

# Infections and Inequalities

THE MODERN PLAGUES

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## Introduction

Medical statistics will be our standard of measurement: we will weigh life for life and see where the dead lie thicker, among the workers or among the privileged.

RUDOLF VIRCHOW, 1848

### WHAT KILLED ANNETTE JEAN?

Early on the morning of her death, Annette Jean was feeling well enough to fetch a heavy bucket of water from a spring not far from her family's hut. In the weeks prior to that day, she had been complaining of a "cold." It was not serious, she thought, although night sweats and a loss of appetite were beginning to trouble her. Annette's brothers later recalled that she was cheerful, "normal," that morning. She made everyone coffee and helped her mother load up the donkey for market. It was an overcast day in October of 1994, and Haiti's rainy season was drawing to a close.

Shortly after Annette's brothers left for their garden, the young woman abruptly began coughing up blood. A young cousin, watching from across the yard, saw her throw off a bright red arc and then collapse on the dirt floor of the tiny house. The child ran for Annette's three brothers,

who tried in vain to rouse her; the young woman could do no more than gurgle in response to their panicked cries. The brothers then hastily constructed a stretcher from sheets and saplings. It would take them more than an hour, carrying their inert sister, to reach the nearest clinic, situated in the village of Do Kay far below their mountaintop garden.

Halfway there, it began to rain. The steep path became slippery, further impeding progress. Two-thirds of the way there, Annette coughed up clots of darker blood and then stopped gurgling. By the time they reached the clinic, it was raining heavily. The larger clots refused to melt, hardening on her soaked shirt, and Annette was motionless in a puddle of diluted blood. She was not yet twenty years old.

I was in the clinic on that rainy day, conversing with a patient near the building's main entrance when the Jean brothers and a fourth man passed into the clinic's courtyard with their terrible cargo. A single rivulet of blood was falling from somewhere under the stretcher onto the paved courtyard. They approached me wordlessly, and I, also silent, reached for the young woman's wrist. It was an easy, joyless diagnosis—death from massive hemoptysis due, almost certainly in a woman her age, to tuberculosis—and Annette was already cold. Her brothers, who had been numbed into silence by the hope that something might still be done, began wailing, each taking up in turn a shrill cry of grief as I pronounced her dead.

One of the women from Do Kay had been mopping the floor of the clinic, but she had stopped to stare. When the men began to weep, she lifted her apron to her eyes and turned away. She had never met Annette Jean or her brothers, but she had seen plenty of tuberculosis. Her own sister, the mother of five children, had died of the same disease in October of 1988. One of those children also died years later from complications of tuberculosis, but not before going stone deaf from one of the medications used to treat it.

I had seen a lot of tuberculosis, too, even though the little clinic in Do Kay was built to serve only a tiny region of the Central Plateau. In 1993 alone, we had diagnosed over four hundred cases of tuberculosis, more than were registered in the entire state of Massachusetts that same year. Diagnosing tuberculosis is something I expect to do on a daily basis. But I too was shaken by the blood, the rain, and by the brothers' sharp grief.

The story does not end with Annette's dramatic agony. Another sister, I learned, had also succumbed to tuberculosis. And a few months after Annette's death, one of her brothers, Marcelin, returned to the clinic with a case of shingles (herpes zoster). From our interview I soon learned that he—like Annette, the child of a peasant family—had been working as a servant in Port-au-Prince, Haiti's capital city. This employment history in a person with herpes zoster has come to suggest, for many of us, early HIV disease, a suspicion confirmed in Marcelin's case by a laboratory test. Although, unlike his sisters, Marcelin was fortunate enough to receive treatment for the active tuberculosis that he later developed, he has told his family that he will die.

I could tell that Annette's family did not—*could* not—comprehend why they should be so unfortunate. To lose two young, previously healthy members of a close-knit family seemed both insufferable and unfair; so did Marcelin's illness. But their incomprehension eventually gave way first to hypotheses and then to conclusions. They were the victims of sorcery, they surmised. Someone had it in for them, and that someone was likely to be another villager.

After a decade of medical practice in the same village, I was accustomed to ferreting out accusations of sorcery and had previously spent some years trying to make sense of them.<sup>1</sup> And that, paradoxically, is the primary function of such accusations: to make sense of suffering. The anthropologist within me is perfectly satisfied to analyze such explanations, but to a physician it is nothing less than punishing to see preventable or treatable pathologies chalked up to village-level squabbles.

