



1-1-2004

Caught between Paradise and Power: Public Health, Pathogenic Threats, and the Axis of Illness

David P. Fidler

Indiana University School of Law

Follow this and additional works at: <https://scholarlycommons.pacific.edu/mlr>



Part of the [Law Commons](#)

Recommended Citation

David P. Fidler, *Caught between Paradise and Power: Public Health, Pathogenic Threats, and the Axis of Illness*, 35 MCGEORGE L. REV. 45 (2004).

Available at: <https://scholarlycommons.pacific.edu/mlr/vol35/iss1/4>

This Article is brought to you for free and open access by the Journals and Law Reviews at Scholarly Commons. It has been accepted for inclusion in McGeorge Law Review by an authorized editor of Scholarly Commons. For more information, please contact mgibney@pacific.edu.

**Caught Between Paradise and Power: Public Health,
Pathogenic Threats, and the Axis of Illness**

David P. Fidler*

TABLE OF CONTENTS

I. INTRODUCTION 45

II. CONCEPTUALIZING PUBLIC HEALTH AND INFECTIOUS DISEASE THREATS 48

 A. *Defining Public Health* 48

 B. *Conceptualizing Pathogenic Threats: Two Paradigm* 52

 1. *Power and Public Health*..... 52

 2. *The “Power” Paradigm: Infectious Diseases as Exogenous Threats to National Interests and Power* 53

 3. *The “Paradise” Paradigm: Infectious Diseases as Threats to Individual Rights, Human Solidarity, and Universal Justice* 59

III. PARADISE SHIFT: THE RISE OF THE PARADISE PARADIGM IN INTERNATIONAL PUBLIC HEALTH..... 65

 A. *Introduction*..... 65

 B. *Collapse of the Classical Regime: The Fading Relevance of the Power Paradigm*..... 66

 C. *Paradise Waxing: The Evolution of International Health Policy* 68

IV. POWER SHIFT: EMERGING INFECTIOUS DISEASES AND BIOTERRORISM 73

 A. *Paradise Lost: The Dismemberment of the Paradise Paradigm*..... 73

 B. *Revenge of the Germs: Emerging Infectious Diseases and Bioterrorism*..... 74

 C. *The Crisis in Emerging Infectious Diseases* 75

 D. *Bioterrorism: A New Ally for the Power Paradigm* 82

V. CAUGHT BETWEEN PARADISE AND POWER: THE CHALLENGE OF THE AXIS OF ILLNESS 86

 A. *Navigating the Space Between* 86

 B. *The Axis of Illness: Defining the Policy Challenges of Emerging Infectious Diseases* 88

 C. *Paradise Backlash: Rejecting the Hegemony of the Power Paradigm*..... 99

VI. CONCLUSION: GIVING POWER MEANING THROUGH HEALTH..... 101

I. INTRODUCTION

The policy area of public health has experienced a revolution in the past decade. The revolution has not occurred in the technical arts of public health, such as epidemiology. The revolution has been political in nature. The last decade has witnessed the previously obscure and neglected policy area of public health shed

obscurity and neglect to become the subject matter of intense national and homeland security,¹ foreign policy,² and global governance³ debates. The national and international political attention public health has received in the last ten years is unprecedented. Nothing in the prior history of national and international efforts on public health compares to the political status public health has reached today.

For those who have dedicated their professional lives to protecting the health of populations, this political revolution is a mixed blessing. The new political attention focused on public health has translated into the commitment of political capital and economic resources to public health on a scale previously unthinkable.⁴ As Ilona Kickbusch argued,

The protection of health is no longer seen as primarily a humanitarian and technical issue relegated to a specialized UN agency, but more fully considered in relation to the economic, political and security consequences for the complex post-Cold War system of interdependence. This has led to new policy and funding initiatives at many levels of governance and a new political space within which global health action is conducted.⁵

* Professor of Law and Ira C. Batman Faculty Fellow, Indiana University School of Law—Bloomington. The author thanks Dean Elizabeth Rindskopf Parker and Professor Leslie Gielow Jacobs for inviting him to present an earlier version of this article at the University of the Pacific, McGeorge School of Law in September 2003.

1. The threat of biological weapons and bioterrorism has, for example, raised the profile of public health in the national and homeland security areas. *See, e.g.*, THE NATIONAL SECURITY STRATEGY OF THE UNITED STATES OF AMERICA 13-17 (Sept. 2002) (analyzing the weapons of mass destruction threat, including biological weapons, from rogue states and terrorists); OFFICE OF HOMELAND SECURITY, NATIONAL STRATEGY FOR HOMELAND SECURITY 43-44 (July 2002) (stressing the importance of improving health capabilities to respond to biological terrorism); JENNIFER BROWER & PETER CHALK, THE GLOBAL THREAT OF NEW AND REEMERGING INFECTIOUS DISEASES: RECONCILING U.S. NATIONAL SECURITY AND PUBLIC HEALTH POLICY (2003); BIOLOGICAL SECURITY AND PUBLIC HEALTH: IN SEARCH OF A GLOBAL TREATMENT (Kurt M. Campbell & Philip Zelikow eds., 2003).

2. *See, e.g.*, JONATHAN BAN, HEALTH, SECURITY, AND U.S. GLOBAL LEADERSHIP (Health and Security Series Special Report No. 2) (2001); Jordan S. Kassalow, *Why Health Is Important to U.S. Foreign Policy* (May 2001), available at <http://www.milbank.org/reports/Foreignpolicy.html> (last visited Feb. 5, 2004) (copy on file with the *McGeorge Law Review*).

3. *See, e.g.*, KELLEY LEE ET AL., HEALTH IMPACTS OF GLOBALIZATION: TOWARDS GLOBAL GOVERNANCE (Kelley Lee ed., 2003); Richard Dodgson et al., *Global Health Governance: A Conceptual Review* (Key Issues in Global Health Governance Discussion Paper No. 1, Feb. 2002).

4. President George W. Bush has, for example, proposed spending \$5.9 billion in fiscal 2003 to strengthen national defenses against bioterrorism, OFFICE OF HOMELAND SECURITY, *supra* note 1, at 68, and \$15 billion over five years to provide HIV/AIDS prevention and treatment assistance to countries in Africa and the Caribbean badly affected by HIV/AIDS. George W. Bush, State of the Union Address (Jan. 28, 2003), available at <http://www.whitehouse.gov/news/releases/2003/01/20030128-19.html> (last visited Sept. 17, 2003) (copy on file with the *McGeorge Law Review*).

5. Ilona Kickbusch, *Global Health Governance: Some Theoretical Considerations on the New Political Space*, in HEALTH IMPACTS OF GLOBALIZATION: TOWARD GLOBAL GOVERNANCE, *supra* note 3, at 192-93.

On the more somber side, the level of political attention now devoted to public health is evidence of mounting threats to population health that are challenging and sometimes overwhelming traditional attitudes, approaches, and capabilities.⁶ The growing seriousness of these threats has ripped public health from its traditional moorings and set it afloat on an increasingly tempestuous sea. Public health's political revolution is, as yet, incomplete because fundamental questions about the sea change public health is undergoing have not been answered. How should public health be navigated during its difficult voyage? To what port or destination should public health be steered and why?

My reading of the on-going debates involving the new political climate affecting public health involves a sense that the incomplete revolution has left public health caught in a conceptual dilemma, the full extent of which has not yet been appreciated. The new political attention directed at public health means that events have shifted this area of policy and law from traditional patterns toward radically different conceptions of the problems and how to address them.⁷ This article argues that, in many ways, public health is caught between these old and new worlds—unable to retreat into the past but uncertain whether and how to embrace a very different future.

In this article, I analyze this conundrum facing public health by drawing on more general debates about the nature of international relations in the post-Cold War period. Specifically, I see parallels between the discourse on public health's new political reality and Robert Kagan's now famous analysis of the increasing divergence of U.S. and European world views.⁸ According to Kagan:

It is time to stop pretending that Europeans and Americans share a common view of the world, or even that they occupy the same world. . . . Europe is turning away from power, or to put it a little differently, it is moving beyond power into a self-contained world of laws and rules and transnational negotiation and cooperation. It is entering a post-historical paradise of peace and relative prosperity, the realization of Immanuel Kant's "perpetual peace." Meanwhile, the United States remains mired in history, exercising power in an anarchic Hobbesian world where

6. MICROBIAL THREATS TO HEALTH: EMERGENCE, DETECTION, AND RESPONSE xvii (M. S. Smolinski et al. eds., 2003) [hereinafter MICROBIAL THREATS TO HEALTH] (arguing that infectious diseases continue to be a significant burden around the world and that public health and health care communities are not adequately prepared for the infectious disease challenge).

7. I have, for example, argued that the successful handling of the 2003 global outbreak of severe acute respiratory syndrome (SARS) represents a transition from traditional governance approaches to pathogenic threats to a new, post-Westphalian governance context. See David P. Fidler, *SARS: Political Pathology of the First Post-Westphalian Pathogen*, 31 J.L., MED. & ETHICS 485 (2003); DAVID P. FIDLER, *SARS, GOVERNANCE, AND THE GLOBALIZATION OF DISEASE* (forthcoming 2004).

8. See Robert Kagan, *Power and Weakness*, POL'Y REV. (June 2002), available at <http://www.policyreview.org/jun02/kagan.html> (last visited Feb. 5, 2004) (copy on file with the *McGeorge Law Review*); ROBERT KAGAN, *OF PARADISE AND POWER: AMERICA AND EUROPE IN THE NEW WORLD ORDER* (2003). *Of Paradise and Power* is an extended version of the article "Power and Weakness."

international laws and rules are unreliable, and where true security and the defense and promotion of a liberal order still depend on the possession and use of military might.⁹

My use of Kagan's analysis to frame examination of public health's new political reality is not designed to explore whether, to paraphrase Kagan, "Americans are from Mars and Europeans are from Venus"¹⁰ on public health questions today. This article is not a comparative study of U.S. and European approaches to contemporary global public health problems.¹¹ Kagan's analysis is useful for my purposes, however, because it focuses on the existence of two diverging world views and the future policy implications of this divergence.

I see, and analyze in this article, a similar divergence in "world views" on how to handle the increasingly troublesome public health threats posed by pathogenic microbes (Parts II-IV). I explore why these diverging views on pathogenic threats exist and examine whether melding these views together might be possible (Part V). At present, arguments for melding together the two different world views on public health are frequent.¹² I argue, however, that these various melding strategies are unlikely to be successful for a reason that resonates with Kagan's exploration of diverging U.S. and European world views—the "paradise" view is ultimately dependent on the "power" view.¹³ Using the concept of the "axis of illness,"¹⁴ I explore public health's contemporary dependency on power in general and the power of the United States in particular. The nature of the axis of illness means that policy responses to pathogenic threats are likely to remain caught between paradise and power, creating a political context for public health unlike anything else ever seen in the history of this policy area.

II. CONCEPTUALIZING PUBLIC HEALTH AND INFECTIOUS DISEASE THREATS

A. *Defining Public Health*

In the Introduction, I referred to "public health" as if this term has a widely understood meaning. Unfortunately, it does not. Some preliminary attention to the concept of public health is thus in order; but I also enter into the definitional controversies of public health because they provide a window on the two main ways pathogenic threats to human health have historically been conceptualized.

9. KAGAN, *supra* note 8, at 3.

10. *Id.*

11. U.S. and European approaches to public health as a foreign policy and national security issue was explored at a conference entitled "Health as Foreign Policy: A U.S.-German Dialogue on Governance and Global Health," Nov. 20-21, 2003, Berlin, Germany.

12. See *infra* Part V.A.

13. KAGAN, *supra* note 8, at 72 ("Europe's evolution into its present state occurred under the mantle of the U.S. security guarantee and could not have occurred without it.").

14. See *infra* Part V.B.

The history of international diplomacy on public health reveals shifts taking place between these two paradigms, including the policy shift that has taken place in the past decade.

In 1988, the Institute of Medicine defined public health as “what we, as a society, do collectively to assure the conditions in which people can be healthy.”¹⁵ Despite being “[o]ne of the most commonly cited definitions of public health,”¹⁶ it has come under significant criticism in recent years. Laurie Garrett complained that the Institute of Medicine’s definition revealed little more than that “there was no agreement about what constituted ‘public health’ other than assuring that people were healthy.”¹⁷ Mark Rothstein similarly criticized this definition as “a vague definition that fails to indicate the primary objective or scope of public health.”¹⁸ Rothstein’s criticism forms part of his overall critique of “a growing trend to include within the sphere of public health all the societal factors that affect health,”¹⁹ or what Ilan Meyer and Sharon Schwartz called the “public healthification” of social problems.²⁰ An example of this dynamic can be found in the argument that “[s]ocial justice is the main pillar of public health.”²¹ These definitional controversies reveal, according to Garrett, that “the new century finds experts at odds over the mission of public health. No two deans of the West’s major schools of public health agree on a definition of its goals and missions.”²²

Definitional cacophony often accompanies the development of academic disciplines; so, in some respects, disagreement among public health experts and scholars on a definition of public health is both to be expected and intellectually healthy. For public health, however, the definitional controversy provides a window on concerns about the neglect of, and complacency about, public health capabilities in many countries around the world. For Garrett, definitions have policy implications: “In the absence of a coherent definition of the [public health] discipline it was no wonder its advocates were struggling to defend their budgets and policies.”²³

The conceptual controversies involving “public health” can also be seen through public perceptions of this policy endeavor. Public health is often confused with health care generally²⁴ or health care for the poor. Garrett has argued, for

15. INSTITUTE OF MEDICINE, *THE FUTURE OF PUBLIC HEALTH* 1 (1988).

16. Mark A. Rothstein, *Rethinking the Meaning of Public Health*, 30 J.L., MED. & ETHICS 144, 145 (2002).

17. LAURIE GARRETT, *BETRAYAL OF TRUST: THE COLLAPSE OF GLOBAL PUBLIC HEALTH* 8 (2000).

18. Rothstein, *supra* note 16, at 145.

19. *Id.* at 144.

20. Ilan H. Meyer & Sharon Schwartz, *Social Issues as Public Health: Promise and Peril*, 90 AM. J. PUB. HEALTH 1189, 1189 (2000).

21. Michael H. Merson et al., *Introduction*, in *INTERNATIONAL PUBLIC HEALTH* xviii (M. H. Merson et al., eds., 2001).

22. GARRETT, *supra* note 17, at 6.

23. *Id.* at 8.

24. Legal scholars have, for example, taken pains to distinguish public health law from law that

example, that: "In the United States 'public health' had become—incorrectly—synonymous with medicine for poor people. Few Americans at the millennium thought of 'public health' as a system that functioned in their interests. Rather, it was viewed as a government handout for impoverished people."²⁵

In addition to distinguishing public health from health care, Garrett's argument emphasizes how the object of public health—the population—had in the United States lost contact with, and respect for, public health as a policy and social endeavor.

Ironically, public health was the victim of its own success in the United States and other wealthy countries, especially with regard to public health's contributions to reducing morbidity and mortality from infectious diseases. Progress against infectious diseases was dramatic enough for the U.S. Surgeon General to declare in the late 1960s that infectious diseases had been conquered, freeing the nation's public health and medical resources to combat non-communicable diseases, such as cancer.²⁶ The epidemiological transition from communicable to non-communicable disease threats that occurred in the developed world in the post-World War II period weakened the visibility, role, and place of public health within nation-states. "Public health in the wealthy world," observed Garrett, "struggled to maintain respect, funding, and self-definition in the late twentieth century."²⁷

Interestingly, a similar phenomenon affected public health in the international realm. The field of "international health" became closely, if not entirely, associated with improving health conditions and services in poor, developing countries. For developed countries, international health activities, such as those undertaken by the World Health Organization (WHO), became predominantly matters of humanitarianism that did not directly affect the national interests of richer, more affluent countries. Again, the developed world's success at reducing its infectious disease morbidity and mortality played a significant role in international health becoming almost purely a humanitarian endeavor. As I argued elsewhere:

[T]he national interest of developed states in the international control of infectious diseases was weakened by the impact, and perceived future impact, of adequate public health systems and antimicrobial pharmaceuticals. During most of the post-1945 period, then, the internationalization of public health has held marginal interest for developed countries that view it merely as a means for developing states to transition toward improved public health.²⁸

regulates medicine and health care. See, e.g., LAWRENCE O. GOSTIN, *PUBLIC HEALTH LAW: POWER, DUTY, RESTRAINT* 3-4 (2000); JAMES A. TOBEY, *PUBLIC HEALTH LAW* 10 (2d. ed., 1939).

25. GARRETT, *supra* note 17, at 8.

26. See *Emerging Infections: A Significant Threat to the Nation's Health: Hearings Before the Senate Committee on Labor and Human Resources*, 104th Cong. 1 (1995) (statement of Senator Kassebaum).

27. GARRETT, *supra* note 17, at 11.

28. David P. Fidler, *The Globalization of Public Health: Emerging Infectious Diseases and*

International public health efforts were, to paraphrase Garrett, viewed in developed nations as governmental and intergovernmental handouts to poor people.

