, global health agencies continue to tout the importance of the multisectoral One Health approach to disease control, which seeks to secure "optimal health outcomes recognizing the interconnection between people,

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animals, plants, and their shared environment" (CDC 2020). Formally unveiled in 2008, the One Health framework has guided global health policy for over a decade, including the ongoing COVID-19 response. But does this approach actually lead to "optimal health outcomes" on the ground? As we watch a constellation of public health agencies scramble to adapt policy to the social, political, economic, and biological threats posed by COVID-19, what can we learn from past One Health policies aimed at eradicating zoonoses?

Two recent monographs shed light on how the One Health approach has governed responses to zoonotic outbreaks in Asia: Natalie Porter's *Viral Economies: Bird Flu Experiments in Vietnam* (2019) and Deborah Nadal's *Rabies in the Streets: Interspecies Camaraderie in Urban India* (2020). In *Viral Economies*, Porter examines One Health responses to the spread of avian influenza (also known as H5N1), which began to ravage Vietnam's livestock economies during the early 2000s. Nadal, on the other hand, turns attention to the relationships between humans, animals, and one of the world's oldest and deadliest pathogens: rabies. Despite efficient rabies vaccines, over 30,000 humans and countless non-humans die from the disease each year across South Asia, a death toll recently exacerbated by vaccine shortages in the region.

Following trends in medical anthropology which emphasize the more-than-human nature of health, both Nadal and Porter look across species, turning an ethnographic eye to "the host of organisms whose lives and deaths are linked to human social worlds" (Kirksey and Helmreich 2010:545). Multispecies ethnography, much like One Health governance, is an interdisciplinary venture that acknowledges the deeply intertwined nature of humans and non-humans—among them animals, plants, microbes, and beyond. While viruses evade traditional ethnographic methods, these lethal pathogens can be located in the proliferation of new attachments, relationships, and life forms that crop up in response to their emergence. These books join a growing number of "viral ethnographies," that is, multi-sited ethnographic studies which foreground a range of more-than-human actors who affect and are affected by the spread of a given pathogen (Lowe 2017).

In this essay, I trace how Nadal and Porter organize their viral ethnographies around conceptual frameworks of entanglement and multispecies exchange relations. Next, I examine how these scholars draw connections between vernacular categories and histories of power, animalization, and

resistance in their respective field sites. In the final section, I compare Nadal and Porter's conclusions about the aims, efficacy, and possibilities of One Health governance, and I ask what these approaches might offer future endeavors in public health and critical medical anthropology.

Entangled Economies

Porter centers *Viral Economies* around "multispecies exchange relations," tracing how One Health interventions are changing the ways humans, nonhumans, and economies intersect across Vietnam (16). As Porter moves between rural farms and city markets, local and global health arenas, and micro- and macro-interactions among people, poultry, and pathogens, she reveals the multiple and often conflicting regimes of value that come into play for the species at hand. In conversation with Vinh-Kim Nyugen and Michelle Murphy, Porter emphasizes that One Health interventions are *experiments*, uncertain and future-oriented "exercises in valuing life, determining life chances, and fashioning ways of life" (21).

Contributing to a growing body of literature about the role of intimacy and care in livestock economies, Porter also attends to the corporeal exchanges that structure poultry farming in Vietnam. While care is laden with risk, violence, and inequality, Porter invites us to consider how "bodily exchanges provide diverse opportunities for discovery and transformation," raising questions about how H5N1 biosecurity experiments, as they separate people from poultry, might close off opportunities for mutual transformation offered by caring exchanges (62).

In Chapter 1, Porter recounts her experiences at two biosecure farms in the Mekong Delta, where enterprising farmers are taking "the public health principle of social distancing and applying it across species" in an attempt to quell avian flu outbreaks and make their flocks profitable to new markets (37). Despite the murky epidemiological and economic benefits of these biosecurity measures, multinational NGOs and foreign development agencies continue to encourage farmers to occupy these entrepreneurial roles, privileging wealthier farmers who are more equipped to assume such risks.

