The Pill and the Liver Probe: Meaning and Culture in Two Disease Interventions

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Blindness

In 2005, I drove from Princeton University to the headquarters of Kurtis Pharmaceuticals (KP), an office complex in northern New Jersey, located in a stretch of green hills off the highway. Flowers and carefully tended greenery covered the campus. The office itself—a large modern building tucked into the center of the park—was less impressive from the outside, letting the exquisite landscape speak without interruption. This was the beginning of an investigation of illness and culture, seen through the lens of an international drug donation program sponsored by KP and carried out by many different actors across the world. This essay compares this current and ongoing donation program with a historical case from the 1930s, showing how an anthropological attitude toward culture (considered very broadly to be a set of shared beliefs that animate and give meaning to human activity) can add complexity, richness, and humanity to a discussion of international health intervention.

In the lobby of KP, where I waited for my contact to come find me, two displays caught my eye. One was a set of photographs documenting a visit by former U.S. President Jimmy Carter to Africa to draw attention to the Carter

* Please note that Kurtis Pharmaceuticals (KP) is a pseudonym. I have used pseudonyms to obscure the identity of corporations and individuals throughout this essay.

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Center’s use of deworming drugs donated by KP. The other display was a life-size bronze statue of an old African man being led by a young boy. The man’s eyes were clouded and blind. Both he and the boy seemed weary. They did not smile. The man wore a kind of toga, baring his chest; the boy wore shorts. The man held one end of a thin stick and the boy held the other, as a leash to lead his blind elder. The meaning of this statue was less obvious than that of the Carter Center photographs, but it had something to say about KP’s impact on global health, something to say about suffering. It commented also on the fraught interaction between modern Western pharmaceuticals and the extremely poor—the people, as one of my contacts at the Carter Center used to say, “at the end of the road.”

Both of these displays refer to KP’s donation of ivermectin, a deworming drug used to control onchocerciasis, often called river blindness. I studied this donation program and another closely related program from 2005 through 2009. Onchocerciasis is a blinding and debilitating parasitic disease endemic to Africa, parts of South America, and a few areas in the Middle East. The parasite, the *Onchocerca volvulus* worm, spreads through the bite of black flies. It causes systemic itching, thickening and deformation of the skin, and eventually blindness. In the impoverished parts of the developing world where the disease flourishes, blind family members can become a burden on their sighted kin. The statue references this sad circumstance, although my expert interlocutors suggested to me that usually girls, not boys, receive the task of caring for blind elders.

In 1987, KP began a global project to control river blindness. The CEO held a press conference to announce that KP would donate ivermectin wherever it was needed until river blindness had been eradicated as a public health hazard. The disease affected about 18 million people at the time. KP constructed a network of key actors that included nongovernmental organizations, medical experts, state ministries of health, and World Health Organization (WHO). In this donation program, KP manufactures ivermectin and ships it to client countries, where the local Ministry of Health (or a local NGO) takes responsibility for distributing the drugs once a year in onchocerciasis-afflicted areas. Ultimately, local volunteers, usually with little or no medical training, administer the pills to their friends and neighbors. The designers and administrators of the donation program meet regularly to discuss its progress, to think through technical problems, to explore new partnerships, and to plan for expansion. During my fieldwork I interviewed key actors in the world of the donation program, attended the periodic steering meetings that brought together actors from all parts.
of the program, and visited Tanzania, where I interviewed Ministry of Health bureaucrats, local NGO employees, community health volunteers, and ordinary people who received the donated drugs.

The ivermectin donation has saved millions from blindness and agonizing full-body itching; no account that I have read disputes its record. The drug works, and so does the donation. The program continues to expand to this day, promising an end to river blindness within the next few decades. My research looks beyond this success story into the margins of this donation. I examine its side effects, unintended consequences, and the new forms of governance and medicine that it has engendered. I am also deeply interested in the moral, intellectual, political, and scientific frameworks that make a massive donation of commercial drugs flowing from the Global North to the Global South possible, meaningful, and desirable to its architects. Critics of the drug industry frequently attack Big Pharma’s excessive profit taking and perceived indifference to the difficulty faced by the world’s poor in accessing life-saving medicines. From the perspective of a conventional critique of the drug industry, a massive corporate-sponsored donation program would seem to make little sense.