Both the examples from public health in the United States and internationally suggest that the state of infectious disease control in developed societies significantly influences how public health is conceptualized and the policy status of public health activities. The conceptual incoherency of public health definitions noted above and the policy neglect of public health nationally and internationally correspond to the “conquest” of infectious diseases in developed nations. Should infectious diseases grow as a threat to developed states, this hypothesis would predict that public health’s conceptual incoherency would be challenged and its policy importance elevated.

The increasing threats posed by infectious diseases have been a powerful engine in the policy revolution that has occurred in public health in the last decade. As examined in more detail later in this article,²⁹ changing perceptions in the developed world, especially the United States, about pathogenic threats has been central to the elevation of public health as a matter of homeland security, national security, foreign policy, and global governance. Contemporary debates about the meaning of “public health” are also indicia of a new status because what public health means now has more significance.

These observations suggest that how we understand public health and conceptualize infectious disease threats depends on, or is heavily influenced by, the perspective of the powerful. The following sections elaborate on this idea by analyzing changes in how pathogenic threats have been constructed over two historical periods of international public health activity. This analysis focuses on two competing paradigms for conceptualizing pathogenic threats—the “power” and the “paradise” paradigms. Borrowing from Kagan’s analysis of the differing U.S. and European world views,³⁰ I argue that these two paradigms offer competing visions of how the world should approach mounting threats from infectious diseases. Then, I examine the shift that has occurred in the last decade from the paradise to the power perspective and the implications of this shift for global infectious disease activities specifically and global public health generally.³¹

B. Conceptualizing Pathogenic Threats: Two Paradigms

1. Power and Public Health

The core of Kagan’s analysis of the diverging world views of the United States and Europe involves differing attitudes toward power. Europeans, Kagan argues,

International Relations, 5 IND. J. GLOBAL LEGAL STUD. 11, 29 (1997).

29. See *infra* Part IV.

30. KAGAN, *supra* note 8.

31. See *infra* Part III.

are moving “beyond power” while the United States embraces power and its exercise.³² Utilizing Kagan’s power-oriented analysis in the context of public health and infectious diseases might strike many people as odd, especially people in the fields of public health and international relations. Power-related analysis traditionally has been the purview of the study of international relations, not public health.³³ Historically, the disciplines of international relations and public health have not been connected in any kind of dialogue. Kelley Lee and Anthony Zwi argued that “little attention has been devoted to health in the I[n]ternational R[elations] field,”³⁴ and Kickbusch has likewise noted “the gulf that divides scholars of policy/International Relations and public health.”³⁵

The revolution that has occurred in public health in the last decade provides evidence that the “traditions of mutual neglect”³⁶ between public health and international relations are breaking down.³⁷ As discussed more below,³⁸ arguments that infectious diseases represent national security threats to the United States bring public health and power directly together. Similarly, the emergence of public health as an issue on national security and foreign policy agendas affects how power and its exercise are perceived. Kickbusch has argued, for example, that the United States should utilize its hegemonic position in international politics to build a “soft-power leadership role” in the global public health area.³⁹

32. KAGAN, *supra* note 8, at 3.

33. The concept of power has been a central theme of the study of international relations. As Hans Morgenthau famously wrote, “statesmen think and act in terms of interest defined as power.” HANS J. MORGENTHAU, *POLITICS AMONG NATIONS: THE STRUGGLE FOR POWER AND PEACE* 5 (5th ed. rev. 1978). One of the dominant theories of international relations, realism, places power at the center of its analysis of international politics. Realist thinkers place, thus, the material capabilities of the state (e.g., economic and military power) at the forefront of their explanations of international relations. See, e.g., Jeffrey W. Legro & Andrew Moravcsik, *Is Anybody Still a Realist?*, 24 INT’L SEC. 5 (1999); KENNETH WALTZ, *THEORY OF INTERNATIONAL POLITICS* (1979).

34. Kelley Lee & Anthony Zwi, *A Global Political Economy Approach to AIDS: Ideology, Interests and Implications*, in *HEALTH IMPACTS OF GLOBALIZATION*, *supra* note 3, at 13.

35. Kickbusch, *supra* note 5, at 192.

36. David P. Fidler, *Disease and Globalized Anarchy: Theoretical Perspectives on the Pursuit of Global Health*, 1 SOC. THEORY & HEALTH 21, 25 (2003).

37. For a good example of the breaking down of these disciplinary barriers, see ANDREW PRICE-SMITH, *THE HEALTH OF NATIONS: INFECTIOUS DISEASE, ENVIRONMENTAL CHANGE, AND THEIR EFFECTS ON NATIONAL SECURITY AND DEVELOPMENT* (2001).

38. See *infra* Part IV.

39. Ilona Kickbusch, *Influence and Opportunity: Reflections on the U.S. Role in Global Public Health*, 21 HEALTH AFF. 131, 138 (2002).

Further, the traditions of mutual neglect between the disciplines of public health and international relations do not mean that power has played no role in public health generally and infectious disease control specifically. The disproportionate infectious disease burden that developing countries suffer compared to developed countries⁴⁰ can be seen as a function of power inequalities in the international system.⁴¹ Paul Farmer's call for a "critical epistemology of emerging infectious diseases" focused attention on underlying social inequalities connected to the distribution of political and economic power.⁴²

In short, power is very much in play in analyzing contemporary public health and infectious disease issues. Kagan's analysis of U.S. and European world views is helpful in the context of infectious diseases because the views he ascribes to the United States and the countries of the European Union have parallels in the world politics of public health. Thus, two perspectives are discernable with respect to pathogenic threats—a perspective that views such threats through the lens of power, and another that seeks to move "beyond power" in approaching infectious disease problems through individual rights, human solidarity, and universal justice. The next sections elaborate on these two perspectives.

Before I begin this elaboration, a caveat about my approach is in order. My analysis of two perspectives does not mean that other ways of conceptualizing the threat from infectious diseases are non-existent. As with many other controversial global issues, analyses do not always appear in stark black and white because shades of grey permeate not only commentary but also policy. Setting out sharply defined perspectives can, however, contribute insights to complex developments, as the widespread consumption of Kagan's analysis of U.S. and European world views illustrates.

2. *The "Power" Paradigm: Infectious Diseases as Exogenous Threats to National Interests and Power*

Although infectious diseases have been wreaking havoc on human societies for millennia,⁴³ they did not become a serious subject of international diplomatic activity until the mid-nineteenth century. Prior to the emergence of international health diplomacy at the 1851 International Sanitary Conference, states handled the threats posed by infectious diseases at predominantly a national level, through such policies as *cordon sanitaire*, quarantine, and requirements for "bills of health" from

40. MICROBIAL THREATS TO HEALTH, *supra* note 6, at 8 ("While the true burden of infectious diseases in many areas of the world is unknown, the greatest burden occurs within developing countries, where an estimated one in every two persons dies from such a disease.").

41. Kickbusch, *supra* note 39, at 138 (arguing that "the global-health gap is about power").

42. Paul Farmer, *Social Inequalities and Emerging Infectious Diseases*, 2 EMERGING INFECTIOUS DISEASES 259 (1996), available at <http://www.cdc.gov/ncidod/eid/vol2no4/farmer.htm> (last visited Feb. 5, 2004) (copy on file with the *McGeorge Law Review*); see also PAUL FARMER, INFECTIONS AND INEQUALITIES: THE MODERN PLAGUES (1999).

43. See, e.g., WILLIAM H. MCNEIL, PLAGUES AND PEOPLES (1976).

vessels arriving from foreign ports.⁴⁴ Although strictly national in scope, such policies reflected an understanding that international trade and commerce were channels for the spread of infectious diseases. The behavior of governments revealed that states conceived of infectious diseases, in the context of international relations, as exogenous threats against which national defenses (e.g., quarantine) had to be constructed.

This state-centric outlook is a central feature of the “power” paradigm. Even after states realized that uncoordinated national “defenses” against disease importation were not effective and began international cooperation on infectious disease control, the cooperation involved finding ways for states to improve their national defenses against the importation of disease from foreign sources. The infectious diseases targeted for international cooperation in the first century of international health diplomacy reveal how states tailored their cooperative endeavors to strengthen themselves against exogenous disease threats. The infectious diseases of diplomatic concern were diseases that experts perceived were spread by international transportation, such as plague, cholera, and yellow fever.⁴⁵

Some infectious diseases spread by international travel and trade, such as tuberculosis, were not the subject of international cooperation because they were already endemic in the states most concerned about exogenous disease threats—the great powers of Europe and North America. As historians of international health diplomacy have pointed out, European fears of “Asiatic” diseases (e.g., cholera) drove states into international cooperation.⁴⁶ The power paradigm’s focus on infectious diseases as exogenous threats to the state did not, thus, generally incorporate all infectious diseases that may move in the streams of international transportation but only those which were alien and thus more threatening to population health in European and North American countries.⁴⁷

44. See NEVILLE M. GOODMAN, *INTERNATIONAL HEALTH ORGANIZATIONS AND THEIR WORK* 23-52 (2nd ed. 1971) (analyzing pre-1851 efforts at controlling cross-border spread of infectious diseases).

45. For example, the convention and regulations drafted at the 1851 International Sanitary Conference addressed cholera, plague, and yellow fever and had provisions that allowed a state to take measures against ships “having on board a disease reputed to be importable.” *Id.* at 46. Similarly, the preamble of the International Sanitary Convention of 1903 stated that its aim was “to establish in a single arrangement the measures calculated to safeguard the public health against the invasion and propagation of plague and cholera. . . .” International Sanitary Convention, Dec. 3, 1903, 35 Stat. 1770, 1 BEVANS 359.

46. Norman Howard-Jones, *Origins of International Health Work*, BRIT. MED. J. 1032, 1035 (May 6, 1950) (arguing that what motivated the beginning of international cooperation on infectious diseases was “not a wish for the general betterment of the health of the world, but the desire to protect certain favoured (especially European) nations from contamination by their less-favoured (especially Eastern) fellows.”). For an overview of how the European desire to protect itself from “Asiatic” diseases was reflected in the international legal agreements concluded between 1851 and 1951, see DAVID P. FIDLER, *INTERNATIONAL LAW AND INFECTIOUS DISEASES* 28-35 (1999).

47. The most expansive list of diseases subject to a treaty was contained in the Pan American Sanitary Code of 1924, which obliged states parties to report cases of plague, cholera, yellow fever, smallpox, typhus, meningitis, poliomyelitis, encephalitis, influenza, and typhoid and para-typhoid fevers. Pan American Sanitary Code, Nov. 14, 1924, art. 3, 86 LNTS 43. The Pan American Sanitary Code placed, however, special emphasis on the immediate reporting of cases of “plague, cholera, yellow fever, smallpox, typhus or any other dangerous contagion liable to be spread through the intermediary agency of international commerce.” *Id.* at art. 4. The

The history of international cooperation on infectious diseases between the mid-nineteenth and mid-twentieth centuries also reveals that the great powers played the leading role in constructing the power paradigm. In this 100-year period, the great powers led international cooperation on infectious diseases for two reasons. First, the repeated “invasions” of “Asiatic” diseases adversely affected populations and economic conditions in leading powers, such as Britain, France, and the United States.⁴⁸ Such invasions adversely affected a nation’s material capabilities and assets, which provided the foundation for its power in the international system. Thus, a state’s power had to be better protected against direct exogenous infectious disease threats.

Second, the great powers took the lead on international infectious disease control because the decentralized, uncoordinated system of national defenses against disease importation began to impose increasingly significant burdens on international trade, especially as advances in transportation technologies (e.g., the steam ship and railroads) increased the speed and volume of international traffic.⁴⁹ Great trading nations, such as Britain, were particularly keen to reduce the drag national quarantine systems created for commercial interests. Here, infectious diseases as an international problem posed an indirect threat to a state’s national interests and power, by triggering widespread trade-restricting health measures that frustrated the promotion of foreign trade and the accumulation of economic wealth from such trade.

The power paradigm appears, thus, to contain contradictory aims: (1) reduce exogenous disease threats through improved national defenses; and (2) reduce the friction national defenses against exogenous disease threats create for international trade and commerce. The development of international health diplomacy in the latter half of the nineteenth century and first half of the twentieth century demonstrated that the only way the great powers could reconcile policy responses to the direct and indirect disease threats posed to their national interests and power was through international cooperation. The exogenous sources of both direct and indirect threats meant that states, even the great powers, had to construct a cooperative regime to mitigate the damage infectious diseases could cause to their national interests and power. This reasoning helps explain the many treaties on infectious disease control adopted during the 1851-1951 period.⁵⁰

International Sanitary Convention of 1926 also included diseases beyond cholera, plague, and yellow fever by adding typhus and smallpox to the list of diseases subject to the treaty’s rules. See International Sanitary Convention, June 21, 1926, art. 1, 2 BEVANS 545.

48. L. S. WOOLF, INTERNATIONAL GOVERNMENT 223 (1916) (recording six invasions of cholera into Europe in the nineteenth century); GOODMAN, *supra* note 44, at 38 (describing cholera epidemics in Europe and North America in the nineteenth century).

49. NORMAN HOWARD-JONES, THE SCIENTIFIC BACKGROUND OF THE INTERNATIONAL SANITARY CONFERENCES 1851-1938, at 11 (1975) (arguing that “[i]f, in the old colonial days, it was true that ‘trade follows the flag,’ it was equally true that the first faltering steps toward international health cooperation followed trade”); GOODMAN, *supra* 44, at 389 (noting that trade interests in harmonized quarantine measures was one of the two most powerful motivations for international health cooperation).

50. For a list of these treaties, see FIDLER, *supra* note 46, at 22-23.

The international legal regime on infectious disease control constructed between the mid-nineteenth and mid-twentieth centuries attempted to provide rules to allow states to achieve their objectives with respect to the direct and indirect exogenous threats infectious diseases created.⁵¹ The “classical regime” for international infectious disease control sought to increase protection against the international spread of disease with minimal impact on international trade and travel.⁵² The classical regime contained two basic sets of substantive rules.

Under the first set of rules, states had to notify other countries about outbreaks of specified diseases in their territories and maintain adequate public health capabilities at points of disease exit and entry. The International Sanitary Convention of 1926 provides examples of both of these kinds of rules. Article 1 of the 1926 Convention required states parties to notify each other of cases of “plague, cholera, or yellow fever discovered in its territory” and the “existence of an epidemic of typhus or smallpox.”⁵³ Article 14 of this treaty obliged states parties “to maintain in and around their large ports and, as far as possible, in and around their other ports, a sanitary service possessing an organization and equipment capable of carrying out the application of the prophylactic measures in the case of diseases coming under this Convention”⁵⁴

These rules supported the objective of strengthening protection against the international spread of disease. The notification duties created a system of international surveillance that provided national authorities with better information on what diseases may be moving in international commerce, increasing the likelihood of rapid, appropriate interventions at the national level to prevent devastating disease invasions. The requirements for maintaining certain public health capabilities at ports, airports, or other border crossing-points (e.g., keeping rat populations at ports under control; providing clean water and proper sanitation facilities for travelers) sought to prevent these gateways of international traffic from becoming vectors of disease transmission.

The second set of rules contained principles that established the maximum trade-restricting measures a state could take against trade and travelers arriving from foreign destinations experiencing outbreaks of specified diseases. For example, the International Sanitary Convention of 1926 provided that “[t]he measures as provided in this Chapter must be regarded as constituting a maximum within the limits of which Governments may regulate the procedure to be applied to ships on their arrival.”⁵⁵ The maximum measures prescribed in the rules were based on scientific and public health principles to ensure that any restrictions on

51. For an overview of the historical development of this regime, see *id.* at 21-57.

52. David P. Fidler, *Emerging Trends in International Law Concerning Global Infectious Disease Control*, 9 EMERGING INFECTIOUS DISEASES 285, 286 (2003).

53. International Sanitary Convention of 1926, *supra* note 47, at art. 1.

54. *Id.* at art. 14.

55. *Id.* at art. 15.

international traffic were justified.⁵⁶ This second set of rules supported the objective of minimizing the interference with international traffic caused by national public health measures. These rules, in essence, sought to effect a harmonization of national defenses against disease importation based on scientifically valid criteria.⁵⁷

The classical regime provides, thus, a window on the power paradigm. Infectious diseases are conceptualized as direct and indirect exogenous threats to the state's national interests and power in the international system. The substantive rules of this state-centric regime are designed to shore up the state's national defenses against the importation of a limited number of epidemic diseases, reduce the prospects that the infrastructure of international traffic would facilitate cross-border disease transmission, and limit trade-restricting health measures to only those scientifically necessary to prevent disease importation.

These rules appear universally applicable on their face; but they were, in fact, conceived and constructed to serve primarily the interests of the great powers—the states that felt vulnerable to “exotic” disease importation and the economic costs national disease defenses in other countries exacted on their international trade.⁵⁸ The classical regime had little relevance for countries where “Asiatic” diseases were endemic and which did not have extensive trading interests around the world frustrated by vexatious quarantine systems.

