AT THE LIMITS OF CURE

Bharat Jayram Venkat

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At the Limits

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# of Cure

BHARAT JAYRAM VENKAT

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For Patti and Thatha

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PREFACE

This is a book about how we imagine cure, and how cure comes up against its limits. It is a book about the unexpected shapes and even more unexpected peregrinations of science and medicine. And it is, finally, a book about tuberculosis treatment in India.

It's ironic—and, as I've come to realize, entirely fitting—that a book about curative imaginations has its origins in the incurable. In 2006, I began to investigate the vexing influence of American philanthropy on HIV interventions in India. Despite the protestations of stalwart figures in public health and medical anthropology, HIV prevention and treatment continued to be viewed as separate sorts of activities.[1] Under the sway of McKinsey consultants, the Gates Foundation gambled heavily that prevention was the right way to invest their fortune in India, given the high cost of treating an incurable condition. The provision of antiretroviral drugs was left to the state, and to the many medical practitioners who operated along the porous borders of government hospitals.

To begin to understand how treatment worked in India, I traveled in 2011 to the city of Chennai, where the first diagnoses of HIV in the country had been made twenty-five years earlier. I spent my days in a small HIV clinic with doctors and nurses as they deftly rounded the inpatient wards, and with counselors who offered reassuring catechisms to patients and their families. I learned patiently about treatment in this clinic and in other, larger, government-run facilities. I learned about a way of life, which was also a mode of survival, built around the idea of a normalcy attained and maintained through dogged adherence to antiretroviral drugs. I even wrote an article about it.[2]

1. Among those advocating for approaching prevention and treatment conjointly, perhaps most notable are Paul Farmer and Jim Kim of Partners in Health.

2. Venkat, "Scenes of Commitment."

Looking back, what strikes me now is the dissonance between a promise and its fulfillment. With the introduction of antiretrovirals, I was repeatedly told, HIV had become a livable, chronic condition. I could see that this was often the case. Even so, people died. I remember a man on a gurney, rolled one morning into the inpatient ward with great haste, comatose, his family clinging to the sides of his bed. By evening, he had passed away, his family still clinging, now wailing. Many patients came in these moments of extremis, otherwise resistant to the discipline demanded by the clinic. Many other patients died despite their strict discipline.

Other than the patients themselves, the usual culprit blamed for these deaths was tuberculosis, described to me as a particularly opportunistic infection. Patients were warned that they must maintain what was described in Tamil as their *noi ethirppu sakthi*: literally, a disease-opposing power, but used by physicians as a translation for "white blood cell count" or "immune system." Tuberculosis paid little regard to such power, manifesting even in patients who registered high white blood cell counts.

As I would learn, tuberculosis was in fact the most common cause of death for those with HIV.[3] At the time, I was baffled. Tuberculosis, I was repeatedly told by the doctors at the hospital, was eminently curable. Why, then, were patients dying from it? Here, too, a dissonance between promise and fulfillment. At the same time that my research was shifting to tuberculosis—to what was purportedly a curable condition—strains of the disease described as "totally drug resistant" started to appear in Mumbai and elsewhere. In many conversations I had across the country, people began wondering aloud whether they were now living in an India after antibiotics. Had tuberculosis, a seemingly curable condition, become incurable once again? If so, it hardly made sense to ask why people continued to die from a curable condition.[4]

This book represents my effort to sort through this ambivalence or near contradiction, an attempt to understand a condition that is sometimes curable and sometimes incurable, sometimes both, and sometimes not quite either. I stopped asking why people were dying from a curable condition, and I began to ask another question, one that is at the core of this book: what does it mean to be cured in the first place?

3. The inverse is not true: the majority of people with tuberculosis in India are not HIV positive.

4. And yet this is a question that many have asked and continue to ask, a question grounded in both a humanitarian moralism and a public health pragmatism.

In our present moment, tuberculosis is a particularly appropriate condition through which to think about cure precisely because its status as a curable condition has become increasingly suspect. Back in mid-twentieth-century India, as government-operated pharmaceutical factories began churning out the antibiotic streptomycin, it was prophesied that tuberculosis would soon become a thing of the past. In this sense, a curable disease was a disease waiting to become history.

Yet, in India today, tuberculosis is both history and present, and as many have pointed out, most likely also the future.[5] At the time of my fieldwork for this book, conducted primarily in the years between 2011 and 2016, there were estimated to be just under three million new cases of tuberculosis in India—about a quarter of all new cases worldwide, more than anywhere else in the world. During that period, the government reported about 400,000 deaths from the disease each year—the sixth leading cause of death in the country.[6] Looking beyond India, the World Health Organization has estimated that a third of the world's population harbors the bacteria that cause tuberculosis—what's referred to as latent tuberculosis—but only about a tenth of that number go on to develop active symptoms of the disease.[7]

5. As Christian McMillen puts it, "History's most deadly disease remains so in the present and very likely will remain so in the future." McMillen, *Discovering Tuberculosis*, 1.

6. World Health Organization, "Global Health Observatory Data Repository." Numerous commentators have noted that such numbers are reminiscent of Western Europe in the nineteenth and early twentieth centuries. Such comparisons, while common, foreclose as much as they reveal, fueling further diagnoses of India's backwardness, organized around a figure of universal history that is imagined to culminate in a hygienic utopia.

7. In India, about 40 percent of the population is estimated to have latent tuberculosis. In general, people do not know that they have latent tuberculosis. It operates more as an epidemiological category than as a clinical or experiential one. At present, latent cases are not pursued, as physicians wait for symptomatic patients to appear at clinics and hospitals (what is often described as "passive case finding"). I was told by government physicians and bureaucrats that treating patients who are asymptomatic—who are not (yet) sick—is a poor use of limited resources. Yet the divide between latent and active tuberculosis is porous, as a latent condition might nevertheless produce effects in the body, and might eventually manifest in active symptoms (at present, it remains exceedingly difficult if not impossible to predict who will develop active tuberculosis). For this reason, the persistence of a latent reservoir of infection ensures the failure of any efforts toward eradication predicated on treating only active cases. As Erin Koch puts it, "Latency is not a biological state, but one that emerges through human-microbe social relationships. In some ways, the 'active'

Despite its global enormity, the uneven distribution and visibility of tuberculosis mean that it remains for many both vanquished and forgotten, not only curable but—having been relegated to other people in other places and times—practically eradicated.[8] But as cases of tuberculosis pop up in places where it had been thought banished (in Paris and Berlin, for example) and as drug resistance traverses bodies and oceans (as in the case of a traveler from India arriving at Chicago O'Hare Airport), tuberculosis has resurfaced as a problem for Europe and North America.[9]

Telling the story this way, in terms of a disease of the past that returns from elsewhere, risks trapping us in an entrenched pattern of thinking about both geography and history.[10] In the pages that follow, ethnography and history meet film, folklore, and fiction to tell a story that stretches from the colonial period—a time of sanatoria, travel cures, and gold therapy—into the postcolonial present, in which eugenicist concerns dovetail uneasily with antibiotic miracles. I began to turn to history in a former tuberculosis sanatorium on the outskirts of Chennai, one that teetered on the brink of existence with the rise of antibiotics before finally regaining a sense of purpose in the 1980s as a treatment center for HIV. Now, the former sanatorium treats patients harboring TB-HIV coinfections as well those with drug-resistant variants of either condition. When I arrived at Tambaram Sanatorium, as it is popularly known, I still intended to write a monograph on HIV treatment, grounded in the ethnographic present of my experience. But I couldn't shake this curiosity about where the sanatorium had come from, and none of the physicians I met there could satiate my curiosity. This was not the Swiss Alps. There was no *Magic Mountain* to behold.

