Chapter Four

The way in which we historicize time
is determined to a great extent by the point
in time in which we are living.

—Romila Thapar, *Talking History*

Wax and Wane

Cures, we might think, should be endings: the end of suffering, of treatment, and of illness more generally. What happens when cures instead come and go, when you can be cured and then cured again? In the transition from sanatorium-based therapy to antibiotics in mid-twentieth-century India, physicians and patients grappled with questions of procedure and prognosis. How long would it take to cure a patient, and who had the authority to say that they were cured? Moreover, just what did it mean to be cured if you could be cured repeatedly? Toward the end of the twentieth century, the use of standardized records made successful antibiotic treatment a matter of consistency and duration. Alongside X-rays and microscopes, documents filled with neat rows of checkmarks became a critical technology for tracking progress. In a literal sense, effective treatment became conceptualized as a problem of marking time. Yet cure could be a fragile accomplishment, one equally endangered by the passage of time. Even as patients through the potential endlessness of treatment, they also seem to experience no end of cures, of endings that follow endings. The further entanglement of tuberculosis with HIV in India throws into relief the ways in which tuberculosis could be figured as almost chronic, and yet curable—and somehow both at the same time. Rather than an ending, such a cure can be interminable.

Daksha's Fury

So far, our explorations of cure have been decidedly earthbound. Now, let's climb: beyond the highest hill stations with their rarefied air, until we arrive in the celestial abode of the gods. A word of caution: such beings are not to be trifled with. You would do well to behave yourself. The gods are all light and heat and emotion, easy to anger. Which means that the stakes are always high.

Perhaps you've heard about what happened to Chandran, the great Moon King.[1] He didn't always look like that, you know. Once he was perennially full, brimming with luminosity. But that was before his marriage to the twenty-seven daughters of Daksha Prajapati, the lord of all creatures.[2] Each of his brides had her special qualities, but Chandran only had eyes for one: Rohini. His desire for her was unquenchable, his cosmic lust burning like fever. Bathed in Rohini's brilliance, he soon forgot about her sisters, his other wives, who waited for him in their lunar mansions.

These other wives, the *nakshatras* or divine constellations, felt his neglect deeply, not just as hurt sentiment but as a failure to perform his husbandly duties. Chandran had been expected to dispense his masculine virility in a more or less equitable fashion as he circulated through the sky. That was the way the sky held together, divine bodies in perfect synchrony. Disproportional lust had introduced a disturbance into the system.[3]

The nakshatras complained to their father, Daksha. It was he who had married them off so cavalierly to a husband with no sense of moderation. As we know, the anger of a divine being is a dangerous thing, burning perhaps even hotter than lust until it has spent itself. How much more dangerous might be the anger of the lord of all creatures? As Daksha exhaled, his fury escaped his parted lips and possessed Chandran. Like a ravenous beast, Daksha's fury

1. The moon is also referred to as Soma, Sasin, Amsuman, or Indu. See Cerulli, *Somatic Lessons*, 106.

2. The number of Daksha's daughters that marry Chandran vary across tellings; in some, there are twenty-eight daughters.

3. In his reading of the story of the moon alongside the story of King Agnivarna's affliction from the *Raghuvamsa*, Daud Ali frames the central issue as a "problem of attachment," which "was not about the morality of the sexual relationship itself, and did not take the form of a body of consistent interdictions against particular acts, behaviours or liaisons. It instead concerned the disposition that the self was to have with the external world as a whole. The senses posed the danger of a loss of self-mastery." According to Ali, disorder or disequilibrium was not produced by lust or attachment per se, but rather by excessive attachment that could lead to one's undoing. Ali, "Anxieties of Attachment," 117.

consumed the moon. His brilliance, which he had already depleted through his dalliances with Rohini, would soon fade to black.

As Chandran's luminescence retreated from the night sky, the creatures of earth who depended on his light and his sovereignty over rain for sustenance began to wither. Touched by their plight, the other gods pleaded with Daksha to relent. In some tellings of the story, Daksha instructs the *aswins*, celestial twin physicians, to provide Chandran with *soma*, an ambrosia that substitutes for his spent semen and delivers immortality to the drinker (and in fact, the Moon King is often called Soma). In another telling, Chandran undertakes *tapasya* (severe penance) that he devotes to Shiva, in a bid to regain his lost heat.

Whatever the means, Chandran is cured. But what happened to him is more than a simple cautionary tale, a warning for those earthly kings who would let their lust get the better of them and forgo their duties. There are consequences for Chandran's actions. Bad behavior and excessive attachment on a cosmic level bears fruit on the terrestrial plane: first, in that Chandran's waning deprived life on earth of his brilliant sustenance and, second, in that Chandran's illness has now descended to earth, a fury that afflicts fragile mortals.

It is this last detail that transforms the story into an origin myth. Chandran is not simply the primordial victim of tuberculosis; he is patient zero.[4] This claim to origination explains why the story of the moon continues to be invoked to this day, even if many of the more salacious details are left out.[5] A medical textbook published by a pair of doctors in the state of Odisha in 2015 includes a rather informative chapter on the history of tuberculosis that proceeds like a whirlwind through Neolithic remains, Egyptian mummies, Romantic poets, the Old Testament, Hippocrates, Herodotus, Robert Koch, and the Chinese *Huangdi Neijing*, before presenting about three pages of what might be termed Indian history, which begins as follows: "TB is an ancient disease in

4. As David Barnes puts it, the figure of patient zero is a "stock character in an oft-repeated drama of transgression, calamity, and (eventually) punishment." More broadly, the figure of patient zero grounds a narrative of disease spread that provides it not only with a beginning, but with a beginning that arrives from elsewhere: as an epidemic (descending upon the people) rather than endemic (which is always already among the people). Barnes, "Targeting Patient Zero," 65.

5. See also Andrew McDowell's powerful discussion of a Rajasthani woman haunted by a kind of tuberculous ghost, one he aptly describes as a "literary revenant" that draws from the embodied description of rajayakshma in the *Kalika Purana*. McDowell, "Chunnilal's Hauntology."

India. 'It is also said that the Moon-God was the first to become a victim of this disease, which is as a result also known as Rajayakshma, or king's disease.'"[6]

Myth and history are words we use to describe what are usually taken to be two distinct ways of approaching the past. Here, the moon's affliction is rather seamlessly integrated into a history of tuberculosis, which is also a history of rajayakshma: the king of diseases, frequently translated as the king's disease or the royal disease, in honor of its first victim, the moon, who governed not only the constellations, but was also the "king of plants, of heavenly bodies and of the Brahmins."[7]

If we wanted to be strictly historical, we might point to the fact that, in the fifth century, the Sanskrit lexicographer Amarasimha located the term *yaksma* as belonging to the same semantic universe as other conditions that manifest through *sosa* (emaciation) and *ksays* (wasting) of the body's vital fluids and tissues.[8] By the eighteenth century, wasting had in fact become the primary sign of yaksma.[9] It wasn't, however, until the nineteenth and twentieth centuries that yaksma became linked to the lungs.[10] By the early twentieth century, rajayakshma itself had become distinctively identified with what was known in English as consumption, phthisis, or tuberculosis.

This is history by way of philology, the study of how a language has developed. But when it comes to disease and its cures, time can flow in straight lines or in grand loops and cycles, and sometimes both ways at once. The story of the moon illustrates that our ideas of cure depend on how we think about and experience time—and that our concepts of time are shaped by our sense of cure.

Embedded in the story of the moon's cure is a problem. Take a look at the night sky. The moon continues to wane. If the moon has been cured, how can this be? Lest anyone think I'm unfairly subjecting myth to the steely vision of empiricism, this is a concern that has struck many commentators and retellers of the story. Some versions of the story suggest that this waning is due to the fact that the moon is a habitual offender: he can't help but be drawn back to

6. Tripathy and Tripathy, *Tuberculosis Manual for Obstetricians and Gynecologists*, 5. It is unclear to me what is being quoted, as no reference is provided.

7. Filliozat, *The Classical Doctrine of Indian Medicine*, 100. On the multiple meanings of rajayakshma, see also Zimmerman, *The Jungle and the Aroma of Meats*, 77.

8. Cerulli, *Somatic Lessons*, 106.

9. Cerulli, *Somatic Lessons*, 166. Filliozat takes this up as well, and argues that it is not at all an imposition to understand rajayakshma as a general kind of wasting disease or form of cachexia, some of which are generalized and others of which affect particular parts of the body. Filliozat, *The Classical Doctrine of Indian Medicine*.

10. Cerulli, *Somatic Lessons*, 106.

Rohini, so he is continuously punished—in which case the regularity of the cyclical time of the moon is the product of a repeated disturbance, an aberration that has become part of the cycle.

But there are other solutions to the problem. Take, for example, this version of Chandran's story, from a mid-twentieth-century Ayurvedic manual on the treatment of tuberculosis, written in Tamil: "On seeing that Chandran, the king of the nakshatras and the Brahmans, was exceedingly fond of/in love with his wife Rohini, his other wives complained to Daksha. He cursed Chandran to come down with this disease. After Chandran repented, the *aswini devas* gave him treatment. They gave him medicines to promote his *ojas* [vitality] and he was cured/recovered/returned to health. Finally, Daksha sent this disease to be caught by the inhabitants of the world."[11] Certain elements of the story remain the same: Chandran disturbs the cosmic order, provokes his wives, and incurs Daksha's wrath. The aswins once again provide their celestial treatment. But the primary cause of rajayakshma/tuberculosis is a curse. In such stories, it is more than a metaphor to say that language shapes the world. Pragmatics literally overcomes physics. Curses contort the world in an overpowering fashion. They have an irresistible gravity. The Sanskritist Alf Hiltebeitel goes so far as to refer to curses as fatalities: performative declarations that set into motion a set of circumstances in which a specific form of death becomes inevitable.[12] A curse, once uttered, becomes like an arrow released

11. Serfoji, *Carapēntira vaitya muṟaikaḷ: Kṣayarōka, uḷamāntai rōka cikitsai*, 11th ed., ed. S. Venkatarajan (Thanjavur: Mankalingam Pavar Press, 1956), translation mine, acc. no. 000154, Chennai, Roja Muthiah Research Library. The precise contents of the cure provided by the aswins remains obscured—unless you count the details provided in the recipes that follow. There are instructions on how to make various "medicated *ghritas*," or preparations made of ghee (clarified butter), that counter the effects of *sosam*, "that which dries up the system." The manual also contains various recipes for treating specific symptoms of tuberculosis, including fever and cough. Everyday substances found in most kitchens, like *miligai* (black pepper), feature prominently among the materia medica, as do more precious substances like *thangam* (gold). G. Jan Meulenbeld provides us with a thicker description of ojas, drawn from the *Charaka Samhita*: "When ojas has diminished, one is afraid, weak, and constantly worried, the organs of sense do not function normally, one's complexion is not healthy, nor are the mental faculties, dryness and slimming prevail. The ojas, which resides in the heart in a (human) body, is considered to be pure and of a reddish and yellowish colour; its loss leads to death." Ojas has been variously translated as a vital force or subtle energy, a force of the gods given to humans, or a fluid system necessary for life. Meulenbeld, "The Woes of Ojas in the Modern World," 160.

12. Hiltebeitel, *The Ritual of Battle*.

from its quiver: it cannot be taken back. Put simply, curses are efficacious, and curses are binding.

