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BOOK REVIEW

Virulent zones: animal disease and global health at China's Pandemic epicenter, by Fearnley, L, Durham, Duke University Press, 2020, 296 pp. \$26.95; Paper ISBN: 978-1-4780-1105-7 / Cloth ISBN: 978-1-4780-0999-3

Virulent Zones challenges recent scientific and journalistic identifications of China as a pandemic epicenter, which have mapped a “geography of blame” where traditional ecologies are marked as “natural reservoirs of deadly viruses” (23). Conversely, Fearnley shows how the complex interplay between science, geopolitics, socioeconomics and culture have produced certain narratives of virulent zones in certain places. *Virulent Zones* is based on participant observation and interviews carried out in 2010–2012 with virologists, veterinarians, wild-bird trackers and farmers in agrarian landscapes of southern China.

The main case study is the Poyang Lake region, which is expected by scientists to be ground zero for future virulent strains of avian influenza due to its rapid population growth, an “explosion” of livestock production of both wild and domestic birds, and migrations of wildlife species in the region. Farmers in the Poyang Lake region have specialised in unusual bird breeds and “marking wildness” (109) through raising, in particular, wild goose to meet the local high demand of “wild consumption” (107). However, practices such as husbandry techniques (free-grazing) and enclosed housing have inevitably increased “potential uncertainty” (68) in this region. The deep insecurity of commercial duck farming in the Poyang Lake region is structured in what Fearnley calls “vital uncertainty” (87). Here, paradoxically, anticipatory discourse that identifies the lake as a pandemic epicenter “only further increases farmers’ reliance on free-grazing practices” (87) which are thought as the main cause for virus spreading.

While the regulatory anomaly of the farmed wild goose breeding creates risks of its own (120), China’s reluctance or inability to report outbreaks of disease reflects an enduring controversy over the country’s relationship with international health organizations. Assertions of “national biosovereignty” (9) intersect with global health norms of open-access research and transparent surveillance, creating a contested domain of “global health diplomacy” (126). The experts Fearnley interviewed in China coped with this situation by way of cultivating informal networks with local authorities and scientists to access data and information. This led to the production of “risk maps” (150) which, however, only showed how experts still ignore where the main risk zones lie.

In fact, China not only “lacks transparency in acknowledging outbreaks”, but also notably has limited technical capacity of veterinary services to detect and contain disease (158). Few veterinarians in China are trained in epidemiology

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and even those who are trained in theory might not be adequately prepared to use the knowledge acquired once in the field (174). Moreover, veterinary reforms have led to a division between office vets who have specialised knowledge but lack familiarity with rural worlds and producers; and so-called “duck doctors” who have plenty of familiarity with rural worlds and producers, but have minimal specialised knowledge in zoonotic diseases (190). The next generation of health workers and veterinarians, Fearnley argues, will need to rely on relevant training, updated laboratory devices, and extensive engagement with social environments to become more efficient and gain further receptiveness to the outside and develop an important capacity to communicate with lay communities.

Throughout this engaging ethnography, Fearnley persuasively argues that “the pandemic epicentre is not best understood as a local place” but rather as the intersection of various spatial domains, the emergence of “multiple new assemblages”, including “ecological zones, working landscapes, and geopolitical territories” (161). In the concluding chapter of *Virulent Zones*, the anthropologist also invokes the concept of “planetary health” which focuses on “the *reflexivity* of health threats,” as the risks we face lie within the society we have created (206). The collaborations urgently needed for planetary health are “those that increase alliances across heterogenous domains of knowledge and production” (207). Communication importantly emerges as a key tool to fight a pandemic.

In a postscript, Fearnley refers to this important point while drawing on the COVID-19 pandemic, and he strongly criticizes the resulting backlashes against the farming, trade and consumption of wild animals in China. Fearnley points out that the calls to permanently ban all wildlife trade are not a final solution to the problem of zoonotic disease risks, since such a ban would most likely drive wildlife markets underground – where they will be even less transparent to veterinary governance that they are now. What is needed is, instead, a better communication and an engaged collaboration between experts and farmers, traders and consumers. Ultimately, *Virulent Zones* shows how science and geopolitics intersect and how this has an important impact on global health. As such, it is a key text for medical anthropologists and sociologists, historians of science, STS researchers, and those working in global health.

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