My curiosity led me to the Tamil Nadu State Archives and Roja Muthiah Research Library in Chennai, and then to the National Library in Kolkata, and later to the India Office Records of the British Library in London. I would learn

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and 'latent' opposition suggests a false—or at least a forced—dichotomy that obscures the ways in which the microbe, the social context, and the body are all 'in motion.'" Koch, *Free Market Tuberculosis*, 192.

8. For example: each year, there are estimated to be approximately nine thousand new cases of tuberculosis in the United States and about five hundred deaths. These numbers suggest one reason why tuberculosis has largely fallen off the radar of both US-focused health researchers and the broader American public, as compared, for example, to a seemingly ubiquitous condition like cancer.

9. On the idea of tuberculosis as a disease banished from Europe and returned as a revenant, see Kehr, "Blind Spots and Adverse Conditions of Care"; Kehr, "Une Maladie sans Avenir"; Kehr, "The Precariousness of Public Health"; Kehr, "'Exotic No More.'"

10. On other places as metonymic of other (past) times, see Fabian, *Time and the Other*.

about the founder of Tambaram Sanatorium, David Chowry Muthu, a Tamil Christian tuberculosis specialist with a handlebar mustache and a hatred of alcohol, and I would track down his descendants in India, Britain, and the United States by following the flourishing branches of the many new sites of internet genealogy. Eventually, I would find myself in the graveyard in Bangalore where Muthu had been buried. What began with Muthu quickly became an exploration of the many pasts that have yielded our present conjuncture, an India where tuberculosis and its treatments are more than ghostly remains.

What follows then is less a straightforward ethnographic monograph and more an anthropological history.[11] In both archives and clinics, I worked with an eye to stories that told me something about what it meant to cure tuberculosis. My experiences as an ethnographer could not help but influence how I approached these stories, but they could not shape it wholesale. Sometimes I discovered threads that connected past to present—for example, in the founding of Tambaram Sanatorium—but as my research progressed I was often left with loose ends. Not every past forms part of a history of the present—at least, not in a way that is concrete, genealogical, or causal. Sometimes a story just ends. Sometimes a story refuses, as Nietzsche would insist, to serve the needs of the present. Sometimes a story wants to stay small—neither brilliant nor banal, neither scalable nor representative, but simply singular.[12]

As I've tarried with these stories, they've taught me how to write them, as well as how to read them. Much of this book tends toward a diegetic mode of presentation, one that might have all too easily been papered over by the will to explain, to theorize. For this reason, the theorizing in this book—like cure itself—is fragile, an extended meditation that dissipates as it travels rather

11. My approach to history is deeply influenced by the focus within subaltern studies on minor histories (as found in the work of Gautam Bhadra and Sumit Sarkar, for example), the strong attention to singular figures in microhistories (exemplified by the work of Carlo Ginzburg and many others since), and the questioning by anthropologists of how the past becomes (or fails to become) history (in the work, for example, of Michel-Rolph Trouillot, Ann Stoler, Michael Lambek, Brian Axel, and Mareike Winchell, among many others too numerous to list).

12. Here, my thinking is inspired by the historian Projit Mukharji's discussion of the contrast between metaphysics and pataphysics: "Metaphysics attempts to explain the world and being in terms of the universal and the particular; pataphysics, a term coined by Alfred Jarry, on the other hand, seeks to extrapolate a science of the singular, the unrepeatable and the exceptional. Metaphysics seeks out regularities and explanations; pataphysics seeks out exceptions and limits to explicability." Mukharji, *Doctoring Traditions*, 286.

than a definitive diagnosis that holds fast across space and time. It is a kind of theory that emerges from narrative description, from the juxtaposition of scenes, and from allowing oneself to be lost, at least for a time, in a sanatorium at the foothills of the Himalayas, on a coolie ship returning from a South African plantation, or in a hectic research hospital near the Mumbai coastline—in other words, in the imagination of cure.

The Incurability of Fantasy

All existence is an imagination within an imagination.

—Ibn al-'Arabi, *The Bezels of Wisdom*

The Beginning of the End

In August 1953, a rather immodest proposal introduced into the upper house of the Indian parliament called for the sterilization of those suffering from incurable conditions—and, in particular, tuberculosis. In the debates that followed, a parliamentarian from Madras cautioned that tuberculosis was fast "becoming a curable disease" with the use of new wonder drugs like streptomycin, an antibiotic developed half a world away.[1]

His words rang like prophecy: just a few years later, Madras was to become the site of a major study testing the efficacy of antibiotics for treating tuberculosis. In the wake of the study, sanatoria the world over would shut their doors. Cure—in the form of antibiotics—could now be delivered to the masses. Tuberculosis, a disease that had plagued humanity for millennia, had finally become curable and, with time, perhaps eradicable.

1. Rajya Sabha Official Debates, "Resolution Regarding Sterilisation," 556.

The Wrong Kind of End

In December 2011, reports began to pour out of Mumbai of patients suffering from a kind of tuberculosis caused by strains of bacteria resistant to all standard treatments.

By many accounts, the curable had once again become incurable.

Was this the end of the antibiotic era?

That Monstrous Indian Imagination

To study the history of cure is to be confronted at every turn by the imagination. In 1861, the English biologist and naturalist Charles Darwin described the imagination as our ability to combine "images and ideas, independently of the will, and thus creat[e] brilliant and novel results."[2] Imagination, he insisted, was a powerful but unconscious force, one that operated most prominently in the work of dreams. The value of the imagination depended on our conscious capacity to sort through these syntheses, to utilize our reason—for Darwin, the highest of the human faculties—to select certain combinations of images and ideas while forcefully rejecting others that threatened to mislead. To fail to exercise proper discernment was to risk ending up, he warned, like those "superstitious" dogs that bay at the moon, creatures entirely at the whim of their unruly imaginations.[3] Despite the prominent role that he attributed to reason, science for Darwin was a powerfully imaginative enterprise, one that metabolized the world and imbued it with ever greater form, force, and connectivity.[4]

Darwin's vision of the imagination finds an unexpected antecedent in the philosophy of history proposed by the German philosopher G. W. F. Hegel, for whom India was a "land of imaginative aspiration, and appears to us still as a Fairy region, an enchanted World."[5] Imagination, for Hegel, was a necessary but less evolved form assumed by Reason, one that entranced the Indian into

2. Darwin, *The Descent of Man*, vol. 1, 106.

3. Darwin, *The Descent of Man*, vol. 1, 107. Drawing on Houzeau, Darwin notes that dogs are unable to clearly discern what is on the horizon, and therefore "conjure up before them fantastic images" to satisfy their "disturbed" imaginations. Darwin, *The Descent of Man*, vol. 1, 108.

4. On the role of the scientist's imagination in the formation of ideas, see Holton, *The Scientific Imagination*.

5. Hegel, *Lectures on the Philosophy of History*, 139. On Hegel's vision of India, see Hegel, *On the Episode of the Mahabharata*. For an analysis of how Hegel's view fit into a longer tradition of imagining India in the West, see Inden, *Imagining India*.

an immoral disregard of the distinction between self and world. Without a sense of an external reality in which to act, there could for Hegel be only repetition, but no change. And without change, there could be no history: India, he wrote, "has remained stationary and fixed," enraptured, like Darwin's baying dogs, by its own "monstrous, irrational imagination."[6]

For Darwin, imagination required the controlling power of reason to generate novel insight. For Hegel, imagination was at best an unevolved form of reason, one particularly at home in the antihistorical "dream-world" of India.[7] Yet there were other imaginations of imagination that flourished in India—for example, in the thirteenth-century philosophy of the Muslim theologian, mystic, and poet Ibn al-'Arabi, whose words were studied and debated by generations of Indian Sufis. Ibn al-'Arabi taught that "the Imagination deals only in what is sensible."[8] The sensible world, he maintained, was but a manifestation of God, a dream accessible to us only through the synthesis of reason (*'aql*) and imagination (*khayâl*). For Ibn al-'Arabi, and contrary to both Hegel and Darwin, imagination was neither opposed to the world nor subservient to reason. Rather than a flight of fantasy away from the sensible world, imagination was instead a path toward it.