The classical regime reveals other important features of the state-centric, national-interest driven power paradigm. Beyond the rules pertaining to public health capabilities at points of disease entry and exit, the classical regime contained nothing that addressed a state's domestic public health infrastructure or capabilities. Thus, whether a state neglected public health internally, causing its population to suffer from unnecessary infectious disease morbidity and mortality, was not an issue. Such neglect was relevant only to the extent that it played a role in cross-border disease transmission; but, even in that context, the classical regime contained no requirements for domestic public health improvements. A state's incentive to improve its domestic public health came from reducing the likelihood that domestic disease problems would escape its borders, causing that state's outbound trade and travel to suffer from the restrictions applied by other states to keep diseases out of their territories.

The absence of rules on a state's domestic public health performance also demonstrates that the power paradigm was not focused on, or even interested in, the health of individuals. Whether individuals have access to adequate sanitation or

56. Fidler, *supra* note 52, at 286.

57. For a historical overview of the objective of harmonizing quarantine systems, see FIDLER, *supra* note 46, at 35-42.

58. GOODMAN, *supra* note 44, at 389.

Fear of the spread of cholera and, later, plague and yellow fever, together with the obvious economies to trade in a uniform system of quarantine were the two motivations in international health for seventy years or so. The third motive, a sense of responsibility towards one's neighbours, came much later.

Id.

personal medical services was simply not a concern of the classical regime. The power paradigm conceptualized individuals as cross-border disease vectors that states could regulate to protect themselves from disease importation. The only point at which the power paradigm resonated positively for non-state actors, including merchants and corporations, concerned the rules minimizing the interference with commercial activity that trade-restricting health measures could cause.

In many respects, the power paradigm reflects the structure and dynamics of international politics during the era when infectious diseases became a subject of diplomatic attention. The first 100 years of international health diplomacy occurred during the heyday of the “Westphalian” system of international relations. The moniker “Westphalian” refers to the Peace of Westphalia of 1648, an event marked by historians of international relations and international law as the conceptual and practical beginning of the modern interstate system.⁵⁹ A few, central features characterized the Westphalian system of international relations. First and foremost, Westphalian international politics focused almost exclusively on the state and the interactions among states.⁶⁰ Other actors in international relations, such as merchants and missionaries, were not considered central to the political dynamics of the system. Given this state-centric outlook on international relations, the emergence of the power paradigm and its state-centric conception of infectious disease threats during the heyday of Westphalian international politics is hardly surprising.

Second, power politics dominated the Westphalian system of interstate relations. In this system, the great powers and relations among them played a special role in the dynamics of international relations.⁶¹ Infectious diseases emerged as an international issue into a political system controlled by a handful of powerful countries, each of which kept a wary eye on potential rivals as part of the balance of power politics.⁶² These power-driven rivalries fueled the scramble for imperial

59. Christopher Harding & C. L. Lim, *The Significance of Westphalia: An Archaeology of the International Legal Order*, in *RENEGOTIATING WESTPHALIA: ESSAYS AND COMMENTARY ON THE EUROPEAN AND CONCEPTUAL FOUNDATIONS OF MODERN INTERNATIONAL LAW* 5-6 (Christopher Harding & C. L. Lim eds., 1999).

As an event in the history of international relations the Treaty of Westphalia symbolically indicated a sea-change in international organization—the transition to a system of sovereign states, as sovereigns subject to no higher or competing authority and conveniently determining the number and character of their legal relations with each other.

Id.

60. Jan Aart Scholte, *The Globalization of World Politics*, in *THE GLOBALIZATION OF WORLD POLITICS: AN INTRODUCTION TO INTERNATIONAL RELATIONS* 13, 20 (John Baylis & Steve Smith eds., 2001) (“The Westphalian system was a states-system.”).

61. See HEDLEY BULL, *THE ANARCHICAL SOCIETY: A STUDY OF ORDER IN WORLD POLITICS* 200-29 (1977) (analyzing the role of the great powers in relation to international order).

62. Robert H. Jackson, *The Evolution of International Society*, in *THE GLOBALIZATION OF WORLD POLITICS*, *supra* note 60, at 35, 43 (noting that the balance of power was one of the basic principles of Westphalian international politics).

possessions that characterizes much of late nineteenth century international relations, as epitomized by the European great powers carving up Africa into spheres of influence at the 1885 Conference of Berlin.⁶³ In such an environment, it would have been incredibly radical for governments of the great powers not to conceptualize infectious disease problems as exogenous threats to national interests and power.

Third, the Westphalian system exhibited strong support for keeping international relations strictly *international*. Thus, what happened inside a state between its government and people was not a legitimate concern of diplomacy or international law.⁶⁴ Infectious diseases emerged as an international issue in a political system heavily marked by strong support for principles of near-absolute sovereignty and non-intervention in the domestic affairs of other states.⁶⁵ The lack of rules in the classical regime of addressing domestic public health capabilities of states is, thus, also not surprising.

The power paradigm does not explain every aspect of public health endeavors against infectious diseases in the first 100 years of international health diplomacy. As the subsequent analysis of the "paradise" paradigm below makes clear, developments leading to a different way of conceptualizing infectious disease threats had origins when the power paradigm held sway. Providing a brief outline of the main features of the power paradigm will, however, provide a backdrop for analyzing the radically different perspective that developed in the latter half of the twentieth century.

3. The "Paradise" Paradigm: Infectious Diseases as Threats to Individual Rights, Human Solidarity, and Universal Justice

As indicated above, the power paradigm on infectious diseases developed in the century following the first international sanitary conference in 1851. The beginning of the second century of international health diplomacy after the end of World War II contained important signals that the next century's perspective on infectious diseases would be different. The Preamble of the WHO Constitution, which was drafted in 1946 and came into effect in 1948,⁶⁶ contained a bold, new vision of public health not at all in concert with the power paradigm. Each provision of the Preamble supported a perspective on public health utterly different

63. See F. H. HINSLEY, *POWER AND THE PURSUIT OF PEACE: THEORY AND PRACTICE IN THE HISTORY OF RELATIONS BETWEEN STATES* (1963) (discussing the Conference of Berlin).

64. Jackson, *supra* note 62, at 43 (noting the development of the principle of non-intervention from the Westphalian norm of *cujus regio, ejus religio*, the ruler determines the religion of the realm).

65. For example, Article 2 of the Statutes of Constitution of the International Office of Public Health adopted in 1907 provided that "[t]he Office may not interfere in any way in the administration of the different States." Rome Agreement Establishing the International Office of Public Health, Dec. 9, 1907, *reprinted in* GOODMAN, *supra* note 44, at 101, 102.

66. Constitution of the World Health Organization, *opened for signature* July 22, 1946, *reprinted in* WORLD HEALTH ORGANIZATION, *BASIC DOCUMENTS* (40th ed. 1994), at 1 [hereinafter WHO Const.].

from the power paradigm's conceptualization of infectious diseases as exogenous threats to a nation's interests and power.

The first principle of the Preamble of the WHO Constitution declared: "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity."⁶⁷ This attempt to provide a definition of "health" departed radically from the power paradigm, which did not formulate a view of "health" per se. The power paradigm saw "health" in aggregate terms—how disease invasion affected a country's population. At most, "health" was merely the absence of widespread disease in the population.⁶⁸ The definition of health in the WHO Constitution's Preamble emphasizes that the member states of this new international organization reject the notion that health is merely the absence of disease in order to promote a more holistic concept of health within the realm of international health cooperation.

The second way the WHO Constitution's definition of health deviates radically from the power paradigm is that it focuses attention on the health of the individual. The declaration that health is a state of complete physical, mental and social well-being contains a vision of each individual's health status. Although one could argue that the definition of health in the WHO Constitution can be applied to the health of a nation, the definition only very awkwardly resonates with health at a population level. As argued above, the power paradigm was not concerned with, or interested in, whether individuals within sovereign states enjoyed a state of complete physical, mental, and social well-being.

The second principle enunciated in the Preamble of the WHO Constitution is: "The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition."⁶⁹ This principle became known as the human "right to health," and the WHO Constitution was the first major international legal document to proclaim health as a fundamental human right.⁷⁰ This principle in the WHO Constitution holds that individuals should be able to assert their right to health against their respective governments in connection with their health. Under the power paradigm, a government's relationship with its

67. *Id.*

68. The statutes of the International Office of Public Health adopted in 1907 serve as an example for this point because they provide that

[t]he principle object of the Office is to collect and bring to the knowledge of the participating States the facts and documents of a general character which relate to public health, and especially as regards infectious diseases, notably, cholera, plague, and yellow fever, as well as the measures taken to combat these diseases.

Rome Agreement Establishing the International Office of Public Health, art. 4, *reprinted in* GOODMAN, *supra* note 44, at 102.

69. WHO Const., *supra* note 66, pmb., at 2.

70. BRIGIT C. A. TOEBES, THE RIGHT TO HEALTH AS A HUMAN RIGHT IN INTERNATIONAL LAW 15 (1999) (noting that the WHO Constitution "is the first international human rights document to formulate an individual's right to health"). The right to health forms part of human rights treaties adopted later, including the International Covenant on Economic, Social and Cultural Rights, Dec. 16, 1966, art. 12, 993 U.N.T.S. 3.

citizens on health status and services was not a diplomatic question or issue. By contrast, the WHO Constitution placed this relationship seemingly at the heart of international cooperation on public health.

The third principle in the Preamble of the WHO Constitution declared: "The health of all peoples is fundamental to the attainment of peace and security and is dependent upon the fullest co-operation of individuals and States."⁷¹ In what can only be called a breathtaking assertion, the WHO Constitution linked international peace and security with the health of *all* peoples. This principle contains a universalism alien to the power paradigm's state-centric conceptualization of infectious disease threats. In addition, the explicit linking of the health of all peoples and international peace and security is nothing short of absurd under the tenets of the power paradigm. How would the failure to achieve a complete state of physical, mental, and social well-being in poor, powerless countries threaten order and stability between the great powers? Again, the Preamble of the WHO Constitution appears to be drafted in a manner that directly rejects the conceptualization of public health that dominated in the previous historical period.

The fourth principle of the Preamble provided: "The achievement of any State in the promotion and protection of health is of value to all."⁷² This principle presents health, and the benefits the achievement of health creates, as organically connected on a universal scale. The "value to all" in the principle can be conceived in two distinct ways. First, one nation's promotion and protection of its people's health generate positive externalities for other nations in the form, for example, of a more attractive export market (i.e., healthier people are better consumers).⁷³ Second, a nation's successful health promotion and protection activities can offer intangible benefits to other countries by, for example, serving as a model for policy reform and strengthening universal respect for individual and public health. None of these ideas—not even the idea that the status of health in one country can affect another country's export opportunities—found expression in the power paradigm. Britain never pressured, say, Germany to improve the health of German nationals so that British manufacturers could export more products to healthier German citizens.⁷⁴ How Germany treated the health of its people was not the subject matter of international health cooperation. The WHO Constitution promotes an entirely different outlook on health promotion and protection within countries, connecting such activities to all other nations.

71. WHO Const., *supra* note 66, pmbl., at 2.

72. *Id.*

73. William H. Foege, *Memorandum to the President: Global Health and U.S. National Interests*, in BIOLOGICAL SECURITY AND PUBLIC HEALTH, *supra* note 1, at 17, 24 (arguing that "healthy societies provide better markets for U.S. goods and healthy societies are able to provide less expensive goods for sale to the United States").

74. Arguments such as this were, however, made by Great Britain in connection with restricting the alcohol trade to indigenous peoples in the Pacific Ocean. The British were concerned that alcohol abuse was harming the ability of indigenous peoples of the Pacific region to buy British goods. See JOHN BASSETT MOORE, 2 A DIGEST OF INTERNATIONAL LAW § 229 (1906).

The fifth principle in the Preamble of the WHO Constitution asserted the following: "Unequal development in different countries in the promotion of health and control of disease, especially communicable disease, is a common danger."⁷⁵ This principle holds that countries with good health standards will be threatened by poor health standards in other countries, particularly if such poor health conditions contribute to the cross-border transmission of infectious diseases. Poor, weak countries will be microbial incubators connected to the disease vectors of international trade and travel, all of which places healthy countries at risk for disease importation. The policy prescription flowing from this principle is, thus, greater attention to raising the health standards of countries struggling to promote and protect health in their territories. Stronger, wealthier countries have a direct self-interest in supporting financially, technologically, and with technical assistance the health efforts of less affluent nations.⁷⁶

The appeal to the self-interest of more powerful states is something that would resonate with the power paradigm, but this paradigm never developed rules or arrangements to facilitate redistribution of resources and technology to improve the health conditions of poor countries. The power paradigm's approach to the microbial incubator problem was the existence of incentives (e.g., the application of trade-restricting health measures by importing countries) for poor countries to confront the problem directly—improve their own public health or not be able to benefit significantly from participating in international trade and travel.

The Preamble's sixth principle stated: "Healthy development of the child is of basic importance; the ability to live harmoniously in a changing total environment is essential to such development."⁷⁷ This principle can be seen as a corollary of the Preamble's principles on the definition of health and the right to health. The corollary emphasizes the special importance of health in the development of children. Thus, the right to health has particularly powerful connotations for child development.⁷⁸ This principle also highlights health threats to one of the most vulnerable parts of a country's population. The message sent is that health policy should protect the most vulnerable in society and work to mitigate such vulnerability. All this is alien to the power paradigm, which developed no sensitivity to the special health needs of children or any other vulnerable segment of the population.

The seventh principle of the Preamble of the WHO Constitution declared: "The extension to all peoples of the benefits of medical, psychological and related

75. WHO Const., *supra* note 66, pmb., at 2.

76. Foege, *supra* note 73, at 24 (Arguing that "the United States receives direct and indirect health benefits when involved in improving the health of developing countries. Direct risks decrease for travelers and importation risks are reduced. In addition, we benefit from improved security and economic opportunities.").

77. WHO Const., *supra* note 66, pmb., at 2.

78. This idea is later enshrined in the United Nations Convention on the Rights of the Child, Nov. 20, 1989, art. 24, 28 I.L.M. 1456.

knowledge is essential to the fullest attainment of health.”⁷⁹ This principle holds that universal and equitable access to scientific, medical, and health care technologies and knowledge is fundamental to achieving the holistic definition of health and fulfilling the human right to health.⁸⁰ It also connects to the fifth principle’s emphasis on the need for the redistribution of material resources among rich and poor countries to raise the standard of health equitably on a universal basis.⁸¹ Apart from creating requirements for states to notify disease outbreaks and limits on trade- and travel-restricting health measures, the power paradigm was a “self-help” system not informed by principles of universal, equitable access to health technologies and knowledge achieved through resource redistribution.

The Preamble’s eighth principle provided: “Informed opinion and active co-operation on the part of the public are of the utmost importance in the improvement of the health of the people.”⁸² This principle contains a vision of public health as a participatory, democratic endeavor within states. Informed opinion requires the free flow of information and debate about health policy and other policy areas with a bearing on health. Active cooperation on the part of the public involves a vision of vibrant civil society participation, with the government, in seeking the attainment of the highest possible level of health. Each element of this principle looks past the border of the sovereign state to enquire into how governments organize their health systems and their health politics. Such scrutiny of a state’s internal health affairs had no place in the power paradigm because it was informed by strong notions of sovereignty and non-intervention.

The ninth principle in the Preamble of the WHO Constitution asserted: “Governments have a responsibility for the health of their peoples which can be fulfilled only by the provision of adequate health and social measures.”⁸³ As with many other principles in the Preamble, this tenet focuses on what happens inside states, not what happens between states, as the power paradigm does. The position that governments have responsibilities for the health of their populations that can be fulfilled only by providing health and other kinds of social services is perhaps not, in itself, a new idea. Public health has, for example, long been considered a “public good” that only governments can adequately provide.⁸⁴ Other principles in the Preamble give government responsibility for health a profoundly different meaning, especially the idea that health is a fundamental human right. The responsibility of the government for its people’s health is, thus, based not in

79. WHO Const., *supra* note 66, pmb., at 2.

80. Later human rights treaties incorporate aspects of this idea, including the International Covenant on Economic, Social, and Cultural Rights, *supra* note 70, at Article 15.1(b) (states parties recognizing “the right of everyone: . . . (b) To enjoy the benefits of scientific progress and its applications”).

81. WHO Const., *supra* note 66, pmb., at 2.

82. *Id.*

83. *Id.*

84. INSTITUTE OF MEDICINE, *supra* note 15, at 7; GOSTIN, *supra* note 24, at 4.

utilitarian, materialistic thinking (as with the power paradigm) but in the basic right of human beings to the enjoyment of the highest attainable standard of health.

