Introduction

Humanity officially won the battle against one of the world's most dreaded microbial killers on May 8, 1980. Meeting in Geneva, the assembled representatives to the World Health Assembly (WHA), the World Health Organization's (WHO) decision-making body, accepted the report of a commission of eminent scientists about international efforts to eradicate smallpox. Twenty-two years after the erstwhile Soviet Union first proposed that WHO commit itself to the complete elimination of smallpox, three years after the diagnosis of the last-known natural case of smallpox, and nearly two years after the world's last-known death from smallpox,[1] WHA resolution WHA33.3 "declare[d] solemnly that the world and its peoples have won freedom from smallpox, which was a most devastating disease sweeping in epidemic form through many countries since earliest time, leaving death, blindness and disfigurement in its wake and which only a decade ago was rampant in Africa, Asia and South America."[2]

The eradication of smallpox is an amazing milestone. Here was a disease that had afflicted humans for thousands of years, causing an estimated 300 to 500 million deaths in the twentieth century alone—and the international community wiped it off the face of the planet (except for a few samples for research purposes in two high-security labs) after only two decades of dedicated efforts.[3] Efforts to get rid of this killer disease overcame the intense ideological divisions of the cold war, serious shortcomings in funding, and incredible logistical difficulties. States of all ideological stripes came together to combat a common microbial enemy, and they prevailed. They collaborated to establish an extensive health surveillance system and provide a global public good to all the countries of the world, regardless of the amount of their contribution.

Although some may laud these efforts as an incredible example of international altruism, the smallpox eradication campaign was (and remains) incredibly controversial for a number of reasons. In their quest to ensure sufficient coverage, vaccinators occasionally behaved in an unethical manner and potentially violated human rights in some communities—vaccinating people without their consent, breaking

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into houses, and failing to respect local medical beliefs. The campaign provoked resentment for violating state sovereignty, imposing particular policies and goals without considering the needs and resource capabilities of local communities. Rumors spread in some areas that the smallpox vaccination was really an instrument of Western control and domination, designed to sterilize the recipient or allow Western states to infect local populations. Some human rights and public health groups expressed concerns about the international community's intentions in promoting a massive, invasive, and costly smallpox eradication campaign instead of addressing other, more pressing health concerns. They worried about the surveillance aspects of the eradication programs, fearing that the oversight would extend into additional areas without any recourse. They feared that their citizenship status would come to depend upon their health status, and that their basic collective and individual human rights would not be respected. The same surveillance components that inspired so much faith among the campaign's leaders that they could succeed encouraged concern, fear, and hostility about its potentially malevolent purposes among others.

More recently, the possibility of an avian influenza epidemic has prompted the international community to organize a proactive surveillance program. Suspected human cases of H5N1 are carefully monitored, as are their contacts, to track the disease's spread and understand the origins of the infection. Through aggressive oversight measures and rapid containment of suspected cases, the WHO hopes to prevent an avian influenza epidemic before it takes hold within the human population. Doing so requires an elaborate surveillance system, and governments have shown a willingness to contribute to building such a system.

While national governments may be on board with these surveillance programs, many individuals have expressed alarm at the costs and collateral damage associated with the efforts to combat avian influenza. When the virus is found within a specific bird population, the typical strategy is to cull the flock before the disease can spread among the birds and, eventually, humans. Culling bird flocks can devastate families, though, when they rely on those animals as a primary food source or for income. Killing the birds may prevent the spread of disease, but the owners of those birds receive no compensation for the loss of their livelihood. Reporting a suspected case of avian influenza can thus lead to economic devastation, which discourages the affected people from sharing information with surveillance systems. People want their families to remain healthy, but they

also want to be able to provide livelihood for their families. Instead of offering reassurance and comfort, the avian influenza surveillance systems discourage compliance and the sharing of the very information they are supposed to collect.

