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—**ESTHER DUFLO**, Department of Economics, MIT, and author of *Poor Economics*

Reimagining Global Health

An Introduction

Paul Farmer
Jim Yong Kim
Arthur Kleinman
Matthew Basilico

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Preface

PAUL FARMER

This book, several years in the making, derives from a class titled Case Studies in Global Health: Biosocial Perspectives, first taught at Harvard College in 2008. That same year, several articles appeared in the U.S. popular press noting that global health was a hot topic among students.[1] New class offerings and even undergraduate degrees in global health were being offered in over a dozen American universities. Such programs, sometimes hastily concocted, presented what was termed a new discipline.

But global health, while a marked improvement on its forebear "international health," remains a collection of problems rather than a discipline. The collection of problems explored in this book and in complementary teaching materials—problems ranging from epidemics (from AIDS to polio to noncommunicable diseases) and the development of new technologies (preventatives, diagnostics, treatments) to the effective delivery of these technologies to those most in need—all turn on the quest for *equity*.

The just and equitable distribution of the risk of suffering and of tools to lessen or prevent it is too often the unaddressed problem in global health. No one sets out to ignore equity, but the way we frame issues of causality and response typically fails to give it due consideration. Equity is less the proverbial elephant in the room than the elephant lumbering around a maze of screens dividing that room into a series of confined spaces.

This myopia is changing. We are starting to lift our heads to see the entire room and the elephant in it. The roots of global health are to be found, we argue in chapter 3, in colonial medicine, a series of practices in which the concept of equity played a small role, and in international health, which gained prominence through nineteenth-century efforts to control the spread of epidemics between countries and became a precursor of this past decade's efflorescence of interest in global health. During the latter decades of the twentieth century, discussions of equity and justice occurred but in a peculiarly parochial manner, with certain givens: the world was divided into three worlds (first, second, third) or, more typically, into nation-states separated by borders across which pathogens readily moved, even as resources were stuck in customs.

Combining anthropology, sociology, history, political economy, and other "resocializing disciplines" with fields like epidemiology, demography, clinical practice, molecular biology, and economics allows us to build a coherent new field that might better be termed "global health equity."[2] It is this multidisciplinary approach, which leads us from the large-scale to the local and from the social to the molecular, that permits us to take a properly *biosocial* approach to what are, without exception, biosocial problems. Such is the central thesis of this book, and also the approach adopted in each chapter.

• • •

If global health is now merely a collection of problems, what might it take to forge a new discipline? Historians of science know what investments were required to build modern chemistry, physics, genetics, or molecular biology: basic principles had to be demonstrated, labs had to be funded, and institutions had to be reorganized, often over several decades. What might it take to build a science of health care delivery that is properly biosocial? Since the biological and the social have traditionally been handled by different disciplines, building the field will certainly demand a multidisciplinary approach. More than theoretical understanding, articulating the biological and the social aspects of health care delivery will require significant new investments in research and training, which are, happily, the principal concerns of a university.[3]

For both ethical and pedagogic reasons, research and training cannot occur without engaging in the *delivery* of health care to the sick (or to those likely to become sick). This reality is what drives doctors and nurses to spend most of their time training in teaching hospitals and clinics rather than in labs, classrooms, or libraries. It also drives our conviction that building a science of health care delivery will be a more complex challenge than that encompassed by most of the current mottoes and proclamations of our research universities.

How might we integrate research and training and service to build *the field already known (if prematurely) as "global health," whether in settings of poverty or of plenty?* This question is largely ignored by nongovernmental organizations (NGOs) and other service providers, public and private. It's also too rarely posed within the university, in part because it's clear that honest answers will invoke the need for substantial new investments and that these investments should be especially—commensurately—large in settings of great poverty. It's hard enough to conduct research on health disparities in rich countries and harder still to explore them in the poorest ones, unless there is a clear commitment to addressing them. Most study-abroad experiences in global health take place in affluent or middle-income settings as opposed to the poorest places: in South Africa rather than Burundi; in Brazil rather than Haiti; in France rather than Moldova, to name a few cases. But this habit falls short of the mission implied in the words "global health."

It's not that there aren't important questions to be answered in South Africa, Brazil, China, Russia, France, or the United States; there are many questions, and investigating them in such countries will help to inform a genuinely *global* health, as we've argued many times.[4] Disparities of wealth, like epidemics, transcend national and other administrative borders and remind us of links, rather than disjunctures, between settings of affluence and privation. But many of our students want to follow the economic gradient down to some of the poorest and most disrupted places on the face of the earth. They want to learn how to work in the places that are in greatest need of modern medicine and public health. A new generation of students and trainees has been explicit about the importance of equity, as Richard Horton, editor of *The Lancet,* noted recently: "Global health is an attitude. It is a way of looking at the world. It is about the universal nature of our human predicament. It is a statement about our commitment to health as a fundamental quality of liberty and equity."[5]

It is for this new generation of students and trainees, who draw on precisely this commitment, that we wrote this book. These students are to be found at Harvard and other research universities in the United States, just as they are to be found in Europe and India and China and Brazil and in the places we work as service providers (Haiti, Burundi, Rwanda, Lesotho, the Navajo Nation, and elsewhere). They are found everywhere, regardless of nationality, region, religion, clinical specialty, or social status, since they do indeed constitute a global generation and have embraced, as Horton observes, a commitment to equity.

But global health needs to move well beyond an attitude. To substantiate that attitude, we need to build a new discipline. This book's authors and contributors believe that global health must be "more than just a hobby." This was the title of an editorial I wrote in the *Harvard Crimson,* in an effort to convince the members of our own university that resources dedicated to global health were investments in the university's core mission; similar arguments apply to other research universities as well.[6]

. . .

In writing this preface, I have mentioned at least a half-dozen relevant scholarly disciplines as institutions ranging from public health providers and NGOs to teaching hospitals and research universities. Is it really necessary to take such a complex approach to what some would consider straightforward problems? The issues with which global health is concerned are many and various, and a book like this one addresses a varied public, including undergraduates, medical and nursing students, students of public health, members and supporters of NGOs, and others seeking to understand global health equity. We believe that what we have to say should matter as well to managers, policymakers, and all those seeking to improve health care delivery in the community, the clinic, and the hospital. Taken together with its supplementary materials available online, this book is meant to be a "toolkit" (a term imposed on us by our students) offered to practitioners, including experienced ones, of global hope.

Undergraduates who hope to address health disparities have a long road ahead of them. For future physicians, there is a traditional path outlined by our institutions of training: first the BA, then medical school, followed by internship, residency, and sometimes fellowship. After clinical training, if an academic path is pursued, comes the transition to practitioner-teacher: from trainee to faculty member. Each teacher of this undergraduate course at Harvard has been through precisely this course of training, the sort of training that for generations has produced cardiologists, infectious-disease practitioners, oncologists, psychiatrists, and every other kind of medical specialist.

But what path lies before the student planning a career in global health? Less than ten years ago, almost no such training opportunities existed; they are only now being created. The authors of this book and other materials would be proud to be thought of as midwives to a longoverdue delivery. As the collection of problems turns into a discipline, there will be more and more demand for training and credentialing at every level.

Doctors are, as noted, only a small part of what is needed. Nurses, laboratory technicians, and managers are equally necessary, as are those born in resource-poor settings who have great talent but almost no chance to start up the same professional ladder. For example, there is plenty of cancer in the rural reaches of Haiti and Rwanda, but there are no oncologists, nor are there any oncology training programs. There is plenty of trauma in the hills and mountains of rural Nepal, but orthopedists are rare or absent. If global health is to be "more than just a hobby," it must embrace the training challenges on both sides of the rich-poor divide. For every Harvard student trained, there must be at least a dozen more in the developing world who would benefit from training. No sustainable model of global health ignores the challenge of training in radically different settings (Cambridge, Massachusetts, and Mirebalais, Haiti, say). Yet most resource-rich universities seek to avoid this unpleasant reality. While they recognize the relevance of global health and acknowledge the need for bilateral training programs, generously funded tracks are absent.[7]

A comprehensive view would see and acknowledge the truly global pool of talent out there. Our students and trainees, at every level and in every setting, want us to build this new field; faculty and administrators agree, as do colleagues and patients around the globe. Linking service to training and research will help elevate global health to the level of academic prestige afforded genetics, say, or systems biology.

So why haven't we caught up with the aspirations of our constituents? When historians look back at the current era, I believe that they will see twenty-first-century medicine in the broad biosocial perspective outlined in this book. They might note the worldwide eradication of smallpox in 1977; the promise and failure of universal primary care ("health for all by the year 2000"); the decline of public and private funding of public health systems ("structural adjustment"); the advent of new or "emerging" epidemics, most notably AIDS and drug-resistant infections, whether bacterial or viral or parasitic; the socialization for scarcity evident in late twentieth-century debates over new epidemics (usually taking the form of pitting prevention and care); the sudden injection of new funds to fight these epidemics in the first years of the twenty-first century; the success of these efforts (which showed that sometimes treatment *is* prevention); and the positive synergies that emerged from these investments, which led, when used wisely, to what was termed "health systems strengthening."

Finally, I hope that historians will note the role of universities and NGO partners who sought to contribute to the burgeoning discipline of global health, which came to include, however tardily, training and research programs focused on global health equity. Building such programs for college students, medical students, interns, residents, and junior faculty at Harvard and its teaching hospitals has not been easy. The training of medical professionals is heavily subsidized by the U.S. government, and this funding remains unavailable for those who see health equity in truly global terms. In other words, the training and research agenda of our country hasn't yet caught up with programs like the President's Emergency Plan for AIDS Relief and the Global Fund to Fight AIDS, Tuberculosis and Malaria, which are among the most ambitious global health programs in history.

The need to catch up is real. When I started my medical training at Harvard in 1984, there were three other students (of the one hundred fifty in our class) who reliably expressed interest in global health. A quarter-century later, that number has swelled to fifty. A third of the students plan careers addressing health disparities in resource-poor settings; more than half are interested in global health equity as defined in this book. Indeed, training programs do not keep pace with demand.

• • •

Yet building training and research programs is just one part of reimagining global health. An even bigger part lies in addressing health disparities directly, by delivering high-quality services to those who have never before enjoyed them. That said, a division of labor (between service and research and training) is important and indeed necessary. We believe that conceptual work can inform service, research, and training—and it is this dimension of global health need that a textbook can seek to address.

