

This is an Accepted Manuscript of an article published by Taylor & Francis in Space and Polity on 2021-10-20, available online: <https://doi.org/10.1080/13562576.2021.1991785> . Access to this work was provided by the University of Maryland, Baltimore County (UMBC) ScholarWorks@UMBC digital repository on the Maryland Shared Open Access (MD-SOAR) platform.

Please provide feedback

Please support the ScholarWorks@UMBC repository by emailing scholarworks-group@umbc.edu and telling us what having access to this work means to you and why it's important to you. Thank you.

Revanchist 'nature' and 21st century genocide

Stian Rice, PhD

(corresponding author)

Center for Urban Environmental Research and Education (CUERE)

University of Maryland Baltimore County (UMBC)

1000 Hilltop Circle

Baltimore, MD 21250

USA

James Tyner, PhD

Department of Geography

Kent State University

800 E. Summit St.

Kent, OH 44242

USA

Abstract

The natural world is responding to anthropogenic change through novel pathogens, antibiotic-resistant microbes, and pest infestations. This resurgence is part of a non-human reappropriation and transformation of human-altered environments. In this commentary, we argue that this “revanchism” has prompted two new forms of genocide: the pre-emptive mass slaughter of non-human animals, and the annihilation of humans as expressed through COVID-19 and other pandemics; forms that will become exemplars for mass murder in the 21st century.

Keywords

genocide, disease, animal geographies, Anthropocene

“Gentle Sleep still lulls Erysichthon, with his peaceful wings ... But when indeed peace departs, a desperate desire to eat possesses his famished jaws and burning belly. Without a moment’s delay he calls out for whatever earth, air and sea produce, and at table complains of hunger, and in the midst of eating demands to eat. What would feed a city, or satisfy a people, is not enough for [Erysichthon]. The more he puts away inside, the greater his desire.”

– Ovid, *Metamorphoses*, Book VIII: 777-842ⁱ

Years from now, when microbes sit down to write their histories, will they consider this the beginning of their Renaissance? Pathogens have had an auspicious start to the 21st century, with Swine flu (H1N1), Mad cow disease (BSE), Middle East Respiratory Syndrome (MERS-CoV), Severe Acute Respiratory Syndrome (SARS), Avian flu (H7N7 and H7N9), Zika, and now COVID-19 (SARS-CoV-2) making dramatic entrances. Meanwhile, faithful standbys (HIV/AIDS, Ebola, Measles) continue to reprise their infamous

roles. To be sure, the historic plagues of Justinian's Constantinople, Cortés' Tenochtitlan, and The Bard's London killed many more. But there is something unsettling about the recent wave of "novel" pathogens; something audacious about this microbial revival in the moment of our bio-technological zenith. It is hard to revel in the Anthropocene while cowering in castles for fear of the nano-scale army at the gates.

Of course, humanity is to blame for this resurgence. Forest clearing for cattle ranching has created deadly new frontiers as agriculture struggles to feed a meat-addicted world (Greger 2007). As we lengthen that dendritic edge between zoonotic disease reservoirs and our immune systems, we give pathogens the chance to get to know us and our vulnerabilities. Our planet's melting tundra—a Pandora's box of diabolical puzzles—is releasing its archive of pathogens from icy entombment. With each ton of atmospheric CO₂, humanity cracks open the lid a little more and turns back the clock on pandemics past. Livestock feedlots pack microbes and antibiotic-marinated animals into the same incubators, thereby ensuring only the strongest parasites will survive. And meat packing plants—those cold mausoleums of industrial agriculture—offer ample opportunities to widen the horizon of food-borne and airborne diseases alike. These threats have been known for decades, but too many have blithely followed capricious capital.