Luckily, there's a workaround. Not the withdrawal of the curse, but an additive operation: the moon will continue to wane, yet the administration of cure means that he will also wax. Chandran's curse remains in place, posing an insurmountable limit to the efficacy of cure. The disturbance to the system has become a permanent feature, the speck of sand at the heart of a pearl. The past is preserved at the level of celestial biology; there is no reset button.[13] Chandran's illness, and the curse that unleashed it, have not been overcome so much as dialectically subsumed. And in the process, he has been irrevocably transformed into the moon you see waxing and waning in the sky above you. For the moon, to wax and wane is precisely what it means to be cured.[14]

Two Kinds of Cure

The problem with repeated waxing is that it presupposes repeated waning. Well after the antibiotic revolution had commenced, this ambivalence continued to bother "very well educated and well informed people" in India, who wondered whether a cure for tuberculosis was possible.[15] To assuage their concerns, a Madras-based doctor named Mathuram Santosham wrote a cheaply priced book titled *What Everyone Should Know about Tuberculosis*.[16]

13. Such a conception of cure might be productively compared, on one hand, to the idea that cure is simply about restoration or return and, on the other, to the rather different idea that cure is unidirectional. This latter idea suggests that after you are cured, there is no going back to how you were before you fell ill, no return to what Georges Canguilhem describes as a state of "biological innocence." Canguilhem, *On the Normal and the Pathological*, 137.

14. Looking to the moon as inspiration for his moving ethnographic meditation on poverty in rural Rajasthan, Bhrigupati Singh, in *Poverty and the Quest for Life*, explicitly calls for an attentiveness to "waxing and waning movements, the interrelation of varying thresholds of life," what he describes as a "lunar sense of enlightenment" (117). Singh's critical move is to turn away from an "unblemished" model of ampleness or totality (such as the sun) in favor of a model of "waxing and waning intensities" (223). In writing of the gods as "partially mortal" (55), he offers an imagination of vitality premised on varying thresholds, ebbs and flows, rather than the overly simple binaries of life and death, plentitude and poverty. In this sense, my reading of the circumstances of the moon, and my analytic attention to the waxing and waning of cure throughout this chapter, resonates deeply with his project.

15. Santosham, *What Everyone Should Know about Tuberculosis*, 3.

16. Santosham, *What Everyone Should Know about Tuberculosis*, 3.

Having treated well over one thousand tuberculosis patients over almost four decades, Santosham had witnessed firsthand the effects of generations of therapies, from sanatorium treatment and gold therapy to thoracoplasty and antibiotics.[17] After graduating from Madras Medical College, Santosham was appointed in 1937 to what he would later describe as a "dustbin posting" in the tuberculosis ward at the government hospital in the neighborhood of Royapettah. It was, he suspected, a punishment for his proindependence activism as a member of the student wing of the Congress Party.[18]

Much to his surprise, Santosham found in tuberculosis a calling and a career, establishing a tiny pulmonary clinic in the Egmore neighborhood of Madras in 1938. Nine years later, he built a much larger sanatorium outside of Madras, which he named Santoshapuram, after his father, who had served as a *tehsildar*, or revenue collector, for the colonial government.

In his writings, Santosham's optimism about the curability of tuberculosis is striking: "To such who are in a mood to give themselves or their dear ones as living preys and voluntary victims to tuberculosis, this will be the answer of this book: 'fear not, dejected friends, for tuberculosis is curable.'"[19] What he meant by *curable* was a far cry from the waxing and waning of the moon. Cure, he explained, was "getting over the existing evil effects of the disease and being free from the fear of it in the future."[20] He meant not only freedom from disease but freedom from the fear caused by the potential for future incarnations of the disease. Whereas the freedom required for the sanatorium cure was figured in spatialized and even existential-political terms, the form of freedom envisioned by Santosham was configured in terms of time.[21] Such an idea of cure, as an ending that endures, might sound far more appealing than the perpetual waxing and waning of the moon.

Yet, as we turn the pages of Santosham's book, this idea of a definitive end is belied by figures of cure that multiply. Cure, it seems, could follow cure. As he pointed out, those of his patients who were truly cured were cured at least twice.

17. Thoracoplasty is a surgical intervention that entails the removal of ribs to collapse the lung, allow it to rest, and give the body time to seal over bacteria with caseous materials.

18. In the years to follow, Santosham's reputation grew as a member of the legislative assembly, closely tied to the prominent Tamil politician Rajaji and his Swatantra party.

19. Santosham, *What Everyone Should Know about Tuberculosis*, 6.

20. Santosham, *What Everyone Should Know about Tuberculosis*, 10.

21. On freedom and the sanatorium cure, see chapter 1.

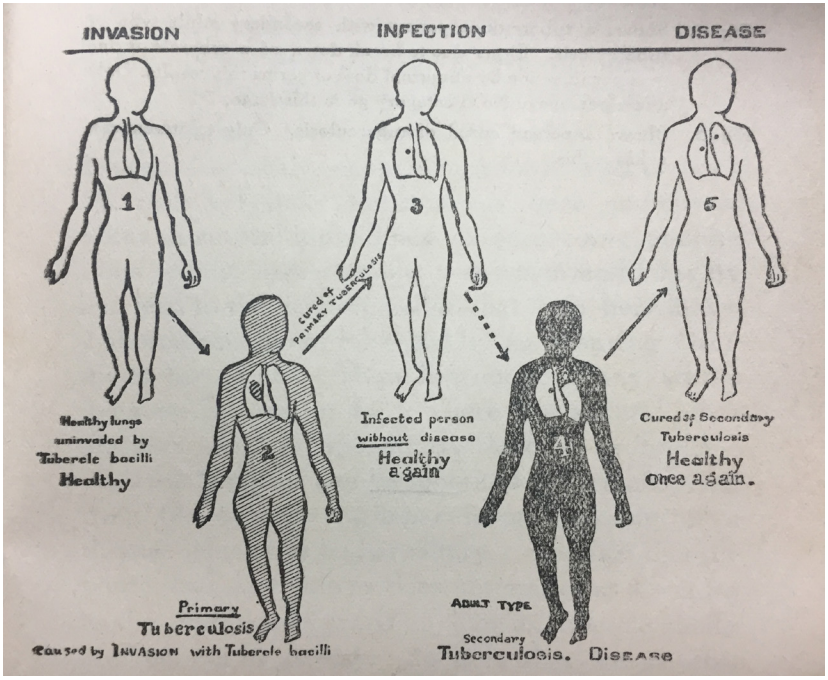

Figure 4.1. Diagram from Santosham's book illustrating the progression of disease. Santosham, *What Everyone Should Know about Tuberculosis*, 10.

A diagram from his book, most likely drawn by Santosham himself, shows the progression of tuberculosis as well as its cure. Initially, the patient's body is merely invaded with bacteria in what Santosham described as "primary tuberculosis." If the bacteria in the lungs are then successfully walled off by tubercles, "fortresses" within which the tuberculous tissues are rendered "sealed and innocent," then the patient would become asymptomatic.[22] The body of the patient would remain "infected," and yet "*without* disease" and "healthy again."[23] According to Santosham, this sealing-off process most frequently occurred without therapeutic attention, and often without the patient even noticing. This, he explained, was the first cure. For many, the curative process ended here.

In some cases, the fortress walls collapsed. Bacteria escaped, multiplied, and colonized other parts of the lungs before entering the bloodstream. Santosham

22. Santosham, *What Everyone Should Know about Tuberculosis*, 75.
23. Santosham, *What Everyone Should Know about Tuberculosis*, 75.

called this "secondary tuberculosis," a condition that was not, generally speaking, self-healing. Such a patient required sanatorium care, antibiotics, and possibly surgery. This was the second cure.

This second cure, however, was far from uniform. Some patients were only partially cured while others were completely cured. Santosham attributed cases of partial cure to the ignorance that led a patient to depend more on their own "feeling of well being than on the doctor's doubts regarding the partly cured disease."[24] "I know a woman who was getting treated for tuberculosis for many years and yet would not believe that she was suffering from a serious malady. She laughed away the doctor's advice of 'bed rest' saying that she did not feel ill to that extent. She got married one fine evening against her doctor's orders, danced all night and died the next morning."[25] Santosham had encountered many such cases in his sanatorium practice. An eighteen-year-old boy who interrupted treatment to take the entrance test for medical school and died of tuberculous meningitis on the last day of his exams. A married woman who returned home for Diwali, became pregnant, and once again fell ill (women's bodies were thought to be particularly susceptible to incurability). An engineering supervisor who returned to his job for fear of losing a promotion, only for the disease to spread throughout his body. "Even temporary disobedience to the rigid rules imposed often ends in the recurrence of the disease and even in untimely death," Santosham warned. "Repentance may be too late."[26]

Yet Santosham did not simply blame his wayward patients. He also blamed antibiotics. Santosham recalled the formal arrival of streptomycin in India in 1948, prior to the Madras Study, and he reflected on the immense effect it had produced on the forty patients he had residing at his sanatorium at that time.[27] The drug remained exorbitantly expensive (Rs. 30 per vial, with a treatment course consisting of one hundred vials), and its import required permissions from the state and central governments, as well as from the Reserve Bank of India. Nevertheless, for Santosham, the antibiotic was a "boon," one that, he wrote, "salvaged out many from the gate way to the grave."[28] But it was also, he warned, "like a fairy with a certain reservation: she will grant only one

24. Santosham, *What Everyone Should Know about Tuberculosis*, 12–13.
25. Santosham, *What Everyone Should Know about Tuberculosis*, 4.
26. Santosham, *What Everyone Should Know about Tuberculosis*, 11–12.
27. On the Madras Study, see chapter 3.
28. Santosham, *What Everyone Should Know about Tuberculosis*, 48, 49.

request and that only once."[29] Compounding metaphors, he further likened streptomycin to a "pistol with only one round to fire."[30]

Antibiotics were to be blamed not because they failed to effect an enduring cure, or because their powers were limited, but rather because the speed of their perceived efficacy discouraged patients from continuing treatment: "Any drug that promptly relieves the distressing symptoms of the disease, creates a state of mind whereby the individual who had suffered hitherto, refuse[s] to undergo any further treatment and, on the other hand, prefers to go to work to stabilise the financial position of himself and his family."[31] By contrast, the "declaration" of what Santosham called a complete cure depended not on the "state of mind" of the patient but rather on the "final say" of the doctor.[32] "The final bugle of victory can only be blown by the doctor."[33] Internal sensations and feelings could not be trusted. To make this point clear, Santosham displays in his book a series of X-ray images of the lungs of a patient with tuberculosis. Such images made it possible to track the progression of disease (and cure) over time. These X-rays reveal the objective correlate underlying (and possibly belying) the subjective feeling harbored by the patient, the body rendered transparent and available to the clinician's expert eye.

The first image in figure 4.2, in the top left-hand corner, shows a patient's lungs before treatment. The second image shows the "disease cleared" shortly after treatment with streptomycin. Tellingly, Santosham does not refer to this as cure. The third image, taken two months after streptomycin treatment, reveals some minor activity in the lungs. The final image reveals that, four months after completing streptomycin treatment, the disease has been definitely and visibly reestablished in the lungs. At once, these images reveal the limitations of subjective feeling as well as the limited curative power of streptomycin.

If My Body Allows

In contemporary India, tuberculosis is almost always said to be a curable condition, one for which there is presumed to be a definitive end point. Yet antibiotics like streptomycin never quite succeeded in smoothing over the temporal

29. Santosham, *What Everyone Should Know about Tuberculosis*, 140.
30. Santosham, *What Everyone Should Know about Tuberculosis*, 142.
31. Santosham, *What Everyone Should Know about Tuberculosis*, 236.
32. Santosham, *What Everyone Should Know about Tuberculosis*, 2.
33. Santosham, *What Everyone Should Know about Tuberculosis*, 147.