The training materials developed for this undergraduate course, for "Introduction to Social Medicine" (required at Harvard Medical School), and for the Global Health Delivery courses offered with the Harvard School of Public Health all draw on key theoretical constructs we deemed important to the practice of global health work, whether at the level of policymakers or practitioners.[8] Useful concepts—from Foucault's "biopower" to Berger and Luckmann's "social construction of knowledge" to Merton's exploration of the "unintended consequences of purposive social action," which we consider in the second chapter of this volume—are largely absent from the global public health literature. Someone might justifiably ask whether such notions are necessary to achieve global health equity, or whether they are simply too abstract, philosophical, and speculative. We contend that such concepts inform the biosocial analysis requisite for meaningful action based on understanding of complex problems in complex settings. These concepts can also inform frameworks justifying efforts to address health disparities—health as a human right, public health as a public good, and health services as investments in economic development, for example.

It is good to have the desire and the capacity to practice medicine and an orientation that supports the public good. But when issues of implementation lead to pragmatic quandaries, it is essential to have deep and broad analyses of the problems. One case in point: the interaction of NGOs and what are considered "failing" public health care systems. A medical provider working with a global health NGO might be led to think that the most efficient path to ensuring the best care for the many is to replace public systems with private charitable care, the kind of care the contributors to this volume are, perhaps, most familiar with. But no private entity can meet the whole range of interlocking needs of a system to support healthy human lives, and no NGO is capable of conferring *rights* to those in need of them. NGOs can at most establish a provider-client relation within a framework of legal rights that only a state can confer. This textbook seeks to make evident the links between what are here called neoliberal policies and the witting or unwitting weakening of public-sector health systems.

The course on which *Reimagining Global Health* is based was designed by anthropologists who are also practicing physicians. The original course description read:

> This new undergraduate course will examine a collection of global health problems deeply rooted in rapidly changing social structures that transcend national and other administrative boundaries. The faculty will draw on field experience in Asia, Africa, and the Americas to explore several case studies (addressing AIDS, tuberculosis, malaria, mental illness, and other topics) and a diverse literature (including epidemiology, anthropology, history, and clinical medicine). This course seeks to introduce students to selected topics in a rapidly emerging and poorly defined field, with a focus on how broad biosocial analysis might be used to improve the delivery of

> services designed to lessen the burden of disease, especially among those living in poverty.

The undergraduate course has been taught yearly since 2008. As we developed it, we worked with an overlapping group of colleagues at Harvard Medical School and its teaching hospitals to reconfigure a course called Introduction to Social Medicine, which was taken by all first-year medical students.[9] That reconfiguration benefitted from being the product of a group of like-minded practitioners; like all such collective efforts, it relies heavily on the limited experience of people accustomed to working together in certain times and places. We also worked with colleagues at Harvard Business School, the Brigham and Women's Hospital, and the Harvard School of Public Health to develop a series of "cases" (which means something quite different than it would in, say, an anthropology course) for students seeking to focus their careers on improving the delivery of health services broadly defined. One result, the Global Health Effectiveness Program, was one of the first joint teaching efforts ever between Harvard's schools of medicine and public health, entities that are physically separated by no more than a hundred yards. We developed new pedagogic materials that critically explore efforts to address some of the ranking problems of global health, from specific epidemics to the development of new technologies to the effective delivery of these tools.[10]

• • •

In January of 2010, a large earthquake destroyed much of Port-au-Prince, the capital city of a country in which we (working with thousands of colleagues, most of them Haitian) were trying to advance the cause of global health equity by addressing disparities directly. The quake leveled Haiti's only large city and claimed, by some counts, a quarter of a million souls.[11] Less than a month after completing the second iteration of our courses for undergraduates and medical students, we found ourselves contemplating Haiti's ruined medical and training infrastructure. Here was an emergent global health crisis, occurring quite literally before our eyes. How might we marshal the resources of the university, and other partners, to assuage the suffering of the injured and of those who, while not injured directly, were unable to access the services they needed?

In the immediate short term, all our focus was on saving lives. In looking back over those first weeks after the quake—itself a daunting exercise[12]—it's possible to conclude that academic medical centers made a pretty decent showing. One of the greatest problems in an earthquake, inevitably, is crush injuries. From across the world, teams of surgeons and anesthesiologists and skilled surgical nurses traveled to Haiti to preserve life and, when possible, limb. Academic medical centers and NGOs joined Haitian authorities and able-bodied citizens seeking to provide relief. Support was widespread: by some estimates, more than half of all American households donated to earthquake relief.

In those first weeks, surgical teams saved thousands of lives—when they could build field capacity or invest in decent and undamaged infrastructure. But many first-time visitors found it difficult to function. Haiti's health care system, public and private, had been weak, disorganized, and overtaxed well before January 12, 2010. The zoo of NGOs working in Haiti prior to the quake was poorly coordinated and little supervised by Haitian authorities, local or national, and even less coordinated with each other. In other words, the chaos of those first weeks was by no means the result of the disaster alone.

The collapse of schools and clinical facilities in Port-au-Prince led some to speak of "building back better." In this view, the quake offered a chance to reimagine the city and its commons—from parks to schools to medical centers. The revelatory shock of the quake served to interrogate, and sometimes undermine, views of public health that had dominated timid efforts in the latter part of the twentieth century. If a reimagined view of global health offers, to paraphrase Richard Horton, a new way of looking at the world, what might a commitment to health equity look like in post-quake Haiti?

Like some of our students, those of us who were experienced Haiti hands found ourselves torn between pessimism and hope, between inaction and bold initiatives. Whenever ambitious efforts to reimagine health care delivery won out, plans for new and improved hospitals and a proper health system were drawn up, and efforts to build new training programs proliferated. But plans and charrettes and reimagined medical centers were one thing; funding and implementation were quite another. As this book goes to press, more than three years after the quake, only a handful of hospitals have been rebuilt, and none of the downed university structures have been restored. The former Ministry of Health is a vacant lot, raked smooth. But one care delivery institution "reimagined" in the days after the earthquake has been designed and built and opened. The Hôpital Universitare de Mirebalais seeks to link service delivery for the poor to training and research, precisely as outlined in so many chapters of this book. It links the dynamism of NGOs and other parts of the private sector to the mandate and need in the public sector. It is beautiful and modern and done.

Sadly, the forces of globalization and decline were not finished with Haiti. The most water-insecure country in the Western Hemisphere, Haiti was primed for a major cholera epidemic even before the quake, as sober reviews noted.[13] Imagining a robust response to cholera was easy. But a more anemic response prevailed behind closed doors and in conference rooms.

With more than a million displaced people living in camps and enduring repeated calls for an end to the distribution of free potable water (on the grounds that it was neither sustainable nor cost-effective, or that it was cutting into the business of water purveyors), some public health experts nonetheless, and of course incorrectly, predicted that cholera was "unlikely to occur" in Haiti.[14] It is hard, as we show in this book, to make claims of causality regarding epidemic disease. But one plausible scenario involved this political economy of proximity.[15] Sewage from one of the United Nations peacekeeper camps leaked directly into a tributary of Haiti's largest river—an unintended consequence, surely, but not an altogether unpredictable one. Regardless of its origin, the cholera pathogen spread rapidly throughout the region drained by the river system and then, more slowly during the dry season, across the country and into the Dominican Republic and beyond.

Building or rebuilding a proper water and sanitation system in Haiti would take, in the best case, many years. Clearly, tens of thousands of lives were in peril in any scenario that involved only slow forms of prevention; faster (if shorter-acting) modes of prevention, from handwashing to vaccination, were necessary and complementary, as were efforts to identify and treat every cholera case.[16] The same quarrels over prevention versus care registered in this book's accounting of twentieth-century epidemics occurred in the midst of the twenty-first century's largest cholera epidemic. The quarrels were generated by the same socialization for scarcity that has marked all health investments in settings of poverty or for the poor who live in affluent countries.[17]

This is a very personal preface, for a number of reasons. One is because this book, and the large quantity of teaching material we've developed over the past few years, represent a significant personal investment for many of us. Another, of course, is that the faculty (and many of the teaching fellows) have dedicated their careers to this effort.

Finally, this preface is personal because the quake and its aftershocks permeated my experience of teaching more than I could say comfortably in a classroom.

Despite the quake and its aftermath, my faith in the importance of the effort required to reimagine global health remains unshaken. If anything, the experience of the Haitian quake, which was mostly wretched, redoubled my own commitment to linking direct experience in settings such as Haiti to tools from social theory that might allow us to understand the consequences, intended and unintended, of social action and of inaction.

If anthropology, history, and the other resocializing disciplines share a common analytic purpose, it is to render whole what is hard to see as such. It is also to acknowledge that human experience of suffering in pain or injury—and of the individuals and institutions that seek to redress suffering—are difficult to render as abstractions of models or theories. Every account is partial, and none could hope to capture the complexity of human experience.[18] This book's chief shortcoming is that every report or case or chapter or review is thus necessarily and avowedly partial. Acknowledging partiality sometimes helps us to interrogate facile claims of causality. Many of these claims will be revealed, in time, to be immodest or flat-out wrong. The history of medicine and public health has repeatedly taught us that humility should infuse our practice and our teaching and all claims of causality. But humility need not lead to paralysis, and we hope that the reader is not caught between unreflective activism and an informed but ultimately paralytic skepticism.

We counsel neither, for long experience has shown us that this too is a false dichotomy, and more dangerous than most. Inaction is not a real option but rather an illusion, one maintained with difficulty in even the tallest ivory towers or most gated retreats. We live in one world, not three, and “reimagining global health” requires resocializing our understanding of it. We've tried to do as much in this book, and we invite you to join us.

1

Introduction

A Biosocial Approach to Global Health

PAUL FARMER, JIM YONG KIM, ARTHUR KLEINMAN, MATTHEW BASILICO

A VIEW FROM THE FIELD

Mpatso has been coughing for months. Coughing consumes his energy and his appetite, and he loses weight with every passing week. When his skin begins to sag, he takes the advice of his relatives and makes the two-hour journey to a health center. There Mpatso learns that he has AIDS and tuberculosis. In his village in rural Malawi—an agrarian, landlocked nation in Southern Africa, hard hit by both diseases—Mpatso's diagnosis carries a very poor prognosis. Malawi, like most of the countries in sub-Saharan Africa, faces the combined challenges of poverty, high burden of disease, and limited health services in the public sector. But Mpatso's case is an exception: shortly after he arrives at the Neno District Hospital—a public hospital built with the help of NGOs in a small town in the rural reaches of southern Malawi—he is seen by a team of clinicians. That same afternoon, Mpatso is diagnosed and begins treatment for both diseases. The treatment involves a dizzying number of pills, but his are delivered daily by a community health worker who also helps him follow his therapeutic regimen. His life will likely be prolonged by decades.

