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COVID-19, Crystal Balls, and the Epidemic Imagination

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COVID-19

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At a press conference in early March 2020, Luiz Henrique Mandetta, at that time the Brazilian minister of health, was asked what we could expect from COVID-19. He looked at the statistical predictions, graphs, maps, and a lot of numbers presented in a PowerPoint and answered, “All of it is happening within what *we imagined*, but *we do not have a crystal ball*, and we are working on latest information. As hard as it may be, it is not the first epidemic we face” (emphasis added).

In fact, Brazil has suffered from several major epidemics over the last two centuries. Many of them are related to mosquitoes. But I have doubts that this background guarantees any solution to the current challenges with COVID-19. I would like to show why from the combination of some historical perspectives and ethnographic situations related to the topic of the ex-minister’s speech. To do so, I focus on epidemic intelligences—how health authorities imagine crises, and which crystal balls they use to enact them.

I conducted an ethnography of public health policies for dengue, Zika, Chikungunya, and yellow fever in cities of Brazil and Argentina. In these places, digital and life technologies are increasingly present in the grammar of epidemics. Software for modeling and geolocation, data-mining systems, PCR investigation, and GMO vectors have become the new trend in health capitalism. Alone or combined, these tools have been used in the surveillance and control of viruses, bacteria, vectors, and, of course, the human populations with which they live. They constitute some of the new epidemic intelligences (Lakoff 2017). They are the new crystal balls promising ubiquitous and real-time anticipation of risk and crises. With them, *prevention* was replaced by *preparedness and response*, shaping health and security into a single commodity in the field of biosecurity (Caduff 2015; Keck 2020; Lakoff and Collier 2008; Segata 2019). But the promises of crystal balls are precarious, as is the epidemic imagination. I have an example from Natal, in northwest Brazil.



Health workers planning visits. (Courtesy of author)

When I started fieldwork, Lucas—a mosquito worker—told me: “You will be surprised. Now everything is digital, even mosquitoes.” He was explaining the high-tech update in public health policy. In Natal, the epidemic imagination was determined by an algorithm that works by combining entomological and epidemiological data. Entomological data resulted from traps that collect mosquito eggs. Epidemiological data resulted from the quantity and location of reported dengue cases. Software connects the geolocation of traps with the location of reported cases to perform virtual *territories of risk* on the city map. Colored circles that

vary from white to red according to the “danger” highlight the quality of the risk. Red circles were everywhere, and they were converted into combat zones. In them, mosquito workers must battle mosquitoes inside houses using pesticides (Segata, 2017).

Public health policymakers used to say that nothing could hide from technology. For them, the digital created a sense of omnipresence and effectiveness. New digital technologies support beliefs in more-precise identification and control. But people, mosquitoes, and viruses do not always behave like binary codes. These crystal balls are not always precise. And they hide important structures of social inequality, environmental racism, and exclusion.

Firstly, there was underreporting of cases. On the one hand, every day during my fieldwork I found ill people who had opted to not seek medical services. They complained about delays in care and the lack of treatment and usually stayed at home medicating their symptoms, such as fever and pain, themselves. If people do not see a doctor they do not become epidemiological data. In addition, the data only contained home addresses. But people might have been bitten in other places of the city during their work hours, leisure, or daily commutes. The mosquito is an enemy, and it does not always live in your backyard, which is all that is usually indicated in official reports of public health policies. On the other hand, the information about mosquitoes was precarious, too. They are presumed from the quantity of eggs collected, but these eggs are too small to be accurately counted. As Lucas explained to me, “you only give a peek, and kick a number.” Therefore, entomological data comes from a mix of sensitivity and luck (Segata 2019).



Mosquito trap, Porto Alegre. (Courtesy of author)

Secondly, mosquito workers did not have personal protective equipment, such as gloves to handle chemicals, repellents, or sunscreen. Usually they got sick, suffering for a long time. Also, geolocation technologies echoed the historical circles of exclusion associating poverty and disease because authorities only sought the mosquito in the poorest communities or slums. There, many

people accumulated recyclables to sell because of a lack of work and also made water reservoirs in buckets. In some cases, recyclables and buckets became breeding grounds for mosquitoes, and authorities accused these people of causing outbreaks.

Experts respond to epidemics based on the data about breeding, eggs, cases, houses affected, or quantity of pesticide to kill mosquitoes. Individual lives and structural inequalities do not matter as epidemic data. They are made invisible by numerical accountability around mosquitoes (Diniz et al. 2016; Nading 2017). In Natal, policies are mosquito-centric, and their crystal balls are not adjusted to capture the suffering of so many people.



Mosquito workers, Porto Alegre, 2018. (Courtesy of author)

This epidemic imagination echoes the human exceptionalism and the militarization of relations. Elsewhere, the *Aedes aegypti* mosquito has been considered a villain. Viruses and bacteria are “invisible enemies” and “terrorists” that must “be fought.” Humans think they have to arm themselves: campaign, face, fight, win. We have been hearing this all along about the COVID-19 pandemic, too. In fact, viruses and bacteria are some of the most common pathological agents, and they are invisible to our eyes. So some animals and vectors work like a microscope—they materialize or mediate the presence of microcreatures. For example, you cannot see the dengue virus around the city, but you can see the *Aedes aegypti* mosquito. So, in this logic of war, the mosquito becomes the target. It is, shall we say, the headquarters of the virus, the territory of the enemy that must be attacked. People living in slums also must be attacked, because they breed mosquitoes. Chemicals are bombs, and they have been killing animals and changing environments and climates. In addition, in cases such as COVID-19 or HIV-AIDS, the virus reaches us directly through another human. Those humans become guilty. Mostly aliens, migrants, refugees, and poor people are converted into enemies, too. Unfortunately, we have been living through chronic wars.

In short, as the ex-minister said, this is not the first pandemic we have faced. But we should change our imagination about it. What constitutes the living world is more complex than some numbers and charts provided from epidemic intelligences. The mathematization usually hides singular and situated experiences, projecting instead the universality of the pandemic (Segata 2020). COVID-19 cannot fit into a calculation based on available backgrounds nor can it become a new normal. Social inequalities leak from the false idea that the virus is democratic and does not infect based on color, passport, or social class. In addition, militarization is the enemy of life. Beyond human conflicts, troubled histories with other species and environments are everywhere. They include profitable exploitations through mining, deforestation, monoculture crops, and intensive meat production, but also threats from viruses, bacteria, and climatic disorders—in other words, destructive relations. If there are boundaries between nations, societies, cultures, or species, they should be places of peaceful encounters, not separation. Health must be an issue of care and inclusion, not war and exclusion. Our lives and futures are matters of politics and common projects, not of crystal balls.

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