The doctor in me insists that no one should die of tuberculosis today; it's completely curable. Yet it is, at the same time, the world's leading infectious cause of death among young adults. An estimated three million people are dying each year from tuberculosis.<sup>2</sup> This figure comes as a surprise to many, who read more frequently in their newspapers about Ebola or "flesh-eating bacteria" than about tuberculosis. Exacting its toll among the world's poor, tuberculosis has ceased to occasion much interest, either in scientific circles or in the popular press. Barry Bloom puts it even more strongly: tuberculosis, he writes, "has been virtually ignored for 20 years and more."<sup>3</sup>

Many are also surprised to learn that infectious diseases remain the world's single most common cause of death. In 1995, for example, a year

in which an estimated 52 million people died worldwide, about 17.3 million of these deaths were due to bacterial, viral, or parasitic infections.<sup>4</sup> And although the majority of deaths occurred in the developing world, infectious diseases also remain a major killer of the U.S. poor. One study of New York City welfare recipients revealed staggeringly high rates of tuberculosis and AIDS: of 858 clients enrolled in 1984, 47 developed tuberculosis and 84 were diagnosed with AIDS. The study thus revealed tuberculosis and AIDS incidence rates well in excess of those found in many poor countries and seventy times higher than the U.S. national rate. In fact, simply being on welfare and having a history of drug or alcohol abuse were strongly associated with death: fully 183 clients—21.3 percent of the cohort—died within eight years. The mean age at death was less than fifty years.<sup>5</sup>

#### INFECTIONS AND INEQUALITIES

Amartya Sen has observed that the first question in any critical examination of equality is “equality of *what*?”<sup>6</sup> This book examines inequalities in the distribution and outcome of infectious diseases. It asks why people like Annette Jean and her siblings are likely to die of infections such as tuberculosis and AIDS and malaria, while others are spared this risk. It explores the creation and maintenance of such disparities, which are biological in their expression but are largely socially determined. This book also explores social responses to infectious diseases, responses ranging from quarantine to accusations of sorcery.

This exploration leads me to examine various, often discrepant explanations for these disparities of risk and outcome, including those proffered by officialdom and by academics. I argue that scholars often weaken their contributions to an understanding of infectious diseases by making “immodest claims of causality” regarding the distribution and course of these disorders. These claims are immodest because they are wrong or misleading. They are immodest because they distract attention from the modest interventions that could treat and, often enough, cure people like Annette Jean. And they are immodest because they distract attention from the preventable social disorder that exacerbates biological disorders.

Using data from Haiti, the United States, Peru, and elsewhere, this volume calls into question many such claims. *Infections and Inequalities* is intended as a corrective and a complement to the growing literature on “emerging infectious diseases.” Although many who study the dynamics of infectious disease will concede that, in some sense, disease emergence is a socially produced phenomenon, few have examined the contribution of specific social inequalities. Yet such inequalities have powerfully sculpted not only the distribution of infectious diseases but also the course of health outcomes among the afflicted.

Strikingly patterned outbreaks of HIV, tuberculosis, and even Ebola—and the social responses to these outbreaks—all suggest that models of disease emergence need to be dynamic, systemic, and critical. They need to be critical of facile claims of causality, particularly those that scant the pathogenic roles of social inequalities. Critical perspectives on emerging infections must ask how large-scale social forces come to have their effects on unequally positioned individuals in increasingly interconnected populations; a critical epistemology needs to ask what features of disease emergence are obscured by dominant analytic frameworks. Such models must strive to incorporate change and complexity and must be global in scope, yet alive to local variation.

This critique leads inevitably to questions about my own disciplinary perspectives. Although this book is the work of a full-time clinician who is also an anthropologist, these essays are neither clinical nor ethnographic. They are instead lodged between medicine and anthropology, drawing freely on both disciplines and on several others, including the sociology of knowledge. This willed “interdisciplinarity” is not meant to free the author from the responsibilities of discipline. Rather, it is clear to me that the disparities of risk and outcome described here are embedded in complex *biosocial* realities. To understand these realities, nothing less than a biosocial analysis will do—an analysis that draws freely on clinical medicine and on social theory, linking molecular epidemiology to history, ethnography, and political economy. Of course, such a synthesis is easy to demand but harder to produce; Fineberg and Wilson have termed it the “Holy Grail” of epidemiology.<sup>7</sup>

Finally, this book is lodged as a protest. The inequalities of outcome I describe are, by and large, biological reflections of social fault lines.