Down the hall from Mpatso's exam room, a neighbor gives birth with the support of a nurse-midwife. In an adjacent room, six women are in labor under the watchful eye of the clinical staff and within a few yards of a clean, modern operating room. In this and in many other respects, Neno District Hospital differs from most health facilities in the region (and throughout rural sub-Saharan Africa). The hospital is a comprehensive primary care facility, providing ambulatory care for hundreds of patients each day. It has one hundred and twenty beds, a tuberculosis ward, a well-stocked pharmacy, and an electronic medical records system. The facility is staffed by doctors and nurses from the Ministry of Health and from Partners In Health. In one of the poorest and most isolated areas in Malawi, a robust local health system is delivering high-quality care, free of charge to the patients, as a public good for public health.

How was this system put in place in a country where effective health services are typically unavailable, and how can comprehensive health systems be built across the "developing world" (perhaps better labeled the "majority world")? How is the double burden of poverty and disease experienced by individuals like Mpatso or his neighbors across the border in Mozambique? How can history and political economy help us understand the skewed distributions of wealth and illness around the globe? These are a few of the questions that motivate our investigation of global health equity.

BIOSOCIAL ANALYSIS

As the preface notes, global health is not yet a discipline but rather a collection of problems. The authors of this volume believe that the process of rigorously analyzing these problems, of working to solve them, and of transforming the field of global health into a coherent discipline demands an interdisciplinary approach. Describing the forces that led Mpatso to fall ill with tuberculosis—a treatable infectious disease that has been banished to history books in most of the rich world yet continues to claim some 1.4 million lives per year worldwide—requires an intrinsically *biosocial* analytic endeavor. The roots of the limited health care infrastructure in rural Neno District, a former British colony long on the periphery of the global economy, are historically deep and geographically broad.

Most textbooks of public health have been written by epidemiologists, and we of course draw heavily from this field, relying as well on insights from clinical medicine and from public health disciplines such as health economics. But the course we teach at Harvard College (like the courses we have long taught at Harvard Medical School and the hospitals with which we're affiliated) is not the same as those taught by public health specialists. We who have developed this course and edited this book are jointly trained in clinical medicine and in anthropology or political economy. Thus we also seek to critique prevailing global health discourse with what we have termed the resocializing disciplines—anthropology, sociology, history, political economy.[1] Our approach hinges on social theory, explored in the second chapter, and aims to interrogate claims of causality widely stated in the literature on global health.

Our experience as medical practitioners has also shaped our approach to this volume. As we demonstrate in chapter 6, adapting a fully interdisciplinary investigation to basic questions—how did Mpatso become ill, and why?—has directly informed our practice. We see this close coupling of inquiry and implementation—the "vitality of praxis"—as central to our work: traversing the space between reflection and pragmatic engagement is necessary in any attempt to distill a core body of information about global health. Limitations exist in any team's knowledge of a particular field, and this book is of course based on material with which we are especially familiar, including the work of Partners In Health, the focus of chapter 6.

AN OVERVIEW OF HEALTH DISPARITIES: THE BURDEN OF DISEASE

We begin by taking a look at the global distribution of poor health and the factors that structure it. Globally, heart disease was the leading killer worldwide in 2004 (see table 1.1); cerebrovascular disease and chronic obstructive pulmonary disease ranked in the top five. This picture looks different, however, when we compare high- and low-income countries. Five of the leading causes of death in low-income countries—diarrheal diseases, HIV/AIDS, tuberculosis, neonatal infections, and malaria—are treatable infectious illnesses that are not found on the leading list of killers in high-income countries. Tuberculosis, malaria, and cholera continue to claim millions of lives each year because effective therapeutics and preventatives remain unavailable in most of the developing world. Although effective therapy for HIV has existed since 1996, and treatment now costs less than $100 per year in the developing world, AIDS is still the leading infectious killer of young adults in most low-income countries. In fact, 72 percent of AIDS-related deaths occur in a single region, sub-Saharan Africa, which is also the world's

TABLE 1.1 LEADING CAUSES OF DEATH, COUNTRIES GROUPED BY INCOME, 2004

Disease or Injury	Deaths (millions)	Percent of Total Deaths	Disease or Injury	Deaths (millions)	Percent of Total Deaths
World			*Low-Income Countries*		
1. Ischemic heart disease	7.2	12.2	1. Lower respiratory infections	2.9	11.2
2. Cerebrovascular disease	5.7	9.7	2. Ischemic heart disease	2.5	9.4
3. Lower respiratory infections	4.2	7.1	3. Diarrheal diseases	1.8	6.9
4. COPD[a]	3.0	5.1	4. HIV/AIDS	1.5	5.7
5. Diarrheal diseases	2.2	3.7	5. Cerebrovascular disease	1.5	5.6
6. HIV/AIDS	2.0	3.5	6. COPD[a]	0.9	3.6
7. Tuberculosis	1.5	2.5	7. Tuberculosis	0.9	3.5
8. Trachea, bronchus, lung cancers	1.3	2.2	8. Neonatal infections[b]	0.9	3.4
9. Road traffic accidents	1.3	2.2	9. Malaria	0.9	3.3
10. Prematurity and low birth weight	1.2	2.0	10. Prematurity and low birth weight	0.8	3.2
Middle-Income Countries			*High-Income Countries*		
1. Cerebrovascular disease	3.5	14.2	1. Ischemic heart disease	1.3	16.3
2. Ischemic heart disease	3.4	13.9	2. Cerebrovascular disease	0.8	9.3
3. COPD[a]	1.8	7.4	3. Trachea, bronchus, lung cancers	0.5	5.9
4. Lower respiratory infections	0.9	3.8	4. Lower respiratory infections	0.3	3.8
5. Trachea, bronchus, lung cancers	0.7	2.9	5. COPD[a]	0.3	3.5
6. Road traffic accidents	0.7	2.8	6. Alzheimer and other dementias	0.3	3.4
7. Hypertensive heart disease	0.6	2.5	7. Colon and rectum cancers	0.3	3.3
8. Stomach cancer	0.5	2.2	8. Diabetes mellitus	0.2	2.8
9. Tuberculosis	0.5	2.2	9. Breast cancer	0.2	2.0
10. Diabetes mellitus	0.5	2.1	10. Stomach cancer	0.1	1.8

SOURCE: World Health Organization, *The Global Burden of Disease, 2004 Update* (Geneva: World Health Organization, 2008), 12, table 2.

NOTE: Countries are grouped by 2004 gross national income per capita: low income ($825 or less), high income ($10,066 or more). For a list of countries grouped by income, see World Health Organization, *The Global Burden of Disease, 2004 Update,* annex C, table C2.

[a] COPD = chronic obstructive pulmonary disease.

[b] This category also includes other noninfectious causes arising in the perinatal period, which are responsible for about 20 percent of deaths shown in this category.

poorest. Diarrheal diseases are often treatable by simple rehydration interventions that cost pennies, yet diarrheal diseases rank third among killers in low-income countries.

Table 1.2 presents similar data, this time using a measure that takes into account both disability and death. This measure, the disability-adjusted life year (DALY), which is a way of quantifying years lost to poor health, disability, and early death, is not without its flaws; we will explore them in chapter 8. DALYs show a similar picture of health disparities between high- and low-income countries. It is also apparent that noninfectious conditions—such as birth asphyxia and birth trauma—are disproportionately distributed in low-income countries. Like the treatable infectious diseases just described, these forms of morbidity and mortality are often preventable with modern medical interventions and are thus much rarer in the wealthier parts of industrialized countries. Another stark picture of this disparity can be seen in map 1.1: despite some improvements over the last two decades, average life expectancy in low- and middle-income countries in sub-Saharan Africa stands at 49.2 years—fully 30.2 years less than life expectancy in high-income countries.

The relationship between gross domestic product (GDP) and health is one starting point for an examination of global health inequities. But national measures of wealth such as GDP and GNP (gross national product) are well worth pulling apart. "Domestic" and "national" data often (perhaps always) obscure local inequities, such as those seen within a nation, state, district, city, or other local polity. Figure 1.1, compiled by the World Health Organization's Commission on Social Determinants of Health, illustrates one example of the substantial differences in health outcomes between rich and poor households within single countries. Figure 1.2, from the same report, highlights another measure of social status across countries—in this case, mother's education level—that correlates with health outcomes such as infant mortality. The impact of social class, among other social, political, and economic factors, on health is taken as a given in this book, as it is in others. We will grapple with the many layers of these inequities throughout the text, beginning with a theory of structural violence in chapter 2. We will delve into the complexities of causation and the structures that pattern both the risk of ill health and access to modern health services, even as we explore effective and ineffective interventions in global health. Why is Mpatso able to attain good health care