Set amidst the controversial terrain of poultry vaccination in Đồng Tháp province, Chapter 2 shows how increasing privatization has led to a "chronically underfunded and under-resourced public animal health sector" and general mistrust for state veterinarians, who attempt to balance

the competing interests of public health and livestock business in their daily work (83). Without providing a long-term solution for viral outbreaks, state-mandated vaccinations burden farmers financially and disrupt the "gendered, collaborative kinship relations that structured poultry care" (81).

Moving "beyond the farm and down the commodity chain," Chapter 3 uncovers how market restrictions in Hanoi and Ho Chi Minh City braid public health with the economization of life (87). While market restrictions have not been proven to stem the spread of H5N1, they have delivered huge blows to millions of small-scale rural farmers, losses health strategists portray as "necessary collateral damage" on the road to industrialized poultry production (106).

In Chapter 4, Porter demonstrates how behavior change communications (BCC) attempt to create "rational health consumers," disciplining citizens into a new, market-oriented form of socialism (118). Shifting the burden of health onto individual citizens and away from public institutions, BCC campaigns blend the goals of the Vietnamese state with the neoliberal reforms pushed by multilateral health organizations like the WHO and World Bank. Recounting her involvement in one BCC campaign, Porter illuminates the conflicting interests at play between donors, seeking scalability and standardized messaging, and Vietnamese NGO workers, who struggle to adapt campaigns to local populations.

Chapter 5 reveals how this neoliberal ethos permeates H5N1 governance at the local, national, *and* global levels by examining the commodification of the avian flu virus itself. Following outcry from countries made vulnerable by inequalities in global health surveillance, the WHO revamped virus-sharing protocols to attribute ownership of "raw" human viruses to the countries from which they emerge. Despite One Health rhetoric integrating human and animal health, no reforms have been made to animal virus protocols, giving multinational poultry corporations undue influence over disease control and public health outcomes.

In all, the concept of multispecies exchange relations offers a fruitful lens through which to view the explosion of new life forms and forms of life created by the emergence of and response to H5N1 (Helmreich 2009). Through this lens, Porter zeroes in on how global health, global capitalism, and animal capital come to be threaded together in Vietnam's bird flu governance, uncovering "a nascent One Health order that, for all its talk of the common good, proceeds according to economic principles of market competition and species standardization" (172).

To capture the wide array of non-human actors she encountered in her field sites, Nadal centers *Rabies in the Streets* around entanglements—"the unfolding, often incidental attachments and affinities, antagonisms and animosities that bring people, nonhuman animals, and materials into each other's worlds" (Nading 2012:574). Locating the threat of rabies inside potential vectors, Nadal organizes the majority of her chapters by species: "Humans" (Chapter 1), "Dogs" (Chapter 3), "Macaques" (Chapter 4), and "Cows" (Chapter 5). In Chapter 2, "Food in the Middle," Nadal focuses on how humans provide sources of food for scavenging animals through garbage, open defecation, religious offerings, and more (27). Chapter 6, "Living with Rabies," delves into the biological effects of rabies on its vectors, as well as human perceptions of rabies transmission, treatment, and outcomes.

In each chapter, Nadal recounts snippets from open-ended interviews with a range of actors—sanitation workers, doctors, vets, monkey trainers, and beyond—from Delhi and Jaipur, along with her findings from hundreds of semi-structured interviews carried out at universities and informal settlements in Delhi. Nadal impressively synthesizes a vast array of primary and secondary sources, paying special attention to the views of "the urban, educated middle class," a group she centers due to its economic, political, and social influence (24). As such, this work makes a substantial contribution to our understanding of middle- and upper-class attitudes towards rabies in urban India. In light of the extensive interdisciplinary archive Nadal draws on, some chapters could have benefited from additional clarification of the social, political, and institutional entanglements of her sources. At times, animal rights activists and right-wing cow protectionists are presented as neutral scholarly voices, rather than partial actors with stakes of their own.