An investigation into the culture that has developed around KP’s donation program can help clarify this apparent contradiction. By culture, I mean very broadly the systems of shared understanding and meaning that make the activity of tropical disease control intelligible and meaningful to its participants, from the perspectives of both doctors and patients (though in practice it is more like administrators and citizens). This essay draws on two specific case studies: this international pharmaceutical donation and a historical yellow fever campaign. The essay inquires into the humanitarian ideas and practices surrounding these programs, both of which involve actors from the wealthy Global North imagining how they might control disease in the Global South.

Back at KP headquarters, I met my contact, John Haldeman, the head of the corporation’s donation program. Haldeman had done humanitarian relief work in Bosnia after the war in the 1990s and he took his job at KP very seriously. After our first conversation in 2005, he told me about the amenities that KP offers its employees—on-site dry cleaning, a convenience store, and a superb dining hall, among other things. He then began describing what I would call a moral culture that stemmed from KP’s sponsorship of the drug donation program. According to Haldeman, the knowledge that KP ran such an important and generous donation program—one that so powerfully benefited extremely poor and sick people—attracted and motivated the firm’s employees. That knowledge gave them a sense of virtue. It was good to work for a company...
like KP, he affirmed, but I detected a slight defensive edge in his comments. The shadow of decades of criticism of the piratical practices of the pharmaceutical industry hung over his response.6

Here is a culture of infectious disease far from the actual illness: a culture of elites relying on mutually held moral, economic, and medico-scientific ideas to do their jobs and to make sense of their lives and work. This was not easy to talk about nor to research, in part because the elite executives and physicians with whom I spoke were not used to thinking about themselves as having a culture—it was not an ordinary topic of conversation or thought and it was difficult to directly observe through conventional fieldwork techniques. But the donation program's culture, again in a sense of shared meanings, was there, and with patient attention I began to see it come seeping in around the edges. This became clearest in a long conversation that I had with the former CEO of KP, the man who had designed and launched the ivermectin donation. He told me two things: that in his world people did not talk about morality, but rather about technical problems and solutions; and that his training as a physician led him to push the donation program to fruition, to make sure that the drugs got to people who needed them. This was an interesting contradiction—that he refused to talk about morality but relied on what seemed to me to be the moral duty of the physician. Again, I think that the CEO saw this as a technical problem with a technical solution—that a doctor had an obligation to apply the tools of medicine where they were needed because these tools are effective. There is the sense of an inherent good working here, but that good is perhaps not moral in nature.

I also spoke with the retired lead biologist who led the research and development of ivermectin, and he similarly focused on the biomechanical aspects of the drug, telling me with great paternal pride of ivermectin's intense power and focused efficacy. He told me that he was pleased that the drug was helping so many human beings, but he described his work at KP as a search for brilliant technical solutions to biological problems, not a moral enterprise or a quest for healing.
POKING HOLES

In this attempt to both write about culture and disease and to work through new ways of thinking about the increasingly turbulent field of global health, I follow João Biehl and Adriana Petryna’s approach from their 2013 book When People Come First. Biehl and Petryna insist on a people-focused empirical study of global health, one that promises to provide fuller and more humane answers to questions traditionally investigated by medical science, public health, and tropical health:

The title of the book expresses our shared respect for the dignity and singularity of the people with whom we work and our close attention to the ways in which their own struggles and visions of themselves and others create holes in dominant theories and interventions. People constantly exceed the projections of experts. The medico-scientific, political, and humanitarian framework in which they are temporarily cast cannot contain them. Their plights and travails demand intense listening and continuous attention. We must hold social theory accountable for the full range of human conditions, for all the polyvocal and contradictory realities that we encounter in the field and that are too often obscured by the lens of established thought.7