A distinct but complementary way of conceiving of the relationship between the imagination and the sensible world can be found in the south Indian Sanskrit tradition of the sixteenth century, in which the imagination (*bhāvanā*) "can be said to see what is there *as it was imagined* and, by so seeing and knowing it, to enhance what is there so that there is now more there. In this sense, imagination does create newness. . . . It is not the original image that the imagination finds but, through the finding, something much fuller, something the imagination has itself driven to the surface and then shaped and deepened by seeing or reimagining it."[9] Within this tradition, to imagine is a process of ripening the world that draws on our capacities to recognize, remember, and reshape the stuff in it. Insofar as cure is a mode of responding to an imperfect world, it is one that depends on these capacities to recognize how things are, remember how they might have been, and shape how they might yet be. Understood in this way, to enter into the imagination of cure is not, as Hegel might have it, to freeze time, but rather to attend to the many forms that time might assume.

6. Hegel, *Lectures on the Philosophy of History*, 139, 147.
7. Hegel, *Lectures on the Philosophy of History*, 148.
8. Al-'Arabi, *The Bezels of Wisdom*, 122.
9. Shulman, *More Than Real*, 261.

Take, for example, Rudyard Kipling, a prominent writer of empire at the turn of the twentieth century. The ubiquity of tuberculosis in England under both Victoria and Edward spilled over into much of his prose. And as an Englishman born in imperial Bombay, Kipling would retain his imagination of India in the worlds that he forged through his stories. In 1909, over a hundred years before our threatened descent into an India after antibiotics—and over half a century before streptomycin arrived on Indian shores—Kipling published "With the Night Mail." An early work of science fiction, his story unfolds in a future in which humanity has taken to the sky in giant airships floating high above the highest hills.[10] In the following scene, two of the crewmen aboard a mail transport ship reflect on the workings of history, and on a history long past (but one that is entirely present to Kipling the writer):

> "Funny how the new things are the old things. I've read in books," Tim answered, "that savages used to haul their sick and wounded up to the tops of hills because microbes were fewer there. We hoist 'em into sterilized air for a while. Same idea. How much do the doctors say we've added to the average life of a man?"
>
> "Thirty years," says George with a twinkle in his eye. "Are we going to spend 'em all up here, Tim?"[11]

In the exchange between Tim and George, we see the dogged persistence and malleability of a certain curative imagination. Kipling's lifetime roughly maps onto the period when bacteriological thinking was on the rise, buoyed along by Robert Koch's discovery of a microbial cause for tuberculosis. In the light cast by this imagination of a world suffused with microbes, the colonial hill station, the sanatorium, and other elevated sites of healing did not disappear.[12]

10. The relationship between social science (in particular, cultural anthropology) and science fiction (or social science fiction) has been elaborated by Diane Nelson in her essay on Amitav Ghosh's *The Calcutta Chromosome*. In the last line of her essay, she concludes: "Social science fiction is itself a pharmakon, a poison and a cure, a threat and a promise, a warning sign and a how-to guide for postcolonial new humans." If I could steal this line as a description for my book, I would. Nelson, "A Social Science Fiction," 262.

11. Kipling, "With the Night Mail," 333.

12. On the idea of a social reconfigured by the arrival of microbes, see Latour, *The Pasteurization of France*.

Instead, they were refigured by Kipling as sites of "sterilized air" where microbes struggled to survive and humans might thrive.[13]

Looking into the future—"With the Night Mail" takes place in the year 2000—what Kipling imagined was not something like antibiotics but rather a further mutation of the tuberculosis sanatorium, elevated from the hills up into the air. His character, Tim, is struck by the sameness of the new, how the most cutting-edge and novel represents nothing more than a modification of the past, transposed from one therapeutic scene (the hill) to another (the airship).

In reading Kipling's story today, I wondered: what made it possible for Tim to see these airships as simply a refinement of a historical form of therapy rather than a break or rupture, a new form of curative imagination entirely? Or, to take a further step back, what made it possible for Kipling to square bacteriological ideas about disease causation with what went on in hilltop sanatoria? The curative imagination of Kipling's characters—and of Kipling himself—is one in which therapeutic forms survive across time by incorporating "images and ideas" drawn from the sensible world.[14] The past is neither refused nor overcome but constantly refurbished for a new age.

A central contention of this book is that *our imagination of cure shapes our understanding of time*: not only the temporality underlying histories of science and medicine—as we see in Kipling's story—but also the temporality of therapy itself. The two are in fact connected. In our moment, cure is frequently taken to be an ending—to illness, treatment, and suffering more generally. If cure is an ending, then a history of cure (or of a curable disease) is more often than not a history of how we came to that ending.[15] We might think back to the optimistic words of the critic Susan Sontag that first appeared in 1977: "the fantasies inspired by TB in the last century . . . are responses to a disease thought to be intractable and capricious—that is, a disease not understood—in an era in which medicine's central premise is that all diseases can be cured."[16] Medicine in the nineteenth century, according to Sontag, was no better than the baying of dogs at moonlight—the unruly product of an imagination deprived of the

13. On the persistence of older ways of understanding disease causality in the face of germ theory, see Worboys, *Spreading Germs*.

14. Darwin, *The Descent of Man*, vol. 1, 106.

15. This helps to explain, at least in part, why we have so many histories of tuberculosis and relatively fewer anthropological studies (although this seems to be changing).

16. Sontag, *AIDS and Its Metaphors*, 5.

guidance of reason. In what we might think of as Sontag's imagination of cure, incurability was primarily a problem of ignorance, what Sontag tried to capture with the word *fantasy*. Such fantasies, Sontag suggested, dissipated once tuberculosis became properly known and therefore curable.

Yet over roughly the last two centuries there has been no shortage of cures for tuberculosis. The antibiotic cure is only one among many, a cure whose future has become increasingly uncertain with the spread of drug resistance. While Kipling glimpsed a future that was, quite literally, an elevation of his present, Sontag looked instead to a past and denigrated its forms of knowledge as pathological fantasy. Their contrasting visions suggest that our imagination of cure—and of historical time—directs our thinking about what counts as proper knowledge, as well as the forms of research and evidentiary production that properly undergird such knowledge. What Sontag overlooked was that medical knowledge in the late twentieth century, when she was writing, was itself a kind of fantasy—dependent on its own imagination of what it meant to be cured. Even today, the complex world-spanning choreography of clinical trials and pharmaceutical research continues to depend on a specific imagination of what sorts of conditions (and what kinds of people) require cure, and how we know whether a cure works.[17] Put simply, the idea that fantasy ever disappears is itself fantastical. It is, in a word, incurable.