Meanwhile, global circulations of people, potatoes, and poultry deposit microbial stowaways onto the surface features of everyday life and into the abyssal depths of our intestinal mucosa. Like the ocean gyres that guided Europe's ships to and from the New World, global trade has become the critical infrastructure for pandemic, but with one important difference: today's fossil-fueled circuitry is blazingly fast. In the 16th century, for a smallpox colony to spread from one population to another, it had to survive the three-week ocean journey from Lisbon to Santo Domingo without first destroying (or being destroyed by) its human host (Alchon 2003). Today, COVID-19 travels in style, needing only to endure an inflight movie and a shuttle bus from the airport. Human bodies are turned into *maquiladoras*, tirelessly churning out trillions of replicants ready to cross the next border, settle into warm warehouses, and combine with other traveling puzzle pieces to make next year's shiny new pestilences. Our modes of production have become theirs.

Revanchist nature

It does not end there. A recent study identified 954 species of agricultural pests that are resistant to chemical pesticides, including 13 cases of resistance to *Bacillus thuringiensis* (Bt) toxins engineered into transgenic corn (Tabashnik et al. 2014). Antibiotic-resistant bacteria, including variants of deadly *Escherichia coli* and *Staphylococcus aureus*, have been traced to increased linkages between human, animal, and environmental reservoirs (Chatterjee et al. 2018). Locust plagues are back with increasing frequency, as *Schistocerca gregaria* find much to like in anthropogenic climate-change and expanding monocultures (Salih et al. 2020). And then there are promiscuous rabbits, killer bees, toxic algal blooms, radioactive boars, and cannibal cane toads.

These and many other examples demonstrate what we argue is a resurgent and *revanchist* 'nature,' a non-human response to centuries of human environmental expropriation. Revanchism, here, is less about Nature (capital "N") recapturing lost territory than an ongoing, non-human reappropriation and transformation of *human-altered environments* (see Braun and Castree 2005). In a painful irony, the habitat loss driving species extinction has been countered by growth in novel, hybrid environments *conducive* to microbial and pathogenic diversity. As the world loses Candango mice and Western black

rhinoceri, it gains Hendra, Hanta, Nipah, and Coronaviruses along with an alphabet soup of flu variants (Mahy 2008). Within our industrial food and water systems, transportation networks, nutritionally weakened bodies, and resource-deprived healthcare services, this revanchist nature is recapturing territory through new relationships, resources, and novel arrangements of DNA.

Still, modern society follows capital, doubling down on chemical and biological responses, pushing back the artificial boundary between human and non-human nature into the molecular (gene engineering) and into outer space (geo-engineering for climate change). In fact, nature's seeming retreat may end up being a ruse. Our voracious, expansionist, extractivist, annihilationist, and speed-addicted tendencies have distracted us from the trap opening at our feet. That tickle at the back of the throat could be a virus or hubris, but it is probably a bit of both.

21st century genocide

In the aftermath of WWII and the Holocaust, the Polish jurist Raphael Lemkin coined the term *genocide* to bring justice against those who committed, in his words, acts of 'barbarity' and 'vandalism.' As Lemkin (1944) explained, new conceptions require new terms, and the systematic, industrialized slaughter unleashed by Nazi Germany required such a term. For Lemkin, genocide does not entail the immediate or wholesale destruction of a group but signals a coordinated plan of different techniques—political, social, cultural, religious, moral, economic, biological, and physical—designed to destroy the *essential foundations of life*: food, water, shelter, healthcare, and security from social and environmental threats. To this end, genocides involve the strategic reterritorialization of social and natural space: the violent assertion of claims to those spaces that others depend on for life. In Nazi Germany, the killing of Jews was the basis for expanding the nation's *lebensraum*, or "living space." The 1904-05 genocide of Herrero in Namibia was motivated by white demand for pastoral land. The killing of Indigenous North Americans involved myriad processes of land alienation, from forced removal and the destruction of food stores to the extermination of Plains bison—an instance of non-human genocide tucked into a human one (Hubbard 2014).