This extended discussion of the Preamble of the WHO Constitution outlines a “world view” on public health radically different from the “world view” found in the power paradigm. My point is not that this new world view of public health, and its implications for infectious disease control, suddenly became the reality of international cooperation on health issues. In fact, after reading the rousing rhetoric of the Preamble, the legally binding provisions of the WHO Constitution might come as some disappointment. The only two obligations WHO member states accepted in the main text of the Constitution were to pay their financial contributions in a timely manner⁸⁵ and to submit certain reports to WHO on a periodic basis.⁸⁶ The WHO Constitution contains no legally binding provisions that require WHO member states to engage in any specific health policy or practices within their respective territories. The WHO Constitution leaves the exercise of health sovereignty by states virtually unfettered. Ironically, the classical regime regulates sovereignty more than the WHO Constitution despite being based in a much less ambitious world view of public health.

The Preamble of the WHO Constitution expresses, however, a perspective on public health almost completely at odds with the premises and assumptions informing the power paradigm. This new perspective has profound implications for conceptualizing threats posed by pathogenic microbes. Where the power paradigm conceptualized infectious diseases as exogenous threats to a nation’s materialistic interests and power, the Preamble of the WHO Constitution places the health of the individual at the center of attention, as illustrated by the proclamation that the right to health is a fundamental human right.⁸⁷ With such a focus, infectious disease threats are not just exogenous but can also arise within a state, a perspective that would widen the list of infectious diseases on which international cooperation would be required.

The Preamble’s concern for the health of individuals is not parochial in orientation but has a universal scope because it incorporates the health of individuals and peoples everywhere, not just those living in the great powers of the international system. The emphasis on the interdependence of people’s health, particularly with respect to infectious diseases, supports the universalism in the Preamble’s vision. This perspective constructs infectious disease threats as much more than “exotic” pathogenic microbes traveling across fixed borders through international trade and travel.

Integrated into the individualism and universalism of the Preamble’s principles is a deep concern for those individuals and peoples most vulnerable to health risks, especially the poor and children. In this new vision of public health, equitable

85. WHO Const., *supra* note 66, art. 7, at 4.

86. *Id.*, pmbl., at 2.

87. *Id.*, Preamble, at 1.

access to healthy living conditions and health-related services both within and among states is crucial. The principle of equity supports the tenet of human solidarity found in the Preamble's universalism and champions the idea of redistributive justice both inside and between states. The Preamble's perspective conceptualizes infectious disease threats, thus, as threats to global justice.

In this article, I call the perspective outlined in the Preamble of the WHO Constitution the "paradise" paradigm. I use the term "paradise" to echo Kagan's analysis of the world view of Europeans, which he argues is a "post-historical paradise of peace and relative prosperity."⁸⁸ The Europeans, according to Kagan, strive for this paradise by turning away from power politics toward a system driven by the rule of law and cooperative justice.⁸⁹ As the contrasts with the power paradigm make clear, the vision in the Preamble of the WHO Constitution turns its back on thinking about health and infectious disease threats through the Westphalian lenses of state-centrism, competitive national interests, and power. The Preamble instead expresses a vision of health and infectious disease threats in terms of individual rights, human solidarity, and universal justice.

III. PARADISE SHIFT: THE RISE OF THE PARADISE PARADIGM IN INTERNATIONAL PUBLIC HEALTH

A. Introduction

After WHO's creation in 1948, international public health efforts on infectious diseases had two competing visions in play—the power and paradise paradigms. The power paradigm continued in the post-World War II period through WHO's continuation of the classical regime on infectious disease control in the form of the International Sanitary Regulations of 1951, which WHO later renamed the International Health Regulations (IHR).⁹⁰ The post-World War II era witnessed, however, the rise of the paradise paradigm in the making of international health policy. This part of the article examines how the paradise paradigm came to replace the power paradigm as the controlling perspective on public health and infectious disease threats within WHO and international health circles in the first five decades of WHO's existence. Developments in connection with policy on infectious diseases provide excellent material to illustrate the reality of this "paradise shift" in international public health. Two events stand at the center of this shift: (1) the collapse of the classical regime on international infectious disease control, which was the progeny of the power paradigm (Part III.B); and (2) the

88. KAGAN, *supra* note 8, at 3.

89. *Id.*

90. International Health Regulations, July 25, 1969, reprinted in WORLD HEALTH ORGANIZATION, INTERNATIONAL HEALTH REGULATIONS (3rd ann. ed. 1983) [hereinafter IHR]. On the IHR's connection with the pre-WHO international law on infectious diseases, see Fidler, *supra* note 52, at 285-86.

ascendancy of new approaches to infectious disease problems echoing the tenets of the paradise paradigm (Part III.C).

B. Collapse of the Classical Regime: The Fading Relevance of the Power Paradigm

In other writings, I have analyzed how the classical regime on international infectious disease control established in the first hundred years of international health diplomacy, and continued in the form of the IHR in the latter half of the twentieth century, collapsed as an effective legal and policy approach to infectious disease threats.⁹¹ I do not wish to repeat these detailed analyses here, but I want to examine what the collapse of the classical regime tells us about the fading relevance of the power paradigm in the post-World War II period. Thus, I concentrate here less on the legal details than on the political dynamics behind the failure of the IHR.

As noted in Part II, the classical regime on international infectious disease control contained two interdependent substantive parts. First, countries were to report outbreaks of specified diseases to other countries, usually through a permanent international health organization. The IHR included such rules as well.⁹² Second, countries were to limit their trade- and travel-restricting measures to those prescribed by the classical regime to ensure that interference with international traffic was justified from scientific and public health perspectives. The IHR also incorporated this approach.⁹³

By the late 1960s and 1970s, WHO officials and other experts recognized that WHO member states were routinely ignoring their obligations to report specified disease outbreaks and refrain from excessive trade- and travel-restricting measures.⁹⁴ The IHR, in other words, collapsed from both ends. Although such widespread non-compliance with international legal obligations raises questions about WHO member states' respect for international law, the key question for my purposes is how the power paradigm explains the unraveling of the classical regime.

The classical regime arose out of the power paradigm's conceptualization of infectious diseases as exogenous threats to the national interests and power of the great powers of the international system. The collapse of the classical regime would be expected if the great powers no longer considered infectious diseases serious exogenous threats requiring international cooperation to shore up national

91. See, e.g., FIDLER, *supra* note 46, at 65-71.

92. IHR, *supra* note 90, at arts. 1, 3.

93. *Id.* at art. 23.

94. See, e.g., DR. P. J. DELON, THE INTERNATIONAL HEALTH REGULATIONS: A PRACTICAL GUIDE (1975); P. Dorelle, *Old Plagues in the Jet Age: International Aspects of Present and Future Control of Communicable Diseases*, 23 CHRON. WORLD HEALTH ORG. 103 (1969); E. Roelsgaard, *Health Regulations and International Travel*, 28 CHRON. WORLD HEALTH ORG. 265 (1974); B. Velimirovic, *Do We Still Need the International Health Regulations?*, 133 J. INFECTIOUS DISEASES 478 (1976).

defenses against pathogenic invaders. The development of international public health in the post-World War II period demonstrates that this hypothesis is correct.

European-led efforts to establish international cooperation on infectious diseases in the nineteenth century arose from the convergence of two factors on leading European states. First, increases in the speed and volume of international travel made hitchhiking pathogens more dangerous to countries engaged in extensive international commerce.⁹⁵ As the establishment of quarantine practices in fifteenth century Italian city-states indicates, diseases have long been transmitted along the highways and seaways of human mobility.⁹⁶ Advances in transportation technologies, such as the steam ship, increased the speed of international trade and travel, producing efficiencies that fed a growth in the overall level of international trade.⁹⁷

Second, with international trade and travel proving more effective vectors for the spread of infectious diseases, the inadequacy or non-existence of public health systems and capabilities in European states left their populations open to microbial invasion and subsequent onward transmission within their territories.⁹⁸ Improvements in domestic public health defenses against infectious disease importation and spread did not keep pace with the increase in the nature of the pathogenic threat. The ever more stringent application of national quarantine measures did little to stop cross-border disease transmission but much to irritate merchants and their government supporters in the great trading nations of the time, such as Britain.

The European great powers developed the classical regime to help address their direct vulnerability to exogenous infectious disease threats. Should that underlying vulnerability wane for reasons not connected to the operation of the classical regime, then the interest of the great powers in the classical regime and international infectious disease control would also wane. The logic of the power paradigm explains what, in fact, happened. As mentioned earlier, two developments weakened great power interest in international infectious disease control. First, these states began to develop better national public health systems through the building of safer, more effective sanitation and water systems in urban areas.⁹⁹ Infectious disease morbidity and mortality in the more affluent parts of the world was already decreasing significantly before World War II. This progress partly informed arguments made by experts, such as Charles-Edward Winslow in 1943, that the United States and other developed nations were on the cusp of the “conquest of epidemic disease.”¹⁰⁰

95. Goodman, *supra* note 44, at 36, 38.

96. *Id.*

97. *Id.* at 36.

98. Fidler, *supra* note 28, at 25.

99. *Id.* at 26.

100. CHARLES-EDWARD AMORY WINSLOW, THE CONQUEST OF EPIDEMIC DISEASE: A CHAPTER IN THE HISTORY OF IDEAS (1944).

The second development—the discovery and widespread application of antibiotics and vaccines—gave developed nations another powerful weapon with which to reduce their vulnerability to infectious diseases.¹⁰¹ The major public health impact of antimicrobial pharmaceuticals came in the post-World War II period, and this progress combined with the advances made in public health infrastructure and practices in the first half of the twentieth century to make infectious diseases much less of a problem than they had been a century before. The “conquest of epidemic disease” envisioned by Winslow in 1943 became a reality, according to the U.S. Surgeon General’s announcement in the late 1960s that infectious diseases had been conquered in the United States.¹⁰²

These two developments meant that the great powers of international politics no longer needed the classical regime to help address their vulnerability to infectious disease threats. The direct and pressing concern these states had for exogenous infectious disease threats disappeared throughout most of the post-World War II period. The power paradigm had not disappeared; it was, in fact, still working because, as the perception of the threat declined, so did great power interest in, and direct support for, the classical regime and its objectives. But, because great power interest in international infectious disease control waned, the power paradigm faded as a relevant feature of both great power foreign policy and international health policy at WHO.

C. Paradise Waxing: The Evolution of International Health Policy

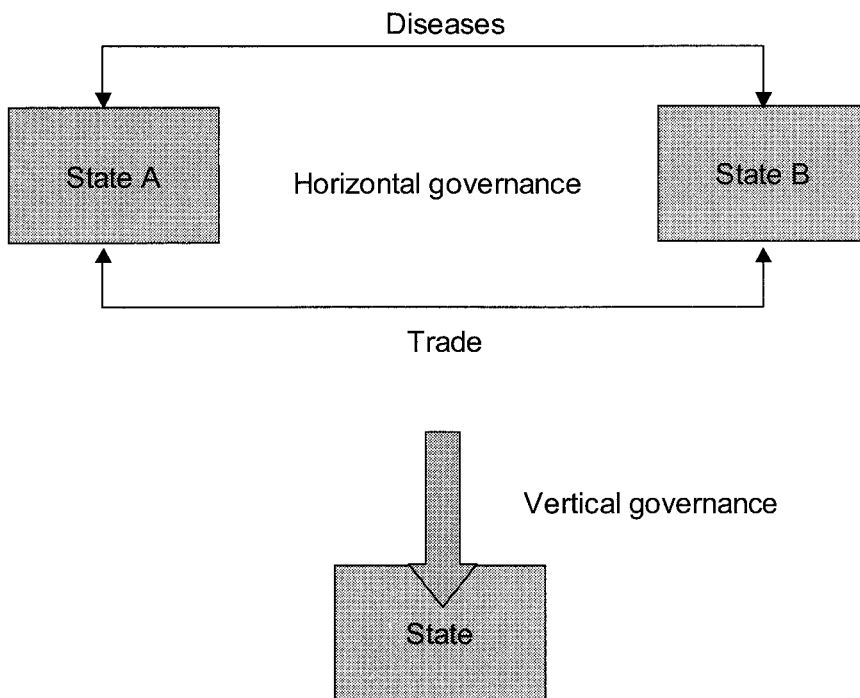
The decades that witnessed the fading relevance of the power paradigm also saw international health policy, especially at WHO, evolve in the directions outlined in the Preamble of the WHO Constitution. A comprehensive analysis of the evolution of international health policy in the post-World War II era is beyond the scope of this article, but highlighting salient features of this evolution is sufficient to support my argument. Three developments stand out in the rise of the paradise paradigm in international health policy: (1) a shift from horizontal to vertical public health strategies on infectious diseases; (2) an increasing concern with health conditions in developing countries; and (3) the formulation of a holistic strategy to advance the right to health, universal health solidarism in the international community, and redistributive justice on a global scale.

101. Fidler, *supra* note 28, at 27.

102. See *Emerging Infections: A Significant Threat to the Nation's Health*, *supra* note 26, at 1.

The power paradigm's approach to the public health problem of infectious diseases was entirely horizontal in nature (Figure 1). The classical regime attempted to regulate cross-border transmission of infectious diseases by focusing exclusively on how states interact with each other. The lack of any rules that penetrated inside a state to address its domestic public health situation confirmed the horizontal orientation of the power paradigm. As revealed by the principles in the Preamble of the WHO Constitution, the paradise paradigm embraced a vertical approach to public health—looking deep inside the state, down to the level of the individual to accord the individual a fundamental human right to health (Figure 1). The Preamble's concern with health equity involved not only equity between states but also within states, another indication of its vertical public health perspective.

FIGURE 1. HORIZONTAL AND VERTICAL GOVERNANCE APPROACHES



At a more practical level, vertical public health strategies against infectious diseases began to emerge as the dominant approach in international health policy. Experts have noted that, earlier in its development, WHO began to supplement the classical horizontal features of international health cooperation with vertical activities that sought to reduce infectious disease problems at their source within countries. Dyna Arhin-Tenkorang and Pedro Conceição traced, for example, the

move by international health policy away from “at the border” controls (such as the IHR address) to “meeting diseases at their sources.”¹⁰³ They argue that, after its formation in 1948,

[i]n a period of great vitality in the scientific understanding of infectious diseases and of progress in medical technology—in vaccines for prevention and drugs for treatment—the WHO added eliminating communicable diseases at their sources to its mandate of containing their spread through more traditional functions of coordinating international health regulations and serving as an information clearinghouse.¹⁰⁴

Large-scale disease eradication efforts led by WHO, such as those for smallpox (which succeeded)¹⁰⁵ and for malaria (which failed),¹⁰⁶ also reveal the growing preference among international health experts for vertical strategies that attacked infectious diseases as locally as possible. WHO also increasingly began to focus its efforts on providing country-level technical assistance to help countries, particularly those in the developing world, improve their national public health capabilities.¹⁰⁷ Such assistance also connects to a vertical public health strategy against infectious diseases.

The second major feature of the rise of the paradise paradigm is WHO’s penchant for focusing much of its attention on health conditions in the developing world. In the late 1970s, Charles Pannenberg observed that WHO “discards in all its principal policies both the first and the second world almost completely focusing on the L[ess] D[eveloped] C[ountry]-world.”¹⁰⁸ This turn towards the poor resonates with the emphasis in the Preamble of the WHO Constitution on the health needs of the most vulnerable populations and on the importance of equity in access to health-related resources and services.¹⁰⁹ WHO’s focus on the developing world also drew attention to the health gap existing between the rich and the poor parts of humanity, underscoring that such inequalities were issues of universal justice, not just national public health.

103. Dyna Arhin-Tenkorang & Pedro Conceição, *Beyond Communicable Disease Control: Health in the Age of Globalization*, in PROVIDING GLOBAL PUBLIC GOODS: MANAGING GLOBALIZATION 484, 485-87 (Inge Kaul et al. eds., 2003).

104. *Id.* at 487.

105. DAVID A. KOPLOW, SMALLPOX: THE FIGHT TO ERADICATE A GLOBAL SCOURGE 21-31 (2003) (describing the successful effort to eradicate smallpox).

106. JAVED SIDDIQI, WORLD HEALTH AND WORLD POLITICS: THE WORLD HEALTH ORGANIZATION AND THE UN SYSTEM 123-91 (1995) (analyzing the failed malaria eradication effort).

107. Arhin-Tenkorang & Conceição, *supra* note 103, at 487 (noting WHO’s efforts to help developing countries without sufficient capacity or resources to control infectious diseases).

108. CHARLES O. PANNENBORG, A NEW INTERNATIONAL HEALTH ORDER: AN INQUIRY INTO THE INTERNATIONAL RELATIONS OF WORLD HEALTH AND MEDICAL CARE 343 (1979).