Annette Jean's death could and should have been averted; effective interventions might have ranged from the clinical to the political. To conclude otherwise is to engage, wittingly or unwittingly, in delusion or obfuscation.

#### VISUAL-FIELD DEFECTS IN ANTHROPOLOGY AND MEDICINE

In reexamining anthropology and medicine from the vantage point of Haiti, there often seems to be no shortage of delusion and obfuscation. At the very least, a good deal of selective blindness exists. The exact nature of the visual-field defect seems to depend on what sort of anthropologist or physician one is. The histories of both anthropology and medicine show these disciplines to be notable for their lack of attention, respectively, to oppression (and, perhaps, to human suffering in general) and to the sicknesses of the poor.<sup>8</sup>

Take anthropology, for starters. Not too long ago, in her study of hunger in Brazil, Scheper-Hughes wrote that "everyday violence, political and domestic horror, and madness . . . are strong words and themes for an anthropologist."<sup>9</sup> Why is this so, if anthropologists work in the same regions from which television exports its images of famine and strife? The killing fields described by journalists were the training fields for generations of anthropologists. What exactly *were* we talking about when we were not talking about "everyday violence, political and domestic horror, and madness"? We were talking a lot about "culture," and part of the problem lies in the ways this term was used. "The idea of culture," explained one authority approvingly in a 1975 book on the subject, "places the researcher in a position of equality with his subjects: each 'belongs to a culture.'"<sup>10</sup>

The tragedy, of course, is that this equality, however comforting to the anthropologist, is entirely illusory. Anthropologist and informant are not separate and equal; both are caught up in a global web of unequal relations. But such illusions reveal an important means by which key misreadings are sustained. A blindness to inequality and structural violence, often the local manifestation of transnational (or at least extraregional) forces, has long marred anthropology.

In a much-quoted essay, "Missing the Revolution," Orin Starn examines the ethnographies coming from highland Peru on the eve of the country's guerrilla war. Working in the very same villages that would later prove sympathetic to the Shining Path (Sendero Luminoso), how was it that anthropologists failed to see what was happening? Following Said, Starn writes of an "Andeanism" that appreciatively stressed the highland peasants' continuity with Incan ancestors. Concerned with ecology and ritual, with depicting remoteness rather than discerning links, a generation of anthropologists seemed to have missed the revolution:

Ethnographers usually did little more than mention the terrible infant mortality, minuscule incomes, low life expectancy, inadequate diets, and abysmal health care that remained so routine. To be sure, peasant life was full of joys, expertise, and pleasures. But the figures that led other observers to label Ayacucho a region of "Fourth World" poverty would come as a surprise to someone who knew the area only through the ethnography of Isbell, Skar, or Zuidema. They gave us detailed pictures of ceremonial exchanges, Saint's Day rituals, weddings, baptisms, and work parties. Another kind of scene, just as common in the Andes, almost never appeared: a girl with an abscess and no doctor, the woman bleeding to death in childbirth, a couple in their dark adobe house crying over an infant's sudden death.<sup>11</sup>

A more systemic view of highland Peru, and its many economic and administrative links to Lima and beyond, might have corrected this myopia. But, as Starn points out, "this economic nexus was one that most anthropologists—largely depending on the categories of 'culture' and 'community'—were unprepared to explore."<sup>12</sup>

A decade earlier, many of the classic ethnographies of anthropology—including those by Evans-Pritchard, Malinowski, and Lévi-Strauss—were critiqued as similarly shortsighted. But more recent studies have also shown a disturbing tendency to offer misreadings of oppression and suffering. Common indeed are the ethnographies in which poverty and inequality, the end result of a long process of impoverishment, are reduced to a form of cultural difference. We were sent to the field to look for different cultures. We saw oppression; it looked, well, *different* from our comfortable lives in the university; and so we called it "culture." We came, we saw, we misdiagnosed.