The smallpox campaign and recent avian influenza efforts typify the larger issues at play in efforts to control infectious disease at the international level. At their core, such efforts must attempt to balance two competing, and often contradictory, forces. On the one hand, international infectious disease control is an excellent example of providing a global public good. It requires contributions from many different states, coordinating their efforts to work toward a common goal. Costs, though, are not necessarily proportional to benefits. Everyone receives the positive payoff from controlling a disease, but no one wants to pay for the control itself. As a result, the international community often underprovides global public goods like infectious disease control, whose provision depends crucially upon sustained cooperation.

On the other hand, infectious disease control campaigns necessarily involve an extensive level of surveillance. The campaign workers and organizers must know when and in which way a disease spreads. This campaign requires detailed information that some perceive as intrusive, overbearing, and with malicious intent. Citizens may feel that the government is constantly looking over their shoulders, essentially spying on them.

The conundrum is this: everyone wants the global public good of infectious disease control, but no one wants to perceive that the government or international community is spying on them. Infectious disease control requires surveillance efforts that are necessary to achieve any level of success, but they may inspire hostility among those who are being watched. Article 12 of the Universal Declaration of Human Rights guarantees a basic human right to privacy, but surveillance efforts necessarily involve oversight and investigation. Indeed, Fairchild, Bayer, and Colgrove recognize that "[t]he history of surveillance has been bounded by a promise of disease control and a specter of intrusion."[4]

This leads to one big question: how can the international community balance the provision of a global public good and the right to privacy without introducing an onerous and resentment-provoking surveillance regime? These forces have coexisted with each other somewhat uneasily over the past fifty years. "Surveillance serves as the eyes of public health . . . Surveillance has also served to trigger the imposition of public health control measures, such as contact tracing,

mandatory treatment, and quarantine."[5] Surveillance can bring attention, but it can also bring condemnation. Infectious disease control in the international arena particularly heightens these concerns, as there may be less recourse available to those who feel that such surveillance is unwarranted or overly intrusive.

All hope may not be lost, though. In recent years, we have witnessed an increasing embrace of a human rights-based approach to infectious disease control. This strategy offers a number of benefits that allow the international community to escape the global public goods/right to privacy/biopolitical surveillance conundrum by promoting a particular understanding to all the affected parties. Human rights norms are generally shared, and most states share some general ideas about what it means to respect and protect human rights. Infectious disease control campaign leaders know their obligations to those people subject to the campaign, and those subjects understand their rights. Surveillance still exists, as it must for this global public good to be provided, but it exists within a framework that informs all parties and offers them avenues for registering any violations.

This book explores the shifting balance between biopolitical surveillance and global public goods—how do we weigh the need for oversight with the fear of intrusion when it comes to providing a global public good like infectious disease control? It also examines the emergence of human rights-based strategies as a way to allay fears while still collecting necessary information.

INTERNATIONAL RELATIONS, PUBLIC HEALTH, AND FOUCAULT

Addressing this conundrum combines the perspectives of two fields that pay too little attention to each other: international relations and public health. International relations has provided extensive insight into the nature of cooperation in the international arena and the factors that promote the provision of global public goods. Public health has focused its attention on the social determinants of health and the application of particular strategies in the control of the spread of infectious diseases.

When it comes to understanding international health cooperation, though, neither field can adequately address the problem. International relations has paid too little attention to the role of competing identities in either promoting or retarding cooperative efforts. It has too often uncritically assumed the acceptance of "received wisdom" and

scientific knowledge by leaders and peoples in developing countries. Failure to implement or resistance to these strategies is interpreted as a lack of capacity or simple obstinence. Identity, pride, and concerns about surveillance rarely enter into the picture. International health efforts, as will become clear throughout the book, are more than technocratic exercises in bringing technological advances to people in need; they necessarily interact with beliefs, identities, and worldviews in powerful and often unanticipated ways.