109. WHO Const., *supra* note 66, pmbl., at 2.

The third feature of the rise of the paradise paradigm is the development of a holistic strategy to advance the right to health, universal health solidarity in the international community, and redistributive justice on a global scale. This strategy was called "Health for All," and it is crystallized in the 1978 Declaration of Alma-Ata issued by the WHO/UNICEF-sponsored International Conference on Primary Health Care.¹¹⁰ The Declaration of Alma-Ata echoes directly the main principles in the Preamble of the WHO Constitution, including the definition of health, the concept of health as a fundamental human right, the problem of inequality of health conditions between rich and poor, the right of people to participate in health policy, and the responsibility of governments for the health of their people fulfilled by the provision of health and social measures.¹¹¹ The Declaration of Alma-Ata also connected health policy to larger concerns of justice in international relations by linking progress on health to economic and social development based on the New International Economic Order,¹¹² promulgated in the 1970s by developing countries as a fundamental reordering of international economic relations.¹¹³

According to the Declaration of Alma-Ata, the "main social target of governments, international organisations and the whole world community in the coming decades should be the attainment by all peoples of the world by the year 2000 of a level of health that will permit them to lead a socially and economically productive life."¹¹⁴ The specific strategy selected in the Declaration of Alma-Ata to achieve "[a]n acceptable level of health for all the people of the world by the year 2000"¹¹⁵ was "primary health care."¹¹⁶ The Declaration defined primary health care as

essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at

110. Declaration of Alma-Ata, Sept. 12, 1978, *reprinted in* DAVID P. FIDLER, INTERNATIONAL LAW AND PUBLIC HEALTH: MATERIALS ON AND ANALYSIS OF GLOBAL HEALTH JURISPRUDENCE 549 (2000).

111. *Id.* at 549-50.

112. *Id.* at 549 ("Economic and social development, based on a New International Economic Order, is of basic importance to the fullest attainment of health for all and to the reduction of the gap between the health status of the developing and developed countries"); *id.* at 550 ("The International Conference on Primary Health Care calls for urgent and effective national and international action to develop and implement primary health care throughout the world and particularly in developing countries . . . in keeping with a New International Economic Order").

113. A. O. Adede, *The Minimum Standards in a World of Disparities*, in THE STRUCTURE AND PROCESS OF INTERNATIONAL LAW: ESSAYS IN LEGAL PHILOSOPHY DOCTRINE AND THEORY 1021 (R. St.J. Macdonald & Douglas M. Johnston eds., 1983) ("The 'New International Economic Order' is . . . aimed at achieving more access to and distribution of the world's riches through legal instruments in which the rights and interests of all the actors in the world arena are fully protected.").

114. Declaration of Alma-Ata, *supra* note 110, at 549.

115. *Id.* at 550.

116. *Id.* at 549.

every stage of their development in the spirit of self-reliance and self-determination.¹¹⁷

These elements of the Declaration of Alma-Ata are sufficient to convey the sense that this document, like the Preamble of the WHO Constitution, conceptualized public health in ways light years from the power paradigm. The power paradigm was only concerned with infectious diseases as exogenous threats to the state. The primary health care strategy of the Declaration of Alma-Ata included the infectious disease problem but went beyond it to include other kinds of public health problems. The minimum core of primary health care, according to the Declaration of Alma-Ata, includes:

education concerning prevailing health problems and the methods of preventing and controlling them; promotion of food supply and proper nutrition; an adequate supply of safe water and basic sanitation; maternal and child health care, including family planning; immunization against the major infectious diseases; prevention and control of locally endemic diseases; appropriate treatment of common diseases and injuries; and provision of essential drugs. . . .¹¹⁸

This baseline content for primary health care illustrates the much more ambitious vision Health for All represents than the one found in the power paradigm.

The promulgation of the Health for All strategy as the leading approach for international health policy in the coming decades occurs at exactly the same time WHO and other experts have recognized the failure of the classical regime as embodied in the IHR. By the late 1970s, compliance with the IHR was poor, at best, leading commentators to question whether the IHR made any contributions to international infectious disease control.¹¹⁹ In contrast to the collapse of the classical regime, alternative infectious disease strategies were scoring victories. Disease eradication efforts eliminated smallpox by the late 1970s, an achievement that owes little, if anything, to the IHR. The formulation of the Health for All strategy also radically departs from the framework found in the IHR to advance a comprehensive strategy to assist governments and international health organizations tackle infectious disease problems through the framework of respecting the individual's right to health, strengthening universalism in health policy, and stressing the connections between health inequalities and the pursuit of human justice. The Health for All strategy represents a historic moment when the paradise paradigm's eclipsing of the classical regime and the power paradigm as the driving force behind international health policy is completed.

117. *Id.*

118. *Id.* at 550.

119. See generally sources cited *supra* note 94.

IV. POWER SHIFT: EMERGING INFECTIOUS DISEASES AND BIOTERRORISM

A. *Paradise Lost: The Dismemberment of the Paradise Paradigm*

The rise of the paradise paradigm in international health policy reached its apogee with the Declaration of Alma-Ata and the launch of the Health for All strategy at the end of the 1970s. The subsequent decade proved, however, a disaster for the vision of public health contained in the Preamble of the WHO Constitution and promoted by the Declaration of Alma-Ata. The historic eradication of smallpox and the promulgation of the visionary Health for All strategy at the end of the 1970s were almost immediately followed by the emergence of a new plague, HIV/AIDS, which by the end of the 1980s had become a global nightmare of growing proportions.¹²⁰ The HIV/AIDS pandemic was a particularly cruel reminder, especially for developed countries, that humankind had not conquered infectious diseases.

The 1980s also witnessed the prestige and influence of WHO in international public health suffer, particularly under the leadership of Director-General Nakajima. The HIV/AIDS pandemic appeared to catch WHO by surprise, creating the impression that the Organization responded too slowly to a new disease threat. Other complaints were made against WHO, including mismanagement and corruption in the Organization and a loss of a sense of direction.¹²¹ By the latter half of the 1990s, public health experts lamented the ineffectiveness of WHO in the face of mounting global health challenges and called for sweeping reforms in the Organization.¹²²

The Declaration of Alma-Ata had linked its Health for All vision to the spirit and demands of the New International Economic Order (NIEO), a blueprint for more equitable and just international economic relations developed and pushed by developing countries during the 1970s. By the end of the 1980s, the NIEO had vanished from the world agenda, made irrelevant by the debt crisis that gripped the developing world in that decade, the collapse of the Soviet Union and the communist alternative to liberal capitalism, and the increasing importance of the processes of globalization.¹²³ At the end of the 1980s, events had bypassed the Health for All-NIEO linkage, leaving it sounding quaint and anachronistic, more like a museum exhibit than a vibrant vision of public health's future.

120. The worldwide number of cases of HIV/AIDS by the end of the 1980s was over 10 million. UNAIDS, *20 Years of HIV/AIDS* (June 2001) (on file with author).

121. Fiona Godlee, *WHO in Crisis*, 309 BRIT. MED. J. 1424 (1994); Fiona Godlee, *WHO in Retreat: Is It Losing Its Influence?*, 309 BRIT. MED. J. 1491 (1994).

122. Fiona Godlee, *WHO Reform and Global Health: Radical Restructuring Is the Only Way Ahead*, 314 BRIT. MED. J. 1359 (1997); see also FIDLER, *supra* note 110, at 109-17 (discussing WHO's decline and efforts at reform).

123. Anthony Anghie, *Finding the Peripheries: Sovereignty and Colonialism in Nineteenth-Century International Law*, 40 HARV. INT'L L.J. 1, 75 (1999) (arguing that the effort to create a New International Economic Order failed).

Public health generally, and infectious disease control specifically, entered the 1990s in a climate of turmoil. This decade would prove to be another pivotal period in the conceptualization of infectious disease threats, and the 1990s witnessed the dramatic re-emergence of the power paradigm in thinking about infectious disease threats. This part of the article analyzes the “power shift” that occurred in the area of infectious disease policy in the 1990s and early 2000s. Two developments drove the dynamics of the resurrection of the power paradigm—the phenomenon of emerging infectious diseases (Part IV.C) and the rise of the threat of bioterrorism (Part IV.D). As subsequent sections examine, the power paradigm returns with a vengeance during this phase of public health history; but the paradigm also exhibits new features that distinguish it from its older manifestation.

B. Revenge of the Germs: Emerging Infectious Diseases and Bioterrorism

The power paradigm’s structure and dynamics provide sufficient guidance to anticipate what would be required for the paradigm to resurface in policy thinking about infectious diseases. The driving force behind the power paradigm is the sense of vulnerability of the great powers to pathogenic threats. The vulnerability of the great powers to infectious disease threats in the latter half of the nineteenth century arose because increased trade and travel, combined with inadequate national public health infrastructures, produced fertile conditions for epidemic diseases. Uncoordinated national efforts to address this heightened vulnerability did little to stop border-hopping bugs but significantly burdened international commercial activity, much to the displeasure of merchants and the governments of great trading nations.

For the power paradigm to rise again, we would have to expect that the great powers’ sense of vulnerability to infectious diseases would increase significantly. The article earlier noted that, during most of the post-World War II period, the interest of the great powers in international infectious disease control waned considerably because they had developed stronger national public health capabilities and harnessed effectively the new arsenal of antimicrobial pharmaceuticals, which allowed them to reduce infectious disease morbidity and mortality significantly.¹²⁴ A renewed sense of vulnerability should arise, therefore, from a combination of three factors: (1) trade and travel proving effective transmission routes for pathogenic threats; (2) inadequate national public health capabilities to deal with global microbial traffic; and (3) the declining effectiveness of the arsenal of antimicrobial pharmaceuticals. As the analysis below of the phenomenon of emerging infectious diseases shows, each of these factors was central to worries in the 1990s and early 2000s about the growing infectious disease threat.

The re-emergence of the power paradigm involves another significant factor that was not present in the paradigm’s original development—the rise of the threat

124. See *supra* notes 99-102 and accompanying text.

of bioterrorism. Although the problem of biological weapons arose in the same period as the development of the power paradigm,¹²⁵ it did not play a role in the paradigm's conceptualization of infectious disease threats. The threat of biological weapons generally, and bioterrorism specifically, plays, however, a huge role in the return of the power paradigm. As explored more below, the main reason for this significant impact is that exogenous threats to a nation's interests, security, and power from the malevolent use of microbes fit the logic of the power paradigm like a tailor-made glove. The impact of this seamless interface on conceptualizing pathogenic threats in the twenty-first century is profound, and I explain this impact in detail below.

C. *The Crisis in Emerging Infectious Diseases*

One of the most important developments in public health policy nationally and internationally in the 1990s was the recognition that infectious diseases were making a comeback, threatening population and individual health in both developed and developing countries. WHO declared in 1996, for example, that the world was confronting a crisis in the form of emerging infectious diseases.¹²⁶ Public health experts defined "emerging infectious diseases" as "diseases of infectious origin whose incidence in humans has increased within the past two decades or threatens to increase in the near future."¹²⁷ This definition encompassed not only diseases never previously identified, such as HIV/AIDS, but also diseases that many thought had been subdued, such as tuberculosis.¹²⁸

A comprehensive description of the emerging infectious disease phenomenon is beyond the scope of this article,¹²⁹ but central to my argument are the political dynamics of the crisis in emerging infectious diseases and how these dynamics connect to the logic of the power paradigm. The "crisis in emerging infectious diseases" becomes politically important because of the engagement of the great powers, particularly the United States, with this issue. This engagement signaled a new sense of vulnerability developing on the part of the great powers concerning naturally occurring pathogenic threats.

The return of the power paradigm can be seen clearly by examining how the emergence and re-emergence of infectious diseases was being conceptualized in the 1990s. Much of the early and most prominent analysis on emerging infectious diseases came from the United States, the leading great power in the international

125. See *infra* note 158 and accompanying text.

126. WORLD HEALTH ORGANIZATION, WORLD HEALTH REPORT 1996: FIGHTING DISEASE, FOSTERING DEVELOPMENT 105 (1996).

127. U.S. CENTERS FOR DISEASE CONTROL AND PREVENTION, ADDRESSING EMERGING INFECTIOUS DISEASE THREATS: A PREVENTION STRATEGY FOR THE UNITED STATES 1 (1994); WORLD HEALTH ORGANIZATION, *supra* note 126, at 15.

128. *Id.*

129. The most recent comprehensive overview of the emerging infectious disease threat is MICROBIAL THREATS TO HEALTH, *supra* note 6.

system. The U.S. Institute of Medicine issued a seminal report in 1992 on mounting microbial threats to health in the United States.¹³⁰ The U.S. government followed the Institute of Medicine's lead by examining the threat of emerging infectious diseases. The U.S. Centers for Disease Control and Prevention published its first report on emerging infectious diseases, *Addressing Emerging Infectious Disease Threats: A Prevention Strategy for the United States*, in 1994.¹³¹ In 1995, a U.S. government interagency working group released *Infectious Disease—A Global Health Threat*, which studied the dangers that infectious disease resurgence created for U.S. foreign policy and national security.¹³²

The U.S. government continued to elevate emerging infectious diseases as a matter of U.S. foreign policy concern in the latter half of the 1990s. Vice President Gore announced a new national initiative to address emerging infectious diseases in 1996, arguing that "there is no more menacing threat to global health today than emerging infectious diseases."¹³³ Donna Shalala, Secretary of Health and Human Services, described the Clinton administration as waging war on infectious diseases.¹³⁴ The United States placed the threat of emerging infectious diseases on diplomatic agendas, such as bilateral diplomacy with Russia and South Africa, G7 summit meetings, and the Asia Pacific Economic Cooperation forum.¹³⁵ In the last year of the Clinton administration, the National Intelligence Council of the Central Intelligence Agency issued a now famous intelligence estimate that assessed the threat of infectious diseases in terms of U.S. foreign policy and national security interests.¹³⁶ These activities, and others, stimulated a host of analyses that conceptualized emerging infectious diseases as exogenous threats to foreign policy and national security interests.¹³⁷

130. INSTITUTE OF MEDICINE, *EMERGING INFECTIONS: MICROBIAL THREATS TO HEALTH IN THE UNITED STATES* (1992).

131. U.S. CENTERS FOR DISEASE CONTROL AND PREVENTION, *supra* note 127.

132. NATIONAL SCIENCE AND TECHNOLOGY COUNCIL COMMITTEE ON INTERNATIONAL SCIENCE, ENGINEERING, AND TECHNOLOGY WORKING GROUP ON EMERGING AND RE-EMERGING INFECTIOUS DISEASES, *INFECTIOUS DISEASES—A GLOBAL HEALTH THREAT* (1995) [hereinafter Ciset Report].

133. Al Gore, Address Before the National Council for International Health 2 (June 12, 1996).

134. Ellen McCleskey, *Gore Unveils New Initiative for Fighting Infectious Diseases*, BNA HEALTH CARE DAILY (June 13, 1996), available in LEXIS, Nexis Library, Arcnws File.

135. See David P. Fidler, *Return of the Fourth Horseman: Emerging Infectious Diseases and International Law*, 81 MINN. L. REV. 771, 784-85 (1997).

136. National Intelligence Council, *The Global Infectious Disease Threat and Its Implications for the United States* (National Intelligence Estimate 99-17D), available at http://www.cia.gov/nic/other_globalinfectious.html (last visited Feb. 7, 2004) (copy on file with the *McGeorge Law Review*).

137. See INSTITUTE OF MEDICINE, *AMERICA'S VITAL INTEREST IN GLOBAL HEALTH* (1997); CHEMICAL AND BIOLOGICAL ARMS CONTROL INSTITUTE AND CENTER FOR STRATEGIC AND INTERNATIONAL STUDIES INTERNATIONAL SECURITY PROGRAM, *CONTAGION AND CONFLICT: HEALTH AS A GLOBAL SECURITY CHALLENGE* (2000) [hereinafter *CONTAGION AND CONFLICT*]; BAN, *supra* note 2; Kassalow, *supra* note 2; Nicholas N. Eberstadt, *The Future of AIDS: Grim Toll in Russia, China, and India*, FOREIGN AFF., Nov./Dec. 2002, at 22; BROWER & CHALK, *supra* note 1; BIOLOGICAL SECURITY AND PUBLIC HEALTH, *supra* note 1; PRICE-SMITH, *supra* note 37; ANDREW PRICE-SMITH, *PRETORIA'S SHADOW: THE HIV/AIDS PANDEMIC AND NATIONAL SECURITY IN SOUTH AFRICA* (Health and Security Series Special Report No. 4, 2002); YANZHONG HUANG, *MORTAL PERIL: PUBLIC HEALTH IN CHINA AND ITS SECURITY IMPLICATIONS* (Health and Security Series Special Report No. 7, 2003).

These efforts to elevate emerging infectious diseases as a U.S. foreign policy and national security concern resonate with the power paradigm. The substantive tenor and purpose of these analyses do not reflect the vision for public health and infectious disease control contained in the Preamble of the WHO Constitution and the Declaration of Alma-Ata. Framing infectious diseases as an exogenous threat to U.S. foreign policy and national security conceptualizes pathogenic threats in the same manner as the power paradigm.