This essay navigates empirical accounts that “create holes in dominant theories and interventions,” in order to think through new, fruitful, respectful ways in which the links between culture and disease might be best understood. Perhaps most importantly, I aim to read the accounts of global health elites alongside the accounts of the ordinary people whose interests they strive to serve in order to expose the “unspoken orthodoxies” of the global health industry.8

A wealth of anthropological scholarship on the rough terrain of culture and disease informs this research; a short overview of how other anthropologists approach this question will help place my work among relevant scholarship and will lay groundwork for the discursive work of this essay. For example, João Biehl’s work in Brazil ethnographically traces the long-term shift of HIV advocacy from radical, street-level work by desperately ill and often marginalized people to a more formal, highly educated, and internationally savvy cadre of HIV/AIDS professionals.9 This research shows not only that institutional and biomedical cultures change over time, but also that the line between patient and doctor (or caregiver and activist) is being blurred constantly. Didier Fassin and Paul Farmer’s research on HIV in South Africa and Haiti, respectively, has also illuminated the importance of attempting to understand institutional, political, and biomedical culture alongside the lives of ordinary people. Fassin charts the
national and international fury over South African President Thabo Mbeki’s cryptic remarks on HIV, widely understood as counter-scientific AIDS denialism, alongside the “political narratives” (life stories recounted with a political edge as cases of unnecessary and often invisible suffering) of ordinary people marginalized, sickened, and killed by AIDS. Farmer reads Haitian beliefs about AIDS and sorcery alongside Haiti’s colonial history and the international, often scientifically endorsed, racist stigma against Haitians in diaspora.

Adriana Petryna’s studies of the aftermath of the Chernobyl nuclear disaster similarly demonstrate how institutional and patient culture must be read together. Petryna illustrates how the emerging Ukrainian state made treatment for radiation sickness from the nuclear disaster a key part of its strategy to legitimize itself against the corruption of the former U.S.S.R., and how Ukrainian citizens negotiated a “biological citizenship” in which their damaged health became the key part of a claim for support from the state. Petryna’s work on pharmaceutical “offshoring,” Jill Fisher’s study of clinical trial participants and organizers, and Alexa Dietrich’s ethnography of drug manufacture in Puerto Rico give additional empirically rich case studies of the difficult interactions between pharmaceutical R&D and the interests of local people. Amy Moran-Thomas and Ian Whitmarsh’s writing on Guinea worm and asthma again gives a detailed, empirical portrait of the enormously complex matrix of health, economy, social life, and medicine that operates in public health interventions.

The above scholarship approaches the links between culture and disease in many different ways, all of which poke holes in conventional understandings of global health. The research that I address in this essay expands the discussion by using the lens of culture to examine two cases of internationally structured efforts to control infectious disease: the current-day ivermectin donation program and the Brazilian Yellow Fever Service inexistence from the 1920s through the 1940s.

**Work and Value**

As I drove home from Kurtis Pharmaceuticals after my meeting with Haldeman, I thought again about the statue of the blind man and the little boy. Who are they, this old man and little boy scowling and looking forward with one set of eyes blind and the other drained of hope? For me, the statues always represented a particularly problematic orientation or collective imagination: a salvific and imperial way of doing business, and an appreciation of the exotic in an entirely generic way, although, bafflingly, one not totally divorced from empiricism. After all, someone had noticed that onchocerciasis-induced blindness affected...
more than the individual, that children (again, usually female children in real life) might also take part in the suffering and increased burdens of responsibility caused by river blindness, even if they have not contracted the disease. But the statue represented a romanticized Africa, a land where the faces might be expressive and even beautiful, but mute. Though the ugliness of the pair’s suffering had been softened, those who knew what the statue meant and represented could not help but see it as a representation of suffering and disease in the safe, sanitary Global North.

Many of my interlocutors recommended that I read an article by two Carter Center researchers, Moses Katarbarwa and Frank Richards; this article describes how systems of obligation and mutual support organized through clan membership in Uganda aid the functioning of the donation program. In short, these broadly accepted support systems dictated that clan members would help fellow clan members who took time off from employment in order to carry out volunteer work for the ivermectin donation program. The article’s methodology was excellent and its conclusions were well supported, though it covered only a small area in Uganda. Despite this limitation, many of my expert interlocutors talked about it as if it were a universal recipe for solving a cultural problem in the work of the ivermectin donation.