These omissions were the result, it's been argued, of theoretical fashions, of the ways in which anthropology "makes its object," and of the ways in which ethnography was written.<sup>13</sup> Most now agree that the omissions were also the result, in part, of anthropologists' relations with colonial or neocolonial power. On the level of the individual researcher, however, the visual-field defects of anthropology are rarely a question of motives but rather, as Asad suggests, a question of our "mode of perceiving and objectifying alien societies."<sup>14</sup> Three decades ago, today's truisms triggered acrimonious debate within anthropology. But debates that focused on the image of the anthropologist as the willing stooge of power often failed to address the more subtle effects of hegemony. This book suggests that the myths and mystifications surrounding these issues often serve powerful interests, in spite of the best intentions of researchers.

The extent to which these critiques of anthropology are still valid is a matter of some debate. Perhaps Marcus and Fischer were correct when, more than a decade ago, they argued that "our consciousness has become more global and historical: to invoke another culture is to locate it in a time and space contemporaneous with our own, and thus to see it as a part of our world, rather than a mirror or alternative to ourselves, arising from a totally alien origin."<sup>15</sup> Perhaps scores of students are this minute studying, say, the plight of women like Annette Jean. Perhaps several Fulbrights have been awarded to study the effects of recent political and economic policies on health outcomes among the poor of Latin America and Africa. But I don't think we're battering down wide-open doors here, if working in Haiti and dealing with AIDS and tuberculosis are at all instructive.

In my first years of reading anthropology, I certainly "missed the revolution." But what better remedial training than that to be found in Haiti? Although I went there in the spring of 1983 with a host of pre-fab research questions, each tightly linked to a sanctioned desire to "contribute to theory," I gradually developed a quite different set of questions, the ones addressed in this book. And in the course of a decade of research, reading, and writing, much of it in collaboration with very ecumenical colleagues, I came to discern disturbing patterns in much social-science writing on AIDS and tuberculosis.<sup>16</sup> For example, when we were face to face with

sexual practices or AIDS outcomes that were manifestly linked to poverty and inequality, we wrote instead about the exotic reflections of cultural difference. Animal sacrifice, zoophilia, ritualized homosexuality, scarification, and ritual beliefs all figure prominently in the early anthropology of AIDS. The only problem was that none of this had any demonstrable relevance to HIV transmission or AIDS outcomes, and claims to the contrary were eventually revealed to be mistaken—not, however, before a certain amount of damage was done, as several of the chapters that follow suggest.

This conflation of structural violence and cultural difference has marred much commentary on AIDS, especially when that commentary focuses on the chief victims of the disease: the poor. A related trend is the exaggeration of the agency of those most likely to become infected. Often such exaggeration is tantamount to blaming the victim.<sup>17</sup> Explorations of AIDS have involved intense scrutiny of local factors and local actors, including the natives' conceptions and stated motives. But is it possible to explain the distribution of HIV by discussing only attitude or cognition? After more than fifteen years in Haiti, I would not hazard to comment on the psychological makeup specific to Haitians with AIDS, and I suspect that quests for psychological "predispositions" are fundamentally misguided. On the makeup of Haiti's changing social conditions and their relation to AIDS, however, much can be said. On the nature of inequality and on the structure of poverty—increasingly a global process—much can be said. On the mechanisms by which these forces come to alter sexuality and sexual practices, much can be said. On Haitians' lack of access to both AIDS prevention and treatment, again, much *must* be said. It is thus unfortunate that these topics have been neglected in the social science and clinical literature on AIDS.

What about medicine's blind spots? If the anthropologist working in Haiti is faced with a host of theoretical and methodological dilemmas, it would seem, at first blush, that the physician's task would be somewhat easier. To a certain extent, it is. There is, first, the wonderful simplicity of the patient-healer dyad. The doctor's allegiance, goes the saw, is always to his or her patient. There is thus little need for angst over social theory: this allegiance holds whether that patient is an elderly, overweight U.S. businessman with coronary artery disease or a thin, coughing Haitian

woman, still in her twenties and dying of tuberculosis and malnutrition.<sup>18</sup> Having had the privilege of caring for both of these patients, I can say only that a warm and caring rapport is possible, indeed necessary, in both cases. Furthermore, the warmth of clinical exchanges—the vitality of practice—can serve as a powerful corrective to the “experience-distant” models of economics, political science, and sociology.