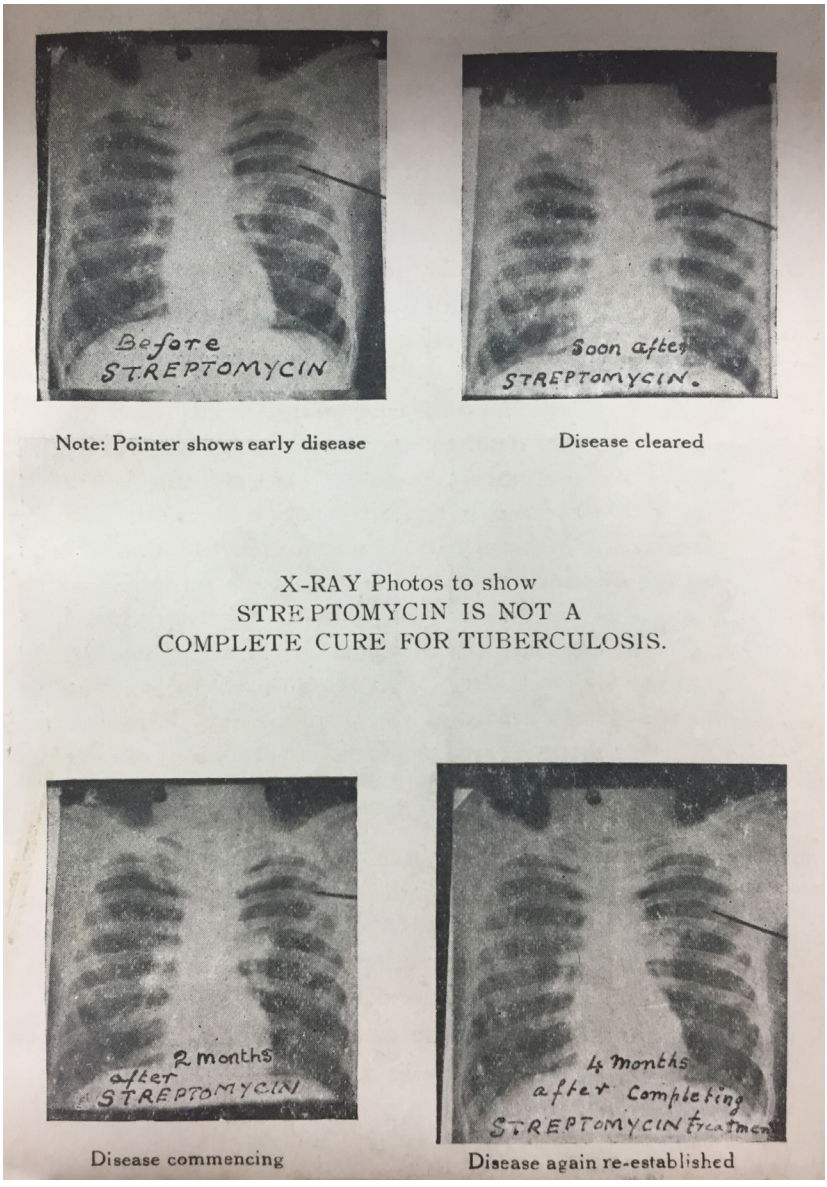

Figure 4.2. X-ray images depicting the effects of streptomycin on the lungs. Santosham, *What Everyone Should Know about Tuberculosis*, 75.

complexities of cure. Far from it. In the course of my fieldwork, it was not uncommon for me to meet patients like Santosham's, who had been cured, and then cured again.

In the summer of 2015, I visited various tuberculosis treatment centers operated by the Damian Foundation, a Belgian organization founded in 1954 to treat leprosy in India. As the number of new leprosy infections dwindled in the decades that followed, the Damian Foundation expanded their ambit to include tuberculosis. At one of their treatment centers on the edge of Delhi, I met Nilam, a former schoolteacher who had been diagnosed with a form of tuberculosis resistant to many of the currently available drugs used to treat the condition.

Nilam was in her late twenties, unmarried, and without children. This was a matter of great concern for her and her family. The reason she hadn't married was that, for seven years, on and off, Nilam had been ill. It all started back in 2008, when she came down with a fever. As was the case with many of the patients whom I met, her first recourse was a visit to a neighborhood doctor, who diagnosed her with tuberculosis.[34]

For almost a year, Nilam stayed in her parents' home and swallowed pills. Her parents told their inquisitive neighbors that she had a bad case of typhoid, which, it seemed, was a better thing to have than tuberculosis. Both were contagious, but what made tuberculosis worse, especially for women, was that it was thought to sap their reproductive capacity. Women with tuberculosis often feared that they would be deemed unmarriageable if others learned of their condition.

That the greater burden of stigma from tuberculosis is placed on women has been well established by studies among urban populations in India.[35] Even after being declared cured, women who have suffered from tuberculosis are less likely to be seen as suitable marriage partners.[36] Having been afflicted

34. On the availability of antituberculosis drugs in India, especially through the market, see Ecks and Harper, "Public-Private Mixes."

35. See, for example, Ganapathy et al., "Perceptions of Gender and Tuberculosis."

36. The particular ways in which the burden of tuberculosis is borne by women are not new. In the 1964 Tamil film *Navarathri* (Nine nights), the male lead, played by Sivaji Ganesan (who also played the role of Ravi in the film *Milk and Fruit*, discussed in chapter 3), visits a brothel to find satisfaction. There, he meets the heroine of the film (played by the magnificent Savithri), who is being held there against her will. In an effort to escape the brothel and the sexual advances of the drunken hero, she turns him into her Scheherazade and induces him to talk. He confesses that he had been tricked into marrying a woman with tuberculosis. Her condition was revealed to him only after their marriage. His wife believes that they shouldn't have sexual relations, and

with the condition, they are also seen as less capable of having children and are thought to run the risk of passing on their condition to their children, despite the fact that tuberculosis is no longer conceived of as inheritable by medical professionals. And yet, something like inheritance is presumed in the calculation of marriageability and reproduction, if not as illness, then in the form of the passing on of frailty.

Eventually, Nilam's doctor told her that she was cured. She made it clear to me that she did not discontinue treatment of her own volition. But she trusted in the declaration of the doctor and felt better. Just two years later, her symptoms returned. This time, her family encouraged her to go to a well-known surgeon from a government hospital, who, like many public-sector doctors, operated his own (illicit) private practice after hours. Under the government surgeon's supervision, her family was certain that she would receive better treatment. The higher price tag reflected their faith in his competence. Nilam completed yet another year of antibiotics and, like her previous doctor, he also told her she was cured.

The declarations of cure began to pile up. "Each time I was treated," she told me, "I thought at the end that I was fine. But it came back."

At the end of 2013, Nilam again began treatment. Six days a week, she would wake early and travel with her mother to the government treatment center, a greenwashed concrete building in an area known as Jivan Park, on the dusty outskirts of Delhi. There, the treatment attendant would open up a box with her name written on it and hand her a blister pack of pills. Such boxes were an important managerial technology, meant to ensure that a patient had supervised, standardized doses available for the entire course of their treatment. The box ensured both the proper dosage and duration of the curative process.

When Nilam was done swallowing these pills, she would wait patiently for her turn to duck behind a curtain, where she would receive an injection of the antibiotic kanamycin. Like many whom I met, she believed that injections were more efficacious than pills. And in fact, when I met her in 2015, she was feeling better. Before her illness began, Nilam had worked as a Hindi teacher in a local school. After this treatment was completed, she told me, she wanted to start teaching again. That is, she added, if her body allowed.

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that she will soon die. We're led to believe that he has her blessing to seek his pleasure elsewhere—thus, the brothel—although his escapades grind to a halt after a severe tongue lashing from our heroine.

But feeling cured is not the same as being cured. Declarations of cure were products of authority. Although Dr. Santosham had described cure as "being free from the fear of [the effects of disease] in the future," he nevertheless insisted that the patient's subjective experience of their own condition was inherently unreliable.[37] Such freedom from fear should be heteronomous in its origins, emerging from the doctor's declaration rather than from the patient's self-originating sense of certainty. For Santosham, the "final say" when it came to cure rested with the doctor.

Such an approach parallels similar divisions between sign and symptom, disease and illness, the objective and the subjective. On the side of the doctor, knowledge. On the side of the patient, mere feeling. In other words, they cannot know whether they are sick or well; their body is in a sense beyond their knowledge. One of the primary tasks of the healer, then, is to persuade the patient to align their feeling with the healer's knowledge. As Georges Canguilhem put it, "A doctor will not understand a patient, at the end of a prescribed cure that has been executed and has eliminated an infection or a dysfunction, who refuses *to call himself cured* and does not behave as someone who feels better."[38] Here is cure figured as a performative speech act. From the doctor: a guarantee that the treatment was in fact efficacious, and a directive to believe and behave as one who is cured. From the patient: a confirmation of trust in the treatment, in the doctor, and in the underlying systems, biomedical and bureaucratic.

Critics of medicine have argued that such an approach subordinates feeling, renders it suspect as a form of knowledge, often to the detriment of patients—in particular women and those from marginalized groups—whose complaints are not taken seriously.[39] In accepting this division between knowledge and feeling, the authority that medicine enjoys over our bodies—and our lives—runs the risk of becoming absolute. What such critiques tend to leave unquestioned is how a doctor comes to know cure and declare it as such. Such a declaration relies on a combination of clinical experience and acumen, bureaucratic rule following and technological availability, all of which compose a particular kind of culture of objectivity.[40] Crucially, the declaration of cure also hinges on the relationship between language, body, and time.

37. Santosham, *What Everyone Should Know about Tuberculosis*, 10.

38. Canguilhem, "Is a Pedagogy of Healing Possible?," 13.

39. For historical and ethnographic work on the ways in which the suffering of certain kinds of bodies has been subordinated to the authority of medicine, see in particular Murphy, *Sick Building Syndrome*; Rouse, *Uncertain Suffering*.

40. On the history of cultures of objectivity, see Daston and Galison, *Objectivity*.

In a chest hospital in the Chetpet neighborhood of Chennai, I met tuberculosis patients who struggled with the ambiguity that seemed to inhere at the heart of cure. Up the spiral staircase that cuts through the center of the building, an atrium housed a few small offices and an enclave of bats clinging to the high ceiling. The ground floor of the hospital was heavily trafficked during the mornings, as an outpatient clinic for patients with tuberculosis. An auto rickshaw driver dressed in a cotton button-up peered in through the doorway, fearful of missing his turn to consult with a doctor. Other patients leaned against trees just outside in an attempt to escape the uncomfortable May heat, waving recently developed X-ray images like yesteryear Polaroids.

Established in 1917 with support from the King Edward Hospital Fund, the hospital once known as the King Edward VII Memorial Tuberculosis Institute was a large domed building that had faded with time. The construction of the hospital in Chetpet spurred the denizens of Spur Tank Road, the major street that ran along the entrance to the hospital, to protest that carting in sick patients from around the city would endanger their own health.[41] Their concerns were summarily overridden by the Madras Legislative Assembly, and the Tuberculosis Institute was erected with the blessings of Lord Pentland, the then governor of Madras.

The neighbors, however, had been correct to worry. Patients poured in from all over the city, and some even traveled from other parts of the state and from the nearby state of Andhra Pradesh. Murugesan, a poor man who professed to run his own bicycle repair business, hadn't traveled all that far. He arrived one morning in the chest hospital, complaining of an inescapable cough that had been bothering him for the past month. Ten years earlier, he explained, he had been diagnosed with tuberculosis. But he insisted that he had completed his treatment and that the doctor had declared him cured. Now, he was worried that it had come back.

When Murugesan claimed that he had been cured ten years earlier, his physician at the Chetpet clinic, Dr. Amutha, had her doubts. She directed him to get an X-ray and a sputum analysis. What was at stake in her diagnosis was not simply whether Murugesan had previously suffered from tuberculosis but rather whether he still had tuberculosis, or perhaps had it again. The distinction between an old infection and a new one was impossible to make without DNA sequencing technology, unavailable at the clinic. The presence of certain

41. Rao, "Tuberculosis and Public Health Policies."

forms of technology makes possible the asking of new questions.[42] Its absence produces limits, which necessitate other lines of questioning.