TABLE 1.2 LEADING CAUSES OF BURDEN OF DISEASE (DISABILITY-ADJUSTED LIFE YEARS), COUNTRIES GROUPED BY INCOME, 2004

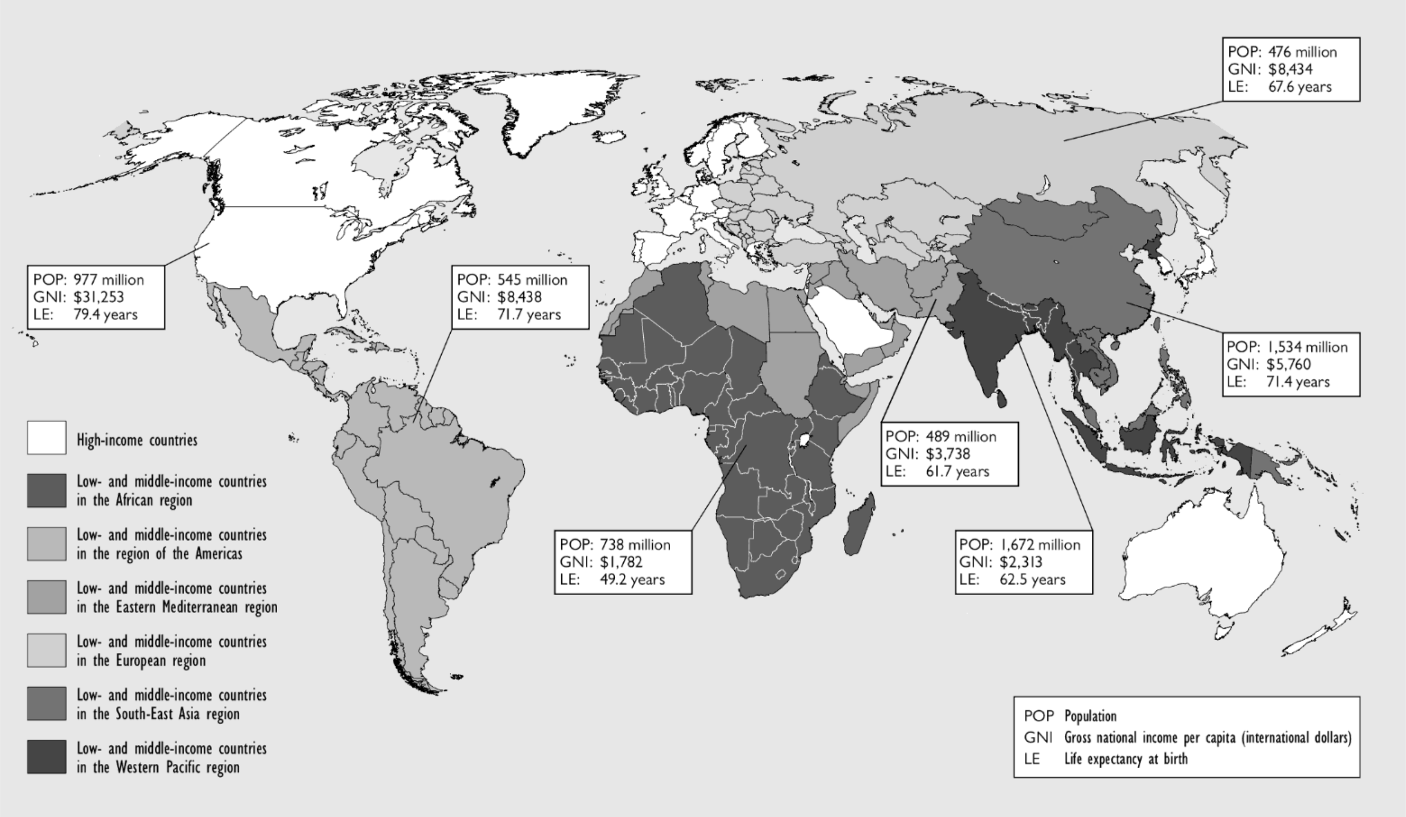
Disease or Injury	DALYs (millions)	Percent of Total DALYs	Disease or Injury	DALYs (millions)	Percent of Total DALYs
World			*Low-Income Countries*		
1. Lower respiratory infections	94.5	6.2	1. Lower respiratory infections	76.9	9.3
2. Diarrheal diseases	72.8	4.8	2. Diarrheal diseases	59.2	7.2
3. Unipolar depressive disorders	65.5	4.3	3. HIV/AIDS	42.9	5.2
4. Ischemic heart disease	62.6	4.1	4. Malaria	32.8	4.0
5. HIV/AIDS	58.5	3.8	5. Prematurity and low birth weight	32.1	3.9
6. Cerebrovascular disease	46.6	3.1	6. Neonatal infections and other[a]	31.4	3.8
7. Prematurity and low birth weight	44.3	2.9	7. Birth asphyxia and birth trauma	29.8	3.6
8. Birth asphyxia and birth trauma	41.7	2.7	8. Unipolar depressive disorders	26.5	3.2
9. Road traffic accidents	41.2	2.7	9. Ischemic heart disease	26.0	3.1
10. Neonatal infections and other[a]	40.4	2.7	10. Tuberculosis	22.4	2.7
Middle-Income Countries			*High-Income Countries*		
1. Unipolar depressive disorders	29.0	5.1	1. Unipolar depressive disorders	10.0	8.2
2. Ischemic heart disease	28.9	5.0	2. Ischemic heart disease	7.7	6.3
3. Cerebrovascular disease	27.5	4.8	3. Cerebrovascular disease	4.8	3.9
4. Road traffic accidents	21.4	3.7	4. Alzheimer and other dementias	4.4	3.6
5. Lower respiratory infections	16.3	2.8	5. Alcohol use disorders	4.2	3.4
6. COPD[b]	16.1	2.8	6. Hearing loss, adult onset	4.2	3.4
7. HIV/AIDS	15.0	2.6	7. COPD[b]	3.7	3.0
8. Alcohol use disorders	14.9	2.6	8. Diabetes mellitus	3.6	3.0
9. Refractive errors	13.7	2.4	9. Trachea, bronchus, lung cancers	3.6	3.0
10. Diabetes mellitus	13.1	2.3	10. Road traffic accidents	3.1	2.6

SOURCE: World Health Organization, *The Global Burden of Disease, 2004 Update* (Geneva: World Health Organization, 2008), 44, table 12.

NOTE: Countries are grouped by 2004 gross national income per capita: low income ($825 or less), high income ($10, 066 or more). For a list of countries grouped by income, see WHO, *The Global Burden of Disease, 2004 Update,* annex C, table C2.

[a] This category also includes other noninfectious causes arising in the perinatal period apart from prematurity, low birth weight, birth trauma, and asphyxia. These noninfectious causes are responsible for about 20 percent of DALYs shown in this category.

[b] COPD = chronic obstructive pulmonary disease.


POP: 476 million
GNI: $8,434
LE: 67.6 years
POP: 977 million
GNI: $31,253
LE: 79.4 years
POP: 545 million
GNI: $8,438
LE: 71.7 years
POP: 1,534 million
GNI: $5,760
LE: 71.4 years
POP: 489 million
GNI: $3,738
LE: 61.7 years
POP: 738 million
GNI: $1,782
LE: 49.2 years
POP: 1,672 million
GNI: $2,313
LE: 62.5 years
High-income countries
Low- and middle-income countries in the African region
Low- and middle-income countries in the region of the Americas
Low- and middle-income countries in the Eastern Mediterranean region
Low- and middle-income countries in the European region
Low- and middle-income countries in the South-East Asia region
Low- and middle-income countries in the Western Pacific region
POP Population
GNI Gross national income per capita (international dollars)
LE Life expectancy at birth

MAP 1.1. Average life expectancy in countries grouped by WHO region and income, 2004. Source: World Health Organization, *The Global Burden of Disease, 2004 Update* (Geneva: World Health Organization, 2008), 5, map 1.

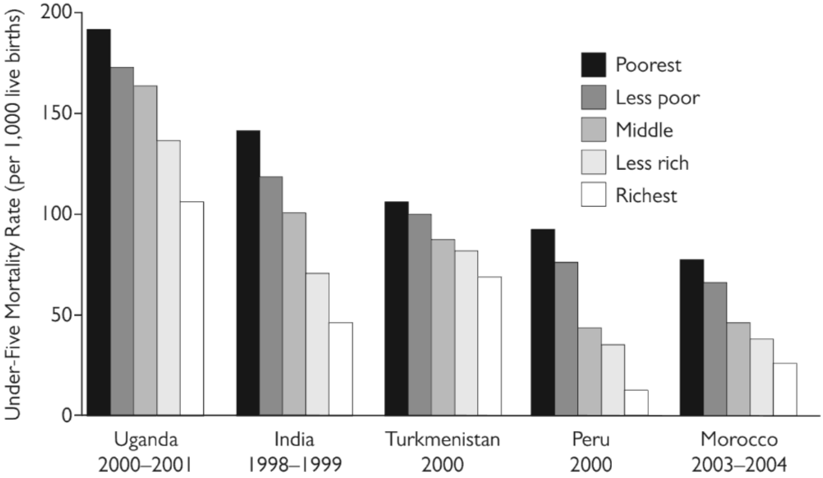


FIGURE 1.1. Mortality rates for children under the age of five, by level of household wealth. Source: *Closing the Gap in a Generation: Health Equity through Action on the Social Determinants of Health*, Final Report of the Commission on Social Determinants of Health (Geneva: World Health Organization, 2008), 30, fig. 2-2.

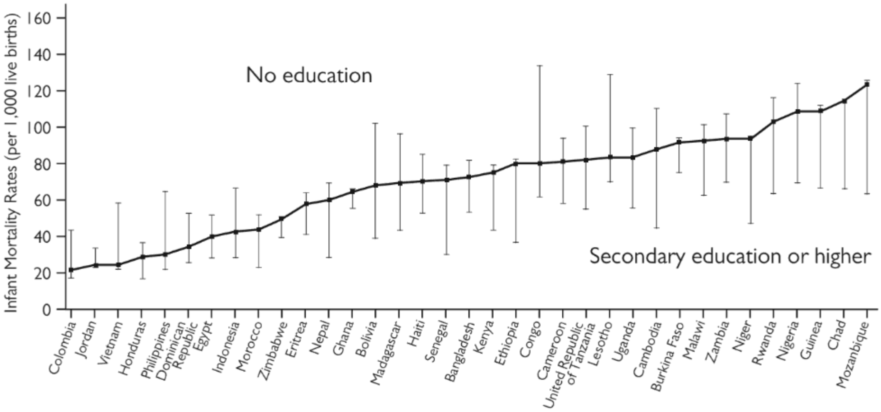


FIGURE 1.2. Inequity in infant mortality rates between countries and within countries, by mother's education. The continuous dark line represents average infant mortality rates for countries; the endpoints of the vertical bars indicate the infant mortality rates for mothers with no education and for mothers with secondary or higher education within each country. Source: *Closing the Gap in a Generation: Health Equity through Action on the Social Determinants of Health*, Final Report of the Commission on Social Determinants of Health (Geneva: World Health Organization, 2008), 29, fig. 2-1.

despite living in rural Malawi, while so many others in similar circumstances cannot?

DEFINING TERMS

Questions quickly arise in any study of this field: what do we mean when we use key terms such as “public health,” “international health,” and “global health”? What do we mean by “global health delivery”? More fundamentally, how should we define “health” itself? The World Health Organization (WHO) defines health as a state of physical, mental, and social well-being. But is this how Mpatso understands health? Can any definition of health capture the subjective illness experiences of individuals in different settings around the globe?[2] Beyond the direct experiences of individuals are social, political, and economic forces that drive up the risk of ill health for some while sparing others. Some have called this *structural violence.*[3] Such social forces become embodied as health and disease among individuals.