While grounding her analysis in entanglements, Nadal also attends to the exchange relations that envelop each species. The pet, cattle, and tourism industries create opportunities for interspecies exchanges—sometimes loving, sometimes violent, sometimes both—that enable rabies transmission. Nadal writes in favor of regulating these industries to curb infections, but she finds that growing fear of certain animals among humans, entangled with widespread devotion and love for those same species, poses an obstacle to reforming these industries and decreasing the threat of rabies.

In the book's conclusion, Nadal lauds the persistence of "interspecies camaraderie," an ethos of entanglement which brings humans and animals together in Indian cities, as the way forward for rabies control. This camaraderie emerges amid "fluid and porous" interspecies entanglements, especially for slum residents who often come into contact with, and express empathy for, street-dwelling animals (222).

Motioning to "the perils of permeability, porosity and penetration," Nadal recalls numerous bites and excruciating deaths caused by human-animal-rabies interactions (Roberts 2017:597). She writes that these conflicts occur "within a framework…of urban poverty, infrastructural constraints, poor sanitation, social inequalities, class discrimination, economic pressures, cultural diversity, religious fragmentation, and health inequality" (223). Given Nadal's emphasis on the entanglements among waste, dogs, and "outcastes" (Dalits) in Chapters 1–3, it is also worth asking how casteism, as it pushes certain people into manual scavenging, pulls them into uncomfortably tight knots with the rabies virus and its canine vectors. Since health interventions aimed at reforming sanitation would necessarily affect the humans and non-humans entangled in these economies, future scholarship should turn ethnographic attention to the multispecies exchange relations that structure waste work. Until these vital threads are brought into focus, we should continue to be wary of "celebrating the endless entanglement of those who can live within the shit" (Roberts 2017:595).

While a focus on exchange relations might reveal new dimensions of inequality shaping India's "viral economies," I wonder how an emphasis on entanglements might also stretch Porter's analysis in new and unexpected directions. Where Nadal carefully recounts the physiological effects of rabies, Porter is more concerned with the outward exchanges that have been transformed by the emergence of H5N1. But what happens when the virus tangles with poultry bodies? As viral ethnographies work to "center" pathogens, how can we also center individual animals that live and die amid violent entanglements of livestock economies, global food systems, and zoonotic disease?

Porter's reflections on care draw me back to María Elena García's writings on grief and the "entangled multispecies intimacies and ethics of care that so often include extraction, confinement, and killing" (2019:358). When anthropological inquiry revolves around livestock, cared for as "food animals" marked for death, what are the ethical and methodological

implications for multispecies ethnographers? Following García, I wonder what it would mean to dwell a little longer in the uncomfortable space of grief, mourning the deaths of animals who have been appropriated as commodities within market capitalism. Entanglement helps us sit with the knotty mess of questions raised by multispecies ethnography, a practice itself filled with incommensurable, uneven exchanges.

Gà Ta, INDogs: Vernacular Categories in Multispecies Worlds

In addition to highlighting the corporeal relations between humans, animals, and viruses, Nadal and Porter examine the symbolic significance of animals in human worlds. As they attend to the phrases used to describe animals in each linguistic milieu, their works present different approaches to this type of discourse analysis.

At the beginning of *Viral Economies*, Porter explains that native varieties of chicken in Vietnam are referred to as "gà ta," which means "something like, 'our chicken'" (29). Beyond marking ownership, this moniker tethers these birds to the land and evokes a sense of shared community. In the face of food insecurity and famine, which has plagued the country multiple times under multiple regimes, the chicken has become a legendary symbol of "self-sufficiency and a brighter future" (29). Consumers across the country continue to prefer local chicken over foreign or commercial brands, and Porter's interlocutors repeatedly affirm the enduring importance of gà ta in Vietnam's poultry economies. Analyzing the role of the chicken in fables, legends, propaganda art, historical accounts, and the statements of her interlocutors, Porter details how poultry have shaped Vietnam both as political symbols and as living creatures whose production has offered farmers "a way to exercise control over lives and livelihoods—especially in the context of shifting-political economic conditions" (34).