In this case, Murugesan's exam results coming back positive would throw into question his previous declaration of cure. Dr. Amutha could argue that Murugesan had not in fact been cured but had only been declared cured (say, by his previous doctor, who had perhaps given Murugesan the wrong type or amount of medication, or for an inadequate duration). In this case, the declaration of cure operates like a kind of true/false statement—but one that can never be fully confirmed as true. One can never know with certainty that tuberculosis will not return, that it is truly gone. Falsifiable only with the passage of time and a future diagnosis, the declaration of cure might be more precisely described as a theory: it is a proposed description of the body, one that is tested repeatedly and acquires adherents and critics over time. Rather than a theory of cure, then, we are left with cure as theory.

On the face of it, this sounds a great deal like cancer treatment, in which the term *cure* is often avoided in favor of the paired concepts of remission and relapse. To speak of remission is to openly admit to an uncertainty about the actual state of things (Are there still cancer cells lurking in the body somewhere?) and about the state of things to come (Will they metastasize?). To speak of remission is to anticipate this possibility of relapse.

By contrast, to be cured, as we often think of it, is to have illness behind you. Certainly, Nilam had thought that her days of treatment were over each time she was cured. Yet, curiously, patients like Nilam and also Murugesan were often referred to as relapse cases. Neither had ever been declared to be in remission, because this is a term that is never, to my knowledge, used to refer to tuberculosis patients. To pair relapse with cure is to admit to the fragility of cure, to the ever-present possibility that illness might return. Yet, crucially, this fragility is never admitted in advance. This, to my mind, is the key difference between cure and remission. Cure deliberately disregards the possibility of return, while remission actively anticipates it.

Checkmarks

Procedure itself offered another approach to declaring cure. In 1992, the Indian government's then thirty-five-year-old tuberculosis treatment program came under intense criticism for a host of reasons, including its inconsistent

42. The use of such technology required more than availability, but also training and infrastructure (such as a dependable source of electricity).

and overlong treatment procedures and an astounding lack of data regarding how many patients had actually been cured by the program.[43] In response, the government transitioned to the internationally recognized DOTS protocol, an acronym that stands for "directly observed treatment, short-course." As much a treatment program as a management strategy, DOTS provides a one-size-fits-all model that aims at cost effectiveness and assumes that people in places like India are unreliable and must be physically observed consuming each dose of their treatment. The DOTS strategy, as it is often described, is organized, in theory if not in practice, around six pillars: direct observation, a standardized short-duration treatment, quality diagnosis via sputum microscopy, a reliable supply of effective drugs, political buy-in, and careful monitoring and evaluation.[44]

For each patient enrolled in the government program, a treatment card was created as an accounting measure, introduced as part of this move toward greater standardization. For each dose of antibiotics a patient received under supervision, a checkmark was placed in a box. If a patient was unable to come to the clinic but had received a dosage in advance to take with them, a circle was drawn around the checkmark. If a patient missed a dose entirely, the treatment provider simply drew an empty circle.

Once a patient had produced a long enough string of checkmarks—representing the fact that they had taken all of the doses in the standardized treatment regimen—they were not, formally speaking, cured, but rather placed in the category of "treatment completed." Technically, to declare someone cured, the national program required negative sputum samples acquired from patients during and at the end of treatment to confirm that the bacteria that cause tuberculosis were no longer present. In the official reporting, however, the Indian government lumped together both "treatment completed" and "cured" cases into a metacategory: "treatment success."

43. The antituberculosis program in India had been subject to regular scrutiny from 1968, including via a series of critical reports issued in 1975 and 1988. Along with concerns about the treatment protocols and the reporting of cure rates, these reports noted problems related to unconfirmed diagnoses, lack of case finding and follow-up, lack of infrastructure and staff, and issues of governance. See Brimnes, *Languished Hopes*, 263–66.

44. The Madras Study, discussed in chapter 3, was an important precursor to DOTS, as were the pilot programs of short-durée therapy pioneered by Karel Syblo, which caught the attention of global financial and health institutions in their turn toward cost effectiveness. See McMillen, *Discovering Tuberculosis*, 189–91, 204.

On occasion, I would see treatment cards on which the patient's physician had written the word "cured" at the end of a long stream of checkmarks. But after the word "cured," I would see further checkmarks, and the words "cured again." Cure was meant to signal the end of illness, but here again was a kind of second cure. For public hospitals networked into the systems of audit in the wake of the post-1992 reform of the Indian antituberculosis program, checking boxes was a means of demonstrating the efficacy not only of the antibiotic cure but of the hospital itself. The need for a second cure could pose a potential problem, undercutting both cure and clinic.[45] When I asked Dr. Amutha why she might attempt to cure a patient who had already been declared cured, she explained that a patient could be "declared cured, but still have TB."

In this instance, Amutha was not claiming that another doctor had made a mistake. Rather, she meant that a patient could become asymptomatic and noninfectious but continue to carry reservoirs of bacteria. In fact, it is estimated that over half of all Indians are asymptomatic carriers of the bacteria that cause tuberculosis. In this light, it becomes possible to say that Murugesan's former doctor was correct to declare him cured. He had been cured, at the level of the symptom, and no longer required treatment—at least for the following ten years. In other contexts, this form of cure has been described as a functional cure, one that allows you to live symptom-free without medication—as opposed to a sterilizing cure, which requires the eradication of the microbes that cause a particular condition.[46]

These multiple ways of understanding cure were rarely formalized and distinguished in the clinics where I worked. Counting checkmarks and counting bacteria were not mutually exclusive. Similarly, doubts about the veracity of another doctor's pronouncement of cure seemed to elicit no hesitation in one's own way of doing things. Notably, understandings of cure were closely related to the forms of diagnostic technology that were at hand. In 1995, for example, the ex-director of the Tuberculosis Research Centre in Chennai, Dr. R. Prabhakar,

45. Veena Das has described how a woman she calls Meena was denied treatment when she required this second cure, in part because the clinic did not want to report treatment failure, which could become refigured as a failure of the clinic. Das, *Affliction*.

46. Recently, this language has been used to describe the result of treating HIV patients with hematopoietic stem cells obtained from a donor carrying a mutation that makes it difficult for HIV to enter into cells. When successful, such patients no longer require antiretroviral treatment, and thus, they are functionally cured. What remains unclear is whether the retrovirus has been entirely eliminated from their bodies, required for a "sanitizing cure."

lamented that a century-old technology remained central to diagnosing tuberculosis: "A great deal of emphasis (sometimes unduly) is laid on imaging and important clinical decisions are made on the basis of 'shadows.'"[47] X-ray images, he argued, "can never be considered as substitutes for eliciting signs and symptoms of the disease."[48]

Later that day, a pair of gray-bearded men came to our table. The older man was missing most of his teeth, so he had difficulty making himself understood. The younger man did most of the talking, speaking with Dr. Prabha about the older man's condition. He handed her a standard-size X-ray of the older man's chest, quite a bit larger than the three-by-three-inch images that were the standard in the hospital. Prabha took the X-ray hesitantly and held it to the light, peering at it intently. After about a minute, she let out a sigh of frustration and handed the image to Dr. Amutha, asking for her opinion. Amutha made an attempt at examining the image, before passing it back with a shrug. Prabha turned to the younger man.

"It's hard," she began to explain. "The X-ray is too big. It's hard to see on the big X-rays after you get used to the small ones." She instructed the younger man to take his companion to get a smaller X-ray—an MMR—from the hospital lab. The image would be processed in two days, she explained. They would have to come back then to receive a diagnosis.[49]

47. Prabhakar, Letter.

48. Prabhakar, Letter.

49. The gray-bearded men were clearly concerned about Dr. Prabha's instructions to return. The two of them worked in Kanchipuram, about seventy-five kilometers from the hospital. To cover the distance and arrive during clinic hours, the men had taken the day off work. When confronted with deferral or referral, patients often spoke anxiously about missing work. Patients feared that taking time off to visit the clinic would put their employment in jeopardy. Many of the patients were migratory laborers, coming from the neighboring state of Andhra Pradesh to find temporary employment in Tamil Nadu. Employment was difficult to come by and often intermittent—to take time off was to risk losing already precarious employment opportunities. Patients also feared that coworkers or employers would become suspicious. With or without a sound basis, rumors of illness could also lead to losing a job. Practices of deferral and referral forced patients into a dicey calculus—continue going back to this clinic, or another, in the hope of diagnosis and treatment, and risk unemployment; or continue to work without treatment and risk even greater illness and possibly death. As McDowell, Engel, and Daftary have pointed out, this practice of asking patients to come back later contributes to patients not coming back at all, resulting in cases that are described as "lost to follow-up." See McDowell, Engel, and Daftary, "In the Eye of the Multiple Beholders."

Developed in 1935 and used as a screening tool for tuberculosis across the world, the mass miniature radiogram, or MMR, is a smaller, cheaper version of a normal-sized X-ray. Although I had seen regular-sized X-rays used in private hospitals, the staff at the Chetpet hospital largely depended upon MMR images. Prabha and Amutha had received much of their tuberculosis-specific training at the government hospital. Having learned to read radiographic images of the chest at a particular size, they found it difficult to transpose their fluency across scale. Patients would often show up with different-sized X-rays, at different exposures, usually from private clinics or diagnostic centers. For the doctors who were trained with and accustomed to the MMR images, these larger images posed a serious problem of interpretation.

In the Chetpet hospital, diagnosing tuberculosis was an affair that extended across multiple spaces and many days. In another hospital located across town, the private HIV hospital where I worked in 2011, time and space were more compressed. The HIV hospital had made use of regular-sized X-rays, pressed against wall-mounted light boxes to be exposed to the interpretative powers of the clinician.

I remember Dr. Vijay in particular, who would quite confidently profess the existence of lesions after looking at an X-ray. He would point them out to me, tracing his finger along the image where the shadows swerved and the darkness congealed to indicate a pathological formation. Oftentimes, treatment began before the results of a sputum exam, on the basis of what was called a presumptive diagnosis. But even when the bacteriological results came back negative—when the laboratory technician was unable to find bacteria in the sputum—Vijay would begin what he called empirical treatment, arguing that the X-ray image suggested tuberculosis even if the bacteriological result showed otherwise.[50]

The analysis of both X-ray images and sputum results elicited a great deal of uncertainty among clinicians. In those quiet moments in the clinic, when the rush of patients receded, I heard clinicians express these doubts. When I asked Dr. Shanta, Vijay's wife, to reexamine an X-ray image that Vijay had already pronounced as tuberculous, she frowned. "I just don't see it," she said. Numerous

50. As McDowell and Pai point out, empirical treatment is widespread in the private sector in urban India, which they explain in part as grounded in a mistrust of the utility of diagnostic tests ranging from sputum microscopy to X-ray imaging and even DNA-based tests like Gene Xpert. Proceeding with treatment after a negative sputum test, for example, is not uncommon. McDowell and Pai, "Treatment as Diagnosis and Diagnosis as Treatment."

studies have demonstrated the high rates of inter- and intrarater variation in the reading of X-rays. These inconstancies are often framed in terms of observer bias, a problem of the observing subject who expects to see certain kinds of things and not others.[51] A suggestive image could all too easily turn out to be a play of shadow and light.