Though they share the goal of improving human health, “public health” and “medicine” are in many ways distinct. Public health focuses on the health of populations, while medicine focuses on the health of individuals. But in reifying the distinctions between them, we risk perpetuating unhelpful visual field defects in both professions. Clinical insights inform public health practice, and public health analysis guides the distribution of medical resources. But we believe both clinical medicine and public health must utilize the resocializing disciplines to address the fundamentally biosocial nature of global health problems. Microbes such as HIV and *Mycobacterium tuberculosis* cannot be understood properly at the molecular, clinical, experiential, or population level without analysis spanning the molecular to the social. Jonathan Mann, a physician and public health expert, put it this way: “Lacking a coherent conceptual framework, a consistent vocabulary, and consensus about societal change, public health assembles and then tries valiantly to assimilate a wide variety of disciplinary perspectives, from economists, political scientists, social and behavioral scientists, health systems analysts, and a range of medical practitioners.”[4] All fields have myopias. The restricted gaze of each discipline can illuminate certain global health problems; but only when they are taken together with a fully biosocial approach can we build, properly, the field of global health.

A word on the term “global health”: An antecedent term, “international health,” emphasized the nation-state as the base unit of comparison and implied a focus on relationships among states. Global health should more accurately encapsulate the role of nonstate institutions, including international NGOs, private philanthropists, and community-based organizations. Pathogens do not recognize international borders. But much churn—social and microbial—is introduced at borders.[5] Further, we seek to examine health disparities not only among countries but also within them, including our own. Boston (like Cape Town and São Paolo and Bangkok) has some of the world’s finest hospitals but also great disparities in burden of disease and access to care; it is on the globe, too.

A final note on definitions: “global health delivery” refers to the provision of health interventions, a process distinct from discovering or developing such interventions through laboratory research or clinical trials. Global health delivery begins with the question “how can a health system efficiently provide health services to all who need them?” More efficient and equitable delivery of existing health interventions could save tens of millions of lives each year. But even the best models of global health delivery cannot alone raise the standard of health care available to people worldwide. The health of individuals and populations is influenced by complex social and structural forces; addressing the roots of ill health—including poverty, inequality, and environmental degradation—requires a broad-based agenda of social change.

ORGANIZATION OF THIS BOOK

The chapters in this volume have been drafted by course faculty, guest lecturers, teaching fellows, and—in many instances—former students from our Harvard undergraduate courses, including “Case Studies in Global Health: Biosocial Perspectives.” In developing the syllabus and course content, we observed that despite the wealth of scholarship in global health equity, there were few introductory texts addressing it; almost none adopted biosocial perspectives. In reviews of the first year of the course, students encouraged us to find ways to make the course material accessible beyond our Harvard classrooms. We decided that this book could achieve two aims: make our course material available to a broader audience, and help to fill the gap of introductory materials on global health.

An exhaustive treatment of global health would be impossible in a single volume; our goal here is to introduce some of the principal challenges and complexities that confront those pursuing global health equity. We also outline some of the accomplishments of this endeavor, very often drawing on our own experiences as physicians, teachers, and activists. This experience occurs in the clinic and the classroom and the field; it is rooted in time and place. For this reason, *Reimagining Global Health* does not seek to offer a comprehensive review of a vast literature but rather to use our field experience in Haiti, Rwanda, Malawi, China, Peru, the United States, and elsewhere to raise important issues and to link these examples to some of the key readings in a number of disciplines and from an even wider array of settings. We also seek to think hard about future challenges by taking stock of what has happened in the past and by drawing on concepts familiar to us.

The book is divided into twelve chapters. Chapter 2 lays out a framework of social theories relevant to the most important questions in global health. We have found these theories helpful in understanding both the material covered in this volume and our own experience within the field of global health. Though we assume no background knowledge in social theory, we draw on work by some of the great theorists of the past century, including Max Weber and Michel Foucault, as well as more recent health-focused work, such as the notion of social suffering offered by Arthur Kleinman, Veena Das, and Margaret Lock. For readers with some background in social theory, we hope that our focus on health will elicit new insights and spur consideration of the relevance of other theoretical frameworks.

Chapters 3, 4, and 5 continue to build an analytic framework by examining three key historical periods critical to an understanding of global health today. Chapter 3 offers an account of colonial medicine and its legacies. One such legacy is the development of major global health institutions, including the World Health Organization; another is the notion of setting priorities for health interventions in the developing world. We trace the ways in which the economic and political priorities of wealthy nations informed assumptions about other populations and corresponding modalities of intervention. These trends have often continued to structure academic inquiry and the design of health interventions well beyond the colonial era. We also study global fascination with the power of biomedical intervention, such as the development of the first antibiotics and the pesticide DDT, in the context of two of the most important global health campaigns of the Cold War era: the smallpox and malaria eradication campaigns, which achieved markedly different results.

Chapter 4 analyzes two pivotal and tumultuous decades for international public health, the mid-1970s to the mid-1990s. They profoundly influenced health systems in developing countries and shaped contemporary discourse among global health policymakers. The chapter begins with the antecedents of the 1978 International Conference on Primary Health Care, in Alma Ata, Kazakhstan, where delegates from around the world adopted the goal "health for all by the year 2000." We then trace the rising influence of neoliberalism and the shift toward a *selective* primary health care approach in the 1980s. Chapter 4 details how these geopolitical shifts led to the rise of the World Bank as perhaps the most influential institution in global health during the 1990s and considers the effects of its approach on the health of the global poor.

In Chapter 5, we examine one of the most astonishing events in the history of global health: the AIDS movement. Why, after a decade of austerity and fatalism in the face of yawning health inequities around the world, did rich countries begin to devote billions of dollars in new resources to global AIDS treatment efforts? Describing the rise of the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) and the Global Fund to Fight AIDS, Tuberculosis and Malaria, we suggest that a broad coalition of practitioners, patients, policymakers, advocates, and researchers helped to expand the notion of "possible" in global health. Global policy and resource flows shifted dramatically, demonstrating the elasticity of assumptions such as "limited resources" and "appropriate technology" and underscoring the force of vibrant social movements in global health.

Chapters 6, 7, and 8 build on the historical and theoretical frameworks set out in earlier chapters and confront many of the key questions in global health, beginning with those posed by Mpatso's experience. Chapter 6 contextualizes these historical trends at the point of care by exploring the resuscitation of public-sector health systems in Haiti and Rwanda, focusing on the experiences of Partners In Health. It offers a chance to see the biosocial approach in practice in the principles behind the organization's strategy and in the delivery of context-specific health interventions.

Chapter 7 outlines a generalizable framework for effective global health delivery. We begin by defining several principles of global health delivery and then analyze contemporary efforts to strengthen health systems in resource-poor settings. The chapter calls for a true "science of global health delivery" capable of improving health system performance around the globe—in areas poor and rich.[6]

Chapter 8 investigates the social construction of disease categories and health metrics in the context of mental illness and multidrug-resistant tuberculosis—two pathologies that pose unique challenges to global health practitioners. The history and political economy of these illnesses illustrate many of the themes treated in this text and highlight the role of biosocial analysis in unpacking some of the complexities of global health. We hope the chapter will offer lessons for other global health challenges that, unlike AIDS, rarely see media attention and are widely misunderstood—often at the expense of those who encounter them as illness experience.

Chapter 9 examines moral aspects of global health work, including the human rights tradition. It traces the genealogy of several ethical frameworks invoked by practitioners, examining their core premises and also the practical implications of their application in global health. Many people are led to global health work by an intuitive sense that it is the right thing to do; we believe that a critical investigation of several moral frameworks can both facilitate productive introspection and expand the sphere of discourse for public engagement in global health.

The last three chapters (10, 11, and 12) sketch the landscape of global health today. Chapter 10 critically examines the rise in foreign assistance for health and development. The chapter goes beyond the question "does foreign aid work?" to ask "*how* does aid work?" What lessons have been learned during the past decades that might improve foreign aid and global health in the decades to come?

Chapter 11 outlines a number of key global health priorities for the next decade. It suggests that scaling up the model of health care delivery and health system strengthening introduced in chapter 7 offers great promise in addressing these priorities. Such an effort offers a platform to reduce the burden of disease, address social determinants of health, and build long-term care delivery capacity that will allow us to adapt to new demands as they arise. But such scale-up and the ability to advance global health equity will not be possible without broad-based social change—which is the subject of chapter 12, the concluding chapter of *Reimagining Global Health*. Those who have written it have studied and worked together for many years and hope our shared experience will be useful to readers, just as we hope to continue learning from others seeking to pursue the elusive goal of health for all.

2

Unpacking Global Health

Theory and Critique

BRIDGET HANNA, ARTHUR KLEINMAN

This chapter introduces a "toolkit" of social theories relevant to global health work. We believe that social theory can help students and practitioners understand and interpret the nature, effects, and limitations of medical and public health interventions. As examples in this book illustrate, well-intentioned global health and development projects can have unintended—and at times undesirable—consequences. Careful evaluation of the conditions that enable such consequences can help practitioners design better programs and cultivate a habit of critical self-reflection, which would surely be an asset to global health scholarship and delivery.

Most global health practitioners are focused primarily on *action:* providing services and seeking to improve the health of individuals and populations. Like the many leaders of public health and sanitation initiatives who preceded them, practitioners of global health have rarely had much exposure to, or patience for, the application of social theory to the problems they face. Evaluation of global health work usually focuses on measuring program effectiveness. Social theory has often been relegated to the domain of post-hoc analysis by scholars writing in academic journals, sometimes years or decades after their insights might have been used to improve the delivery of care.

The divide between theory and practice has many roots. Some scholars point to the troubled legacy of political Marxism, in which various interpretations of Karl Marx's writings were used as the basis for radical, and sometimes violent, reconstruction of the social order. In addition, the involvement of social scientists, particularly anthropologists, in enabling and justifying the violence of colonialism, and the scientific racism that provided its ideological cover (traced in chapter 3), has led to serious reflection regarding the role of social science in global health and humanitarian work. This history has provided ample cause for the inward turns of deconstructionism and self-criticism that have preoccupied much of anthropology for the past thirty years.

This period also coincided, however, with the rise of medical anthropology as a discipline and the emergence of a new perspective: that of the physician-anthropologist. The physician-anthropologist authors of this volume are examples of those who have used tools from medical anthropology to hone a vision of health equity and social justice. For example, the nongovernmental organization Partners In Health drew on social theory to critique and improve its approach to health care delivery, as chapter 6 explores. It is in this new but vibrant tradition of medical anthropology that we ground our approach to social theory for global health. Effective global health leaders must consider problems from multiple perspectives. They must measure the effects of interventions and explain the meanings of those effects to diverse actors, in diverse places, and at different moments.