Public health, on the other hand, has too often embraced biopolitical surveillance without considering the ramifications and responses. This is especially true when considering public health efforts at the international level. States and citizens are often wary of outsiders watching over them, and they frequently feel like they lack any meaningful recourse. They question the international machinations that promote such programs, fearing that the surveillance structures may collect information (which may or may not even be related to health) to be used against them later. People may like the global public good of infectious disease control, but they hesitate to embrace its attendant surveillance operations. Biopolitical surveillance efforts often find themselves frustrated by the refusal or reluctance of states and peoples to participate, thus harming efforts to control the spread of deadly diseases. The almost functionalist view of translating health into policy overlooks the nuance and subtlety that goes into making and encouraging compliance with health policy, particularly at the international level.

Examining the growth of biopolitics in the international arena has become something of a growth industry for scholars of the French philosopher Michel Foucault in recent years. Foucault established his reputation in the 1960s as a leading critical theorist of social institutions and practices. Drawing on a background in psychology, he focused many of his critiques on psychiatry, medicine, and sexuality. In particular, Foucault explored how these institutions and practices contributed to the exercise of power by the state. These practices allowed the state to exercise control over the populace and discipline their practices. By designating someone as healthy or sick, gay or straight, and sane or insane, the state could both introduce a measure of control over that person and subtly induce individuals to discipline themselves to follow "appropriate" standards of behavior. Instead of being neutral scientific categories, these classifications sent powerful messages as to what is "normal" and "acceptable" within society. It provides society with a standard by which it can include or exclude an

individual. In this way, medical surveillance and classification gave society a powerful tool for imposing order under the guise of scientific objectivity.

Foucault scholars have done an admirable job taking the philosopher's somewhat fragmentary discussion of health, surveillance, and state power and fleshing it out into a more complete theory. Doing so, they have helped trace how the state came to be concerned with monitoring and regulating the health of the populace. They call attention to its emergence and provide us with clues as to the resistance against it. What is fascinating, though, is that these scholars have, almost without exception, cast biopolitical surveillance and biopolitical citizenship in a negative, overbearing light. On reading most works on biopolitics, one gets the sense that the state's interest in public health is solely negative and gathering such information serves the sole purpose of using it to prevent the masses from recognizing their genuine interests. It may indeed be true that such health-related surveillance presents opportunities for subterfuge and manipulation, and numerous examples exist where governments have used health data to justify discrimination, but to dismiss all health surveillance as predatory is too blunt an analysis. Furthermore, most of these analyses remain far too abstracted from actual policy implementation. They pay too little attention to the practical realities—both positive and negative—of introducing public health surveillance programs.

It is important to be mindful of the dangers associated with biopolitical surveillance, but it is also important not to dismiss the entire concept out of hand. Surveillance plays an important, even crucial, role in the provision of a global public good like infectious disease control. Dichotomizing biopolitical surveillance as either good or bad without exploring its nuances or attempts to resolve the tension prevents us from understanding the interplay at work. As the following chapters will make clear, biopolitical surveillance also can inspire the international community to work toward the provision of a global public good like health. Such surveillance can provide crucial information about the scope of the problem and appropriate interventions, but few developing states possess the infrastructure necessary to provide reliable public health surveillance programs. Governments cannot do anything about improving health if they do not know about it or the extent of the issue. Information is crucial, and it is only through the collection and dissemination of such information that changes can occur. By seeking out strategies that explicitly recognize and respect human rights, the international community

may be able to still collect the data necessary for effective infectious disease control strategies.

KEY CONCEPTS: GLOBAL PUBLIC GOODS AND BIOPOLITICAL CITIZENSHIP

Understanding international cooperation for health requires that we pay attention to two key concepts: the provision of global public goods and the changing nature of biopolitical citizenship in the modern era. Chapters 1 and 2 will provide greater overviews of global public goods and biopolitics, but it will be useful to preview them briefly here.

A public good is a good whose consumption is nonrivalrous (consumption of the good by one person does not diminish the availability of that good for another person) and whose benefits are nonexcludable (no one can effectively be denied that good). Traffic lights, national defense, and public education are examples of public goods. Everyone benefits, and no is denied access. Because of their unique characteristics, public goods face particular challenges in their provision. Consumers can take advantage of public goods without contributing to their provision. Rational gain-seeking behavior by individuals leads to the underprovision of the good. Everyone benefits from the good, but their incentive to contribute to its provision is marginal at best. Without some sort of collective action mechanism, the public good will not be provided.