That said, it is important to add, though perhaps not to one's patients, that North American men with coronary artery disease are apt to live much longer than Haitian women with tuberculosis. North American men with coronary artery disease are apt to live longer than Haitian women, period. And the former, even those who are uninsured, clearly have much greater access to top-quality care than do the latter: indeed, it may be true that few Haitian peasants have received state-of-the-art care for pulmonary tuberculosis or any other serious illness—ever.<sup>19</sup>

A warm patient-doctor relationship is surely indispensable to quality care. So too is a familiarity with the biomedical literature. The vast, if still largely potential, power of modern medicine stems in great measure from its focus on the biological sciences. No one who has access to the vast array of drugs and diagnostic tools of a modern hospital could fail to appreciate the century's remarkable return on investments in bench science. No one who confidently prescribes a new medication could fail to appreciate the double-blinded controlled trial. But the narrow or uncritical use of these tools is one reason for physicians' blindness to the large-scale forces that generate sickness. Such pathogenic forces were once the focus of social medicine, as the work of Rudolf Virchow and others can remind us:

Virchow understood, as we his successors have not, that medicine, if it is to improve the health of the public, must attend at one and the same time to its biologic *and* to its social underpinnings. It is paradoxical that, at the very moment when the scientific progress of medicine has reached unprecedented heights, our neglect of the social roots Virchow so clearly identified cripples our effectiveness.<sup>20</sup>

Physicians again need to think hard about poverty and inequality, which influence *any* population's morbidity and mortality patterns and determine, especially in a fee-for-service system, who will have access to care. In short, all of the forces that bring a patient to a doctor (or keep a

patient from a doctor), all of the processes leading to sickness and then to diagnosis and treatment, are related to a series of large-scale social factors. The diagnostic dilemma, in thinking about the health of populations, is not so very different from that faced by the anthropologist.

So how might humane and compassionate physicians work such perspectives into their practice? Many of the finest clinicians I know have neither the time nor the inclination to consider such large-scale questions. Obligated to keep up with the explosion of medical knowledge and increased administrative demands, they are (or feel) consumed by the task at hand—to see a patient through an acute illness or to diminish the suffering of the chronically ill. Their patients might prefer such an approach, I suspect, to the one advanced in this book; no one who is ill wants the doctor visibly distracted by the problems of others.

In a utopia, perhaps this would be enough. Others would make sure that everyone had access to high-quality medical services. Someone else would enforce standards of care and monitor the forces that generate sickness in a society. Others would make sure that medical care, broadly conceived, was designed to promote the full development of each member of society.

Alas, we live in a society that encompasses both Haiti and the United States. It is a society that includes both Harlem and the Lower East Side of Manhattan, Paris and Kinshasa, London and Bombay. Further, we live in a society that is poorly defined by national boundaries. Nowhere is this clearer than in the case of HIV, as I've tried to show in previous work:

The ties that bind Haiti to urban North America have a historical basis, and they continue to change. These connections are economic and affective; they are political and personal. One reason this study of AIDS in rural Haiti returns again and again to urban Haiti and the United States is that the boundaries separating them are, at best, blurred. The AIDS pandemic is a striking reminder that even a village as “remote” as Do Kay is linked to a network that includes Port-au-Prince and Brooklyn, voodoo and chemotherapy, divination and serology, poverty and plenty. Indeed, the sexual transmission of HIV is as eloquent a testimony as any to the salience—and complicated intimacy—of these links.<sup>21</sup>

Such arguments are not inappropriate to the analysis of other diseases, including tuberculosis. Is it mere polemic to argue that in terms of social

causation the coronary artery disease of millions of overfed northerners is linked to the tuberculosis of malnourished Haitian women?

Our society ensures that large numbers of people, in the United States and out of it, will be simultaneously put at risk for disease and denied access to care. In fact, the spectacular successes of biomedicine have in many instances further entrenched medical inequalities. This necessarily happens whenever new and effective therapies—from antituberculous drugs to protease inhibitors—are not made readily available to those in need. Perhaps it was in anticipation of late-twentieth-century technology that Virchow argued that physicians must be the “natural attorneys of the poor.”

In any setting where medical injustice is a given, it is incumbent upon physicians and other healers to respond to the troubling questions posed by the destitute sick. These issues cannot be left to the leaders of the insurance and pharmaceutical industries, whose bottom line is not relief of suffering. Until doctors ask other types of questions—Who becomes sick and why? Who becomes a patient? Who has access to adequate services? How might inequalities of risk and outcome be addressed?—they will remain at least as blind as the anthropologists who “missed the revolution.”