In the 21st century, such "conventional" genocides have not disappeared. Nor will they: ethnic and religious violence in Myanmar, Syria, and Yemen continues to express deep territorial roots. But like the viruses we obsessively track, genocide is evolving into new variants. This century's genocides have taken two novel forms. In the first, non-human populations are destroyed to prevent the transmission of disease to other animals or humans. This strategy of "eradication-as-firewall" has already been deployed in the culling of 50 million birds exposed to Avian flu, four million cows exposed to BSE, and 17 million minks exposed to SARS-CoV-2. In 2019, one quarter of the world's domestic pigs died from African swine fever (ASF) or were killed to prevent its spread (Mackenzie 2019). As the global food system accelerates meat production and pathogens increasingly find ways to move between species, non-human genocides will evolve from being an emergency brake on runaway transmission to a standard preventive measure. Discussions of theriocide (Beirne 2014) and ecocide (Lindgren 2018) have examined the mass killing of animals for food, sport, pest control, ritual sacrifice, and as a collateral consequence of climate change. We argue that these discussions include the strategic culling of animals as a territorial defense against pathogens.

The second form of emerging genocide is of the human species, the autophagic annihilation we have seen with COVID-19 and other recent epidemics. Capitalism is indifferent to use value, only recognizing in human and non-human nature the exchange value of vendible labor and commodities. This

disregard—for the complex web of interconnections from which diverse use values emerge—justifies a ceaseless assault on those environmental systems that provide the *essential foundations* for human life. In its abstract form, then, capitalism is inherently and indiscriminately genocidal. But in its concrete expression, capitalism exhibits a strong preference for some human groups over others. The divisions of labor, race, gender, and class so effective at extracting value have become the breakpoints between the living and dying. Politicization is redirecting excess death toward undesirable populations, expropriating surplus labor, and undermining public health efforts when and where they are needed most. As a form of genocide, today's pandemic-capitalism involves a strategic reterritorialization of social space between the historically privileged and the vulnerable: the contours of profit-making already condition who dies from a lack of oxygen, ventilators, ICU beds, and vaccines. Meanwhile, as millions bury COVID-19 victims in the earth, billionaires plan their escape into space.

These two genocidal forms are increasingly linked through complex crises. Like undesirable people, wolves, wild pigs, rats, and roaches are shot, trapped, sterilized, and poisoned, their territories cleared to generate surplus value and remove threats to capital accumulation.ⁱⁱ Vulnerable human populations are threatened by the destruction of the non-human nature upon which they depend, through land use conversion, resource extraction (Crook et al. 2018), and pollution (Heischmidt 2009). Rather than curb agricultural encroachment on zoonotic reservoirs, limit commodity movements, or dissipate concentrations of livestock, agricultural capitalism mediates the spread of food-borne diseases by culling stock. This destruction of surplus—commonly used to mitigate crises of overproduction—drives up prices and threatens survival for the poor. And as climate change cuts into industrialized breadbaskets, corporate- and state-financed land grabbing pushes smallholders into the ranks of the landless and spatially fixes restless capital in *terra zoonosis*. Crisis is inherent to capitalism and today's revanchist nature has provided ample opportunities for wealth accumulation as millions die (BBC 2021). Indeed, strategies for profit-making in a global emergency are being perfected in preparation for the genocides waiting in the wings.

According to legend, Erysichthon—King of Thessaly and the pitiable soul whose hunger pangs introduced this essay—once ordered all the trees in the sacred grove of Demeter cut down. One of these was a giant oak in which a dryad nymph lived. Fearing the wrath of Demeter, Erysichthon's men refused his orders. But the king would not be denied and taking up the axe himself, felled the oak and killed the nymph. When one of his men tried to stop him, the king decapitated him. In her dying breath, the nymph cursed Erysichthon, leaving Demeter to exact revenge. And the goddess of fertility and the harvest did just that, sending Limos (famine) to occupy the king's stomach. From then on, Erysichthon could never eat enough. He consumed everything in his kingdom, even selling his daughter into slavery to satisfy his hunger. Eventually, "when the evil had consumed everything they had, and his grave disease needed ever more food," the king devoured his own body until he was no more.ⁱⁱⁱ

Like Erysichthon in Demeter's grove, capitalism has pursued its accumulation for accumulation's sake, destroying the environments humans depend on and killing those who stand in the way (cf. Marshall 2021). Like Limos, the environmental response strikes at the stomach of the beast, stoking the unrelenting and insatiable hunger that animates capitalist accumulation. To satisfy this hunger, capitalism sells our children into debt bondage, scours the earth for resources, invents fictitious commodities and virtual currencies, and when nothing can satisfy it, turns inward and eats itself. Whatever stories microbes decide to tell, their histories and the histories of 21st century genocide will be deeply entwined with capitalism.