I was surprised, naively, to see an instrumental idea of culture operating within the world of the donation, a world that valued empirical research very highly, but in a strikingly different way than academic anthropology does. Cultural work in the literary and political world of the donation program takes place mostly as a sideshow, and usually as a kind of operations research devoted to making disease control programs more efficient.

As part of my fieldwork, I interviewed volunteer drug distributors in five villages in the Morogoro region of Tanzania. My conversations with them revealed that drug distribution volunteers turned over rapidly: they often left their jobs after experiencing just one disenchanting round of drug administration. The work was not as much fun as it had seemed when they first joined, and it was unpaid. None reported receiving the informal support detailed in Katarbarwa and Richard’s study of distribution in Uganda. Most asked if they might be compensated for taking an entire week off work in order to carry drugs to their neighbors. One woman reported being told to volunteer by her village council, not through any desire of her own. A man named Isaac in a town called Zombo expressed weary disgust with what he saw as the top-down, dictatorial culture of the donation programs: he told me that as long as the architects of the programs gave orders and collected data, but did not really listen to the locals,
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the programs would accomplish nothing.

His idea of accomplishment was of course very different from the idea espoused by the donation programs. Mr. Isaac wanted a comprehensive program of assistance from the government of Tanzania or from any other source willing to offer it. Wells, schools, dispensaries, easily accessible medical care, and employment all were part of Mr. Isaac’s plea, but the donation program’s success could only be measured by the number of pills distributed.

Most of my Tanzanian interlocutors had no firm idea from where the drugs originated and felt that the relationship engendered by the drug donation was a form of reciprocal gift giving. However, this exchange was neither satisfying nor clear—local people gave their labor in distributing the drugs, and they gave their compliance in taking them. They expected to get something else from the donors in return, although again they were not clear exactly what. In the literature surrounding the donation program, this arrangement appears as an operational problem to be solved rather than as part of the political economy that makes a population vulnerable to epidemic infectious disease in the first place. A scholarship that is more attentive to structural violence—what Paul Farmer calls “the hard surfaces of everyday life,” or simply poverty—will provide a more meaningful and useful portrait of the culture of donation recipients, and of international humanitarian aid recipients in general. An assessment in terms of structural violence, with an emphasis on the structures that produce sickness and inequality rather than on high-tech solutions to specific disease problems, also stands in contrast to the prevailing assumptions that donation programs are unremarkable, implicitly good, and rational ways of helping the helpless. Scholars of public health must especially attend to the ways in which humanitarian interventions might reinforce the relationships between the Global North and Global South that contribute to poverty and ill health in the first place.

Fever

I draw another example of fraught cultural relationships in public health from a historical case: foundation-sponsored research on yellow fever in Brazil in the 1930s. In 1929, a researcher for the Rockefeller International Health Board (IHB), Dr. M.E. Connor, traveled by steamship into the interior of Brazil to look for cases of yellow fever. Connor was in the country working in cooperation with the Brazilian Yellow Fever Service (YFS), a collaboration between Rockefeller IHB and the Brazilian government. In the past few years, I have read through Connor’s diaries and thousands of other documents at the Rockefeller Archive
Center just outside New York City. In the 1920s and 1930s, the Service’s goal was to control yellow fever in Brazil. The Rockefeller personnel in the country supported the Service, but were also deeply engaged in primary research on yellow fever. Connor’s team had no blood test for yellow fever, so they collected evidence of the disease’s symptoms in order to understand its epidemiology:

4 April 1929 in Remanso, Dr. Francisco de Assis Souza: Graduate of the Bahia Medical School and a recent arrival in Remanso, says that the principal diseases seen by him in this town have been malaria and hookworm. No case of “vomito preto” has come to his notice as yet, nor is he able to find a history of this infection in Remanso. The doctor does not expect to remain here, as he is unable to collect for his services…there is every evidence of malaria and hookworm diseases, also a prevalence of venereal infections. I engaged a horse and guide to go to the neighboring village where the hotel-keeper said there was reported a case of vomito preto. I found the case and it proved to be a clear infection of tertian malaria. The patient had vomited considerable bile which I examined by spreading on a cover glass without finding the tint of red—only green.21