Global public goods function in much the same manner, but they add a geographical dimension. Global public goods are neither rivalrous in consumption nor excludable in benefits, but they extend to more than one geographical region. Their provision also is nondiscriminatory against any population groups or generations.[6] Examples include clean air, financial stability, and health.

Just like traditional public goods, global public goods face impediments to their optimal provision. At the global level, though, overcoming these impediments is even more difficult. It can be more difficult to enforce some sort of collective action at the international level, as the international community does not have the same enforcement powers that are available to individual states. The international system cannot compel paying taxes to provide public services in the same way that national governments can. This does not mean that national governments will *never* contribute to providing public goods. A casual examination of international relations demonstrates that governments do agree to provide funds that will further the

provision of global public goods. Achieving that cooperation takes different steps, though, and is not necessarily as easily done. The provision of global public goods, thus, depends crucially upon successful international cooperation.

International health programs are emblematic of the benefits and challenges of global public goods. Controlling the spread of a disease like severe acute respiratory syndrome (SARS) will benefit the international community in many ways. Compelling states to pay for such a program, though, is more difficult. They may want to wait for other states to begin such a program. Decision makers in each state have to make the conscious decision to dedicate time, energy, and resources to this collective effort without fully knowing the benefits. Even more crucially, successful disease control depends on the combined efforts of all states more or less simultaneously. For example, Vietnam may declare that it has controlled SARS within its borders, but that does little good if neighboring Thailand has not. Infected individuals, who may not even know they are carrying the virus, can cross national borders. Increasing speed and ease of international travel exacerbates the problem. The SARS epidemic of 2002–2003 leapfrogged its way to at least twenty-four different countries thanks largely to airplanes.[7] The disease originated in China, but spread to places as disparate as Canada, France, South Africa, and Kuwait largely thanks to travelers who inadvertently disseminated the virus with their rapid cross-border movements. Only a coordinated effort can produce the global public good of infectious disease control. Investigating global public goods can thus provide crucial insights into why states choose to cooperate on global health issues.

Biopolitical citizenship builds upon the simple fact that health status has long functioned as a status marker within the international community. As Fidler highlights, "Infectious disease measures historically have served as demarcations by which 'we' protect ourselves from the diseases of 'others.' "[8] In the modern era, though, states have become increasingly preoccupied with the intersection of human biological existence and power. They rely more and more on health and disease as social and political markers, and a person's status as a citizen worthy of respect and attention within the international community increasingly depends upon being healthy and avoiding disease.

Why would health play such an important role? Baldwin provides a useful perspective:

> Bodily fluids are politically important, indicating our status as viable members of the community. Inebriated, infected, or influenced, we

> are less than fully capable and responsible citizens . . . Citizens stricken by a contagious disease pose a threat, and the community must decide how to protect itself. Illness, in the best of circumstances a private misfortune, becomes public and political.[9]

A person's health status has thus transformed itself from an indicator of our biological well-being to one that influences our status within the polity. The ill pose a danger to the healthy. They become a group that is acted upon by the state and are often subject to rules and regulations like quarantining that would be otherwise unthinkable. Groups identified with particular diseases, rightly or wrongly, may face social and political discrimination.

Distinguishing the ill from the healthy requires ever-increasing amounts of surveillance. The state collects increasing amounts of data about individual bodies in an effort to regulate behavior and demarcate status within the state. Starting in eighteenth century Europe, state politics took an active role in regulating the health and well-being of its populace. The state was no longer content to just regulate defense and economics; it now saw the regulation of citizens *qua* humans as integral to its very existence. The state now sought to implement policies specifically designed to regulate the physical well-being and health of its populace.[10] The state thus takes greater interest in the health of its citizens as a way of maintaining and extending its power.