Max Weber, an early twentieth-century German sociologist and one of the architects of modern social science, defined sociology as "the science whose object it is *to interpret the meaning of social action* and thereby give a causal explanation of *the way in which this action proceeds and the effect which it produces*."[1] Weber saw sociology as a science in the sense that it could identify certain causal relationships between social forms. But, as an anti-positivist, he believed that these relationships were not as "ahistorical, invariant, or generalizable"[2] as those studied by natural scientists. Rather, Weber sought to interpret the meanings of cultural norms, symbols, and values that connect people to structures such as bureaucratic institutions of the state.

Today, anthropology and other modes of social analysis still seek to "interpret the meaning of social action." The social theories outlined in this chapter can be used to help explain why certain global health initiatives succeed while others fail. These theories elucidate the social determinants of health: the nature and causes of poverty and inequity. The specific social theories discussed here are by no means the only pertinent ones, but they are particularly relevant to navigating the complexities of global health delivery.

BIOSOCIAL ANALYSIS AND THE SOCIOLOGY OF KNOWLEDGE

Most medical research focuses exclusively on the biologic causes of disease. A biosocial approach posits that such biologic and clinical processes are inflected by society, political economy, history, and culture and are thus best understood as interactions of biological and social processes. Biosocial analysis of global health challenges reaches across disciplines and breaks down the boundaries that separate them; for example, understanding questions of resource optimization, which are usually reserved for economists, also requires insights from anthropologists and health practitioners. One central illustration of the biosocial nature of disease is the correlation between disease risk and poverty. We will revisit this relationship often in this volume under various names (such as structural violence and social suffering) and in the context of different diseases (such as malaria, AIDS, and multidrug-resistant tuberculosis).

Other concrete examples include the link between psychological and economic depression and the rise in rates of disability associated with increased unemployment. Likewise, economic status, education level, cultural traditions, and access to infrastructure all influence dietary habits, a crucial determinant of heart disease and obesity. The global epidemic of type 2 diabetes mellitus is attributable in part to greater sugar intake. To add complexity to the issue of culture and diet, one must also consider mental health. For example, Anne Becker and colleagues conducted dietary studies in Fiji and found that as tourism grew and infrastructure was developed, the diets of the native people shifted toward Western eating habits. Rates of anorexia and bulimia rose as television watching became popular and displaced other cultural events and large family meals.[3] None of these phenomena can be examined properly in the absence of biosocial analysis.

A biosocial approach demands the reconciliation and occasional disruption of multiple frames of knowledge. A medical student will learn, for instance, that the cause of cerebral malaria is the protozoa *Plasmodium falciparum* and that the treatments of choice include quinine or artemisinin-based combination therapy, whereas an epidemiologist or a public health planner might view the cause as undrained breeding grounds for the mosquito vector and recommend draining standing water, providing mosquito nets, and spraying DDT. All the while, residents of an endemic area and ethnographers who speak with them might assert that the cause of malaria is the unequal distribution of land under the local system of tenancy and might protest that DDT's environmental effects make its use unacceptable.

How should global health practitioners navigate these multiple ontological claims? Differential values assigned to diverse categories of evidence—in this case, whether the problem is deemed biological, environmental, or economic—will shape the proposed solution and its ultimate effect. This is particularly clear in the case of malaria. Although the biological view of malaria causality largely won out over the geographic and sociological views in the 1970s, some historical analyses of malaria burden suggest that land development and distribution are as important as technological interventions in eliminating malaria.[4] To help clarify these multiple explanatory frameworks, we introduce biosocial perspectives and the sociology of knowledge.

In 1966, sociologists Peter Berger and Thomas Luckmann published *The Social Construction of Reality,* which defines the sociology of knowledge as "whatever passes for knowledge in a society, regardless of the ultimate validity or invalidity (by whatever criteria) of such 'knowledge.'"[5] Berger and Luckmann begin by explaining how people form shared mental conceptions about the world: when any group of people—whether they are sailors marooned on a desert island, first-year medical students, or commodities traders on Wall Street—find themselves together, they construct norms to govern their relations. As jokes, habits, and practices are passed on to subsequent generations, they become freighted with meaning and assume the status of immanent rules. If these individuals have children or initiate others into their community, the newcomers will over time experience these historicized habits as natural rules. Berger and Luckmann call this process *institutionalization,* in which "reciprocal typification of habitualized action by types of actors" leads to the eventual objectification of that habitualized action as an institution.[6] Assumptions and accidents become historicized into truths, and knowledge is created.

"To understand the state of the socially constructed universe at any given time, or its change over time," Berger and Luckmann write, "one must understand the social organization that permits the definers to do their defining. Put a little crudely, it is essential to keep pushing questions about the historically available conceptualizations of reality from the abstract 'What?' to the socially concrete 'Says who?'"[7] It is through this process that people's knowledge and beliefs about the world—all human knowledge, including science, "regardless of its ultimate validity or invalidity”—become legitimized in society, and the world can be said to be “socially constructed.”

The mechanisms of legitimation are useful to keep in mind in any field; for global health analysis, legitimation helps explain how practices become institutionalized. When transformed into policies backed by organizations with claims of authority, legitimized knowledge comes to exert social control over individuals. People feel pressure to obey rules and conventions that have become dissociated from human agents and are instead imbued with coercive power because they have been legitimated and institutionalized. For example, individuals may choose to exercise and follow a “healthy” diet because public health norms recommend these behaviors; doctors may be unable to give patients an already-proven vaccine because it hasn’t yet received World Health Organization pre-qualification (a stamp of approval for global health interventions). “Man,” in other words, “is capable of creating a world which he experiences as something other than a human product.”[8] Social constructions become naturalized over time, as if they were invariant parts of the nature of things.

Even demonstrable scientific principles, including those established beyond doubt, are socially constructed in the sense that they remain historical products of specific questions and experiments—and of human minds, which, in an alternate history, might have asked other questions and conducted different experiments. The *Diagnostic and Statistical Manual of Mental Disorders* (*DSM*) is a good example of the social construction of knowledge in medicine. Given that it is an authoritative text designed to guide practice and treatment norms for psychiatry in the United States, and to some degree worldwide, one might assume that it would be immune to cultural variance. But until 1973, the *DSM* maintained that homosexuality was a psychiatric disease.[9] In this case, social biases shaped medical diagnosis. Similarly, the *DSM* has redefined and downgraded the amount of time that is considered “normal” for someone to grieve after the death of a spouse or child. In the past, a person who still felt intense symptoms of grief a year after such a personal tragedy would have been considered depressed. But in recent decades, stigma associated with depression has decreased, and the use of psychopharmaceutical drugs has become more widely accepted. According to today’s *DSM,* a person is considered clinically depressed if he or she still feels grief after two weeks. This arbitrary process of *medicalization*, whereby subjective experiences are redefined as disease—such as remaking war trauma into post-traumatic stress disorder, or severe cases of premenstrual syndrome into premenstrual dysphoric disorder—illustrates the social construction of knowledge and the institutionalization of medical norms.[10]

As we grapple with the social construction of medical knowledge, a technical distinction drawn from medical anthropology might be useful. While in general parlance the terms "illness," "disease," and "sickness" are used interchangeably, medical anthropologists posit distinctions between them. Illness can be understood as the subjective experience of symptoms by laypersons and their communities,[11] disease as the reinterpretation of these symptoms as objective categories by medical practitioners, and sickness as pathology at the population level.[12] Awareness of how both knowledge and policy are socially constructed helps students and practitioners take a critically self-reflective approach to global health delivery.[13]

THE UNANTICIPATED CONSEQUENCES OF PURPOSIVE ACTION

Awareness of the social construction of knowledge, however, does not illuminate how even well-intentioned initiatives can unwittingly cost lives and resources. Robert Merton's theory about the *unanticipated consequences of purposive social action* offers insight into this phenomenon. Purposive action, according to Merton, involves motives and, consequently, a choice among alternatives; it must also have a goal and a process.[14] Nevertheless, such an action may not achieve the desired aim and may in fact result in unanticipated, and sometimes undesirable or perverse, outcomes. Unintended consequences of purposive action vary, as do their causes. One potential cause is knowledge asymmetries: for example, a doctor might misunderstand the language or cultural traditions of a patient and misdiagnose or mistreat the patient accordingly. Even with all relevant information, one can always make an error or take an action that subverts one's ultimate goal.

Merton also identifies "rigidity of habit" on the part of individuals or institutions and "the imperious immediacy of interest" as potential causes of unanticipated consequences.[15] For example, the United Nations responded to the "imperious immediacy" of the plight of refugees fleeing the 1994 Rwandan genocide by setting up refugee camps in neighboring Democratic Republic of the Congo (shown in figure 2.1). Those camps, however, became a base of operations for the perpetrators of the genocide—a devastating and unintended consequence that helped launch frequent bouts of violence that continue to this day.[16]

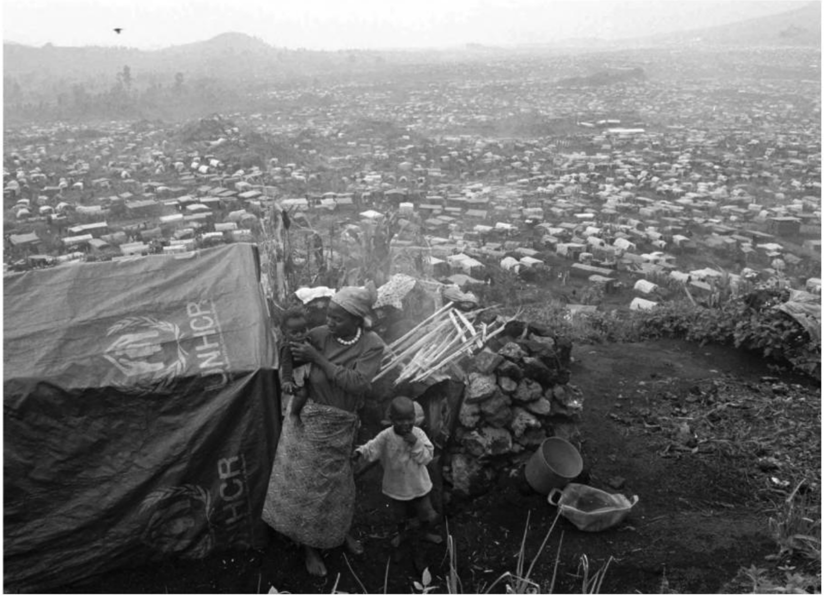


FIGURE 2.1. This Rwandan mother and her two children, refugees from the Rwandan genocide, stand in front of their sheeting shelter overlooking the Kibumba refugee camp, twenty miles northeast of Goma, Democratic Republic of the Congo, on February 13, 1996. Organized by international humanitarian organizations, such refugee camps, located along the border between Rwanda and the Democratic Republic of the Congo, unintentionally became bases of operation for Hutu militias that continued to systematically slaughter Tutsis in the camps and surrounding regions. Courtesy Associated Press/Jean-Marc Bouju.