In spite of the very many doubts about the utility of interpreting shadows, X-ray imaging endures as a ubiquitous technology in India and enjoys a critical role in the Government of India's tuberculosis diagnostic protocol. X-rays persist as an imperfect means of seeing into the body, of diagnosing illness and gauging progress, of correlating external signs to internal physiological variations. Roadside diagnostic laboratories across Chennai prominently advertise X-ray services, available for a relatively small fee. Many smaller clinics without X-ray equipment referred their patients to laboratories with which they had established a relationship premised on trust and financial incentive. In many of the doctors' offices that I visited, calendars were branded with the name of particular diagnostic laboratories.[52]

Sputum microscopy—counting bacteria under a microscope—is not terribly sensitive, and yet it remains, along with X-rays, a primary means of diagnosing tuberculosis in India. The fact that sputum microscopy is a technique dating back over a century was frequently remarked upon during the course of my fieldwork as a sign of the lack of progress in tuberculosis diagnostics. At the same time, microscopy has its defenders as well. In 1995, Dr. N. K. Shah, the WHO representative to India, reflected on the utility of sputum microscopy: "True to the simplicity of the common man, what is relevant in the health for all context, is not always high technology and high cost diagnostics, but tests that are simple, sure and easy. For instance, in our revised National Tuberculosis

51. The difference between what Vijay and Shanta saw, and in their certainty about what they saw, might also be understood as a form of gendered difference: Vijay was more confident that he could interpret the X-ray with certainty, while Shanta (and Amutha and Prabha as well) was less certain.

52. In its ubiquity, the X-ray has also been denigrated. Through her research in the state of Kerala, Caroline Wilson describes how new medical imaging technologies became exceedingly popular in the 1990s, particularly in what are termed superspeciality hospitals. The Keralan doctors with whom she worked took X-ray imaging to be part of any basic investigation, and X-ray images to be legible to any clinician. The services of a radiologist were only required for the newer imaging technologies, which were not only more expensive but enjoyed a heightened technological aura. Wilson, "Thinking through CT Scanners."

Program . . . the age old, simple, cheap, sputum smear microscopy, is the surest bet both for diagnosis as well as for prognosis."[53]

Shah's argument in favor of sputum microscopy was based on criteria of efficacy, simplicity, and cost effectiveness. Despite its age, sputum microscopy remained for Shah the best means of providing diagnosis to the masses. He drew a line between high technology, which had its place, "especially when the disease appears vague or complicated, clandestine or deceptive and when localization and research needs are paramount," and "age old" technology like sputum microscopy.[54] The very simplicity and affordability of sputum microscopy made it perfect for a situation in which price was an issue but the goal remained "health for all."[55]

As a lab technician at the Chetpet hospital explained to me, the examination of a sputum sample from a patient deemed cured should reveal no bacilli for a period of six months after completion of treatment. This is what transformed a "treatment completed" case—in which a patient had taken each dose, as signaled by the string of checkmarks—into a "cured" case. If bacilli were discovered within that six-month window, then the patient would be classified as a relapse case, although in theory the patient might have been reinfected by a different strain of bacteria altogether. If bacilli were discovered after that six-month window, only then would the patient be classified as a case of reinfection—although, here too, there remained the possibility that the patient had never been cleared of the original tuberculosis-causing bacteria in the first place.

Sputum microscopy, like X-rays and checkmarks, were rough heuristics. If, for example, DNA-based tests had been readily available, the clinicians and lab technicians with whom I worked might have been able to say with greater certainty whether a patient previously declared cured was suffering from the same strain of bacteria or a new one.[56] The act of declaring someone cured is shaped, but not wholly determined, by the availability of both diagnostic and therapeutic technologies. Although the introduction of antibiotics in India certainly promoted a conception of cure as final, the optimism surrounding cure has always harbored a skeptical underbelly.

53. Shah, "Letter on Diagnostics."

54. Shah, "Letter on Diagnostics."

55. Shah, "Letter on Diagnostics." Shah's insistence on "health for all" through the use of basic technologies echoes the language of the Declaration of Alma-Ata in 1978 and its emphasis on primary health care.

56. On the early use of DNA fingerprinting to distinguish new infections or reinfections from relapse in San Francisco, see Barnes, "Targeting Patient Zero," 56–57.

Back in the mid-twentieth century, Santosham admitted that certain forms of tuberculosis were recalcitrant to the best efforts of medicine. He categorized the disease into sixty-five varieties, based on its location in the body, duration, and rate of progression. Four of these, he explained, "may be called *incurable*."[57] Another four he described as "*probably incurable*."[58] Despite this strong disclaimer, Santosham warned his colleagues against refusing to treat a patient on categorical grounds.[59] "Before submitting a patient to a period of treatment, it is wrong to declare his disease *definitely incurable*, because a period of treatment can reverse the speed or progress."[60] The body under treatment was capable of many things. Nevertheless, treatment did not always turn out as one hoped. In a long passage from his book, Santosham reflected on one of his earliest patients, whose illness endured across generations of therapeutic ambition:

> I remember a lady in the early 1940s when I found her to be suffering from tuberculosis in one lung, with sputum positive for tubercle bacilli. She was a newly married bride at that time. First she was treated with A.P. [artificial pneumothorax, a form of collapse therapy]. And later she was treated with Streptomycin, I.N.H. [isoniazid], and P.A.S. [para-aminosalicylic acid] when those drugs became available.
>
> She went on giving birth to children during her treatment. All were healthy children.
>
> Her disease was never controlled by any drug. She regularly took treatment and took all the new drugs that became available one after the other. When she was about 50 years of age and all her children were grown up she was still under full course of treatment for tuberculosis.
>
> All these years she was doing her domestic duties to the husband and children and was attending all the Church and social functions. I met her in such functions many a time. She was the centre of a group of merry making guests in all parties and she was the best dressed also.

57. Santosham, *What Everyone Should Know about Tuberculosis*, 22, emphasis added.

58. Santosham, *What Everyone Should Know about Tuberculosis*, 22, emphasis added.

59. By contrast, the philosopher, theologian, and social critic Ivan Illich would argue that it was precisely when a patient seemed incurable that the physician should step away, allowing the patient an autonomy from the forces of medical authority—even if this meant death. Death, for Illich, was an eminently human experience that had increasingly been expropriated by medicine from the sphere of meaningfulness. Illich, "Death Undefeated."

60. Santosham, *What Everyone Should Know about Tuberculosis*, 23, emphasis added.

On and off she will get admitted in Sanatorium for a fort-night or a month and went back to her home.

At this stage her husband was run over by a transport bus. He was about 60 at the time. "He was a very loving husband" she said. "Everyday he will give my medicines before going to office and come back again and give the medicines all these thirty years."

By this time she had taken all the anti tuberculosis drugs in all permutations and combinations always more than 3 potent drugs. I had sent her often to other tuberculosis specialists, Sanatoria with year and year record of treatment and whole series of X-rays. She lived up to 52 years of which about 30 years with tuberculosis in a small house in Royapettah. The picture is of a person who lived with often repeating stormy episodes of tuberculosis religiously taking her treatment without a single day's default all her days. All the drugs did not give her full deliverance but they kept her well enough to do her duties to the husband and children for thirty years.[61]

Santosham's patient persisted through three decades of treatments. But eventually, her condition took a permanent turn for the worse. When she passed away, Santosham attended her funeral. In a second book published in 1985, he thinks back to the day of the funeral, and in particular to a prayer of gratitude offered by his patient's son. In recollecting his words, Santosham remembers being overwhelmed by memories of fortitude and failure:

> I was recalling to my mind the host of drugs costing thousands she had swallowed, through which according to science [she] should have got well 30 times in her life. A great disappointment to the doctor and the patient, a failure of science. But looking at the other side of the picture except for the restraining influence of these drugs she should have died about a year after her first child birth. The drugs kept her moving, loving, praying and praising for 30 long years as a patient of tuberculosis gifted with a patience that survived 30 years to give to the home, a mother, wife and the world. She was a sermon on the subject of the benefits of patience and discipline, never despairing, ever hoping.[62]

Although she was never cured, Santosham had insisted on treating her. For three decades, she had been one of those "probably incurable" cases, but the cold hard reality of her incurability could only be ascertained from the perspective of

61. Santosham, *Tuberculosis at a Glance*, 68–69.
62. Santosham, *Tuberculosis at a Glance*, 70.

the grave. Despite such failures, Santosham insisted that tuberculosis was in general "very curable." His unblemished optimism survived alongside a sense that cure was never guaranteed, fragmented by *probablies* and undercut by cases like that of the woman who lived for thirty years with her condition.

In between the "very curable" and the "probably incurable," we find a kind of tuberculosis that looks like a chronic condition. As Santosham put it, tuberculosis was "a *chronic disease* that often slowly progresses and always takes long to recover from."[63] Chronic, and yet curable—the two terms were not in tension, although we often think of them as referring to opposed conditions. The chronic, we might imagine, is incurable and potentially terminal. It has no end, except for perhaps death. The curable, on the other hand, should end, once and for all, long before death.

For Santosham's patient, time was carved out over three decades of treatment into something that resembled (but was not quite identical to) the waxing and waning of the moon; moments in which things were better, when she could care for her family and attend church, and moments when things went awry. But the difference, for Santosham, was that her waxing and waning was not cure. Her condition was chronic and only potentially curable, until it wasn't.

In the early days of the antibiotic era, Santosham's patient underwent three decades of treatment for tuberculosis. Forty years after her death, tuberculosis remains strangely chronic, even if nobody describes it that way. The thing to keep in mind is that Santosham's patient was never declared cured. Over the course of seven long years, Nilam, on the other hand, had repeatedly been declared cured. In her life, cure had not been the end of illness, but rather an end: a temporary stopping point before the resumption of therapy. Nevertheless, Nilam continued to express to me the hope that she would be cured again, but this time, once and for all.

Platonic Cure

So much is at stake in the declaration of cure. We might treat such a declaration as the simple reporting of an observable fact: Nilam's doctors saw that she was cured, and they said so (again and again). As Santosham emphasized, the authority to declare someone cured belongs to the supervising physician. A patient might declare themselves cured, giving precedence to their experience of their own bodies over the credentials, expertise, and experience of the doctor.

63. Santosham, *What Everyone Should Know about Tuberculosis*, 236, emphasis added.

But in so doing, Santosham warned, they risked a partial cure, one that might unravel as they moved back into their everyday life. Nilam had not usurped authority from her doctors—she placed her faith in them, repeatedly, allowed them to declare her cured. Yet even a declaration of cure from an anointed authority could come undone.

The nature of such authoritative declarations became clearer to me in 2015, when I was invited to the Tuberculosis Research Centre in Chennai for the celebration of World TB Day, one of many annual commemorations inaugurated by the World Health Organization to spread awareness of certain diseases and their cures.[64] As part of the celebration, a former tuberculosis patient who had been declared cured, Mrs. Ramasami, had been asked to share the story of her treatment with a large room filled to capacity with minor politicians, journalists, physicians, students, and a handful of academics. Her hair pulled neatly back, she began speaking into the microphone, primarily in Tamil, her left hand tapping out the fluid rhythm of her words.

"My first *TB attack* [English] happened in 2003," she explained. This attack had come as something of a surprise to Mrs. Ramasami. "I had thought there was no chance that I could get TB." She was, in her own words, "a housewife" who didn't "live in a slum." But then she had fallen ill. Her disbelief led her to resist not only the diagnosis, but also the treatment: "I fought with the doctors. After the Mantoux test, and some other tests, the doctor said: You definitely need to take these medicines. But they were such big medicines! At first, I wouldn't take them. I threw them out the window. And when I was taking them, I had a lot of problems. Nausea and vomiting. The doctor asked for sputum. I refused to give it. I was acting very childish. I suffered relentlessly from a severe fever."[65] Over the course of seven long years, Mrs. Ramasami's condition had waxed and waned, punctuated by bouts of antibiotic therapy. "They

64. Back in 1982, to commemorate the centennial of Robert Koch's proclamation in Berlin of a bacterial etiology for the disease, the International Union against Tuberculosis and Lung Disease proposed an annual day of awareness, as part of a year of events coordinated under the theme "Defeat TB: Now and Forever," for which the Tuberculosis Association of India printed a pair of seals, as part of their regular annual sale of tuberculosis seals.