Connor’s steam voyage went on for several more weeks. In his opinion, it generated unreliable public health data, since the physicians with whom he spoke sometimes gave the impression of being ill-trained or stupid. Connor’s diagnoses of yellow fever from this trip were based on the collection of somatic or verbal evidence, something at second or thirdhand: they were therefore less than definitive. Autopsies, which could remove and examine the liver, yielded much more reliable results: liver samples either had characteristic yellow fever lesions or they did not. There was no ambiguity with flesh.

In the 1920s, yellow fever was not well understood—it was not until 1927 that researchers identified the cause of the disease, a virus. Even then the epidemiology of the fever was not clear. In Brazil, especially, the source of the disease was obscure—Rockefeller researchers had noted that the disease broke out very rarely in urban centers, but also that there was no clearly identified reservoir of the infectious agent. They knew it spread via mosquitos, but they did not know where these mosquitos came from. Researchers wondered if the mosquitos might have traveled in the water tanks of steamships sailing from febrile areas of West Africa, or if the source might be something totally unknown.

To solve this mystery, the Rockefeller team wanted to create a very accurate map of cases of yellow fever throughout Brazil. In the large urban centers where the Rockefeller men worked, they were able to check possible cases of yellow fever in person, often visiting sick or dying travelers in their hotel rooms. This
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research was conducted in an epidemiological capacity—Rockefeller personnel did not provide treatment. But the Rockefeller men (and they were all men) were very few—perhaps a dozen for the whole country—and the evaluation of symptoms was complex and subjective. They realized fairly early on that only autopsies would give them reliable epidemiological data.

To this end, Rockefeller officers inserted themselves legally and physically into death and mourning in Brazil, and they did so with the full support of the Brazilian government. Within a remarkably short time, they persuaded the government to require its citizens to obtain a certificate of burial before interring their loved ones if the death had any signs of being related to a short fever. According to the Rockefeller officers, this was the first time that the Brazilian state had attempted to register death. In a typical early journal entry, Rockefeller doctor Elsmere Rickard describes a meeting with the Brazilian Ministry of Health:

26, 27 and 28 May 1930: Either escrivães [local public health registrars] or doctors may make out the form but before such are valid they must bear the signature of the Representative of the [Ministry of Health], who is our viscerotome [an autopsy instrument] agent. This gives our agent opportunity to select his cases. Our agent will send the second "via" [a report on a suspected yellow fever death] to us at the end of each month thus giving us a control on all deaths.22

Control was key, as Rockefeller agents were deeply interested in close control of “people and things”—perhaps as a reaction to what they saw as the riotous disorder of Brazilian natural and human life.23 The Rockefeller team generated, for example, endless, ingenious prescriptions for public sanitation, particularly efforts to combat mosquito breeding.24 In cooperation with the Brazilian Ministry of Health, the YFS encouraged local people to keep fish in their drinking water, as the fish would eat insect larva; to cover disused toilets with a tight paper seal; to destroy or remove anything outdoors that could hold water, such as cans and flower pots; to maintain ladders so that the Yellow Fever Guardas (a paramilitary public health police) could check their gutters; and to fill urns of funerary flowers with wet sand rather than plain water.

Viscerotome

The YFS worked very closely with the Ministry of Health, but its mission was to research yellow fever. YFS personnel experimented endlessly with the disease itself and with its insect vector. They also developed an autopsy tool, the viscerotome: a probe designed by Elsmere Rickard in 1930 and put into wide use
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by the Rockefeller team immediately afterwards. This tool shows a particularly interesting side of how the YFS did business, how its medico-scientific culture organized evidence, and how it came into conflict with local vernacular cultures.