How we conceive of the history of cure, as well as what we count as proper research and proper knowledge in the present, delimits the kinds of questions we can ask moving forward and the kinds of ends we can pursue. The imagination is a collective "field of action," one that both draws from the world and transforms it.[18] Within the curative imagination articulated by Sontag, one in which we have finally arrived at proper knowledge of tuberculosis, we might feel an ethical injunction to ask: why do so many people continue to die of a curable condition?[19] The fact of curability is given, a fait accompli rather than

17. On the organization and ethics of transnational clinical trials, see Petryna, *When Experiments Travel*. In the context of India, see Sunder Rajan, "Experimental Values," 67–88. See also Sunder Rajan, "The Experimental Machinery of Global Clinical Trials," 1–55. On the priorities of big pharma, see Dumit, *Drugs for Life*.

18. Benjamin, *The New Jim Code*.

19. The question of why people die of curable conditions, by its very framing, is an unequivocal indictment: someone is to blame. When I first asked myself, and others around me, this question, I was naive enough not to understand that. It speaks to the generosity of the doctors with whom I worked in India that they understood my question in its naïveté, rather than as an accusation meant to highlight their own failures. I had witnessed, for example, multiple episodes during which an Indian American

something to be turned over, examined, and studied in its own right. To begin to ask different questions, we have to stretch our imagination of what cure might be, how it might work, and what it might mean. In other words, we must begin to imagine cure otherwise.

If, as Sontag would have it, the history of medicine is a movement away from fantasy and toward greater enlightenment, then it is an irony that a book about tuberculosis must explain the disease to an audience that might be unfamiliar with it.[20] In India today, as elsewhere, tuberculosis is most commonly diagnosed in its pulmonary form—that is to say, in the lungs—but can appear in various parts of the body, from the spine to the brain to the genitals

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medical student, who was on fellowship at one of the hospitals where I worked, pointed out the shortcomings of the hospital's infrastructure and its staff, seemingly with little grasp of the underlying situation. The hospital staff responded with a great deal of forbearance. Nevertheless, some of the physicians with whom I worked had their own answer to this question: they blamed the patient, or more broadly, the backward culture of the patient. The medical anthropologist and physician Paul Farmer has consistently worked to turn the question back onto the medical community. Reflecting on his work in Haiti, he writes:

> We encountered no shortage of silliness—again, immodest claims of causality—among people attempting to explain, without alluding to the concept of neglect, why so many people died in places like Haiti from an eminently treatable disease such as tuberculosis. The ranking explanation among Haitian and certain non-Haitian health professionals was that the peasants believed in sorcery and thus had no confidence in biomedicine. We learned, instead, that rural Haitians had no access to biomedicine and that they did just fine, regardless of their views on disease etiology, once we fixed the dysfunctional tuberculosis program. What needed to change was not the cultural beliefs of the patients but rather the quality of the tuberculosis program—and with it, perhaps, the cultural beliefs of part of the medical community. (Farmer, *AIDS and Accusation*, xvii)

Farmer succeeded in reversing the direction of the indictment, by linking the problem of failure to the quality of healthcare provision, to bureaucratic neglect, and to the culture of medicine more generally. For a similar view from an Indian tuberculosis clinic, see Das, *Affliction*.

20. One might object that Sontag was not a professional historian. Certainly, but her work has enjoyed a much broader reach than that of most historians, and for that reason, it reveals how a specific curative imagination shapes ideas about the history of medicine more widely. And of course, even some professional historians of medicine, and of tuberculosis specifically, continue to operate from the vantage of present-day enlightenment.

and kidneys.[21] The possibility of cure has regularly been thought to depend on knowing the underlying cause of a disease. Our present-day understanding of tuberculosis as a unitary, bacterial disease emerged from contentious etiological debates in the late nineteenth and early twentieth centuries that stretched from Berlin to Madras. Through these debates, *tuberculosis* began to refer to a condition brought on by an infection with any bacteria that are part of the *Mycobacterium tuberculosis* complex, regardless of where in the body it takes root, or for that matter, the kind of body in which it appears (European or otherwise, human or not).[22] In place of symptoms (wasting, tubercles), the contemporary classification of tuberculosis is organized around cause. But as I've already suggested, Koch's announcement in 1882 that tuberculosis was engendered by bacteria did not dispel the sense that its causes were primarily environmental, an etiology affirmed by the persistence of sanatorium-based forms of treatment. The shift to construing cause in narrowly bacteriological terms required the emergence of powerful antibiotics in the early to mid-twentieth century. In this sense, the way in which we imagine cure might just as well be said to shape how we conceive of disease and its causes. To put it another way, our understandings of a disease and its causes are consolidated alongside our imaginations of cure.[23] And in the absence of new imaginations of cure, new ideas about disease causality might at best be incorporated into older understandings of causality, or potentially ignored entirely.[24]

21. As Bryder, Condrau, and Worboys have noted, there is a serious dearth of historical (and anthropological) studies of nonpulmonary forms of the disease, undoubtedly related to the fact that such forms are harder to diagnose and more easily confused with other conditions like cancer. Bryder, Condrau, and Worboys, "Tuberculosis and Its Histories," 3.

22. The most common way in which these bacteria are thought to be transmitted is through inhaling what someone else has expelled from their body, usually through coughing, sneezing, or spitting. But these bacteria can also travel in other ways: for example, through injection, as is the case with animals used in experiments. On tuberculosis in nonhuman animals in India, see Venkat, "Iatrogenic Life."

23. In his history of malaria, Rohan Deb Roy similarly argues that "knowledge about a cure and a disease-causing entity, to a considerable extent, shaped one another. In fact, it is not entirely implausible to think about situations in which knowledge about cinchona and quinine preceded, and effected crucial shifts in the history of malaria." Deb Roy, *Malarial Subjects*, 276.

24. The historian Michael Worboys has made a related point, that new ideas of causation did not simply displace older ones, but rather assimilated them. See Worboys, *Spreading Germs*.

The Pendulum of History

Tuberculosis, and the fantasies it has inspired, has not gone away, even if many of its cures have. Perhaps its most powerful fantasy has been that of its end: the fantasy of a cure for tuberculosis, once and for all. As we observe the spread of drug resistance, we are faced with the question of what happens when the curable becomes incurable. When the history of cure is no longer simply the history of how we arrived at an ending, we can end up with what looks like a pendular history, in which we return, as I was told during my fieldwork, "to the dark ages"—that is to say, a time before antibiotic enlightenment. The idea of return is at the center of an imagination of cure grounded in lack or loss. For that reason, it is also, if often implicitly, at the center of medical anthropology, a field that examines the "culturally constructed ways in which various people experience ill health and find ways to 'get back to where they were' before the onset of disease, illness, or pain."[25]

The idea of return has a long genealogy in the history of anthropology, in which cure has what might be thought of as a social function: to normalize the deviant or abnormal subject, to reincorporate them into the social or symbolic order. Much of this work—frequently focused on magical or shamanistic healing—assumes a conservative imagination of cure, one that operates through a return to preexisting norms.[26] Such a vision of therapy has its uses, as a promise that things might be as they once were, that disorder, disruption,

25. Alter, "Heaps of Health, Metaphysical Fitness." Alter is less interested in how people return to "where they were" and more in how they become something else, something potentially superhuman. Relatedly, Todd Meyers suggests that, following Canguilhem, we might make a distinction between cure and healing: whereas cure has a sense of return or restoration dependent on external criteria, healing is an opening that allows for the laying down of new norms. Meyers, *The Clinic and Elsewhere*, 9.