65. The Mantoux test, first developed in 1907 and further refined in the 1930s, involves the intradermal injection of a protein derived from Koch's tuberculin into the forearm. In theory, if the test is positive, the injection site will produce a raised, hardened bump forty-eight to seventy-two hours later. But the results can be difficult to interpret; false positives induced by previous exposure to tuberculosis or to the BCG vaccine are common.

started giving me injections. Injections and pills. Pills, so many pills! Twelve or fifteen pills, they gave me so many! . . . In the morning, a packet of pills, in the evening, a packet of pills, I was taking so many medicines! . . . I didn't have *awareness* [English]. I hadn't realized that these medicines would bring with them their own problems, like vomiting, constant vomiting." Mrs. Ramasami described the difficulties involved in the supervised treatment regimen. "For about three or four years, it controlled my life. . . . I'd arrive in the hospital at nine in the morning. Until twelve o'clock I would take the pills one at a time, waiting to vomit. After a while I'd take another pill. Then I'd wait and see. And again, I'd vomit. At the same time, I was still getting injections, for twenty-four months." The intense physical reactions produced by the drugs led Mrs. Ramasami to skip doses, stop her treatments early, and refuse some of the drugs.

> The main problem was that I wasn't taking the medications properly . . . I'd go back to the doctor with half of the medicines. I can't do it, I'd tell him. I can't take the pills. If I take this pill it itches, I'd say. If I take this other pill, I vomit. If I take this other one, I get nauseous. I said something like this for each and every medicine. . . .
>
> How should I put it—in truth I thought TB was a game and I didn't take it seriously.

The long duration of Mrs. Ramasami's treatment suggests a repeated failure to achieve cure, or perhaps to remain cured. If tuberculosis and its treatment is in fact a game, as she put it, it is one that is meant to be finite, with a clear end point. In such a finite game, there are rules to be followed, requiring a certain kind of seriousness that Mrs. Ramasami, by her own admission, lacked. She was, in this sense, a player of what we might think of as an infinite game—one in which winning and losing are far less important than simply remaining in play.[66] Of course, this had not been her intention.

If the antibiotic treatment of tuberculosis is a game, it is one that is explicitly rule-bound, serious, and, above all, finite. Patients should take their medications, regularly and dutifully, until they have completed their course of treatment and been declared cured by their doctor. Yet the finite game of treatment is one that frequently threatens to devolve into an infinite game. Rules are broken, supervision rebuffed, and it becomes entirely unclear whether it's even possible to win—or if the best you can hope to do is keep on playing.

66. My discussion of games is inspired by the work of Vinay Lal, who in turn borrows the idea of finite and infinite games from James Carse. See Lal, "Gandhi"; see also Carse, *Finite and Infinite Games*.

Like Nilam, Mrs. Ramasami had also undergone treatment for seven years. Under the government's standardized treatment protocols for tuberculosis, she should have been cured in no more than two to three years. Yet Mrs. Ramasami had never been declared cured over these seven years. This failure to be cured was one that Mrs. Ramasami took upon herself, as a recalcitrant patient, one that doctors would describe in jargon as nonadherent, noncompliant, or simply a default case.[67] While Mrs. Ramasami and her doctors seemed to accept that her cure had been postponed through personal failing, others were less willing to do so.

For example, Nilam. Although she had fallen ill again and again, she inoculated herself against accusations of personal failure. Nilam had told me that she was "not a defaulter," that she had always taken her medicine.[68] Instead, she blamed the host of private and government doctors who, in her words, "only cared about money." Blame was fungible, moving across and between groups to assert claims of responsibility: the patient for herself, or the doctor for the patient, or the patient's family for her. Blame also indexed what was thought to be an inappropriate orientation toward wealth generation, rather than, for example, toward proper care.[69]

What unites their stories is that neither Nilam nor Mrs. Ramasami attributed blame to the pills and injections, the very stuff of cure. To blame cure—to point to the failures of antibiotic treatment—would be to sacrifice their own hopes for a cure that was final, and to risk lapsing into a discourse of incurability. Instead, cure had to remain ideal, perfect, almost sacred,

67. The category of noncompliant patient emerged after World War II, as new treatments (like antibiotics) became available for a host of conditions requiring extensive treatment (like tuberculosis). As Jeremy Greene points out, the use of the category has been understood simultaneously as a means of extending medical authority and as a critique of that authority. See Greene, "Therapeutic Infidelities."

68. On the category of the defaulter in tuberculosis treatment in India, see Seeberg, "The Event of DOTS."

69. On the question of blame, see Farmer, *AIDS and Accusation*. Farmer discusses how race, class, gender, and geography come to configure the pathways through which blame flows, specifically in relation to the spread of HIV. As Niels Brimnes point out, the practice of treating the Indian patient as responsible for their own failure was crystallized through an emphasis on behavior and character. More sociologically oriented studies in the 1960s, and even the Madras Study of the 1950s (see chapter 3), turned attention away from individual responsibility to the state in its organization and administration of antituberculosis programs. See Brimnes, *Languished Hopes*, 192–94.

its efficaciousness unsullied by its earthly approximations.[70] For that reason, blame had to be attributed elsewhere: to the patient, to the family, or to the doctors.

At some point, Mrs. Ramasami's condition began to deteriorate. Before beginning another course of antibiotic treatment, she was admitted to a nearby private hospital where her right lung was surgically collapsed to stymie the spread of infection. After her hospitalization, Mrs. Ramasami was placed on a grueling regimen involving daily pills and biweekly injections. Like the Christian woman treated by Dr. Santosham, Mrs. Ramasami endured a range of treatments. Not only antibiotics, but hospital admission, bed rest, and collapse therapy. The treatments of the past continued to be conscripted as a means of bolstering the efficacy of antibiotics in the present.

After about two years, her treatment finally came to an end. Since then, Mrs. Ramasami hadn't experienced another attack. In Mrs. Ramasami's words, her seven years of therapeutic purgatory reflected nothing about the medical system, any doctor or nurse, her family, or even the relentless barrage of pills and injections. The failure to be cured, it seems, is never the failure of cure. In the treatment of tuberculosis, antibiotics are Platonic: a particular curative intervention might fail, but cure itself can never fail.[71] For that reason, cure can always be deferred to other times (the future) and other places (other clinics). The finite game can become infinite.

"Since 2010," Mrs. Ramasami concluded, "I haven't had any problems. Here, I was cured."

The audience burst into applause. As she moved to sit down, one of the doctors at the hospital took the microphone. "Thank you very much. . . . Just hold on. . . . Thank you very much and it's so nice that you somehow took all those tablets, and now you can proudly say that you're cured." For the doctor, if Mrs. Ramasami could finally say that she was cured, it was not simply because her problems had come to an end, but because her doctors had declared her cured—and this is why she had been invited to share her story

70. As Todd Meyers remarks, "Even in cases where the patient's expectations are not met (medical practice has failed to cure or to reestablish an earlier order), somehow the absence of cure does not necessarily induce doubt in medicine's potential to do so." Meyers, *The Clinic and Elsewhere*, 10.

71. Jaipreet Virdi makes a strikingly similar observation in relation to cures for deafness: "It makes possible all that was impossible and unfathomable, delivers on demands but doesn't always distinguish between the real and the fake. It only matters that it exists, this cure, and that it can deliver. If it fails to do so, then it's not the cure's fault. It's yours." Virdi, *Hearing Happiness*, 34.

Figure 4.3. Logo and slogan, in Tamil, for India's tuberculosis treatment program. Screen capture, Central TB Division, http://www.tbcindia.gov.in/index1.php?lang=1&level=3&sublinkid=4668&lid=3241.

that day, as a model of penitence who had finally accepted the authority of her doctors. She had learned, it seems, to play a finite game.

Bad Publicity

In the five years since she had been declared cured, Mrs. Ramasami had been free from any further *attacks*, as she called them. Her cure had been completed. This was the way in which cure was frequently spoken about in the clinic and in everyday life, as an end point. Advertisements encouraging treatment appear on television screens across India. Posters are pasted on walls, replete with the language of cure. Similar promotional materials are distributed throughout India, featuring athletes, chess champions, and actors from the many regional film industries in the country. During a conversation with a doctor from the northeast of the country, who had previously worked with the government program, I asked him about those patients whom I had met, like Nilam and Murugesan, who had been cured and cured again, as well as those who remained (or became) uncured. I asked him about these ad campaigns, which called upon the Indian public to place their faith in a cure that is certain.

In the English-language version, supervised, standardized antibiotic treatment is described as a "sure cure for TB." In Hindi, the expression used is *pura course, pakka ilaaj*, which roughly translates as "a full or finished course [of therapy] for proper cure."[72] As with the English word *cure*, *ilaaj*—which comes out of Persian and Arabic and is used in Urdu, Hindi, Punjabi, and Gujrati—has a

72. The Hindi/Urdu word *pakka* has a broader semantic range beyond certainty and appropriateness that includes ideas of solidity, authenticity, completeness, absoluteness, and even ripeness. My thanks to Andrew McDowell for raising this point.

broad metaphoric range, useful to describe cures physical, spiritual, and even political. *Ilaaj* might also be rendered as "treatment," which places emphasis less on cure-as-end and more on the process and substance of cure, the actual medicine and its administration. In which case, "pura course, pakka ilaaj" might be rendered as "full or finished course [of therapy] for proper treatment"—as opposed to, say, an iatrogenic treatment that could lead to drug resistance. Similarly, in Tamil the slogan reads: *purana gunamadaia muzhu utthuravaadham*, which translates to "full guarantee to reach complete recovery or cure."[73]

The former government doctor admitted that many patients were not properly cured, at least not with the kind of certainty professed by these slogans. But he added, somewhat cynically, that to describe antibiotics as only a possible cure was not terribly catchy.[74] What became clear to me was that "pura course, pakka ilaaj" indexed a widely shared investment—financial, material, libidinal—in a specific vision of cure as final. This is a vision in which we are all at one time or another enrolled, both for ourselves and for others.[75] After all, shouldn't cure be a once-and-done kind of thing? A one-way street from sickness to health?

Such a conception of cure might be thought of, in the words of the historian of religion Mircea Eliade, as radical. Eliade described the "radical cure" as one

73. In her work on the translation of AIDS in Nepal, Stacey Leigh Pigg documents the contortions undertaken by health outreach workers attempting to explain or impart knowledge of the condition. Such contortions are induced in part by the historical formation of knowledge about a disease, local norms around what can be spoken about (and what cannot), and the often-elite register required to undertake technical translation. As Pigg points out, for example, AIDS was transliterated into Nepali, but an emphasis on the meaning of each roman letter as critical for proper understanding rendered the question of what AIDS means better suited to quiz games than health outreach. In India, tuberculosis has been largely rendered as TB despite the availability of vernacular-language options that might be proffered as translations. On the question of translation in health outreach, see Pigg, "Languages of Sex and AIDS in Nepal."

74. This offhanded comment reflects something about the formation of a "sphere of communicability" that situates the lay public as incapable, intellectually and emotionally, of grasping the nuanced range of possible therapeutic outcomes, a public that only responds to slogans. See Briggs, "Communicability, Racial Discourse, and Disease."