#### ON CLAIMS OF CAUSALITY

Responses to these questions demand much more than careful phenomenology, a cornerstone of both good ethnography and clinical medicine. Studies compiled from the twelfth century onward show that the poor, quite simply, are sicker than the nonpoor and that this is true in both rich and poor countries.<sup>22</sup> In a 1969 volume of papers addressing the issues of poverty and health, we read: “Clearly the poverty population is considerably less healthy than the rest of the population of [the United States]. It still experiences substantially higher rates of overall mortality (all ages and by age, and especially from the communicable diseases), infant mortality, and severe illness.”<sup>23</sup> A more recent review argues that studies continue to point to the same conclusion:

One of the most striking features of the relationship between [socio-economic status] and health is its pervasiveness and persistence over

time. This relationship is found in virtually every measure of health status: age-adjusted mortality for all causes of death as well as specific causes, the severity of acute disease and the incidence of severe infectious conditions, the prevalence and severity of nearly every chronic disease, and measures of disability and restricted activity.<sup>24</sup>

But how, precisely, are these inequalities of outcome explained? Also writing of the U.S. poor, Ryan puts it trenchantly: “The facts are plain: their health is bad. The cause is plain: health costs money, and they don’t have money.”<sup>25</sup> In the years since Ryan made this claim, we have learned that the relationship between poverty and health is more complicated.<sup>26</sup> But the complexities are often found in the diverse ways in which the health of the disenfranchised may be made to suffer. That is, poverty and other social inequalities come to alter disease distribution and sickness trajectories through innumerable and complicated mechanisms.

Take tuberculosis, with its persistence in poor countries and its resurgence among the poor of many industrialized nations. We cannot understand its markedly patterned occurrence—in the United States, for example, afflicting those in homeless shelters and in prison—without understanding how social forces, ranging from political violence to racism, come to be embodied as individual pathology.

Initially, poverty and racism increase the likelihood that one will become infected by *Mycobacterium tuberculosis*. The mechanisms by which this occurs include the prevalence of the disease among the poor and the fact that the poor are more likely to live together, often in the cramped, airless quarters that once characterized the “lung blocks” of industrializing cities and now describe the urban ghettos in which tuberculosis is endemic. Various institutions designed to serve or contain the poor have in many instances been the settings for amplified outbreaks of tuberculosis. Nardell and Brickner argue, for example, that homeless shelters have become the lung blocks of the late twentieth century.<sup>27</sup> Poverty and racism surely increase the likelihood that one will end up in a shelter, just as these forces arrange the chances that one will wake up in a crack house or a prison.

Once infected, the poor are more likely to progress to active disease. Again, the mechanisms are myriad. Cell-mediated immunity, which keeps tuberculosis quiescent in most persons, may be compromised by

malnutrition, HIV infection (or other concurrent disease), or addiction to drugs or alcohol. Addiction, in turn, is usually not comprehensible without an understanding of subjugation and racism, at least not if historical and population-based studies are to be believed. Even reinfection with *M. tuberculosis* might play a role in ensuring that tuberculosis infection will progress to disease; the risk of reinfection is strongly influenced by the social factors just described.

These same factors determine outcomes among those with active tuberculosis disease. Poverty and racism increase the likelihood of dire outcomes among the sick by restricting access to effective therapy or rendering it less effective if patients are malnourished or addicted. Poverty clearly decreases the ability of patients to "comply" with demanding, lengthy regimens. Indeed, the advent of truly effective therapies only brings into starker relief the centrality of social inequalities, when unequal access to these therapies heightens the inequalities of infection and reactivation already described.

Thus do *fundamentally social forces and processes come to be embodied as biological events*. Throughout this book, I will make similar arguments in considering HIV and other infectious pathogens.

While underlining the essentially social nature of unequal health outcomes, I also want to avoid what might be termed the "Luddite trap." Addressing the social roots of disease is sometimes held to be incompatible with advocating the delivery of high-quality, high-tech care—an opinion often voiced by critics of private-sector medicine. But the facts are otherwise, as Paul Wise observes in a subtle discussion of racial disparities in infant mortality: "Too often, those who elevate the role of social determinants indict clinical technologies as failed strategies. But devaluing clinical intervention diverts attention from the essential goal that it be provided equitably to all those in need. Belittling the role of clinical care tends to unburden policy of the requirement to provide equitable access to such care."<sup>28</sup>

Nothing is wrong with high-tech medicine, except that there isn't enough of it to go around. It is, in fact, concentrated in precisely those areas where it will have the most limited effects. We need more and better clinical services for those marginalized by poverty and by discrimination. Annette Jean would no doubt be alive today had she been diagnosed and

treated in a timely fashion. Combination antiretroviral therapy would—and, I hope, will—no doubt prolong her brother's life. The poor need access to the best clinical interventions available, and we are living in a time when double standards of care must be questioned. Indeed, this is one of the messages to be distilled from the voices cited in this book.