The viscerotome, or “liver punch,” was a steel implement with a sliding blade that could be used to puncture the abdomen of a corpse in order to obtain a sample of the liver. The liver specimen could then be examined at a lab for signs of yellow fever. The viscerotome cost little to manufacture and could be used successfully by people without a medical education—a quick lesson on how to slide the probe up under the ribs sufficed for training. By 1933, the Yellow Fever Service had established more than 800 viscerotomy posts in the interior of Brazil. The liver probe is a symbol of a medical practice that violated social norms and common decency—the YFS literally penetrated the bodies of dead Brazilians in order to obtain a proof that was totally physical and could be read in the laboratory instead of in the field. These partial autopsies were fantastically valuable from an epidemiological perspective—and the YFS staff, at least in their diaries, admitted no other way of looking at things. Their culture of medical data collection, backed by the Brazilian government and the international fortune of the Rockefeller IHB, trumped any local concerns.

The Rockefeller YFS was not particularly interested in local culture—in the 1930s a rhetoric of cooperation or collaboration with local people had not yet developed, and the Rockefeller technical expertise was the last word in the management of yellow fever. But local culture seeped through anyway, and local people voiced their opinions, sometimes through violence, as seen in the 1932 murder of a viscerotome agent, described in Rickard’s journal:

We interviewed the local delegado [representative] and various eyewitnesses to the crime. We also visited the place of the murder. Doctor Figuerido’s report is quite correct. I might summarize by adding that our representative was murdered by five rum-crazed ruffians who backed him into a corner. He did not draw his gun until he had been knifed in the side by one of his assassins who was going to “tirar um pedaço de figado” [take a liver sample—meant here as a cruel joke]. His first shot mortally wounded one of the aggressors. Unfortunately as he was using an automatic, his second shot jammed in the barrel. If he had had a revolver, he might have succeeded in killing enough of his aggressors to escape alive.

Rupture

Who, in this conflict, has the right to violate another person’s bodily sanctity? Does the attacker, with his sneering taunt, have the right to take a liver sample?
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What framework of sovereign power, law, science, or custom authorizes this action? Here, in this rupture, in this intrusion of violence into the orderly routine of the autopsy service, the world of the viscerotome revolves in miniature. Bruno Latour famously argued that Louis Pasteur confused the inside and the outside of the laboratory, made scale irrelevant through his microscopic husbandry of the anthrax bacillus, and introduced a new political force into the world—a force that only he could interpret, and that only he could speak for.29 This small example from the history of the viscerotome, which is mentioned in historian John Farley’s magisterial account of the history of the Rockefeller IHB, demonstrates the similarly complete epistemological and political value system that allowed the Yellow Fever Service to operate in its peculiar way and thrive.30

Like Pasteur, the Rockefeller officers confused inside and outside. For example, a standard part of Rockefeller laboratory routine was the maceration of whole monkeys into a slurry, which lab workers would then inject into other monkeys, hoping to maintain a strain of yellow fever in vivo. Substances inside the body—liver tissues—were capable of generating a reliable, valuable public health meaning when passed through Rockefeller labs. The outsides of bodies, the grimace of a mother at her child’s funeral, did not factor at all.

Conclusion

Both cases that I analyze in this essay show public health entities at odds with their constituents, working over a great cultural divide. Both cases resulted in measurable public health gains: the lifting of an ancient and very awful burden of disease from the ordinary people of Tanzania and Brazil. Yet both cases, separated by thousands of miles and more than 70 years, showed a similar friction, a similar unease in the way that architects of public health programs think and write about their objects, and more importantly in the way that they act. The difficulties and conflicts of tropical, international, and global medicine are well known. But this essay draws attention to the fact that this kind of conflict would be better understood if we attend to systems of meaning—what we might call culture—on the part of both the recipients of public health care and the administrators and scientists who design health interventions. I hope that this short set of case studies will join a conversation on equity and justice in global health. Further, I hope that these case studies might lead scholars, policy experts, activists, and global health administrators into a new way of thinking about what happens when drugs, technology, or other forms of aid flow from the United States and Europe into what the ex-CEO of Kurtis Pharmaceuticals
called “the thickets of Africa.”