75. Cure is rarely ever one's own. Spending time in an Indian hospital reveals the ways in which disease control, broadly understood, is figured as the responsibility of not only the patient, but the family, medical practitioners and the state. See Venkat, "Scenes of Commitment."

that would offer us relief from the often-wrathful transformations produced by both illness and its treatment. Such a cure would operate through the "abolition of profane time."[76] Without the passage of time, there could be no illness, no treatment, no suffering. According to Eliade, such a radical cure required a return to a time before time, before the beginning of our troubles, before even the "beginning of the World."[77] In such a time, there are no relapses or reinfections, no side effects, neither grievances nor regrets, and, above all, no uncertainties.[78] Such a radical cure might culminate in the end of a cycle (death) or the beginning of a new one (rebirth). But at its foundation, the radical cure makes cure itself unnecessary, perhaps even unthinkable.[79]

Eliade identified strains of radical cure in premodern healing traditions (as well as within psychoanalysis). However, such a conception of cure is not alien to the history of what might be loosely termed biomedicine, which has at times proposed a vision of the body as a kind of thermodynamically closed system, one in which each part served a specific function in relation to every other part, as well as in relation to the integrated whole.[80] Such a vision of the body operates by reading biology through physics, the history of medicine as the history of science.[81] Nothing new from the outside could enter to disrupt

76. Eliade, *Myths, Dreams, and Mysteries*, 51.

77. Eliade, *Myth and Reality*, 88.

78. For a critique of Eliade and those who followed him on this point, see Thapar, *Time as a Metaphor of History*, 5–8.

79. It's worth noting that the radical cure as conceived by Eliade bears little resemblance to the radical cure described in the first chapter, which involved the building of more prisons to disperse the crowded prison population. This should give us pause about what precisely constitutes radicality in a given situation. Eliade himself has been the subject of much critique, for his romantic vision of premodern religious traditions and for the ways in which these views aligned with his support of fascism in Romania.

80. Within such a vision of the body and of illness, the historian and philosopher of medicine Georges Canguilhem identified what he described as a "tendency to conceive of a cure as the end to a disturbance and the return to a previously existing order, which is evidenced by all the terms with the prefix re- that serve to describe the healing process: restore, restitute, re-establish, reconstitute, recuperate, recover, etc. In this sense, a cure implies the reversibility of the phenomena whose succession constituted the illness; it is a variant of the principle of conservation or invariance that form the basis for classical mechanics and cosmology." Canguilhem, "Is a Pedagogy of Healing Possible?," 11.

81. I'm indebted here to the work of Georges Canguilhem. Michel Foucault, in his introduction to Canguilhem's *On the Normal and the Pathological*, would write that

or disturb things. And as a closed system, the body could, at least in theory, be restored to its previous condition.

Illness might then be understood as a curative response, an almost deliberate deranging of the mechanism to set it right.[82] A fever, for example, was not necessarily pathological, but rather a means of reestablishing the normative order. Illness and cure were not invariably opposed forces, but rather one and the same.[83] Curative illness could turn back the clock (or more precisely, the body), from the pathological back to the normal.

If the alternative to this vision of cure is conceived of in terms of the incurable—which frequently takes the guise of further suffering, death, or interminable treatment—it might appear quite reasonable to invest in such a vision. If cure is an ending through restoration or return, then incurability is a prolongation of the infinite game of treatment (or perhaps an ending through death). That such a radical cure is unreachable, even for the gods, makes it all the more seductive as a site of investment.

Everyone's Opportunity

Rather than offering a rebuke of her doctors or an indictment of the toxicity of her medications, Mrs. Ramasami testified to her own failings. The world over, HIV patients give similar testimonies, as a means of bolstering treatment

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Canguilhem's work was "intentionally and carefully limited to a particular domain in the history of science." Foucault, "Introduction," ix. He adds that "Canguilhem would undoubtedly allow one to say that the moment which must be considered strategically decisive in a history of physics is that of the formalization and constitution of the theory; but the moment that counts in a history of the biological sciences is that of the constitution of the object and the formation of the concept" (xvii). In this sense, Foucault reads Canguilhem's particular approach to the history of biology as one that emerges out of the history of science and, in particular, out of the history of physics.

82. Such a body might be thought of as a kind of romantic machine. See Tresch, *The Romantic Machine*. A similar idea has been proposed by Andrew McDowell in his discussion of the use of the idiom of "rotation" among Bengali doctors as a means of describing "a kind of mechanical pharmaceutical overlay on local, upanishadic, and ayurvedic views of the hydraulic or pneumatic body and its symptoms." McDowell, "Mohit's Pharmakon," 342.

83. We might think again of the distinction between curative and pathological disease described in chapter 1.

organizations and gaining access to goods and services.[84] I had, however, never heard such a testimony given by a former tuberculosis patient.

To the chagrin of many public health activists, tuberculosis patients have rarely identified with their illness. Like a cold or a broken leg, tuberculosis largely fails to infect personhood or sociality in an enduring way. In the overlapping idiom of public health experts and activists, there are "persons living with HIV," but there are only ever "TB cases."

A consequence of this was made clear to me by Dr. Nalini Krishnan, the director of what is perhaps the only NGO in the state of Tamil Nadu, and one of very few across all of India, that focuses on tuberculosis. Dr. Krishnan lamented the fact that tuberculosis was not HIV. Where were the tuberculosis patient advocacy groups, she asked? Groups that could push for newer treatments, greater government support, and more research?

Dr. Krishnan argued that having tuberculosis failed to mark patients in the same way as being HIV positive. In part, she speculated, this was because tuberculosis was curable, a transient condition. By contrast, HIV infection signaled a permanent ontological transformation due to its incurability—there was no moving on from HIV. The specter of curability seemed to preclude certain forms of both identity and community.[85]

I'm reminded of a night in 2011 when I found myself sitting in a police station. The night had begun rather differently. I was celebrating the birthday of a friend at an apartment located in a Chennai neighborhood facing onto the Bay of Bengal. My friend had taken a break from the festivities to get some air, only to discover that his motorcycle had gone missing. The watchman guarding the house across the street, half-asleep, gestured for us to approach the metal grate separating him from the road.

The police took it, he said.

We hoped that the police in question were those stationed nearby, at the tiny precinct next to the government wine shop that sold very little wine but quite a bit of beer and hard alcohol. My friend and I walked the short distance through the dark and quiet streets pierced only by the yelping of roving gangs of dogs.

84. The oratorical genre that might be described as therapeutic testimony is well documented in anthropological work on HIV in particular. Patient testimonies premised on repentance have become generic modes of raising awareness and funds and gaining access to much-needed medicines. See Biehl, *Will to Live*; Nguyen, *The Republic of Therapy*.

85. See Banerjee, "No Biosociality in India."

At the station, the bleary-eyed officer behind the desk admitted that, yes, they had taken my friend's motorcycle. But only to keep it safe, he explained. Why else? It had been locked improperly; anyone could have stolen it. Fortunate that they had gotten to it first.

He asked us to wait until the officer in charge returned. Only he had the authority to release the bike into our custody. As the rain poured down outside the station, the officer dispatched an underling into the elements to fetch tea and snacks. He began to ask us questions about our lives, our families, our work.

I began talking, perhaps too much. In those days, I hadn't yet turned my attention to tuberculosis. I spent my days in a small private HIV clinic in the city. Sitting with counselors as they delicately relayed the results of diagnostic tests. Rounding with nurses and doctors in the mornings as they checked on patients too ill to remain at home.

Like the hospital in Chetpet, the reputation of the HIV clinic drew patients from the farthest reaches of Chennai, as well as from surrounding parts of Tamil Nadu and the neighboring state of Andhra Pradesh. Some patients came regularly to collect medicines; others received their medicines from the government program and only came to the clinic when things took a turn for the worse and they required more intensive forms of care.

The officer expressed befuddlement at my line of research. "They're all going to die anyway, isn't it so?"

The question he was asking wasn't "Aren't they all going to die?"

He was asking, "They're all going to die, so what's the point?"

I'm reminded here of the words of Susan Sontag. "For purposes of invective," she wrote, "diseases are of only two types: the painful but curable, and the possibly fatal." That night at the police station, I offered the officer a third type. With the drugs that were now available to treat HIV, you could live a perfectly normal life. That was what the counselors told the patients each time they visited. Incurable, but not for that reason fatal.

Yet if I had been more honest, I would have had to admit that patients did die. The doctors at the clinic ascribed these deaths to a seemingly endless parade of multisyllabic opportunistic infections and related conditions like Kaposi's sarcoma, cytomegalovirus, immune reconstitution inflammatory syndrome, pneumocystis pneumonia, toxoplasmosis, and candidiasis.

But what I saw most often—the usual cause of death for many of those who spent their last days in the clinic—was tuberculosis.

At first, I was surprised by the number of tuberculosis cases I saw in the clinic. I had grown up in a middle-class American suburb in the 1980s and '90s,

too late to know tuberculosis except by the vaccination marks on my parents' arms. In my family, I alone had been born in a country that thought itself removed from this plague.

Back in 2011, nobody at that clinic in Chennai seemed to worry too much about tuberculosis. After all, they told me, it was merely opportunistic, secondary, and curable at that. What really mattered was HIV, the underlying condition, the chronic seedbed from which tuberculosis sprouted. In the clinic, a once-fatal disease had become a chronic condition through the use of antiretroviral drugs. Here, critically, *chronic* signaled *incurable* but not *fatal*. Tuberculosis, on the other hand, was a curable disease that nevertheless turned out to be quite fatal. The juxtaposition of two conditions in one body made these temporal formulations all the more pronounced.

There was, however, at least one person at the clinic who seemed worried about tuberculosis. Pregnant with her first child, Dr. Shanta had been repeatedly cautioned not to see tuberculosis patients. Her pregnancy, she was warned, decreased her immunity and increased her risk of infection. That made it rather difficult for her to do her job, she explained, a hint of irritation creeping into her voice.

"Everyone has TB," she said with a shrug. "Either they've had TB, they have TB, or they will have TB." Shanta was not alone in her assessment. Forty years earlier, Dr. Santosham had argued that almost every Indian would be, at some point in their lives, invaded by the bacteria that cause tuberculosis: "No one can run away or hide himself from the all prevailing tubercle bacilli. It seems, sooner or later, we are sure to be caught by the bacilli that lurk unseen in the atmosphere."[86] Curable, incurable, chronic, fatal. And perhaps, above all else, inevitable?

She'll Never Recover

After giving birth, Shanta took an extended leave, and I spent more time with her husband, Vijay, also a doctor at the clinic. On a morning about six months after I began my research at the clinic, a man named Sendhil entered hesitantly through the sliding doors of Vijay's office. He was propped up on both sides by his brother and his elderly mother. Sendhil was in his mid-to-late twenties, clothes hanging loosely from his joints like a hastily constructed scarecrow.

Sendhil's mother and brother took turns explaining that he had not been sleeping, and that he had not taken his medications in two weeks. Sendhil

86. Santosham, *What Everyone Should Know about Tuberculosis*, 77.

slouched low in his chair, refusing to turn his head toward Vijay, fixing his gaze instead on the blank wall in front of him.

After listening to their worries, Vijay quietly asked Sendhil's mother to wait outside. He seemed concerned about what could be discussed in front of her. She acquiesced, gently closing the door behind her. As soon as she had exited, Vijay turned to Sendhil and began firing questions at him about what was wrong, and about why he had stopped taking his medications. Sendhil maintained his stoic silence. His brother Selvan answered in his place.

Sendhil would leave the house in the morning, as if going out to work. But just a few hours later, he would return home, drunk. The rest of the day would be spent sleeping. When he wasn't out drinking or asleep, he lingered around the house, not working, not doing much of anything. Worry creasing his face, Selvan also reported that Sendhil continued to experience what he called "fits," occasional seizures. In spite of these concerns, and in spite of Sendhil's silence, Vijay assured them that Sendhil was "almost normal" now. It was a miracle that he had survived at all, he added.