26. Returning to a preexisting norm might not always mean returning to the same norm that one had previously inhabited. Cure might instead entail the inhabitation of a preexisting norm that is nevertheless new to you. A telling example of this form of thinking can be found in the work of the French anthropologist Jeanne Favret-Saada. In the 1970s, she conducted fieldwork among peasants in the Bocage region of France. In this region, she argued, witchcraft was a kind of "remedial institution," one that granted bewitched male farmers an opportunity to acquire the violent norms of French peasant masculinity that they had failed to learn in their previous roles as sons subservient to their fathers. Cure, in this sense, was the adoption of those adult male norms specific to the Bocage. This is less of a return to one's previous norms than the adoption of the norms appropriate to a new status, one that parallels what Michael Taussig described when he wrote, in regard to Latin American shamanism, that "the cure is to become a curer." Taussig, *Shamanism, Colonialism, and the Wild Man*, 447. In

or pathology might be remedied by the reestablishment of a preexisting social and biological order. By contrast, a vision of history as return has quite different uses, as a dire warning to the present about an apocalyptic future that resembles a dark past, or as a means of culling lessons from that history in order to shape a dramatically different future.

But therapy and history only appear pendular if we assume that we return to where we began: that to be cured is to be restored to a previous state of health, and that for a condition to become incurable throws us back to an earlier moment, for example, before the ascendance of antibiotics. Yet the ends of cure, and the ends of history, are not so neatly satisfied. Rather than restoring a previously existing set of norms, cure might be transformative—even revolutionary—in its open-endedness, acting to elaborate, widen, or even overthrow existing norms.[27]

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the Bocage, then, we might say that the cure is to become a man. See Favret-Saada, *Deadly Words*.

27. Questions of norm and status were taken up quite differently—even radically—by scholars of race, gender, sexuality, and disability, many of whom took inspiration from the anthropologist Ruth Benedict and, in particular, from her short essay titled "Anthropology and the Abnormal," *Journal of General Psychology* 10, no. 1 (1934): 59–82 (for an example of this kind of lineage making, see Staples and Mehotra, "Disability Studies," 35–49). In this work, Benedict suggested that the problem posed to society by divergence from the norm might be remedied by a widening of the cultural pattern rather than a disciplining of the abnormal. In other words, social norms might become more capacious, more embracing.

To further elaborate Benedict's own examples, the problem was not nonnormativity; the real problem was a form of society, a certain set of political arrangements, and an economic system that made life potentially unlivable (or at least exceedingly difficult) for those who failed to approximate a certain normative ideal. The problem was not disability but rather a lack of accessibility. The problem was not homosexuality but rather a narrow definition of what counts as appropriate desire. The problem was not schizophrenia but rather the crushing weight of discrimination. Such an argument is activist and political, and, to my mind, very much in line with Benedict's vision of redesigning society and producing social change. On the idea of redesign in Benedict, see Modell, *Ruth Benedict*.

The aim then would be to cure society, rather than the individual. Here, the form of cure that emerges is not remedial but rather transformative, acting not on persons but rather on cultural norms. This position might be identified, for example, with the early work of the scholar of disability and activist Eli Clare, who questions a structure of curative expectation in which life in the present is sacrificed for a future to come. For Clare, the narrowly individuated cure of disability is genocidal, an effort to eradicate difference and, in the process, to eradicate the kinds of communities that have emerged on the basis of these differences. On the future-oriented temporal-

Just as one cure is not quite the same as another—in substance, in therapeutic mode, in its distribution and effects, in the kinds of ethical questions it raises, and in the ways in which it is conceived of in its moment (and in our own)—neither is one form of incurability the same as another. What this means is that the incurable is not simply the mirror opposite of the curable, but rather an effect of how we imagine cure in the first place. And if our ideas of cure can change, so too can our ideas of the incurable. Asking about what it means to be cured, and what it means to be incurable, might make it possible to halt the pendulum-swing of therapy, and of history—or at the very least to think critically about what is at stake when we conceive of the conjoined temporalities of therapy and history as pendular at all. The more general point is that how we think about the curable and the incurable shapes how we conceive of history, and of time more generally. This book then offers an anthropological history, by which I mean I approach history itself as an effect of the curative imagination rather than as an explanation for it.

In a World of Pure Kipling

Anthropologists are fond of arrival stories. Let me tell you one—not mine, but that of Edward Selby Phipson, who arrived in India as a physician but became, to the best of my knowledge, the first anthropologist to study tuberculosis in India. Born in Birmingham in 1884 to a family of painters and businessmen, Phipson completed his medical training in 1908 and enlisted in the Indian Medical Service. He was moved every few years, experiencing the far reaches of the Indian colony, which in that moment stretched from Burma in the east to Aden in the west.[28] In 1937, as Aden shed its dependency on India, Phipson was reassigned

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ity of curative promises, see Kim, *Curative Violence*; Clare, *Brilliant Imperfection*; and Clare, *Exile and Pride.* Relatedly, but in a very different place and time, Frantz Fanon struggled with the near impossibility of psychiatric cure in Algeria in the face of continuing colonial violence. For Fanon, individual cure could not take place without a transformation of the social order. See Fanon, "Colonial War and Mental Disorders."

28. In Burma, Phipson served as deputy sanitary commissioner. During World War I, he found himself in Gallipoli, where, after the death or incapacitation of many British officers, he found that he was the only Britisher left standing with the language skills required to command the 156th Gurkha Rifles over two days of fighting. After the war, he was invalided to India, where he was first appointed assistant medical officer of health in Bombay, and then health officer in Simla, a post that he held for five years. In 1923, he was relocated to Aden, where he served as the port health officer.

to Assam, a region in the northeastern corner of the Indian colony, where he was promoted to colonel and assigned to the post of inspector-general of civil hospitals.

This is where our story begins, in an Assam contending with British efforts at pacification and control. As a physician, an administrator, and gentleman scholar, Phipson was an integral part of this colonial apparatus. He had a reputation for linguistic virtuosity (if obituaries are to be believed, he spoke Urdu, Burmese, Pashtu, Gurkhali, French, German, and Italian) as well as for acting and stagecraft (honed as a participant in an amateur theater group). He lived, as a colleague put it, "in a world of pure Kipling."[29] Such a world was one drawn from the experience of India and filtered through the optics of empire.

Like his compatriot Kipling, Phipson became engrossed by the problem of tuberculosis. He wanted to learn how the tribal peoples of Assam understood the causes of the disease, and what (if anything) they thought could cure it. The spark for his curiosity had likely traveled from British Africa, as anthropological methods and knowledge flowed across colonial networks. In 1930, just a few years before Phipson arrived in Assam, the British Medical Council put together what it called a "Draft Scheme for a Tuberculosis Survey in an African Community," which incorporated both ethnographic and historical approaches to determine the extent of the disease as well as native beliefs about it. The Colonial Development Fund, which supported the draft scheme, surmised that it was "through the sympathetic adaptation of native ideas and methods to the uses of modern hygiene, rather than by the abrupt substitution of European regulations for native customs, that success is most likely to be attained."[30] As we will see, Phipson's strategies paralleled those of his colleagues working in colonial Africa.