My research into the donation of ivermectin for river blindness illuminates a classic problem in public and global health: the designers of the medical intervention (which was, in this case, the mass administration of pills to control a parasitic disease) had a very different set of priorities and unspoken, implicit meanings than did their subjects, the people who handed out and swallowed the pills. Power entered very forcefully into this relationship: the drug companies and their NGO allies were able to exercise a great deal of power and authority over the everyday lives and behavior of the recipients of donated drugs. The reasons why they exercised such power are complex and have much to do with the economic might of the drug companies and with global historical trends in North-South humanitarian aid. This essay does not propose a specific solution to this problem, but it does seek to expose some of the unspoken orthodoxies that make this situation possible. More importantly, this essay sheds light on how the system of meaning of the donation organizers (that is, their culture) ought to be discussed alongside the system of meaning of the recipients of the drugs. Culture, in the world of humanitarian aid, often appears solely as an operations problem to be overcome in the face-to-face interactions of aid workers and aid recipients. I argue that this way of thinking must change and that the persistence of this way of thinking about culture in humanitarian aid may perpetuate imperial power relations that place a wealthy, technologically sophisticated Global North unjustly in command of a subordinate Global South.

The historical case, the creation and expansion of the viscerotome service in Brazil in the 1930s, demonstrates a long tradition of this imperial relationship in international health. Additionally, the case reveals ways in which we might think about culture in order to better understand the power relations that characterize international humanitarianism. The YFS interestingly did not profess a humanitarian motive; in fact, I was not able to find a document containing a mission statement or explicit statement of purpose at all. Yet, it brought together impressive, intelligent, hard-working researchers who devoted years of their lives to charting the source of yellow fever in South America and to basic scientific research on the transmission and etiology of the virus. They did not announce the reasons why they did this, that is, the way that they made
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sense of their lives, the way that they organized meaning—their culture. This kind of thing seeps through around the edges. The Rockefeller Yellow Fever Service men are all dead now, and we will never know their thoughts. But their surviving documents reveal an enduring and meaningful fact of global health: a way in which scientific goals become political goals, in which epidemiology can shape and animate public policy, and in which laboratory culture enters into conflict with local culture.

The relationship between drug donor and recipient, or yellow fever researcher and populace, dramatizes a typically biomedical way of thinking about reason and unreason, science and belief, medicine and superstition, and best practice and local culture. This essay attempts to rearrange these notions in order to make clearer the assumptions that place rational science on one side and a picturesque—but ultimately subordinate—culture on the other. To read one part without the other, to pretend that there are two distinct cultures of infectious disease—one monolithic, global, inevitable, and rational and the other varied, local, troublesome, and disposable—is playing with half the score. Such thinking perpetuates old and harmful colonial, imperial attitudes about subordination and power in international medicine.

Notes

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6. Donald W. Light and Rebecca Warburton, "Demythologizing the High Costs of Pharmaceutical
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11. Farmer, Infections and Inequalities.
18. Samsky, “Since We Are Taking the Drugs.”
21. Connor, MEC (Connor) diary excerpt, March 31, 1929, p. 86, folder 232, box 40, series 305, RG 1.1, Brazil, Rockefeller Foundation records, Rockefeller Archive Center.
22. Elsmere Rickard, RIC (Rickard) diary excerpt, May 26, 27, 28, 1930, p. 61, folder 265, box 50, series 305.O, RG 1.1, Brazil, Rockefeller Foundation records, Rockefeller Archive Center.
24. Foucault, “Governmentality.”
25. Elsmere Rickard, RIC (Elsmere Rickard) diary excerpt, June 30 to July 5, 1930, p. 13–4, folder 265, box 50, series 305, RG 1.1, Brazil, Rockefeller Foundation records, Rockefeller Archive Center.
28. RIC (Elsmere Rickard) Diary excerpt, September 9, 1932, p. 26, Folder 265, Box 50, Series 305, RG 1.1, Brazil, Rockefeller Foundation records, Rockefeller Archive Center.
30. Farley, To Cast Out Disease.