With international infectious disease control efforts, biopolitical citizenship moves beyond state boundaries to encompass the entire international community. Health surveillance operates at both the national to the international level. States are required to share increasing amounts of information about health and disease within their borders or face punishment. In 2005, the WHA substantially revised the International Health Regulations (IHR) to compel all member-states to report any event of public health importance to the WHO. (More detail on this process appears in Chapter 6.) Such intrusive surveillance is justified by efforts to stop epidemics before they start, and it is indeed true that such information is crucial to identifying these emergent threats. At the same time, some states have expressed resentment at these new regulations. They perceive them as expressions of power and dominance by larger states, implying that developing countries are inherently more diseased and therefore threatening to the rest of the world. They allege that international biopolitical citizenship becomes a tool whereby the international community further marginalizes them.

At the same time, framing can also lead to a more inclusive notion of biopolitical citizenship. Marginalized groups can receive attention and resources to eliminate diseases that have bedeviled them—even if those diseases no longer exist among wealthier groups—if efforts are framed more expansively. Instead of wanting to isolate the diseased Other, these frames could encourage recognition of common humanity and an ethical obligation to care for all. Sickness in one part of the human family affects the entire human family, either directly through the spread of an illness or indirectly from needing to care for the afflicted. We could move from a narrow focus on eliminating diseases and toward a more holistic view of promoting health. Similarly, the biopolitical citizenship frame could focus more selfishly. States that have successfully controlled a particular disease within their own borders could frame international disease control efforts as attempts to ensure that their hard-won gains are not lost through no fault of their own. In such a frame, international infectious disease control efforts are less about protecting others and more about protecting yourself. The potential ambiguity over the framing of biopolitical citizenship and how it encourages or discourages collaborative international efforts requires greater attention.

HEALTH AND DISEASE

Dictionary definitions of health frequently emphasize vigor, vitality, soundness of body and mind, and optimal well-being. These colloquial usages make it clear that health is more than simply the absence of disease. International treaties and declarations have often employed a more holistic, far-reaching understanding of health. The Constitution of the WHO declares: "Health is a state of complete physical, social, and mental well-being."[11] The Ottawa Charter for Health Promotion of 1986 expands upon this definition, adding that health is "a resource for everyday life, not the objective of living" and "a positive concept emphasizing social and personal resources, as well as physical capacities." The Ottawa Charter goes on to list the following prerequisites for health: "peace, shelter, education, food, income, a stable ecosystem, sustainable resources, social justice, and equity."[12]

These broader definitions of health are clearly beneficial for understanding all the components that contribute to human well-being, and they challenge the international community to engage in far-reaching, proactive interventions to allow everyone to live a healthy life. The nature of these obligations has led to great international debates over the years. In 1978, the WHO launched its campaign "Health for All by 2000" based upon the principles elucidated in the

Alma-Ata Declaration. The declaration called for the international community to redress the global inequities in health statuses by ensuring access to primary health care services provided by the state for all as a matter of social justice. Primary health care, as conceptualized by the declaration, included health education, promotion of proper nutrition, safe water and adequate sanitation, maternal and child health (including family planning services), immunization, prevention and control of locally endemic diseases, appropriate treatment for common injuries and illnesses, and the provision of essential drugs.[13] The document cited health as a basic right, fundamental to all people everywhere.

This framing—of a right to health and health care, of health as a public good, of a comprehensive responsibility for the industrialized nations to provide to the rest of the world—quickly came under attack. Developed states balked at providing the necessary resources to realize this goal, and question arose as to the potential political content of such a program.[14] Even more consequentially, many governments questioned whether health was truly an international concern. Health and health care has long been a national (or subnational) issue, and some feared that internationalizing health and all of its attendant prerequisites represented a fundamental abrogation of national sovereignty.[15]

This should not be read as symptomatic of callousness on the part of developed states so much as an ideological dispute over the appropriate role for the international community. We continue to witness vigorous contestation over the existence and nature of an international human right to health and health care, and these debates are likely to continue for the foreseeable future. The revisions to the IHR, detailed in Chapter 6, reflect many of these debates.