Another possible inspiration for Phipson's approach might be found in the work of the British social anthropologist Edward Evan Evans-Pritchard, who published his magnum opus on witchcraft just two years before Phipson arrived in Assam.[31] Based on his doctoral research on the Zande people of north central Africa, conducted in the mid-1920s, Evans-Pritchard's *Witchcraft, Oracles and Magic among the Azande* has become a classic text for thinking through forms of explanation that diverge from natural or physical causality. According to Evans-Pritchard, the Zande frequently explained what he thought of as unfortunate coincidence in terms of witchcraft. This mode of explanation

29. Wolstenholme, "Colonel E. S. Phipson," 720.
30. McMillen, *Discovering Tuberculosis*, 42.
31. Evans-Pritchard, *Witchcraft, Oracles and Magic among the Azande*.

provided a meaningful causal agent, the witch, against whom a stereotyped response might be enacted, either to exact retribution or to facilitate cure.[32]

The critical question for Phipson was whether tribal groups in Assam believed that tuberculosis could be transmitted from one person to another. If the fact of communicability was "embodied in or at least not obviously at variance with tribal beliefs," Phipson wrote, then it might be possible to encourage these groups to act scientifically without realizing it.[33] Put another way, he believed that science might be hidden beneath what he described as the "extraneous trappings of superstition and ignorance."[34] Phipson's goal was to persuade the Assamese people to behave the right (scientific) way, even if it was for the wrong (religious, magical, or superstitious) reasons. He believed, along with his colleagues in Africa, that rationally appearing behavior might be produced even in the absence of an entirely rational belief system.[35]

32. Evans-Pritchard's work prefigured and in many cases directly influenced generations of anthropologists concerned with understanding the rationality of peasants, particularly in the era of postwar development. For example, in 1955, a young anthropology student at Harvard University, Edward Wellin, was recruited by the Rockefeller Foundation to travel to Peru as part of an assignment with the Peruvian Ministry of Public Health. His task was to evaluate the work of a team of hygiene visitors who had been working in Los Mollinos, in the foothills of the Andes. Wellin wanted to find a specific behavior of the local people that might serve as an index of the efficacy of these hygiene visitors. He chose to study the boiling of water. Wellin would argue that to improve public health—in this case, to increase the rates of water boiling—you needed to understand local forms of reasoning. The residents of Los Mollinos might be convinced to boil their water, but might not be convinced by the kinds of reasons that mattered to public health experts. See Wellin, "Water Boiling in a Peruvian Town."

In the 1960s, at the height of what have come to be known as the rationality debates in the social sciences, modern scientific forms of reasoning became increasingly understood as situated, local, and at times provincial. Medical anthropologists in particular turned to the study of competing rationalities, perhaps most prominently in the work of the Harvard-based psychiatrist and anthropologist Arthur Kleinman, who, in the late 1980s, developed a typological distinction between disease (a biomedical diagnosis) and illness (a culturally mediated understanding and experience of that disease). As a result, the proper domain of medical anthropology became illness (rather than disease) and healing (rather than, for example, cure). See Kleinman, *The Illness Narratives*.

33. Phipson, *Tribal Beliefs concerning Tuberculosis*, 39.

34. Phipson, *Tribal Beliefs concerning Tuberculosis*, 38.

35. In his review of the history of medical anthropology, Lawrence Cohen has described this as a form of thinking that considered peasants to be acting *as if* they were rational when their actions served what was construed to be a useful social function,

The first step, however, was to understand what native peoples believed. The existence of some sort of idea of communicability represented, for Phipson, a "rational element in tribal beliefs," one that he hoped might come to "supersede the irrational."[36] He was convinced that the "basic principles of the management of tuberculosis could be grafted on to or interpolated between tribal beliefs, so as to avoid any serious clash between scientific truth and tribal superstitions."[37] Phipson hoped to use his findings to introduce propaganda among the tribes regarding the cause of the disease, as well as how it might be prevented and cured.

Although anthropology as a discipline had become professionalized in universities in Britain, the United States, and, to a lesser extent, France, it was still de rigueur for colonial administrators to engage in an amateur but nevertheless respectable kind of anthropological inquiry.[38] Around 1938, Phipson recruited British administrative officers from across Assam to collect ethnological information from local tribal groups.[39] His team unearthed a range of ideas about the disease. Tuberculosis, he learned, was thought to be the fruit of ancestral sin, passed down through generations; the result of a family member entering into the home of an enemy; the effect of a spell cast by a jealous sorcerer or a covetous neighbor; the penalty for murder or the killing of another's livestock; the price to be paid for eating prohibited food or drink or consuming dirt from a grave; a curse sent by spirits who had been improperly worshipped. Different groups in Assam used different words and focused on different symptoms.

This variability was not unique to India. *Phthisis*, a Greek term inherited from Hippocrates that remained popular into the early twentieth century, was a hereditary condition that rendered one constitutionally *phthisical*. The primary symptom was a body that wasted away, as if consumed by an internal flame. Both *phthisis* and *consumption* referred in general to a disease that had whole-body effects. What we now call *tuberculosis*, a term that originated in the nineteenth century but seems to have really taken off only in the twentieth, originally referred to the finding of tubercles, pale potato-like structures, in the

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without the need for an underlying rational belief system. See Cohen, "Making Peasants Protestant and Other Projects."

36. Phipson, *Tribal Beliefs concerning Tuberculosis*, 49.

37. Phipson, *Tribal Beliefs concerning Tuberculosis*, 39.

38. On the history of amateur anthropology and the institutionalization of the discipline, see Kuklick, *The Savage Within*; Stocking, *After Tylor*; and Barth et al., *One Discipline, Four Ways*.

39. Phipson, *Tribal Beliefs concerning Tuberculosis*, 38.

lungs of those with the disease. For a time, it was not uncommon for physicians to speak of tuberculosis, consumption, and phthisis in the same breath. While there were efforts to draw clear lines between these and other conditions, many physicians would treat them as virtually synonymous.

Sometimes, potentially different conditions were deliberately superimposed: for example, in the writings of early twentieth-century compilers of Ayurvedic recipes, who maintained that the old Sanskrit term *kshayarogam* referred to the same condition that European physicians called phthisis or tuberculosis.[40] We might think of this as an innocent act of translation.[41] But in fact, kshayarogam could have been translated in many other ways, or simply described in terms of its causes, symptoms, and treatments. In superimposing these conditions, it became possible to say that European medicine and Ayurveda were in a way equivalent, sharing a common understanding of the body and the series of ways in which that body could be deranged. Moreover,

40. This act of translation, in which two conditions were rendered equivalent, required a further set of intellectual gymnastics. Medical conditions never travel alone. They carry with them ideas about the body, the world, and how everything works together, all of which also requires translation. See, for example, the debates surrounding the translation of germ theory into Ayurveda in early twentieth-century Bengal in Mukharji, *Doctoring Traditions*, 169–76. On the history of the continuing encounter between biomedicine and Ayurveda, see Sivaramakrishnan, *Old Potions, New Bottles*; Wujastyk and Smith, *Modern and Global Ayurveda.* In a parallel case, Chinese practitioners of Western medicine in the early twentieth century translated germs as "wasting worms," an idiom drawn from the medical etiologies of the Qing dynasty. Andrews, "Tuberculosis and the Assimilation of Germ Theory in China."

This is not, however, to say that all aspects of science and medicine are infinitely translatable. In attempting to translate the core concepts involved in a randomized controlled trial to Tibetan subjects, for example, the absence of concepts like randomness (and the disposition to regard such matters in terms of fate) poses a limit to the malleability or recontextualization of divergent epistemologies within radically different understandings of the world. See Adams et al., "Informed Consent in Cross-Cultural Perspective."