References

- Alchon, Suzanne A. 2003. *A Pest in the Land: New World Epidemics in a Global Perspective*. University of New Mexico Press.
- BBC. 2021. *Millions become millionaires during Covid pandemic*. BBC News 23 June. <https://www.bbc.com/news/business-57575077> (last accessed 15 September 2021).
- Beirne, Piers. 2014. Theriocide: Naming animal killing. *International Journal for Crime, Justice and Social Democracy*, 3:2, 49-66.
- Braun, Bruce, and Noel Castree. 2005. *Remaking Reality: Nature at the Millenium*. Routledge.
- Chatterjee, Anuja, Maryam Modarai, Nichola R Naylor, Sara E Boyd, Rifat Atun, James Barlow, Alison H Holmes, Alan Johnson, Julie V Robotham. 2018. "Quantifying drivers of antibiotic resistance in humans: a systematic review," *The Lancet Infectious Diseases*, 18:12, e368-e378.
- Crook, M., D. Short, and N. South. 2018. "Ecocide, genocide, capitalism and colonialism: Consequences for indigenous peoples and glocal ecosystems environments." *Theoretical Criminology* 22:3, 298–317.
- Greger, Michael. 2007. "The Human/Animal Interface: Emergence and Resurgence of Zoonotic Infectious Diseases." *Critical Reviews in Microbiology* 33:4, 243–99.
- Heischmidt, C.M. 2009. China's Dumping Ground: Genocide through Nuclear Ecocide in Tibet. *Penn St. Env'tl. L. Rev.*, 18, p.213.
- Hubbard, T. 2014. Chapter 13. Buffalo Genocide in *Nineteenth-Century North America: "Kill, Skin, and Sell."* Duke University Press.
- Lemkin, Raphael. 1944. *Axis Rule in Occupied Europe* (Washington, DC: Carnegie Endowment for International Peace).
- Lindgren, T. 2018. Ecocide, genocide and the disregard of alternative life-systems. *The International Journal of Human Rights* 22:4, 525-549.
- Mackenzie, Debora. 2019. "A Quarter of All Pigs Have Died This Year Due to African Swine Fever." *New Scientist*. Accessed March 19, 2021. <https://www.newscientist.com/article/2222501-a-quarter-of-all-pigs-have-died-this-year-due-to-african-swine-fever/>.
- Mahy, B.W.J. 2008. "Emerging and Reemerging Virus Diseases of Vertebrates," in Mahy, B.W.J. and Marc H.V. Van Regenmortel, *Encyclopedia of Virology (Third Edition)*. Academic Press, pp 93-97.
- Marshall, C. 2021. Record number of environmental activists murdered. *BBC News* 13 September. <https://www.bbc.com/news/science-environment-58508001> (last accessed 15 September 2021).
- Salih, A.A.M., Baraibar, M., Mwangi, K.K. et al. (2020) Climate change and locust outbreak in East Africa. *Nat. Clim. Chang.* 10, 584–585.

Tabashnik, Bruce E., David Mota-Sanchez, Mark E. Whalon, Robert M. Hollingworth, Yves Carrière. 2014. "Defining Terms for Proactive Management of Resistance to Bt Crops and Pesticides." *Journal of Economic Entomology*, 107:2, pp 496–507

ⁱ From Anthony S. Kline, *Ovid's Metamorphoses: A Complete English Translation and Mythological Index* (Charlottesville: University of Virginia Electronic Library, 2000). Accessible at <http://ovid.lib.virginia.edu/trans/Ovhome.htm>.

ⁱⁱ It is fitting that these "pest species" are the names given to those dehumanized in Nazi Germany, Rwanda, Srebrenica, North America, and now Myanmar.

ⁱⁱⁱ *Ibid.*