One way to illustrate the parallels between much of the literature on emerging infectious diseases and the power paradigm is to examine how infectious disease problems in the developing world were being framed as problems. The very moniker “emerging infectious diseases” denotes a focus attuned to developed countries rather than developing nations. For many parts of the developing world, infectious diseases never disappeared as a source of sickness, disability, and death. The Institute of Medicine’s Committee on Emerging Microbial Threats in the 21st Century observed in 2003 that:

Most developing nations have not shared fully in the public health and technological advances that have aided in the fight against infectious diseases in the United States. . . . In developing countries, clean water is scarce; sewage systems are overwhelmed or nonexistent; the urban metropolis is growing exponentially as the global market economy expands and rural agricultural workers migrate to cities; and economic need, political conflict, and wars are displacing millions of people and creating growing refugee populations.¹³⁸

In developing countries, infectious diseases had not un-emerged. This context provoked Paul Farmer to ask pointedly: “If certain populations have long been afflicted by these disorders, why are the diseases considered ‘new’ or ‘emerging’? Is it simply because they have come to affect more visible—read, more ‘valuable’ persons?”¹³⁹ The use of the term “emerging infectious diseases” reflects the driving force behind the renaissance in interest in infectious diseases—the powerful again felt vulnerable and threatened.

The return of the power paradigm does not, however, exactly mirror its earlier form. As discussed earlier, the classical regime’s rules demonstrated that the great powers wanted to reduce their vulnerability to disease importation and the costs national quarantine measures used by other countries created for international trade. The emergence of the power paradigm in the 1990s and early 2000s also contained growing fears about disease importation into developed nations through the channels of international trade and travel.

138. MICROBIAL THREATS TO HEALTH, *supra* note 6, at 23.

139. FARMER, *supra* note 42, at 39.

Although discourse on emerging infectious diseases included discussion about trade-restricting health measures, the return of the power paradigm did not focus as heavily on the costs such measures imposed on the trade of developed nations. One reason for this difference is that the kind of disruptive national quarantine measures used routinely in the late nineteenth and early twentieth centuries had disappeared throughout the world. Thus, national quarantine practices no longer constituted the kind of burden on trade they did in the earlier era. The lack of compliance with the IHR's rules on trade- and travel-restricting health measures did not generally affect the trade of developed countries, which were not countries that exported epidemic diseases subject to the IHR.

The interests developed countries had in regulating trade-restricting health measures shifted from the IHR to international trade law in the post-World War II period, first under the General Agreement on Tariffs and Trade and then under the World Trade Organization (WTO) after its formation in 1995.¹⁴⁰ The Uruguay Round of trade negotiations that produced the WTO also created a new international trade agreement, the Agreement on the Application of Sanitary and Phytosanitary Measures, which became, for developed countries, more important for protecting trade from health-related restrictions than the IHR.¹⁴¹

Trade-related concerns of the great powers factored into the return of the power paradigm in a way different from the earlier development of this paradigm. In the 1990s and early 2000s, infectious diseases overseas caused friction for the trade interests of the great powers in the area of intellectual property rights rather than the traditional trade-in-goods area. Heightened protection for intellectual property rights, including patents, under the WTO's Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS)¹⁴² has caused enormous controversy in global public health because of concerns that patent protection for pharmaceuticals will decrease access to essential medicines in developing countries.¹⁴³ Severe infectious disease problems in the developing world, especially HIV/AIDS, contributed to a global campaign of developing-country governments and non-governmental organizations to protect and clarify the public health flexibilities and safeguards in TRIPS. This campaign forced the United States and the European Union to retreat on their TRIPS positions and accept virtually all the developing-country demands in the Doha Declaration on the TRIPS Agreement

140. Fidler, *supra* note 52, at 286.

141. Agreement on the Application of Sanitary and Phytosanitary Measures, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations, Annex 1A-3.

142. Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations, Annex 1C.

143. Ellen 't Hoen, *TRIPS, Pharmaceutical Patents, and Access to Essential Medicines: A Long Way from Seattle to Doha*, 3 CHI. J. INT'L L. 27, 29 (2002) ("The implementation of TRIPS . . . is expected to impact the possibility of obtaining new essential medicines at affordable prices.").

and Public Health, concluded in November 2001.¹⁴⁴ The TRIPS controversy within the WTO again revealed the great powers having to manage friction in their trade interests and relations caused by infectious diseases in developing countries and regions.

The concerns about emerging infectious diseases also added a new feature to the power paradigm not present in its prior incarnation. In the 1990s and early 2000s, many arguments were made that infectious disease problems in developing countries represented a national security threat to developed states.¹⁴⁵ Such arguments were new because, prior to these assertions, “[h]ealth has rarely, if ever, been defined as a national security issue.”¹⁴⁶ The infectious disease-national security linkage arguments asserted that infectious diseases in developing countries, particularly HIV/AIDS, could help undermine state capacity for good governance and economic productivity.¹⁴⁷ Declining state capacity contributes to political instability nationally and regionally, creating indirect foreign policy and national security problems for developed countries.¹⁴⁸ Thus, developed countries have foreign policy and national security interests in helping developing countries tackle their internal infectious disease problems.¹⁴⁹

At first glance, this line of argument seems to support the principle found in the Preamble of the WHO Constitution, which provided: “Unequal development in different countries in the promotion of health and control of disease, especially communicable disease, is a common danger.”¹⁵⁰ The assertion that HIV/AIDS in sub-Saharan Africa represents a national security threat to the United States does not, however, flow from the tenets of the paradise paradigm. The appeal in this assertion does not promote the individual right to health, human solidarity through health, or concepts of universal justice, but seeks to address a perceived threat from infectious diseases to U.S. foreign policy and national security interests. The argument links infectious disease problems in the developing world with the selfish

144. World Trade Organization, Doha Ministerial Declaration on the TRIPS Agreement and Public Health, WTO Doc. WT/MIN(01)/DEC/2 (2001). For an overview of the process leading to the Doha Declaration, see ‘t Hoen, *supra* note 143, at 30-43.

145. The infectious disease-national security connection was, in the case of the United States, crystallized in the Central Intelligence Agency’s report on the implications of the global infectious disease threat for the United States, which presented infectious diseases as a national security concern for the United States. See National Intelligence Council, *supra* note 136.

146. CONTAGION AND CONFLICT, *supra* note 137, at vii.

147. See, e.g., PRICE-SMITH, *supra* note 37, at 121 (arguing that “infectious diseases may in fact contribute to societal destabilization and to chronic low-intensity intra-state violence, and in extreme cases it may accelerate state failure”).

148. *Id.* at 122.

149. CISET REPORT, *supra* note 132, at 11 (Arguing that “the improvement of international health is a valuable component of the U.S. effort to promote worldwide political stability through sustainable economic development. . . . Thus, the effort to build a global surveillance and response system is in accord with the national security and foreign policy goals of the United States.”).

150. WHO Const., *supra* note 66, pmbll., at 2.

political calculations of the great powers rather than moving such problems “beyond power” as the paradise paradigm attempts.

The frequency with which infectious disease problems in developing countries were framed as foreign policy and national security concerns of the United States and other powerful nations reveals, in many respects, just how far behind events had left the paradise paradigm. First, arguments that epidemics in developing countries of HIV/AIDS and other diseases threatened the foreign policy and national security interests of the great powers were indicative of how bad the infectious disease problem in the developing world had become. Instead of Health for All by the Year 2000, the developing world was in the clutches of the worst infectious disease epidemic in human history, HIV/AIDS, by the end of the twentieth century. Faced with such a calamity, public health officials and political leaders did not rush to re-embrace the vision in the Declaration of Alma-Ata. The HIV/AIDS calamity, and other severe infectious disease problems, such as tuberculosis and malaria, was not “beyond power,” but desperately needed the application of serious material power, which could only be supplied and exercised by developed nations.

This dynamic explains why experts repeatedly framed infectious disease problems in developing countries as threats to U.S. national security and foreign policy rather than as evidence of the need for a rejuvenated Health for All strategy. The paradise paradigm was not necessarily obliterated in this process because the use of the power paradigm by some represented more a tactical than strategic move in advancing global health. Efforts to use emerging infectious diseases to redefine “security”¹⁵¹ illustrate that many involved in this issue wanted to appropriate the political appeal of “security” but transform it for ends more in tune with human rights, health solidarity, and universal justice. Commentators chose, thus, to analyze infectious diseases as threats to “human security,” a reformulation of the security concept that radically shifts the focus of security thinking from material state power to threats to individual health and well-being. According to the United Nations Development Programme (UNDP):

The concept of security has for too long been interpreted narrowly: as security of territory from external aggression, or as protection of national interests in foreign policy or as global security from the threat of nuclear holocaust. . . . Forgotten were the legitimate concerns of ordinary people who sought security in their daily lives.¹⁵²

151. See, e.g., PRICE-SMITH, *supra* note 37, at 119 (using a non-traditional definition of security to examine infectious disease threats); BROWER & CHALK, *supra* note 1, at 4-7 (adopting “human security” as a framework through which to analyze infectious disease threats).

152. UNITED NATIONS DEVELOPMENT PROGRAMME, HUMAN DEVELOPMENT REPORT 1994, at 22 (1994).

The UNDP maintained that human security involves protecting ordinary people from chronic threats, such as hunger, disease, and repression, and from sudden and harmful disruptions to the pattern of daily life.¹⁵³

The bottom line of arguments that redefine security is, however, clear and in stark contrast to the paradise paradigm: Selfish incentives have to be constructed to prompt increased great power concern and commitment to the problem of infectious diseases, especially in developing countries. This bottom line appears in other discourses developing in the 1990s and early 2000s on infectious disease problems in the developing world. The famous Report of the Commission on Macroeconomics and Health asserted that developed countries should vastly increase their financial assistance concerning developing-world health problems because such problems significantly erode prospects for economic development in developing countries.¹⁵⁴ The message the report sent is that infectious diseases in developing countries create macroeconomic trouble that will adversely affect developed countries over time.¹⁵⁵ Thus, developed countries have a direct self-interest in funding substantial improvements in the health conditions of the developing world. Although this report supported the redistribution of resources from rich to poor, the reasoning used in the report to reach this conclusion bears no resemblance to the principles informing the paradise paradigm.¹⁵⁶

Another aspect of the efforts to jump start great power concern about infectious diseases in the developing world offers a less subtle window on the return of the power paradigm. The worsening of the infectious disease problem in developing countries, highlighted by the havoc-wreaking HIV/AIDS pandemic, has reached such a dismal point that the great powers simply could no longer afford to ignore it. Continuing to appear indifferent or complacent about the HIV/AIDS catastrophe threatened to complicate other foreign policy and national security objectives the great powers had, especially the United States. The deepening HIV/AIDS crisis complicated U.S. efforts to garner support for progress in international trade liberalization (e.g., the TRIPS and access to essential medicines controversy) and for the post-September 11 global war on terrorism.

153. *Id.* at 23. For the UNDP, human security serves as an umbrella concept for seven different kinds of security needs: (1) freedom from poverty (economic security); (2) access to food (food security); (3) access to health services and protection from disease (health security); (4) protection from environmental degradation (environmental security); (5) protection against violent threats to personal safety (personal security); (6) protection for indigenous cultures and ethnic communities (community security); and (7) protection of civil and political rights and freedom from political oppression (political security). *Id.* at 24-25.

154. *See* COMMISSION ON MACROECONOMICS AND HEALTH, MACROECONOMICS AND HEALTH: INVESTING IN HEALTH FOR ECONOMIC DEVELOPMENT 4 (2001) (recommending that high-income countries "commit vastly increased financial assistance in the form of grants, especially to countries that need help most urgently, which are concentrated in sub-Saharan Africa").

155. *Id.* at 28 (Arguing that developed-country spending on health in poor countries is "an investment in the well-being of the rich countries as well as the poor. The evidence is stark: disease breeds instability in poor countries, which rebounds on the rich countries as well.").

156. The report mentions, for example, the "inclusion of health among the basic human rights enshrined in international law," but does not return to the right to health at any point in its analysis. *Id.* at 21.

Resolving the crisis is not a U.S. strategic objective; but the horrific nature of the problem, and developing-country anger and demands for assistance, put the United States in the position of having to do something significant to reduce the friction the issue was causing U.S. diplomacy on matters of central foreign policy and national security concern.¹⁵⁷

Even though the earlier formulation of the power paradigm did not include extensive consideration of infectious disease problems inside poor, weak countries, the incorporation of these problems into infectious disease diplomacy in the 1990s and early 2000s still highlights the central features of the power paradigm: Infectious diseases are framed as exogenous threats to the foreign policy interests and national security of the great powers. The heightened risk of disease importation by developed countries in the era of globalization represents a direct exogenous threat that the literature on emerging infectious diseases repeatedly emphasized. The negative consequences of disease-exacerbated political and economic problems in developing countries constitute an indirect exogenous threat infectious diseases pose for developed states. The policy advice urges the great powers to reduce their vulnerability to the direct and indirect exogenous threats by exercising their material power in ways that mitigate these threats.

D. Bioterrorism: A New Ally for the Power Paradigm

The development of the power paradigm in the first century of international health diplomacy concerned only naturally occurring infectious diseases. It was not concerned with the threat posed by the possible use of biological weapons. Such weapons were a concern of international politics in the interwar period, as evidenced by the extension of the ban on the first-use of chemical weapons to biological weapons in the 1925 Geneva Protocol.¹⁵⁸ The concerns states had about the use of biological weapons in warfare did not, however, affect the power paradigm and its classical regime, which remained focused on naturally occurring pathogenic threats. Further, in this time period, states expressed no concerns about the use of biological weapons by terrorist groups. The public health concerns of the power paradigm and the national security problems posed by biological weapons never converged in the initial development of the power paradigm.

The power paradigm and national security worries about biological weapons continued on divergent paths until the 1990s. Fears about state use of biological weapons against the United States produced some public health activity after World War II, contributing, for example, to the CDC's development of the Epidemic Intelligence Service.¹⁵⁹ After this brief convergence of public health and

157. This dynamic may explain the five-year \$15 billion Emergency Plan for AIDS Relief announced in President Bush's State of the Union Address in January 2003. Bush, *supra* note 4.

158. Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, June 17, 1925, 44 L.N.T.S. 65.

159. Foege, *supra* note 73, at 18.

national security, the threat of biological weapons faded as a concern of U.S. public health authorities.¹⁶⁰ The biological weapons issue remained strictly an arms control issue. The adoption of the 1972 Biological and Toxin Weapons Convention supplemented the 1925 Geneva Convention's ban on the first-use of biological weapons with a prohibition on the development, production, acquisition, and stockpiling of biological weapons by states.¹⁶¹

Public health and national security began to converge on biological weapons in the 1990s as fears of biological weapons proliferation among states and terrorist groups increased. Revelations about the scale of the former Soviet Union's offensive biological weapons program and the extent of Iraqi efforts to develop a biological weapons capability in the early 1990s raised the threat profile of biological weapons as a national security concern.¹⁶² The pursuit and terrorist use of weapons of mass destruction (WMD) by Aum Shinrikyo in Japan in the mid-1990s turned the prospect of WMD terrorism from speculation to reality.¹⁶³ The United States, and other developed nations, faced the challenge of defending against and preparing for bioterrorism.¹⁶⁴

The latter half of the 1990s saw the U.S. federal government begin to formulate strategies for dealing with potential bioterrorist attacks. Experts argued that the front-line of defense against bioterrorism was not the traditional first-responders to emergencies, such as the police and firefighters.¹⁶⁵ The nation's

160. *Id.* (noting that, although the Epidemic Intelligence Service "program was conceived because of concerns about biological warfare, . . . the major benefit of the program has been to improve the practice of public health in this country").

161. Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction, Apr. 10, 1972, 11 I.L.M. 309 (1972).

162. See R. P. Kadlec et al., *Biological Weapons Control: Prospects and Implications for the Future*, 278 JAMA 351 (1997).

163. On Aum Shinrikyo, see David E. Kaplan, *Aum Shinrikyo* (1995), in TOXIC TERROR: ASSESSING TERRORIST USE OF CHEMICAL AND BIOLOGICAL WEAPONS 207 (Jonathon B. Tucker ed., 2000).

164. David P. Fidler, *Bioterrorism, Public Health, and International Law*, 3 CHI. J. INT'L L. 7, 9-10 (2002) ("The United States reacted to Aum Shinrikyo's chemical and attempted biological terrorism by focusing on domestic preparedness for catastrophic terrorism. . . . At the federal level, the Defense Against Weapons of Mass Destruction Act of 1996 symbolized this policy shift toward preparedness for catastrophic terrorism.").

165. *Hearing on Terrorism Preparedness: Medical First Response, Before the House Comm. on Government Reform, Subcommittee on National Security, Veteran Affairs, and International Relations*, Sept. 22, 1999, Testimony of Tara O'Toole, available at http://www.fas.org/irp/congress/1999_hr/990922-testimony_2.htm (last visited Feb. 8, 2004) (copy on file with the *McGeorge Law Review*); David L. Heymann, *Memorandum to the President: Emerging and Epidemic-Prone Diseases: Threats to Public Health Security*, in BIOLOGICAL SECURITY & PUBLIC HEALTH, *supra* note 1, at 49, 51. With respect to the anthrax attacks in the United States, the author comments that:

[d]iagnosis and treatment was done by first responder health workers, followed by a public health response of the affected state by the Centers for Disease Control and Prevention (CDC). . . . Just as the health system was the first to detect cases and raise the alarm, it remained at the front line throughout the public health response, alongside the criminal and other elements of the response.