41. The sociologist of science Bruno Latour disturbs the idea that there can be simple translation between past and present. He examines the case of Ramses II, who is said to have "died of tuberculosis." Latour argues that such a statement can make sense only through the coordination of specific knowledge, skills, and technologies belonging to the twentieth-century scientists who examined his mummy, thereby giving reality to his postmortem diagnosis. Latour's question is not whether the deceased died of tuberculosis, but rather for whom and under what conditions such a tuberculous death becomes meaningful (certainly not for Ramses II's coevals in Pharaonic Egypt). See Latour, "On the Partial Existence of Existing and Nonexisting Objects."

it became possible to claim that India's knowledge of tuberculosis had come first. If European medicine was held up as a standard, it was an anxious one that could be derided as old (Ayurvedic) wine in a new (European) bottle. This was, in a sense, an even deeper sorcery, of a particularly modern form that allowed anthropologists like Phipson to transmute enmity and jealousy, curses and ancestral sins, phthisis and kshayarogam, into the singular condition we call tuberculosis.[42]

The Magic of Juxtaposition

Phipson's research resulted in a study published by the Assam Government Press, with a generous foreword provided by an Oxford-educated anthropologist and colonial administrator named James Phillip Mills, who had written extensively on the Naga people of Assam.[43] In his foreword, Mills distilled from Phipson's findings a more abstract—and more academic—explanation for the perceived cause of tuberculosis among the Assamese tribes: the breaking of a taboo. According to Mills, the sense of identity between self, family, and clan among the Assamese meant that the effects of taboo breaking could spread from the original victim to their family and eventually to the larger group. As Mills put it, "Substitute 'tuberculosis' for 'magic' and it is clear wherein lie the hopes of successful propaganda against this terrible scourge."[44] As with the effects of magic, tuberculosis might be defended against, controlled, and maybe even defeated.

Mills's equation of magic and tuberculosis echoed the evolutionary theories proposed four decades earlier by the Scottish anthropologist James George

42. In other moments, conditions were deliberately held apart. See Bryder, "'Not Always One and the Same Thing.'" In the early twentieth century, for example, a diagnosis of tuberculosis could signal the death knell of a British soldier's career in India, with dire consequences for their state-granted benefits and pension. For this reason, colonial physicians frequently afforded soldiers less severe, more readily curable diagnoses, relying on the fact that many of the symptoms of tuberculosis were shared by other conditions (see chapter 2).

43. From 1913 to 1947, Mills served in the Indian Civil Service in northeast India, where he gathered the information for his several ethnographies of Naga groups throughout the region. Mills served as subdivisional officer at Mokokchung in the Naga Hills of Assam between 1917 and 1924 and deputy commissioner, based at Kohima, during the 1930s. In 1930, he was appointed as the honorary director of ethnography for Assam. In 1943, he was promoted to the position of advisor to the governor of Assam for tribal areas and states, with overall responsibility for tribal matters in northeast India.

44. Mills, foreword, 37.

Frazer, in which magic was a less evolved form of science. For Frazer, magic came in two varieties. The first, which he called imitative or homeopathic magic, operates through the principle of like affecting like, or action through resemblance—what Michael Taussig has described as the "magic of mimesis."[45] By contrast, contagious magic operates through the principle of previous contiguity or contact, through "the notion that things which have once been conjoined must remain ever afterwards, even when quite dissevered from each other, in such a sympathetic relation that whatever is done to the one must similarly affect the other."[46]

At the heart of either form of magic is what we might think of as an efficacy produced through juxtaposition: two things that resemble one another, or two things that were primordially connected but since separated, have an unshakable hold over one another. On both counts, we can understand how the effects of taboo breaking might spread through a family or clan, bound by kinship and perhaps also resemblance. But for Frazer—and we can see this line of thinking as it is inherited by Evans-Pritchard, Phipson, and Mills—the rationality underlying magic is in fact irrational, what he described as a "mistaken association of ideas."[47] This mistake became for both Mills and Phipson a convenient guise behind which scientific principles of disease management could be implemented. Rather than an obstacle to be overcome, native belief became a resource that could be put to use. If Assamese ideas about tuberculosis were, in Sontag's words, a fantasy, they were also, for colonial officials, a convenient and available one amenable to their own functionalist interpretations of culture.

Ironically, Frazer's method, which relied heavily on the juxtaposition of temporally and spatially separate phenomena—"snipping and combining similar customs from wildly scattered societies"—has faced over a century of criticism accusing him of falling prey to precisely the kind of mistaken associations that he described as foundational to magic.[48] The similarity between such phenomena is merely superficial, critics have alleged.[49] There is no real relation, no primordial association, no universal "grammar of the human soul."[50] Yet

45. Taussig, *Mimesis and Alterity*, 48. See also chapter 4 of his book more generally.

46. Frazer, *The Golden Bough*, 37.

47. Frazer, *The Golden Bough*, 37.

48. Graeber, "Remarks on Wittgenstein's Remarks on Frazer," 20.

49. Frazer also had his adherents, those who took inspiration from his work, in particular the surrealists, who in turn have inspired generations of anthropologists, including, for example, Claude Lévi-Strauss.

50. Graeber, "Remarks on Wittgenstein's Remarks on Frazer," 2.

both Frazer and his critics subscribed to a shared belief in something like an a priori true association between ideas and things. But they disagreed on which relations were true, and which were mistaken. Rather than contributing to such adjudications, my interest is instead in the kinds of effects produced by specific juxtapositions, as well as those that they preclude.

A powerful example of the effects of juxtaposition can be found in anthropological writings on what have been termed symbolic cures. Whereas biomedical cures might be thought to work through the manipulation of material connections—artery to heart, for example—symbolic cures operate through the manipulation of symbolic connections, which may or may not have a material substrate.[51] Let's take, for example, the work of the French anthropologist Claude Lévi-Strauss. In 1963, he published his famous analysis of a Cuna shamanic ritual (in Panama) performed in the event of difficult birth. In the course of the ritual, the shaman sings a complex incantation, a narrative of a great quest that allegorizes the challenges of childbirth and their overcoming:

> The sick woman believes in the myth and belongs to a society which believes in it. The tutelary spirits and malevolent spirits, the supernatural monsters and magical animals, are all part of a coherent system on which the native conception of the universe is founded. The sick woman accepts these mythical beings or, more accurately, she has never questioned their existence. What she does not accept are the incoherent and arbitrary pains, which are an alien element in her system but which the shaman, calling upon myth, will re-integrate within a whole where everything is meaningful.[52]

The song, stocked with a mythical menagerie, offers the woman a language for her otherwise incomprehensible pain. Cure, in this sense, is a return to meaning—the swing of the pendulum—made possible through the translation of the woman's pain into the symbolic order of her society. The effect of connecting what is otherwise an arbitrary and alienated pain with these mythical images from her society is to remove that arbitrariness. Critically, her pain has no necessary, a priori relationship to these images, although it might seem to be the case after the fact. Such relationships must be forged by the shaman,

51. On these varied forms of therapeutic manipulation, see Lévi-Strauss, "The Effectiveness of Symbols," 198–204.

52. Lévi-Strauss, "The Effectiveness of Symbols," 197.

who is a master of juxtaposition.[53] In connecting an image to her pain, it has become meaningful, and she is cured.

Taken a step further, juxtaposition might be understood as the method of cure writ large. And just as juxtaposition might be taken as the method of cure, it is also the method of this book. In the chapters that follow, I juxtapose scenes drawn from folklore, film, and fiction, as well as ethnographic and historical research, to forge associations and, more precisely, to create contexts. Scholars depend on a variety of well-trodden contexts to make sense of a given phenomenon or situation. For anthropologists, this has often been culture; for scholars of South Asia, religion or caste.[54] Such favored contexts can take on an aura of obvious relevance, so much so that the juxtapositions they require are obscured entirely.[55] To be clear, there is much to be understood by taking seriously such contexts, in discerning the twitch from the wink—and in fact, I frequently draw on these more routinized contexts (for example, the context of India, which constantly threatens to slip into a bounded national territory that doubles as an explanatory device).