Later, after Sendhil and his family had left, Vijay filled me in on the backstory. About six months earlier, just prior to my own arrival at the clinic, Sendhil had been admitted to the inpatient ward. He was very ill and was eventually diagnosed with tuberculous meningitis.[87] The bacteria that cause tuberculosis had traveled to the protective membrane surrounding Sendhil's brain and spinal cord, resulting in severe inflammation. His immune system, weakened by HIV, had been unable to keep the infection in check.

Tuberculous meningitis is exceedingly difficult to diagnose and treat, particularly when specialists and certain kinds of medical equipment are in short supply. A few weeks earlier, I had observed a middle-aged man in a coma admitted into the inpatient ward. Vijay had performed a lumbar puncture to collect the man's cerebrospinal fluid. Even before receiving the results of the laboratory tests, he felt certain that the man was suffering from tuberculous meningitis.

Vijay had debated whether to invite a neurologist from a nearby hospital for a consultation. Many of the neurologists and other specialists whom he had previously called upon were extremely hesitant to work with HIV-positive patients. Knowing this, Vijay only asked for consultations when he thought that something might be done for the patient. In this case, Vijay sensed that

87. On anthropological and historical approaches to thinking about coinfection, see Livingston, *Improvising Medicine*; Engelmann and Kehr, "Double Trouble?"

the man was in a late stage of disease, and that it was too late. Almost as if to confirm the wisdom of his decision, the comatose man died the next morning.

But Sendhil's case was different. After a few weeks of intensive treatment and monitoring in the inpatient ward, he had been allowed to return home to continue both his tuberculosis and HIV treatments. Since this near-fatal episode, Sendhil's health had improved remarkably. In the months following his hospitalization, there had been no discernible trace of tuberculosis, and the viral levels in his body had been reduced to a fraction of their former level. The combined forces of these pathological microbes had been, at least momentarily, held at bay.

Confronted by Sendhil's silence, Vijay gestured toward the hefty patient file sitting on the desk in front of him, filled with admission and discharge records, counseling reports, drug regimens, clinical observations, laboratory results, and referrals. Sendhil's patient file was also a history of labor, of expensive drugs and scarce time devoted to the work of preserving a life.

Vijay turned toward Sendhil and repeatedly asked him why he was not taking his medications.

But it was his brother who responded over and over again, "He won't tell me why. He just drinks."

Taking a deep breath, Vijay launched into a kind of homily. "Your life is in your hands. We've put in all of this work for you," he said. "Now, you must do something. Keep yourself busy—play table tennis, badminton, get a job, anything at all. Keep yourself busy instead of lying around at home."

Although Sendhil had finally turned toward Vijay, he remained silent, his eyes glued to a spot somewhere between the doctor's chin and the clinic floor. It was impossible for me to say whether Vijay's admonitions had moved him.

But Vijay was not deterred by Sendhil's silence. "Listen: if something happens to you, your brother will be sad for some time, but he'll be okay again after a while. Your father will be sad too, but he will also be okay.

"Your mother," he continued—"and mothers are different from fathers," he added—"your mother will be heartbroken. *She'll never recover*. I've seen that your mother accompanies you on every visit to the hospital. Just think of how lucky you are. Listen: we all have problems. Some seem worse than others, but all are relative. We must learn to live with it."[88]

88. The generic trope of the dutiful and doting mother, while arguably pan-Indic, has a particularly strong hold in the state of Tamil Nadu, through such figures as Tamil Thai (Mother Tamil) and the former chief minister, Jayalalitha, commonly referred to as Amma, or mother. See Ramaswamy, *Passions of the Tongue*.

"Living with it" is a problem unique to chronic conditions. Ostensibly, when a condition is curable—especially if we think of cure as an ending—there is nothing to endure past that ending. One might merely live (as if merely living were ever so simple). And when a condition is fatal, endurance beyond a certain point is arguably beside the point. Dr. Vijay's ethical injunction to "live with it" only made sense in the context of a life that was figured as permanently altered over a stretch of time. The eruption of tuberculosis into that life, a condition that could be cured, only underscored the fact that HIV, an incurable but chronic condition, was something that had to be endured.

Despite her exile from the examination room, Sendhil's mother was reincorporated as a critical figure in Vijay's address. She was the one who accompanied Sendhil to the hospital each time. She was the one who waited for him just outside. Although the physical presence of Sendhil's mother had been limited to the first minutes of the clinical encounter, her presumed desire for her son to live was very much present, articulated through the doctor's speech.

Here, Vijay had rendered explicit the generally unarticulated forms of care provided by Sendhil's mother in his argument. It was in the name of his mother that Vijay called on Sendhil to live: "She'll never recover." For Vijay, such a claim could not have been articulated from the position of just any kin relation. Vijay claimed that brothers and fathers could recover, but mothers would remain heartbroken, because "mothers are different from fathers." At the same time, Vijay invoked the singularity of Sendhil's mother; she was the one who accompanied him to the hospital every time. Sendhil's mother became a token of a general type: motherhood, Indian motherhood, or, perhaps more specifically, Tamil motherhood. At the same time, she was irrepressibly singular, as Sendhil's mother, as the one who accompanied him, as the one who would never recover.[89] In this sense, her condition was also chronic and incurable.

89. Indeed, such kin-based commitments might also be productively related to older Tamil ethical traditions frequently articulated in terms of concrete familial ties. For example, a particularly damning couplet from the sixth-century *Thirukkural* notes that a drunkard's glee brings suffering primarily to his mother. Vijay might not have consciously intended to invoke this stanza in singling out the relationship between Sendhil's nonadherence to therapy (which included his drinking) and his mother's suffering. Yet as Anand Pandian has convincingly argued, these older ethical traditions continue to suffuse Tamil life (and familial relations) in the present, albeit in fragmentary form, perhaps most often in the absence of explicit citation. Pandian, "Tradition in Fragments."

Although Vijay began by repeatedly asking Sendhil why he would not take his medication, Sendhil's silence forced him to adopt a different tactic. Rather than continuing to insist on the importance of committing to therapy, Vijay instead invoked another commitment structured by a form of maternal care that was both generic and yet painfully specific. For his mother, if not for himself, he had to live, and to live, he had to recommit himself to treatment, and to the minor customs that composed a life. Such commitments are rarely just one's own.

Having already spent more time with Sendhil and his family than he did with most of his patients, Vijay hastily scratched a list of drugs on his prescription pad. He tore out the page and handed it to Selvan. The two brothers left, Sendhil never having said a word.

Still No Cure

One morning in early 2011, I heard a patient telling Dr. Vijay that he had seen an article in the newspaper about a cure for HIV. The patient wondered whether the cure was available at that hospital. Vijay responded quite simply that there was currently no cure, but that the existing medications would keep the patient healthy. He later explained to me that there was in fact a cure. But he noted that the curative procedure was dangerous and unfeasible in an "Indian setting," as he put it.

What was this cure? In 2011, the journal *Blood* carried a report that a single subject, pseudonymously known as the Berlin Patient, had been cured of HIV. Since then, numerous reports have surfaced of HIV-positive patients who have been cured. At the time of writing, the Berlin Patient remains by all accounts cured. But in a recent case involving an infant who was also declared cured, the virus repopulated after an unexpectedly long period of dormancy, raising both cautions and hopes. Although resistance has been a critical term in HIV treatment since the inception of antiretroviral drugs, it has now become possible to speak of a (functional) cure, as well as of relapse.

To be clear, Vijay was not simply hiding information from his patient. To offer knowledge of cure raised hopes of its actualization. But in this case, cure remained resolutely elsewhere, for other people in other places. Vijay was trying to avoid making a promise that he could not keep. In his evasion, we can once again see how cures might operate like promises. Like promises, cures are not necessarily guarantees. Like promises, cures can be broken, microbes can repopulate in resistant forms, and patients can relapse.

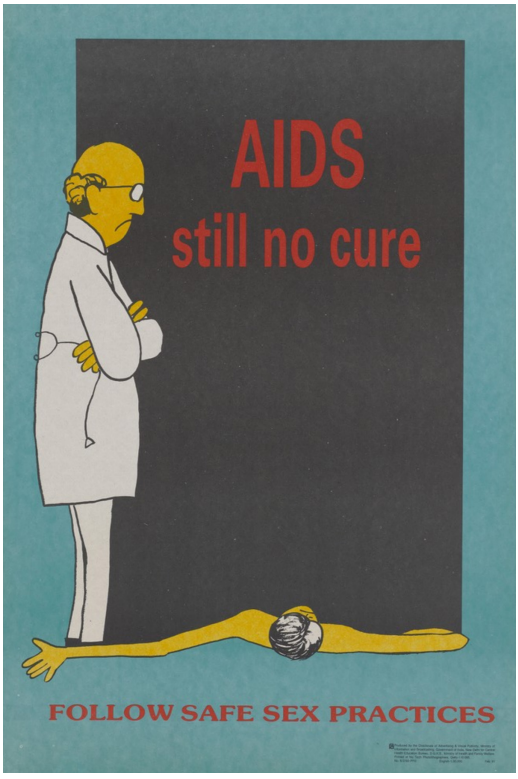

Figure 4.4. A "safe sex" poster produced by the Ministry of Health and Welfare, New Delhi, in 1991. L0054327, Wellcome Library, London. Copyrighted work available under Creative Commons by-nc 4.0, https://creativecommons.org/licenses/by-nc/4.0.

The investment in a concept of cure as final threatens to foreclose recognition of the limits of cure, and in itself produces a limit to what we can know—what we are willing to know—when it comes to both our singular and collective fates. Part of this closure involves an unwillingness to conceive of other possibilities of cure, ones in which we are left without tidy endings. Ones in which, for example, our vitality waxes and wanes, but we are not necessarily marked as incurable or chronically ill.

Physiology is not reducible to psychology, but I can't help but think here of Sigmund Freud's 1937 essay "Analysis Terminable and Interminable," in which he describes the case of a prodigal Russian who arrives despondent in Vienna. After extensive therapy, Freud declares the man cured, only to have him return nine years later, neurotic and penniless. It seems that he is no longer cured.

How can this be so? Freud explains it in terms of the "residues of the transference"—what we might think of as the remnants of an incomplete therapeutic encounter. Freud's Russian patient requires intermittent treatment for the next fifteen years as pieces of his past continue to resurface. Pieces that peel away, Freud writes, "like sutures after an operation, or small fragments of necrotic bone."[90] For Freud, both therapy and illness seem interminable, an infinite game without end.

In the present moment, there are consequences to conceiving of tuberculosis as a chronic condition, quite different than those faced by Dr. Santosham and his patients in the mid-twentieth century. Chronicity has become an ever-expanding classification, justly critiqued for exposing increasing numbers of people to the predations of drug manufacturers, insurance companies, health care providers, and the state. To have a chronic illness is not only to become a patient for life, but also to become a patient (and consumer) before you ever begin to feel ill.[91]

As I thought further about Freud's Russian patient, and about Nilam, Murugesan, and Mrs. Ramasami, it occurred to me that, for each of them, there were endings. In fact, there was no end to endings. Each time Nilam was cured, there was an ending. Each time Mrs. Ramasami felt better and stopped her treatment, there was an ending. Perhaps illness and treatment are not interminable, as Freud suggested, but rather, infinitely terminable, always ending so that they may begin and end once more. Endings follow endings. In this sense, both illness and cure might be critical diagnostic signs of the waxing and waning of life.

90. Freud, "Analysis Terminable and Interminable," 218.

91. On the increasing medicalization of uncertainty and the associated extension of treatment over the course of a life, see Dumit, *Drugs for Life*; Jain, *Malignant*; Aronowitz, *Risky Medicine*.