Another message is that, with effective clinical interventions, we can often hope to efface the embodied manifestations of social inequalities. This has certainly been the goal of many health care providers working in settings of great privation.<sup>29</sup> We can show that tuberculosis outcomes can be as good among the rural Haitian poor as they are anywhere else.<sup>30</sup> Others working in U.S. inner cities have shown that inequalities of survival among those living with HIV can also be erased if high-quality AIDS care is afforded to all, regardless of ability to pay.<sup>31</sup>

Nevertheless, we must remember that effacing the inequality of outcomes is not the same as eliminating the underlying forces of inequality itself. And studying inequality is perhaps even further removed from this goal. But a desire for equality, whether avowed or hidden, often underpins such studies, as Sen points out: "When we assess inequalities across the world in being able to avoid preventable morbidity, or escapable hunger, or premature mortality, we are not merely examining differences in well-being, but also in the basic freedoms that we value and cherish."<sup>32</sup>

In a very real way, inequality itself constitutes our modern plague. The burdens of inequality are primarily borne by the poor and marginalized, for not everyone can claim victimhood, despite the self-serving identity politics and "soft relativism" of our times. But it is worth noting that even wealthy societies riven by great inequalities are bereft of social cohesion. This lack of cohesion is tightly linked to increased rates of morbidity and mortality: "It is now clear," writes Wilkinson in an important study of inequality in industrial societies, "that the scale of income differences in a society is one of the most powerful determinants of health standards in different countries, and that it influences health through its impact on social cohesion."<sup>33</sup>

In the United States, where this correlation is pronounced, one notes with alarm the widening income gap between worker and management: at this writing, the average CEO of a major company makes more than two hundred times what the average factory worker earns.

This disparity, five times greater than it was thirty years ago, is growing. "You can almost hear the proletariat sharpening the guillotine," warned *Newsweek* in an article on the subject; but in truth there seems to be a monopoly of violence from above, not below.<sup>34</sup>

. . . . .

This book consists of ten chapters. The first, written at the behest of an anonymous reviewer who commented on an earlier incarnation of the book, offers an overview of my own engagement in efforts to remediate inequalities of access to potentially life-saving interventions. It is the story of an expanding group of people—some of them chroniclers of the modern plagues, others absorbed in combating them—for whom pragmatic engagement in the clinic and the field lends to life a vitality all too uncommon in the modern university.

Chapter 2, which is necessarily less personal, takes a closer look at the concept of "emerging infectious diseases" and in so doing elaborates the analytic framework used in the rest of the book. The general argument it presents is that social inequalities often determine both the distribution of modern plagues and clinical outcomes among the afflicted. Thus does inequality itself become a pathogenic force. Like the introduction, these two chapters are critical of rigidly disciplinary approaches to complex biosocial phenomena such as epidemic disease. And, like the rest of this volume, these chapters draw unabashedly on methodologies ranging from ethnography to molecular epidemiology.

Subsequent chapters seek to apply this framework to specific diseases—primarily AIDS and tuberculosis—and specific settings. But the perspective here is neither epidemiologic nor sociologic; rather, it is my hope that a deep concern with individual experience suffuses every page. All of the chapters tell the stories of people afflicted by these plagues.<sup>35</sup>

In examining these deadly epidemics, the chapters move from a broad sociology-of-knowledge approach to an in-depth look at the dynamics of infectious disease and, finally, to pragmatic interventions designed to improve outcomes. An "ethnographic interlude" links the chapters on AIDS and tuberculosis, underscoring the perils of relying overmuch on a single discipline.

Chapter 10, the book's conclusion, is as much a warning as a plea. The further entrenchment of social inequality has dire implications in a time of rapid advancement in science and technology. If I am correct, the plagues of our times require as "co-factors" such inequalities—that is, steep grades of inequality fuel the persistence or emergence of epidemic disease. Greater access to effective medical services is but a necessary first step in stanching these epidemics.