By contrast, disease is relatively discrete. Disease control programs seek to limit or eliminate infectious agents that cause specific illnesses in human beings. It is entirely possible that, as a result of such programs, positive externalities like a well-developed health care infrastructure, economic development, sustainable resources, or peace may emerge. The debates that will come clear throughout this book often center on the relationship between disease and health and the international community's priorities on these two fundamental concepts.

INFECTIOUS DISEASE IN THE INTERNATIONAL ARENA

Why focus on international infectious disease control campaigns? Two reasons are particularly relevant. One, coordination at the international

level is potentially more difficult. As already highlighted, the international community lacks the same sort of direct power to compel the provision of global public goods. There is no international tax authority to force states to contribute funds to improve international health. There is no international parliament that can debate the passage of international laws analogous to the U.S. Congress or the British Parliament. The WHA passes resolutions and can promote changes within the international community, but it lacks the legal authority and coercive authority of a parliament. Even when states sign international treaties, like the Charter of the WHO, the treaties often lack direct punishment powers, and states will often register reservations that exempt them from certain provisions. Moral suasion and shaming are often the only tools at the disposal of the international community in these situations. And yet, those tools often work. States may lack the power to tax or threaten punishment to encourage cooperation, but the international community has been able to use these seemingly "weak" tools to bring states together.

Two, effective control of and responses to infectious diseases necessitate some sort of international effort. A single state may be able to control or eliminate a disease within its borders. So long as the disease still exists, though, the threat of the return of that disease remains. Barrett offers a three-tier typology of disease control efforts. Control occurs when the circulation of an infectious agent is restricted to below a level that could be sustained by individuals acting on their own. Elimination refers to controlling that infectious agent sufficiently enough as to prevent an epidemic from spreading within a given geographical area. Eradication means that an infectious agent has been eliminated everywhere and at the same time.[16] In other words, control reduces a disease's severity in one place, elimination removes it from that area, and eradication removes it from everywhere. The United States eliminated yellow fever from its territory in 1905, yet cases still occasionally occur in the United States when travelers bring the disease back with them.[17] The only way to ensure that yellow fever does not reappear within the United States is to eradicate the disease—and eradication requires an international, coordinated effort to eliminate the disease everywhere. We could say that yellow fever has been controlled and eliminated from most countries around the world, but we cannot say that it has been eradicated so long as it remains endemic in forty-two South American and African states. National governments can organize disease control efforts, and they can be quite successful, but it takes the efforts of the entire international community to effect long-lasting changes.

PLAN OF THE BOOK

Before examining how global public goods provision and biopolitical surveillance effect global infectious disease control programs, we must first understand biopolitical surveillance and global public goods. Chapters 1 and 2, respectively, explicate what these concepts mean and how they have been used within the international community. Chapter 3 shows how these two ideas played out during the global smallpox eradication campaign. Smallpox offers us a glimpse at humanity's greatest triumph in international infectious disease cooperation, but the eradication efforts also raised much suspicion and cast doubts on the purposes behind the surveillance. Chapter 4 examines the rise of a human rights-based strategy to balance the need for surveillance with the desire to provide a global public good by examining the HIV/AIDS pandemic. While the human rights approach appears ascendant now, it was (and, in some quarters, remains) the subject of intense political battles. Chapter 5 examines SARS, a new infectious disease that emerged and spread in the midst of this human rights-based approach to infectious disease control. In many ways, SARS' emergence presented the international community with its first opportunity to put the ideals of a human rights-based strategy into practice from the beginning. Chapter 6 focuses on the IHR, the main international treaty regulating the treatment and reporting of infectious diseases to international authorities. The IHR underwent significant revisions in early part of the twenty-first century's first decade, culminating in the ratification of a new version of the treaty in 2005. The updated IHR has been significantly expanded to be more broadly applicable in the modern era, but its increased scope has raised fears of overbearing surveillance and too little respect for human rights. In the Conclusion, I offer ideas for explicitly integrating human rights into biopolitical surveillance. Doing so offers the international community the best opportunity to balance these competing interests of providing a global public good and ensuring that surveillance operations do not become overly intrusive.