But in returning again and again to our usual contexts to explain something, we risk explaining it away. Taken to the extreme, routinized contexts can overdetermine the meaning and signification of the thing to be explained. Through the process of contextualization, a life or event can become an example, effect, or symptom of something larger: a statistical or scholarly trend, a

53. This absence of necessity is undoubtedly in the eye of the beholder. It might just as well be said that the relationships forged by the shaman are in fact preexisting relationships that had been broken. As Gerald Bruns argues in his introduction to the Russian formalist Viktor Shklovsky's *Theory of Prose*, a poetic universe operates through the idea of a necessary connection between a thing in the world and the transcendental. Bruns, "Introduction," ix–xiv. By contrast, "a prose universe is just one damn thing after another, like an attic or junkyard or side of the road" (ix). This is a universe of arbitrariness. In the face of this arbitrariness, "the task of reason . . . is to bring things under control—not, however, by poeticizing them, not by allegorizing events into semantic superstructures (theories of chivalry, for example, or of culture), but rather by the construction of plots . . . whose operations do not so much abolish randomness as justify it" (x).

54. See Appadurai, "Theory in Anthropology"; Appadurai, "Is Homo Hierarchicus?"; Inden, *Imagining India*. See also Strathern, *Partial Connections*.

55. I'm reminded here of the words of Gregory Bateson, who teaches that "a story is a little knot or complex of that species of connectedness we call *relevance*." For Bateson, relevance is a property that emerges as a result of story, rather than a prior connection that is merely uncovered or underscored by story. Bateson, *Mind and Nature*, 13.

zeitgeist, a cultural norm.[56] Context can begin to appear as a kind of cure for the messiness of life. The danger, however, is that we succumb to a heavily territorialized form of thinking in which we confront a profoundly naturalized world that has already been carved up, leaving us only to accept our slices. Such a form of thinking is one in which we already know what matters and why, one in which we run the risk of extinguishing the singularity of life, of phenomena, and of experience.[57]

Certainly, a particular juxtaposition will open up specific lines of inquiry and occlude others.[58] But rather than ask which is the right juxtaposition, I wonder instead about what a particular juxtaposition illuminates. What kinds of juxtapositions might be vitalizing, because they force us to rethink taken-for-granted contexts and raise new questions? And what kinds of juxtapositions might lead us to predictable end points?[59] Or, as with Phipson and Mills, to the instrumental production of contexts that suit our own ends, that make the sense we require to fulfill our own ambitions? In writing this book, my aim has been instead to produce juxtapositions that jolt the senses. For this reason, this book was not written for the quick excerption of "theory," for the canny lifting of a term or phrase that can be laid down wherever you may go. The method of the book is a plea for a renewed attention to scholarly form, specifically, to the kinds of juxtapositions (and contexts) we depend upon and demand. In this sense, my method is also an argument about cure itself.

At the Limits

While this book begins in the early twentieth century and ends in the early twenty-first, the reader will be frequently transported across time and space, sometimes abruptly. Threads are dropped, others are picked up. The movement

56. I am indebted here to a conversation with Projit Muhkarji, in which he referred to an "implicit rule of numbers" in historical writing: the more people affected, the more relevant or important a phenomenon.

57. Ronald Inden has made a related point about the contextual taming of the singular text: "more often than not, when my colleagues in anthropology call for context they seem to be asking for a detached, potentially feral, textual practice to be converted into an expression of or, at best, a commentary on this anthropological text." Inden, "Introduction," 10.

58. See Strathern, "Out of Context."

59. I draw here from the work of the anthropologist Naisargi Dave, who has thought carefully about the uses of context in relation to the distinction she draws between vital and sterile contradictions. Dave, "On Contradiction."

from colonial gardening, pension benefits, and philandering milkmen to cosmology and dying wives is an attempt to produce, through juxtaposition, unexpected contexts for imagining cure. What it means to be cured is not "stationary and fixed," as Hegel infamously described India, but rather dependent on the kinds of juxtapositions through which it is imagined.[60] In particular, the question of what is being cured—a disease, a body, a people, a relationship, a society, an attitude, a population, an environment—reveals that cure might inevitably and always be a metaphor with a slippery referent. There is no originary cure that we can turn to as our founding paradigm.

Cure is never panacea, boundless in every direction, ubiquitously and eternally efficacious for everyone, everywhere, at all times. A central claim of this book is that we can better understand cure through its partiality or fragility, through the ways in which it unravels, comes undone, or even fails—in other words, by examining the limits of cure. Those limits come in many forms: in the limits to knowledge (What can we know?), of ethical comportment and action (How should we act?), and—crucially—of expectation (What can we hope for?). Antibiotic resistance might signal one form of limit, organized around the waning power of pharmaceuticals in the face of bacterial mutation. Claims about who needs or deserves cure (and who doesn't) might be thought of as another kind of limit, premised on deeply racialized and classed calculations of human worth and value. Approaching cure at its limits provides a stronger, less idealized foundation for thinking the ethics and politics of treatment, and medicine more broadly.

While tuberculosis has frequently been held up as exemplary of disease more generally, the way in which cures for tuberculosis have been imagined will only ever partially map onto other conditions. The recent development of a functional cure for HIV, for example, must be understood in relation to a transnational history of activism, the unequal distribution of various generations of antiretroviral drugs and modes of prevention, and the fact that this cure remains, at least at the moment of writing, unscalable. Yet, as we shall see, the existence of such a cure contributes to how cure is reimagined in relation to TB-HIV coinfections. Similarly, the forms of curative imagination that have taken shape around mental illness have been inflected by gendered and racialized histories of institutionalization, psychopharmacology, and psychiatry, histories that at moments have run parallel to tuberculosis. For example, the theoretical elaboration of cure in psychoanalysis provides a way of thinking about the problem of recurrence and the role of the clinician's declaration in

60. Hegel, *Lectures on the Philosophy of History*, 139.

the making of cure—which likewise bleeds into how we imagine relapse and remission in the treatment of cancer. To be sure, for certain conditions, like heart disease, we have a difficult time imagining cure at all. And the debates over what it might mean to cure disability take us in an entirely different and more radical direction, forcing us to confront the fact that in imagining cure we imagine certain forms of life as somehow damaged or in need of repair.[61]

This book explores a range of curative imaginations that have taken form around tuberculosis: in debates contrasting idyllic sanatoria and crowded prisons, through which freedom in its many forms became envisioned as a kind of therapy; in the itineraries of ships filled with coolies and soldiers seeking work and treatment across the British Empire; in the networks of scientists who tested antibiotics in India as a means of asking whether poverty really mattered to therapeutic success; in clinics where patients were told that they were cured only to undergo treatment again and again; and in the reworking of midcentury anxieties about population growth in relation to contemporary drug resistance in India's urban centers. In conjoining past and present, *At the Limits of Cure* is an effort to contribute to conversations about the promises and perils of medicine for our collective futures.

My aim in this book is to grapple not only with the history and present of cure but also to lay a foundation from which we can begin to envision what forms of therapeutic promise might be imaginable in the times to come, and to prepare ourselves for the inevitable limits of such therapies. We might think of such a quest for limits as a form of critique, one that reveals the arbitrariness of what frequently appears as "universal, necessary, or obligatory."[62] It is, in other words, a beginning for how we might imagine cure otherwise in a world of fading antibiotic efficacy.

61. I'm referring specifically to the work of scholars who have studied cures for deafness. See Virdi, *Hearing Happiness.* In relation to India, see also the work of Michele Friedner, in *Becoming Normal,* on state-sponsored cochlear implants and the promise of normalcy.

62. Foucault, "What Is Enlightenment?," 45.