In the prelude to Chapter 4, Porter turns attention to the connections between poultry and "a key Vietnamese principle for proper living and comportment: *hy sinh*, or sacrifice" (109). She goes on to clarify how hy sinh, as an "emotive form of life" encompassing social, ethical, and spiritual principles, surfaces in art, literature, film, and ritual practices in relation to chickens, ducks, and other avian livestock (111). By adopting a mode of analysis which is "at once genealogical and ethnographic," Porter is able to speak to historical continuities and departures in Vietnamese perceptions of poultry (146). Moreover, she illuminates how neoliberal governance

in Vietnam emerges at the nexus of unique and evolving exchange relations, influenced by both the "shifting identity of the Vietnamese state and cultural values in global health" (147).

In *Rabies in the Streets*, Nadal explores linkages between the caste system and vernacular categories for scavenging animals in urban India. Throughout the book, she refers to India's indigenous landrace of dogs as "INDogs," rather than the more commonly used "pariah dog," noting that *pariah* entered the English lexicon as a caste designation and is often used to disparage feral or mixed-breed dogs (82).[2] She goes on to examine how ancient Sanskrit texts consistently associate dogs with low- and non-caste groups due to their engagement in scavenging and waste work. Given the enduring power of caste slurs like "pariah," Nadal's expansive textual, linguistic, and historical analysis could have been textured by a more detailed ethnographic account of how these vernacular categories come to bear on the everyday lives of casteized humans in contemporary India.

While Nadal argues that food is "the central knot in the network of interspecies connections," she misses an opportunity to investigate how language and food practices in South Asia are profoundly linked to caste and religious difference (27).[3] Though the book's analysis is restricted to a discussion of Hindu religious traditions, many of Nadal's interviews took place in segregated Muslim neighborhoods and a substantial number of her interlocutors have Muslim names.[4] As such, Nadal's discussion of animal rights activists and cow protectionists, particularly their perspectives on beef consumption, could have been enriched by an engagement with recent literature which untangles the relationship between cow protection, Hindu nationalism, and violence against Dalits and Muslims in contemporary India (Govindrajan 2018, Narayanan 2019).

By anchoring the book in the perspectives of upper-caste Hindus, Nadal inadvertently presents caste Hinduism as the face of Hinduism, India, and Indianness, but her analysis opens important questions about the "complicated entanglement of race, colonialism, caste, and animality" that lies at the heart of multispecies relations across South Asia (Govindrajan 2018:179). Questions of food and animality continue to police boundaries of difference in modern India, and *Rabies in the Streets* begins to unravel these questions across multiple sites of human-animal interaction. Building upon Nadal's extensive work, future multispecies studies of South Asia should further explore the critical role that language

and discourses of animalization play in fueling and naturalizing violence against marginalized groups.

One World, One Health: Experiment or Endgame?

In all, these books present starkly different pictures of One Health governance in their respective sites. Emphasizing the experimental nature of One Health interventions, *Viral Economies* "invites us to reject the *inevitability* of any 'One' way of living with and killing others, and to be open to and permissive of alternatives" (188). By taking aim at "both the exploratory and normative dimensions of One Health experiments," Porter's approach neither discards the potential benefits of these interventions nor posits them as cure-alls for zoonotic disease, but instead asks how they come to bear on the real people, poultry, and pathogens who are entangled in these systems (21). Her keen-eyed focus on how neoliberalism is articulated through Vietnam's bird flu policies invites us to think more deeply about how public health, far from being apolitical or a universal good, operates within a field of power and carries life-and-death consequences for the subjects of its interventions.