Institutional values can also prevent us from anticipating possible outcomes. In the example of the Péligre Dam in Haiti, discussed in chapter 6, the values of international development institutions blinded the builders of the dam to the fact that the project would displace whole communities and trigger poverty and homelessness. Most large infrastructure projects, from dams to highways to power plants, have consequences both intended and unintended.

Finally, Merton explains that in some cases merely announcing one's intentions can alter the circumstances surrounding an action; even the best plans are laid on shifting ground. For example, in places where decent medical care is scarce, simply announcing plans to build a new hospital, or to upgrade an old one, can cause a surge of patient visits to the site before the new facility is ready. On-site clinical staff members, if there are any, must suddenly care for hundreds of additional patients each day, likely in outdated facilities that had previously handled only a few dozen patients each day. This is just one example. Realized and potential unintended consequences are too numerous to count, and their impact looms large in the history of global health.

THE RATIONALIZATION OF THE WORLD

Berger and Luckmann demonstrate how social institutions and legitimized knowledge shape the agency of individuals; Merton asks why purposive social actions often fail to achieve their intended result. Today, it is rare for individuals to be the sole, or even the primary, actors in an intervention. Institutions and organizations—governments, nongovernmental organizations (NGOs), corporations, and multinational organizations such as the World Bank and various United Nations agencies, including the World Health Organization—are more frequently the architects of global health practice and policy.

Embedded in the actions of institutions and some individuals are power and authority (or the lack thereof, as is the case for many of the patients this volume describes). Max Weber (pictured in figure 2.2) delineates three modes of authority.[17] *Traditional authority* such as patriarchal, patrimonial, or feudal power derives from history, custom, or (in Berger and Luckmann's words) institutionalization. It is the power passed on from generation to generation by monarchs, barons, village headmen, and tribal chiefs.

Charismatic authority is generated by extraordinary leaders capable of mobilizing large numbers of people around an idea or goal. It can be associated with religious leaders (such as Buddha, Jesus, Krishna, Muhammad, or Moses), political leaders (such as Nelson Mandela or, on the other end of the spectrum, Adolf Hitler), and leaders of moral movements (such as Mahatma Gandhi, Mother Teresa, or the Rev. Martin Luther King Jr.). Although charismatic and traditional authority are often contrasted, they can also overlap: the religious traditions inspired by charismatic leaders take on traditional authority based on custom after their founders die; many moral movements are also political in nature. Charismatic authority, though difficult to quantify, can be an important element of a successful global health endeavor. Mobilizing a team and attracting internal and external support, both critical for fledgling projects, may depend on the irreplaceable, unquantifiable attraction and effectiveness of a particular activist or leader. As Weber writes, such leadership rests "on devotion to the exceptional sanctity,

FIGURE 2.2. Max Weber, an influential social theorist who shaped our understanding of bureaucratic institutions, charismatic authority, the process of rationalization, and other social phenomena.

heroism or exemplary character of an individual person, and of the normative patterns or order revealed or ordained by [that person]."[18]

Most central to our work here is Weber's third type of power, which he called *rational-legal authority,* a category inclusive of modern law, the state, and organized institutions in which the authority of the ruler derives from laws and rules. This kind of modern authority functions in the context of what Weber terms *bureaucracy* (refer to table 2.1). Bureaucratic power, he argues, is fundamentally different from other kinds of power, deriving not from tradition or charisma, both of which are often vested in individuals, but from institutions. Bureaucrats—members of the bureaucracy—are parts of organizations that can replace them and will likely outlive them. As Weber predicted, the replaceable nature of bureaucrats resulted in an increase in programs granting certificates and degrees for specific, and increasingly specialized, jobs. Bureaucracies have a hierarchical structure of subordination: vocations and responsibilities are clearly defined and correspondingly compensated; and the individual, Weber writes, is a "single cog in an ever-moving mechanism which prescribes to him an essentially fixed route of march."[19]

Weber predicted that institutions would become the most powerful social structures in society, greater than family or community,

TABLE 2.1 MAX WEBER: MODES OF AUTHORITY

Type of Authority	Derives Its Power From
Traditional	History, custom, and habitualization over generations; accepted because "it is how things have always been"
Charismatic	Extraordinary leaders who can mobilize people around an idea or goal
Rational-legal	Consistent application of a set of rules and laws, whose execution depends on a system of bureaucracy, characterized by: • Fixed and official jurisdictional areas governed by formal rules • A hierarchy of authority composed of a system of supervision and subordination • Maintenance of files and records • Official activity distinct from private life (separation of office and officeholder) • Technically qualified personnel operating at full capacity • Specialization of tasks and division of labor

because they could both generalize and quantify. This development, he argued, would result in the technologization and bureaucratization—the *rationalization*—of everyday life. Describing "the disenchantment of the world," Weber explains how rationalization transforms the mystical and the mysterious into laws, rules, and regulations (in a manner similar to Berger and Luckmann's process of institutionalization). Protocols, technical jargon, neologisms, simplifications, standardizations, and scientific methods are all part of the rationalization that Weber believed would come to dominate the modern world and would increasingly legitimize bureaucratic power over both traditional and charismatic power. Think, for instance, of how common sense and generalized ideas of danger are now reified as specific ideas of defined risk that entail risk appraisal, categorization, management, forecasting, insurance, and prevention.

Rationalization, Weber recognized, has positive potential, yet can be very dangerous. It is unparalleled in its efficiency as a tool for administering large and complex systems because it is more generalizable and quantifiable and less ad hoc than other types of power. Although there is the ever-present possibility of corruption within bureaucracies, they are usually much more egalitarian systems than traditional or charisma-based ones. While a hereditary king or a charismatic sect leader might require certain familial connections or religious beliefs in order to allow an individual access to traveling papers or educational opportunities, bureaucracies tend to require legal—rather than ideological—authorization.[20]

Weber also presaged certain dystopian implications of the rationalization of the modern world. Bureaucracies at times function like an "iron cage," in which rules trump common sense, creative innovation, and human decency. Individuals working in bureaucracies have little incentive to change or improve the rules because their jobs are contingent on efficiently executing—not questioning—the specific tasks assigned to them. Once created, bureaucracies are thus difficult to reform or destroy: a large number of individuals have a stake in their preservation and constancy. Amid these and other observations about the modern world, Weber imagines the rising tide of rationality leading into a "polar night of icy darkness."[21]

Understanding the benefits and the dangers of bureaucratic rationality can sharpen scholarship and practice in global health. When we look at the institutions that govern international efforts in global health—such as the World Health Organization (WHO), the United Nations Children's Fund (UNICEF), and the U.S. Agency for International Development (USAID)—it is easy to spot both the tactical advantages that a bureaucratic structure gives them and instances in which rule-bound behavior leads to everything from improved outcomes (the intended consequence) to inefficiencies and even, at times, grave missteps. An example of the latter is the WHO's use of cost-effectiveness analysis to formulate policy relevant to the AIDS pandemic. Despite the existence of effective therapeutics since the mid-1990s, as we will see in chapter 5, AIDS was declared too expensive to treat among poor people until the early 2000s. Similar judgments have been made by global health policymakers about treating other chronic diseases such as multidrug-resistant tuberculosis (MDRTB), diabetes, or depression in low-income settings. Chapter 8 describes in depth how a narrow focus on cost of treatment per life-year saved has hamstrung the global response to MDRTB. Weber's notion of bureaucracy informs our discussion of global health policy and practice throughout this book, as does the brief consideration of Michel Foucault's work on disciplinary power in the next section.

DISCIPLINE AND BIOPOWER

History is written by the victor, or so the saying goes. This aphorism, and many like it, speak to the relationship between knowledge and power. Through the concept of *biopower,* French philosopher and historian Michel Foucault seeks to explain how biologic and medical data are used by the institutions of the modern world to define, count, divide, and—in a word—*discipline* populations. Biopower is another important addition to our theoretical toolkit for global health.

Foucault analyzes, among other things, the history of seventeenth- and eighteenth-century cultural and political institutions like the insane asylum, the prison system, and the clinic. He traces how these institutions constructed norms about what is considered sane and insane, licit and illicit, healthy and sick, which later generations inherited and, over time, accepted as natural. For example, the criteria for deciding whether someone is insane and should be sent to a hospital or criminal and should be sent to prison evolved from a set of institutional practices into norms, some of which became enshrined in law.

Similarly, the idea of prisons as places for reform rather than punishment evolved over time. Foucault's book *Discipline and Punish* begins with an unforgettable torture scene from eighteenth-century France. A prisoner named Damiens is taken to a scaffold, where it is ordered that "the flesh will be torn from his breasts, arms, thighs and calves with red-hot pincers, his right hand, holding the knife with which he committed the said parricide, burnt with sulphur, and, on those places where the flesh will be torn away, poured molten lead, boiling oil, burning resin, wax and sulphur melted together and then his body drawn and quartered by four horses and his limbs and body consumed by fire, reduced to ashes and his ashes thrown to the winds."[22]

According to Foucault, this gruesome punishment served a chiefly symbolic function. The king, the body of the state, had been attacked, and therefore the perpetrator's body would be attacked in return, beginning with the hand used to commit the treasonous act. Foucault terms this public display of coercive force *sovereign power,* "the right to *take* life or *let* live."[23] Weber might have classified this modality of power as traditional authority because it was reinforced by tradition and sanctified by religion.

Foucault compares this form of punishment to the prison systems that began to appear a few decades later, in which a different form of disciplinary power emerged as a tool of correction. Observing, reforming, converting, and categorizing became the mechanisms of discipline within prisons. Other institutions such as hospitals, asylums, and the bureaucracies of the state also began employing these techniques over the course of the late eighteenth and nineteenth centuries. During outbreaks of plague, for example, public health authorities developed an infrastructure of surveillance and quarantine for observing and collecting information about populations and individual bodies. After epidemics of plague subsided, states continued to use this infrastructure to keep track of, and exert coercive force over, their subjects. In the modern world, Foucault posits, disciplinary power is the principal means by which governments and other coercive institutions control populations.[24]

In 1785, Jeremy Bentham designed a theoretical prison called the panopticon, which illustrates the mechanisms of disciplinary power. A hexagonal prison with windowed cells around the perimeter and a dark guard tower at the center, the panopticon was designed so that inmates were always visible from the tower without knowing whether they were being watched. The possibility of being watched would lead inmates to correct their behavior automatically. The coercive force generated by the panopticon—constant self-surveillance and correction among those inside—is a form of disciplinary power. Foucault argues that the institutions of modern society exert a similar power; they discipline individuals instead of coercing them directly.