Id.

public health system was the first line of defense, and the quality of that system would determine how effectively the country could respond to a bioterrorist attack.

This perspective brought bioterrorism preparedness efforts and public health efforts on emerging infectious diseases together. Experts identified synergies between preparing for both types of pathogenic threats. For example, improved infectious disease surveillance in the United States for naturally occurring diseases would benefit efforts to defend against bioterrorist attacks.¹⁶⁶ Similarly, money devoted to strengthening the nation's defenses against bioterrorism would also help the country deal with the growing threat of naturally occurring infectious diseases.

The rise of policy concern with bioterrorism in the 1990s and early 2000s occurs simultaneously with the return of the power paradigm in connection with infectious diseases, and bioterrorism significantly affects the conceptualization of pathogenic threats in the 1990s and early 2000s.¹⁶⁷ The nature of the bioterrorist threat powerfully reinforced the power paradigm's view of infectious diseases as exogenous threats to a nation's interests, security, and power. Bioterrorism encouraged policy responses that sought to reduce the state's vulnerability to exogenous pathogenic threats. The intense focus on national bioterrorism preparedness strategies helped subordinate foreign policy and national security concerns about infectious disease problems in developing countries, especially after the anthrax attacks in the United States in 2001.

Bioterrorism preparedness did not ignore international public health cooperation,¹⁶⁸ but the focus on bioterrorism helped shape such cooperation in ways that resonate with the power paradigm. For example, experts argued that improved global infectious disease surveillance was important for U.S. defenses against bioterrorist attacks.¹⁶⁹ Thus, the United States should support WHO efforts to strengthen global disease surveillance as part of protecting U.S. national security from bioterrorist attack. These policy arguments connected with the concerns of U.S. vulnerability to imported infectious diseases to produce strong U.S. national

166. Heymann, *supra* note 165, at 54 (arguing that "there must be increased understanding by the U.S. Congress and the governments of other countries that strengthening public health for naturally occurring infectious diseases will ensure detection and response to those that may be deliberately caused...").

167. *Id.* at 50 (arguing that, after the anthrax attacks in the United States, "preparedness for a possible bioterrorist attack has become one of the highest profile security issues pertaining to infectious diseases and international public health security").

168. The United States and other countries created, for example, the Ottawa Plan to improve international cooperation on bioterrorism preparedness. See Fidler, *supra* note 164, at 17. Under the Ottawa Plan, "the strengthening of global capacity for infectious disease surveillance and outbreak response is an essential component of preparedness for a possible attack using biological weapons." Heymann, *supra* note 165, at 50.

169. Foegen, *supra* note 73, at 22.

Protection of the United States requires increased cooperation with, and support for, WHO. . . . The United States could improve global health security while improving national health security by providing people and resources to the World Health Organization to assist in their development of an optimal system of gathering pertinent health information from the entire world.

Id.

interests in improving global disease surveillance capabilities. This policy direction conceptualizes infectious diseases, both naturally occurring and intentionally caused, as exogenous threats to the interests, security, and power of sovereign states, including the world's hegemon.

The impact of the bioterrorism problem on conceptualizing pathogenic threats can be seen in WHO activities. The policy convergence generated for public health by emerging infectious diseases and bioterrorism gave WHO (as well as national public health agencies) the opportunity to appropriate the concept of "security" in its infectious disease activities. The effort to revise the IHR in the 1990s and early 2000s became, thus, part of WHO's strategy to improve "global health security."¹⁷⁰ WHO interpreted this concept broadly, in part to support those who argued that "security" needed to have an expanded definition and to be moved away from its traditional narrow focus on the material power and interests of the state.¹⁷¹

"Security" means freedom from risk or danger. Health security means, therefore, freedom from risks and dangers to health. Global health security means freedom from risks and dangers to health arising from global interactions among peoples and states. The global health security concept also sends the message that a nation's health security is intertwined with the rest of the world through the processes of globalization.¹⁷² A country that wants to reduce its vulnerability to infectious disease risks and dangers must participate in global endeavors to reduce infectious disease problems.

The logic of the global health security concept interfaces directly into the premises of the power paradigm. The power paradigm's conceptualization of pathogenic threats flows from awareness of the state's vulnerability to infectious disease risks and dangers. Addressing such vulnerability requires cooperation among states and the building of regimes to regulate international cooperation on infectious disease control. The power paradigm produced, for example, the classical regime.

Even with its broad focus, WHO's "global health security" constitutes a conceptualization of infectious disease threats that is different from the vision contained in Preamble of the WHO Constitution and the Declaration of Alma-Ata.

The Preamble of the WHO Constitution provided that "[u]nequal development in different countries in the promotion of health and control of disease, especially communicable disease, is a common danger."¹⁷³ The premises of the paradise paradigm held that the common danger should be primarily reduced by dealing

170. *Global Health Security*, 76 WEEKLY EPIDEMIOLOGICAL RECORD 166 (2001); WORLD HEALTH ORGANIZATION, GLOBAL DEFENSE AGAINST THE INFECTIOUS DISEASE THREAT 12-19 (2003) (discussing global health security).

171. WORLD HEALTH ORGANIZATION, *supra* note 170, at 14 (arguing that traditional conceptions of security have been altered by the end of the Cold War and the forces of globalization).

172. *Id.* at 15 (arguing that "the resurgence of the infectious disease threat has global causes and consequences that can only be addressed through global solutions supported by strong national public health capacity").

173. WHO Const., *supra* note 66, pmbl., at 2.

with the underlying inequality of health conditions that individuals face within and among countries by a redistribution of resources from rich to poor. The global health security concept subordinates this objective to strategies aimed at reducing national vulnerabilities of states to exogenous pathogenic threats, namely improved global disease surveillance and outbreak response and the restoration of national public health capabilities.

The impact of bioterrorism on the power paradigm sharpened the focus on national vulnerabilities and the construction of approaches to reduce exogenous threats to them. In addition, the direct threat bioterrorism presented to states further marginalized the belief that redistributive justice would remove indirect dangers from pathogenic problems in poor countries. Bioterrorism was about power, and preparedness for this threat could not rely on strategies concocted to take public health “beyond power” into a post-historical world where human rights, health solidarity, and universal justice prevailed. The Health for All vision simply lacked credibility as a basis for policy in the face of the threat of bioterrorism.

The rise of the bioterrorism problem contributed, thus, to the return of the power paradigm in two fundamental ways. First, bioterrorism reinforced the power paradigm’s conceptualization of infectious diseases as exogenous threats to a state’s interests, security, and power. The synergy between policy responses to emerging infectious diseases and bioterrorism preparedness was a synergy based on reducing national vulnerabilities to pathogenic threats. In terms of naturally occurring infectious diseases, the synergy is focused on potential direct threats such as severe acute respiratory syndrome (SARS) or pandemic influenza rather than indirect threats posed by HIV/AIDS in sub-Saharan Africa.

Second, the policy attention and funding concentrated on bioterrorism, especially in the United States, channeled the power paradigm’s return more forcefully toward bioterrorism preparedness than addressing threats from naturally occurring infectious diseases. This new policy climate makes efforts to address health inequalities between developed and developing nations politically and financially more difficult, which echoes the lack of interest the initial development of the power paradigm showed for infectious disease problems inside weaker states in the international system.

V. CAUGHT BETWEEN PARADISE AND POWER: THE CHALLENGE OF THE AXIS OF ILLNESS

A. *Navigating the Space Between*

The paradise and power “shifts” analyzed in Parts III and IV outline two distinct ways of conceptualizing pathogenic threats to national and international public health. The power and paradise paradigms share little, if any, common ground, making conceptual melding of these two perspectives difficult. In my work on global public health, I sense both reluctant acceptance that power politics has returned to public health and a desire not to allow the return of power to obliterate

the ideals of the Preamble of the WHO Constitution and the Declaration of Alma-Ata. This situation encourages people to explore the space between power and paradise in order to construct ways to advance both aspects of the world politics of public health.

Attempts to navigate the space between the power and paradise paradigms come in different forms, and three prominent arguments involve: (1) the attempt to redefine “security” in order to advance a strategy for addressing pathogenic threats;¹⁷⁴ (2) the effort to make pathogenic threats problems of macroeconomic importance;¹⁷⁵ and (3) the appeal to the developed nations to exercise “soft power” leadership in helping the developing world address its mounting infectious disease problems.¹⁷⁶ These arguments attempt primarily to address the problem of naturally occurring infectious diseases rather than bioterrorism, which has become firmly planted in traditional national security frameworks. Each argument seeks the same objective—constructing incentives for the great powers to exercise their power in ways that will improve the deteriorating infectious disease situation in the developing world. Navigating the space between the power and paradise paradigms appears, thus, to resemble an attempt to salvage some paradise through the enlightened application of power.

This context brings my analysis back to Kagan’s exploration of U.S. and European world views. Kagan chastises growing European hostility toward American power by arguing that Europe’s move “beyond power into a self-contained world of laws and rules and transnational negotiation and cooperation”¹⁷⁷ is only possible because of American power and the willingness of the United States to use it.¹⁷⁸ During the Cold War, the power of the United States shielded Europe from the Soviet military and political threat; and the Europeans used the space created by the American shield to rebuild their relations with each other through the institutions and processes that eventually became the European Union. According to Kagan, Europe’s “post-historical paradise of peace and relative prosperity” is built on the foundation of U.S. power, not in opposition to it or as a viable competitor of it.¹⁷⁹ The European paradise represents weakness encased in the hard shell of American military, political, and economic power. Europeans are, thus, caught in the political space between paradise and power.

174. See, e.g., BROWER & CHALK, *supra* note 1, at 1-12 (using the human security concept to analyze public health and U.S. national security); PRICE-SMITH, *supra* note 37, at 119 (rejecting traditional notions of security in analyzing infectious disease threats); WORLD HEALTH ORGANIZATION, *supra* note 170, at 14 (arguing that traditional notions of security are breaking down and broadening to include threats such as those posed by infectious diseases).

175. WORLD BANK, WORLD DEVELOPMENT REPORT 1993: INVESTING IN HEALTH (1993); COMMISSION ON MACROECONOMICS AND HEALTH, *supra* note 154.

176. Kickbusch, *supra* note 39, at 138 (urging the United States to develop soft power leadership on global health).

177. KAGAN, *supra* note 8, at 3.

178. *Id.* at 72.

179. *Id.* at 72-73.

Kagan's insight into European and American world views also has relevance for the efforts being made to navigate between the power and paradise paradigms on pathogenic threats. Each of the three main navigational strategies mentioned above seeks to achieve some of the goals within the paradise paradigm through motivating the great powers to see the infectious disease crisis in the developing world as of direct importance to their security, economic, and political interests. The prospects for the vision contained in the Preamble of the WHO Constitution and Declaration of Alma-Ata depend on the effective exercise of power by strong states.

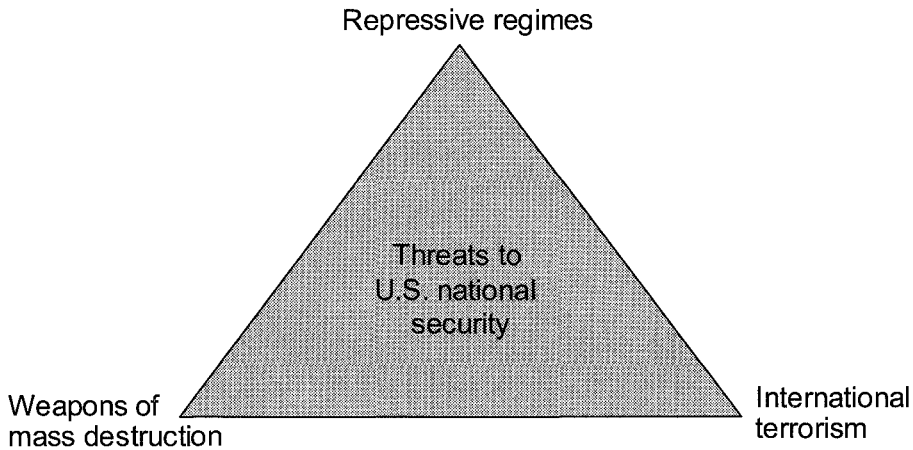
Reinforcing this view is the nature of the threat naturally occurring infectious diseases present. The next section explores the complex policy challenges that emerging infectious diseases pose. The nature of the threat not only reinforces the need for strong states to exercise their power more energetically but also suggests why public health may remain stuck between the paradise and power paradigms for the foreseeable future.

B. The Axis of Illness: Defining the Policy Challenges of Emerging Infectious Diseases

The United States has placed the threat of bioterrorism within a larger strategic framework of U.S. national security that President George W. Bush famously called the "axis of evil."¹⁸⁰ Leaving the choice of rhetoric aside, the axis of evil identifies the key national security threats the United States faces in the post-September 11 era. Those threats are repressive regimes, weapons of mass destruction, and international terrorism (Figure 2). As articulated by President Bush, these threats are interdependent, combining to create the axis that poses dangers for U.S. national security. The axis of evil is, in fact, a strategic doctrine, like the Truman Doctrine, that provides a roadmap for the exercise of U.S. power.

180. George W. Bush, State of the Union Address (January 29, 2002), available at <http://www.whitehouse.gov/news/releases/2002/01/20020129-11.html> (last visited Feb. 8, 2004) (copy on file with the *McGeorge Law Review*).

FIGURE 2. THE AXIS OF EVIL



The axis of evil doctrine has helped plant deterrence of, and defense against, bioterrorism firmly within the U.S. strategies of both national and homeland security.¹⁸¹ The importance of the nation's public health infrastructure and capabilities to bioterrorism preparedness has elevated public health into the realms of national and homeland security, a position public health has never occupied before. Although historically unprecedented for public health, the incorporation of public health in U.S. national and homeland security does not represent a conceptual sea change for U.S. perceptions of its national security. The elevation of public health into the traditional conception of national security means that U.S. national security experts see public health as another material capability to be marshaled to protect the United States from external threats. Bringing public health into the existing world of national security has not broadened the way in which the United States conceptualizes national security threats.

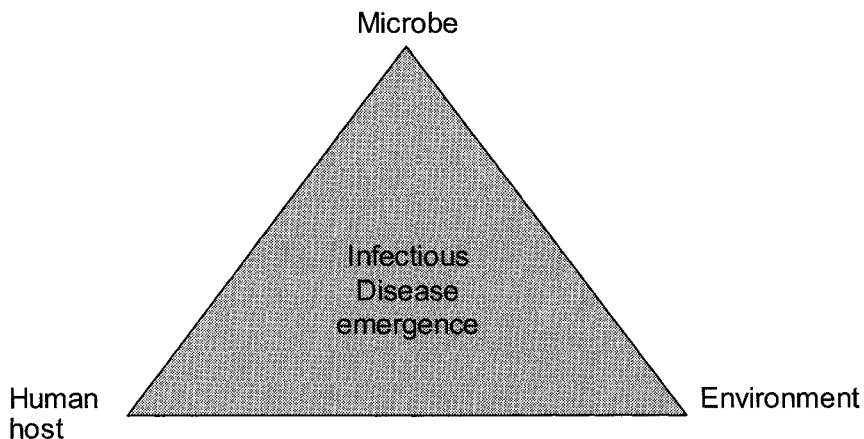
Bioterrorism preparedness has, thus, benefited from having a strategic doctrine on U.S. national security to guide the application of U.S. power. The problem of emerging infectious diseases does not, however, fit into the axis of evil, nor does it appear to have stimulated the development of any particular doctrine to guide the application of U.S. power against naturally occurring pathogenic threats. The closest things to such a doctrine are the arguments that naturally occurring infectious diseases represent direct (e.g., disease importation) and indirect (e.g., contributing to state failure abroad) exogenous threats to U.S. foreign policy and national security interests.

181. THE NATIONAL SECURITY STRATEGY OF THE UNITED STATES OF AMERICA, *supra* note 1, at 6-7; OFFICE OF HOMELAND SECURITY, *supra* note 1, at 43.

These arguments lack the clarity of a strategic doctrine, such as that provided by the axis of evil. The axis of evil doctrine clearly identifies the targets for the application of U.S. power internationally: containing (or even overthrowing) repressive regimes, deterring the pursuit of weapons of mass destruction by state and non-state actors, and fighting international terrorism. The problem with emerging infectious diseases is that the nature of the threat is not easily described because the problem is incredibly complex. In the following paragraphs, I construct the “axis of illness” as an attempt to simplify the complexity represented by infectious disease emergence and re-emergence. Constructing the axis of illness helps communicate why appeals to the great powers to exercise their strength more energetically in the public health area may have less policy traction than advocates for more great power leadership might hope.