In India, the dark side of global health governance can be seen in Swachh Bharat Abhiyan (the "Clean India Mission"), a country-wide sanitation campaign launched by Prime Minister Narendra Modi in 2014. The Swachh Bharat campaign subsidized the creation of more than 100 million toilets and deployed behavior change communications in an effort to eradicate open defecation across India. Activist Bezwada Wilson, along with numerous other Dalit and anti-caste reformers, has harshly criticized Modi's campaign for romanticizing sanitation work while forcing countless Dalits back into manual scavenging, hundreds of whom died in septic tanks implementing the scheme (Subramaniam 2017). In 2019, the Bill and Melinda Gates foundation, the largest private global health organization and a staunch One Health proponent, gave Narendra Modi the "Global Goalkeeper Award" for Swachh Bharat Abhiyan, suggesting that the broad sphere of global public health lacks an adequate critical lens through which to view structural casteism in South Asia.

While Nadal recognizes that beliefs about caste contribute to rates of open defecation, her call for "a total change of mindset" obscures how global health interventions can further strengthen authoritarian regimes and exacerbate existing inequalities (65). Nadal's reluctance to critique

Swachh Bharat Abhiyan, and the One Health framework more broadly, reflects "a general tension between critique and crisis" which can shape scholarly contributions during public health emergencies (Benton 2017:506). Nadal's work is clearly motivated by the conviction that "because rabies is totally preventable through vaccination, every death is one too many" (16). After coming face-to-face with the gruesome, life-taking effects of this preventable disease, Nadal sees One Health governance as a net good, and she argues that clearing the pathway for One Health interventions requires Hindus to start seeing animals as collaborators in the fight against rabies. Nadal concludes that "designing and implementing an efficient system for defeating rabies, and maintaining that system over the long haul, poses a challenge to India and 'Indianness,'" adding that India's young, adaptable populace is well-equipped to overcome this obstacle (231).

As we quarantine in our homes to avoid zoonotic infection, as unprecedented monsoon floods rip through South Asia, and as wildfires spread across the western United States, I can't help but think that crisis is the Anthropocene's calling card. As we grapple with the urgency of multiple unfolding (ecological, biological, political, social, and economic) crises, how might we hold space to critique the structures and systems that make certain lives more vulnerable to these threats in the first place? While states and health organizations have marshaled vast resources to fight COVID-19 and H5N1, rabies receives far less attention in the global health sphere because it does not pose a "global" threat. The ongoing nature of the rabies crisis in the Global South, despite the availability of vaccines, demonstrates that in One Health governance, "at every level and in every relation, some lives matter more than others" (Porter 2019:173).

Read together, these viral ethnographies raise important questions about the role of critical medical anthropology in relation to the new and increasingly powerful One Health regime. From the perspective of public health practitioners, framing policies as "experiments" might erode public trust in these agencies and their interventions, despite a given policy's grounding in sound epidemiological data. However, framing One Health interventions as a silver bullet will, at best, overstate the efficacy of these neoliberal entities and, at worst, promote policies which further harm marginalized groups in service of a vaguely-defined "collective" health. Public health interventions do not unfold in a vacuum but within a political ecology of disease, in relation to social, political, and economic structures

that make certain lives in certain parts of the world more susceptible to viral infection than others. By attending to the unpredictable pathways of zoonotic transmission and global health governance in India and Vietnam, Nadal and Porter show that "in some sites, and for some species, the pandemic has already arrived" (Porter 2019:4). Rather than conceiving of these populations as test subjects for future One Health experiments, we might instead ask how people and animals, amid violent entanglements and viral economies, are *already* defining what it means to live a messy, multiple, more-than-human health. ■

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Endnotes:

[1]See Anderson et al. (2020).

[2]In other parts of the text, Nadal refers to casteized groups as "doms" (61) and "chandalas" (83), terms widely regarded as caste slurs in contemporary India.

[3]See Ghassem-Fachandi (2010), Govindrajan (2018), and Pinto (2006).

[4]For more on Muslim segregation in Delhi, see Jamil (2018).

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