Foucault's concept of discipline helps us to understand biopower. The sovereign whom Damiens tried to kill had traditional authority, but the king's power was limited in important ways. He had the right of seizure and the right over life—that is, he could claim a certain amount of his subjects' labor or crops as tax, and he could kill a person for being a traitor or force men to die at war in his army. But the king did not know, or seek to know, what went on within the walls of people's homes, beds, prison cells, or bodies.

In the eighteenth century, however, along with the prison reformers came a rationalist revolution focused on quantifying and documenting many aspects of life—from anatomic dissection to classification to collecting census data to developing statistical analysis—often driven by the goal of consolidating power over life. Centralized bureaucracies consolidated power in France by counting and controlling the health and social welfare of populations, moving from sovereign power to what Foucault called *governmentality*. These activities had many names and purposes, as they do today. Some employers document their employees' eating habits, for instance, in order to promote healthy living and make the workers more efficient; states require that children receive vaccinations before they attend school to improve population health and student performance. These acts carry state power and governance—the reach of governmentality—into ordinary lives and into the body itself.

Biopower, then, can be seen as the form of governmentality that deals with life. It is embedded in the processes of modern capitalism. Unlike sovereign power, biopower is diffuse and does not operate through specific visible agents. Likewise, biopower may be said to exert control over life as opposed to death: it brings "life and its mechanisms into the realm of explicit calculations and [makes] knowledge-power an agent of transformation of human life."[25]

According to Foucault, biopower emanates from two poles: first, the regulation of biologic processes (propagation, health, longevity, mortality) at the level of the population; and, second, technologies for discipline at the level of the individual (such as the panopticon) (see figure 2.3).[26] It is an essentially productive power, in that it endeavors to administer, optimize, and multiply knowledge about populations, subjecting them to precise controls and comprehensive regulations (by, for example, measuring the size and distribution of populations or categorizing populations by gender, age, race, occupation, fertility, mortality, and so on). Biopower is at work, therefore, any time quantification of life leads to categorization of life.

Manifold examples from the colonial and contemporary periods demonstrate this type of power. From anthropology, there is the history of using anthropometric measurements of the skull and a racial "science" to construct an invidious evolutionary ladder with Africans at the bottom and Europeans at the top. The colonial construction of stereotyped and institutionalized divisions between ethnic groups is a source of violence and conflict to this day. In Rwanda, Belgian colonists branded the minority Tutsis as a military and royal caste, in opposition to the Hutus, whom they categorized as peasant farmers. The distinctions the Belgians reinforced helped fuel ethnic conflict; decades later, the categories Hutu and Tutsi were the fault lines of the 1994 genocide.[27] Similarly, the British codified caste differences among the Indian population, a legacy that contributes to continued caste violence and inequality in India today.[28] There are few straight lines in history, and we must be wary of claims of causality in complex social fields like those in which ethnic violence occurs. Nonetheless, it would be naïve to disregard the long-term impacts of colonial policies, stereotypes, and hierarchies on postcolonial societies and polities today.

Biopower is not necessarily destructive, however. The two most

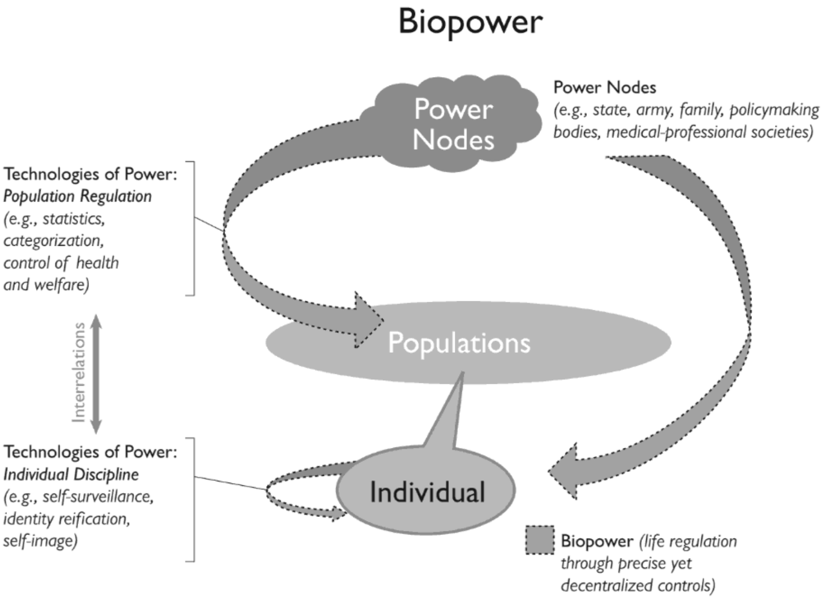

Biopower
Power Nodes
Power Nodes (e.g., state, army, family, policymaking bodies, medical-professional societies)
Technologies of Power: Population Regulation (e.g., statistics, categorization, control of health and welfare)
Populations
Interrelations
Technologies of Power: Individual Discipline (e.g., self-surveillance, identity reification, self-image)
Individual
Biopower (life regulation through precise yet decentralized controls)

FIGURE 2.3. Biopower, a concept developed by Michel Foucault, helps us understand how the quantification of individuals' biology contributes to the discipline of the body and the regulation of modern life.

notorious industrial disasters of the past century, the 1984 Bhopal gas leak in India and the 1986 Chernobyl nuclear meltdown in Ukraine, illustrate how categorizing disaster-related illnesses can create new subjectivities and state policies. In Bhopal, state bureaucracies not only based disability compensation and medical care on illness categories that excluded the long-term effects of gas exposure but also demanded documents that the poor could neither access nor produce.[29] In contrast, while according to some estimates only two thousand people were affected by the Chernobyl disaster, fully one-third of Ukraine's population secured enrollment in the Chernobyl compensation scheme. The collapse of other state disability systems in the wake of Ukraine's withdrawal from the Soviet Union had created a deficit in services, which was partially remedied by the system created to care for Chernobyl survivors. Adriana Petryna calls this phenomenon "biological citizenship," a "massive demand for but selective access to a form of social welfare based on medical, scientific, and legal criteria that both acknowledge biological injury and compensate for it."[30] Hence, an important component of our toolkit is the critical examination of processes through which biopower operates in global health interventions and shapes our understanding of these interventions.

SOCIAL SUFFERING AND STRUCTURAL VIOLENCE

The study of global health consists of more than examining specific programs and interventions. At stake are the lives and livelihoods of millions of people and families. Although biopower may help identify the limits and conditions of knowledge, it may not help us understand suffering, the question of who suffers most, or why one person suffers and another does not.

Arthur Kleinman, Veena Das, and Margaret Lock developed the term *social suffering* to account for the forms of social violence that constitute inequity. “Social suffering,” they write, “results from *what political, economic, and institutional power does to people* and, reciprocally, from *how these forms of power themselves influence responses to social problems.*”[31] In other words, institutions and their agents can perpetrate violence in the name of health and welfare. Social forces—including economics, politics, social institutions, social relationships, and culture—can cause pain and suffering to individuals.

Being born into poverty, facing discrimination because of the color of one’s skin, or living in an abusive home are all dimensions of social suffering. The term also encompasses the interpersonal experience of suffering, the experience of chronic illness, and the ways in which society and its institutions unintentionally exacerbate social and health problems. The concept of social suffering addresses the intersection of medical and social problems—for example, the need for coordination of social and health policies in response to the clustering of inner-city violence, substance abuse, depression, and suicide.

We close with a theory that addresses the roots of global health inequities. Paul Farmer’s observations of the links between poverty and ill health in Haiti informed the development of the concept of *structural violence,* which can be thought of as a form of social suffering. “Such suffering,” he writes, “is ‘structured’ by historically given (and often economically driven) processes and forces that conspire—whether through routine, ritual, or, as is more commonly the case, the hard surfaces of life—to constrain agency. For many, including most of my patients and informants, choices both large and small are limited by racism, sexism, political violence, *and* grinding poverty.”[32]

Farmer describes the plight of women living with AIDS in rural

Haiti. Without understanding the forms of structural violence at play in this setting, one might presume that these young women had contracted the disease because—to use language that casts them as free agents—they chose to be promiscuous. This conclusion, however, would be wrong on two scores. First, at the time of Farmer's research, the main difference between women in rural Haiti who had HIV and those who did not was the occupation of their primary sexual partner. With few opportunities to earn income themselves, women often partnered with drivers or soldiers, men whose mobility and status brought increased income. But these men were also more likely to have multiple girlfriends or sex partners, especially in urban areas, who in turn were more likely to have had contact with sex tourists from the United States and other countries. The rural female partners of these men, therefore, were more at risk of contracting HIV than were those women whose partners were local farmers. Neither group of women could be classified as "promiscuous." When structural violence is overlooked, agency is often overestimated, constraint underestimated. "Attentiveness to the life stories of women with AIDS," Farmer observes, "usually reveals that their illness is the latest in a string of tragedies."[33]

Structural violence helps deconstruct why for so many people suffering with disease and disability, an illness such as AIDS is but one additional misfortune piled on previous layers of hardship. At the macro level, the theory underscores the political, economic, and historical forces that pattern and link material deprivation and poor health.

CONCLUSION

This toolkit of social theories is by no means comprehensive, but its primary areas of focus—knowledge, power, institutions, and inequity—are all central to the study and practice of global health. Social theory provides an organizational framework for global health. These theories will not cure tuberculosis, bring a baby safely into the world, or care for the elderly. But illuminating some of the relationships that govern social action can help us design better programs, guide practical solutions to health challenges, and develop habits of critical self-reflection among practitioners.

Moreover, drawing on the biosocial framework that animates this textbook, we share an even more ambitious goal. We seek to show how approaches to global health problems can benefit from social theory, which helps us understand the dynamic relationships between those problems and the interventions launched to counter them. That is why theory matters. We hope, too, to convince the reader that the assortment of problems that constitutes global health can be conceptually framed in such a way as to develop global health as an interdisciplinary, academic subject.

SUGGESTED READING

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