A common feature of literature on emerging infectious diseases is the listing of the many different factors that contribute to pathogen emergence and re-emergence. Looking at two reports on emerging microbial threats from the Institute of Medicine illustrates this phenomenon. The seminal 1992 report on emerging microbial threats to the United States listed six factors in disease emergence: human demographics and behavior; technology and industry; economic development and land use; international travel and commerce; microbial adaptation and change; and breakdown of public health measures.¹⁸² Identifying such factors helps communicate the message that infectious disease emergence and re-emergence is an interdependent relationship between the microbe, host, and the environment in which they interact (Figure 3).

FIGURE 3. HOST-MICROBE-ENVIRONMENT INTERDEPENDENCE



182. INSTITUTE OF MEDICINE, *supra* note 130, at 34-112.

The Institute of Medicine report on microbial threats published in 2003 expands the factors contributing to infectious disease emergence from six to thirteen (Figure 4),¹⁸³ which again illustrates the enormous complexity of the phenomenon of disease emergence and spread. The Institute of Medicine's 2003 report sees infectious disease emergence arising from the convergence of genetic and biological factors; physical environmental factors; ecological factors; and social, political, and economic factors.¹⁸⁴ The convergence of these interlocking factors determines the nature of the interaction between the human and the microbe.

FIGURE 4. INSTITUTE OF MEDICINE'S REVISED LIST OF FACTORS BEHIND INFECTIOUS DISEASE EMERGENCE AND RE-EMERGENCE

- Microbial adaptation and change
- Human susceptibility to infection
- Climate and weather
- Changing ecosystems
- Human demographics and behavior
- Economic development and land use
- International trade and travel
- Technology and industry
- Breakdown of public health system
- Poverty and social inequality
- War and famine
- Lack of political will
- Intent to harm

The number and variety of factors contributing to emerging infectious diseases make organizing policy responses for this problem nightmarish. The axis of illness represents one way to organize these factors into categories in order to highlight major areas for possible policy interventions. Table 1 slots the factors identified in the latest Institute of Medicine report on microbial threats into five categories.

183. MICROBIAL THREATS TO HEALTH, *supra* note 6, at 53-147.

184. *Id.* at 53.

TABLE 1. FACTORS OF EMERGENCE IN FIVE CATEGORIES

Category	Factors from Institute of Medicine (2003)
Microbial resilience	Microbial adaptation and change; human susceptibility to infection
Human mobility	International trade and travel; human demographics and behavior; technology and industry
Social determinants of health	Poverty and social inequalities; war and famine; climate and weather; human demographics and behavior; technology and industry
Globalization	Economic development and land use; technology and industry; changing ecosystems; human demographics and behavior
Collective action problems	Lack of political will; intent to harm; breakdown of public health measures; poverty and social inequalities; war and famine

The category of “microbial resilience” captures the importance of microbial, genetic, and biological factors that drive pathogenic evolution and its relationship to humans. The Institute of Medicine stressed, for example, the importance of microbial adaptation and change to infectious disease emergence:

Microbes are continually undergoing adaptive evolution under selective pressures for perpetuation. Through structural and functional genetic changes, they can bypass the human immune system and infect human cells. The tremendous evolutionary potential of microbes makes them adept at developing resistance to even the most potent drug therapies and complicates attempts at creating effective vaccines.¹⁸⁵

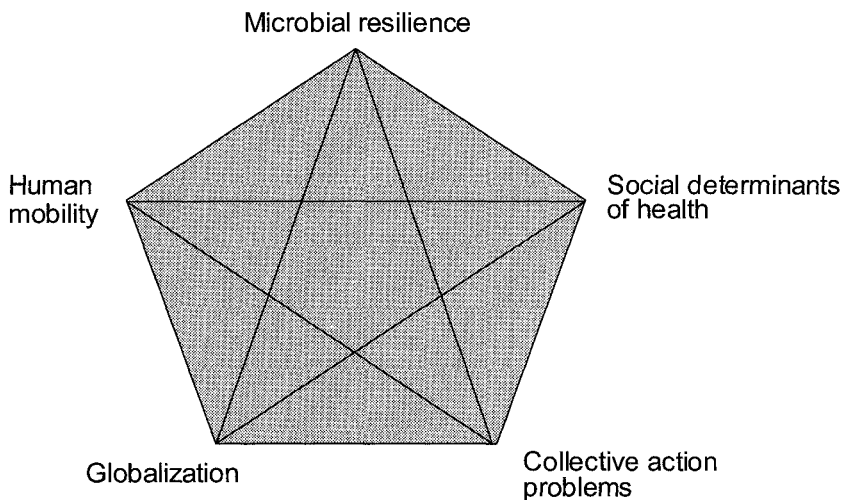
“Human mobility” emphasizes the roles international trade, travel, and migration play in disease emergence, including the contributions technology and industry make in increasing the speed, scope, and impact of human mobility. The category of “social determinants of health” focuses attention on the underlying societal problems that foster microbial penetration of human populations. Social determinants of health face constant pressure from the other elements of the axis of illness and are adversely affected by factors, such as the breakdown of public health capabilities, that undercut the ability to protect and promote public health. “Globalization” refers to factors that accelerate economic development, technology, industry, and culture in ways that deterritorialize human behavior and the environmental milieu in which humans and microbes interact. The category of

185. *Id.* at 4.

“collective action problems” refers to the governance challenges created by infectious disease emergence that human societies confront at national, international, and global levels. When the Institute of Medicine identifies the breakdown in public health measures as a risk factor in disease emergence and re-emergence,¹⁸⁶ it focuses attention on government and governance failures on public health. Responding to resurgent infectious disease requires successful collective action both within and among states.

The axis of illness forms as these five categories interact to foster the emergence and spread of infectious diseases (Figure 5). It is important to stress that each category connects with the others directly and indirectly in a dynamic process. For example, the processes of globalization directly affect human mobility by making faster transportation technologies available. Globalization affects collective action problems by exacerbating problems with social determinants of health and accelerating human mobility. Of most relevance for my purposes is how the axis of illness highlights the daunting governance challenges the emergence and re-emergence of infectious diseases present. Resolution of collective action problems is very difficult because governance strategies have to bear, in some sustainable fashion, the constant forces produced by the interdependence of microbial resilience, human mobility, social determinants of health, and globalization.

FIGURE 5. THE AXIS OF ILLNESS



186. *Id.* at 107-21.

The axis of illness represents the policy context that has to be kept in mind when analyzing calls for the great powers to show more leadership on global public health issues, especially in connection with improving health conditions in developing countries. The return of the power paradigm, and the appeals to its fundamental dynamics, stress enlightened self-interest of the great powers as the path of global health progress. One potential use of the axis of illness is to keep policy analysis of emerging infectious diseases from falling into the trap of myopia and parochialism. The axis of illness highlights the complex, globalized web of interdependent factors that strong countries, such as the United States, have to appreciate in responding appropriately to naturally occurring pathogenic threats.

This use of the axis of illness resonates with Kickbusch's argument that what is needed to move the United States into more robust leadership in global health is a broadly conceived public debate and dialogue "on how the United States as a whole—its government, its private sector, its NGOs and foundations, its academic institutions, and its citizens—contributes to and is affected by the global distribution of health and disease."¹⁸⁷ Kickbusch's underlying objective in fostering such a dialogue is the redefinition of U.S. national interests in connection with global public health: "It is not helpful to give a long list of 'shoulds,' ranging from financial contributions to world agreements, when what is needed is a change in mindset."¹⁸⁸

The axis of illness may, however, have exactly the opposite effect on the United States and other great powers. The power paradigm is premised on responding to exogenous pathogenic threats to a country's national interests, security, and power. New forms of political, security, economic, and power rationales for great-power engagement in global public health appeal directly to the self-interested dynamic of the power paradigm. Confronted with the tangled web of the axis of illness, a great power may well scrutinize very carefully exactly where its interests, security, and power are threatened, how they are threatened, and what realistically it can do about such threats. The results of such great power machinations over the axis of illness may not be policies desired by those seeking to prod the great powers toward "enlightened self-interest." The results may mirror the dynamic that unfolded in the first century of international health diplomacy: The great powers (1) engaged in self-help by improving their national defenses against pathogenic threats through improved national public health capabilities and the development of antimicrobial technologies; and (2) led international cooperative efforts to (a) reduce their vulnerability to disease importation through improved disease surveillance, and (b) mitigate the burdens infectious diseases created for other foreign policy objectives, such as promoting international trade.

187. Kickbusch, *supra* note 39, at 139.

188. *Id.*

The axis of illness may well teach a great power that the seriousness and complexity of pathogenic threats in the early twenty-first century require, first and foremost, a determined effort to rebuild national defenses against disease importation. The traditional national security framework's focus on bioterrorism preparedness supports such a strong national effort. A rebuilding strategy would involve strengthening (1) domestic public health capabilities to improve responses to disease importation and onward transmission; and (2) international surveillance mechanisms that provide national public health systems with early warning about potential exogenous microbial threats. These policy reform ideas mirror what the great powers did in the first century of international health activity. First, the great powers initiated domestic public health reforms to reduce their national vulnerability to disease importation. Second, they led the effort to establish a system of international surveillance for exogenous disease threats of concern to them in the form of the classical regime.

The axis of illness may also teach the great powers that infectious disease problems in other countries are more likely to complicate the achievement of other foreign policy objectives in the twenty-first century. In the latter half of the nineteenth and first half of the twentieth centuries, the major foreign policy objective complicated by infectious diseases was international trade. The great powers learned in the nineteenth century that neglecting the uncoordinated application of national quarantine systems burdened their efforts to expand the scope and profitability of their trading systems. Today, neglecting the serious problems other countries experience from infectious diseases may burden a broader range of foreign policy interests, including promoting trade, protecting intellectual property rights, fostering economic development in the developing world, fighting international terrorism, and maintaining stability in strategic countries and regions of the world (e.g., China and Russia).

This broad potential impact of emerging infectious diseases on the interests of the great powers is one reason why advocates of improved global public health are making appeals that resonate with the power paradigm. This broadness calls for heightened foreign policy scrutiny of claims that emerging infectious diseases are significant problems standing in the way of the great powers achieving other goals. As analyzed earlier, the catastrophe of HIV/AIDS in sub-Saharan Africa and other parts of the developing world has indeed become an obstacle to U.S. foreign policy in advancing U.S. interests in more trade liberalization within the WTO.¹⁸⁹ Developing countries, supported by non-governmental organizations, have forced the United States and the European Union to retreat on the issue of compulsory licensing and parallel importing of patented pharmaceutical products with the context of TRIPS.¹⁹⁰ The great powers retreated largely to reduce the potential of the access to medicines controversy to scupper progress in other areas of trade

189. See *supra* notes 142-144 and accompanying text.

190. See 't Hoen, *supra* note 143, at 27-46.

liberalization and complicate foreign policy on other issues of strategic importance to the great powers, such as enhanced cooperation on counter-terrorism.

Claims are often made that the HIV/AIDS problem in sub-Saharan Africa and elsewhere represents a threat to U.S. national security because HIV/AIDS threatens to contribute to state failure, which can lead to problems of national security concern for the United States.¹⁹¹ As the Taliban's harboring of Al Qaeda demonstrated, failed states can be very dangerous to the great powers;¹⁹² so the linkage between HIV/AIDS-related devastation and potential state failure is sufficient to focus foreign policy and national security attention on this argument. The linkage begins to look weak, premature, or merely hypothetical when one realizes that infectious diseases played no material role in foreign policy and national security headaches caused by failed states, such as Somalia, Afghanistan, Rwanda, the Congo, and Liberia.

Great power scrutiny of the linkage between infectious diseases and state failure may also lead analysis away from parts of the developing world that are most heavily affected by pathogenic threats. As I have argued elsewhere,¹⁹³ the argument that HIV/AIDS can destabilize countries and threaten U.S. foreign policy and national security interests appears to have more resonance when the countries in question are of strategic concern to the great powers—countries such as China, Russia, and India.¹⁹⁴ The concern with countries of strategic importance marginalizes the region of the world most significantly affected by HIV/AIDS, sub-Saharan Africa. Eberstadt explains why this marginalization occurs within the traditional approach to national security and foreign policy:

Africa's AIDS catastrophe is a humanitarian disaster of world historic proportions, yet the economic and political reverberations from this crisis have been remarkably muted outside the continent itself. The explanation for this awful dissonance lies in the region's marginal status in global economics and politics. By many measures, for example, sub-Saharan Africa's contribution to the world economy is less than Switzerland's. In military affairs, no regional state, save perhaps South Africa, has the capacity to conduct overseas combat operations, and indeed sub-Saharan governments are primarily preoccupied with local troubles. The states of the region are thus not well positioned to influence events much beyond

191. See, e.g., PRICE-SMITH, *supra* note 37, at 122-23.

192. Stephen M. Walt, *Beyond Bin Laden: Reshaping U.S. Foreign Policy*, 26 INT'L SECURITY 56, 62 (Winter 2001/2002) (arguing that failed states are a problem for U.S. national security).

193. David P. Fidler, *Public Health and National Security in the Global Age: Infectious Diseases, Bioterrorism, and Realpolitik*, 35 GEO. WASH. INT'L L. REV. 787 (2003).

194. See, e.g., Eberstadt, *supra* note 137, at 22-23 (emphasizing Russia, China, and India's problems with HIV/AIDS over sub-Saharan Africa's); National Intelligence Council, *The Next Wave of HIV/AIDS: Nigeria, Ethiopia, Russia, India, and China* (Intelligence Community Assessment 2002-04D, Sept. 2002), available at http://www.cia.gov/nic/other_nextwaveHIV.html (last visited Feb. 8, 2004) (copy on file with the McGeorge Law Review).

their own borders under any circumstances, good or ill—and the cruel consequence is that the world pays them little attention.¹⁹⁵

More broadly, Helen Epstein reinforces the point made by Eberstadt by arguing that

[t]he reason the health crisis in developing countries is so serious is precisely because it is possible for rich nations to prosper even with billions of sick and hungry people in the world. So for Western countries, the health crisis in developing countries is really not an economic question, or even a security question. It is a moral question, however unfashionable that may be, and this is what makes it so hard to deal with.¹⁹⁶

The axis of illness concept can also be used to question the linkage between infectious diseases and state failure in another way. Is state failure a result of pathogenic threats, or are the pathogenic threats a result of state failure caused by other factors? In other words, if a great power identified a link between state failure and infectious diseases, the appropriate policy response might not be to improve public health capabilities in the state in question as a first priority. The appropriate response might be to target macro-level governance problems that cause or exacerbate pathogenic destabilization of the country. Great powers are typically not willing to dole out assistance, including for infectious disease programs, to governments that have proven themselves incapable of using the assistance effectively. Structural adjustment or even regime change may very well be in order as opposed to increased foreign assistance for public health.

The complexity highlighted by the axis of illness may also have the curious effect of limiting the interest of the great powers in emerging infectious diseases rather than enlightening it. Today's great powers have deep political and economic interests in advancing globalization and the human mobility it fosters, so they have little interest in constricting these contributors to the axis of illness. Great powers have the ability and resources to resolve domestic collective action problems that arise in connection with pathogenic threats,¹⁹⁷ even if they have neglected public health for decades and now face greater threats from infectious diseases.¹⁹⁸ International collective action problems pose more of a dilemma for the great powers for two basic reasons. First, solutions to international collective action problems are notoriously difficult to create and sustain, even in contexts much

195. Eberstadt, *supra* note 137, at 23.

196. Helen Epstein, *The Global Health Crisis*, in BIOLOGICAL SECURITY AND PUBLIC HEALTH, *supra* note 1, at 9, 15.

197. BROWER & CHALK, *supra* note 1, at xv (arguing that “[c]urrently the United States is managing the infectious disease threat. . .”).

198. *Id.* at xv-xvi (arguing that “[a]s Americans’ exposure to emerging and reemerging pathogens has grown, the country’s ability to respond to infectious disease has diminished in many areas” because “of the low priority given to public health over the past 30 years”).

more focused than the axis of illness, because of the context of anarchy in which states interact.

Second, international collective action on public health confronts a daunting deterioration in social determinants of health in many countries, including overpopulation, poverty, malnutrition, environmental degradation, and inequitable access to economic and health resources. Comprehensively addressing crises in social determinants of health in an anarchical system of independent sovereign states is something even the most enlightened great powers would hesitate to tackle. The difficulties of this task may encourage the great powers to concentrate even more intently on what is much more within the realm of possibility: strengthening national public health defenses and targeting limited strategies for improved international cooperation on infectious diseases, such as global surveillance.

The paradise paradigm wanted states to confront the root causes of global public health problems, and the paradigm called for the termination of the dynamic in which the great powers determined international health policy. The great powers are not likely to embrace a program of action that declares their special status in international health matters illegitimate. Further, the great powers have had sufficient experience with foreign assistance and international aid to be skeptical that calls for massive redistribution of resources for public health purposes would best serve their foreign policy and national security interests.

In summary, the axis of illness might very well encourage the great powers to hew closely to the power paradigm: Strengthen national defenses against disease importation; construct international mechanisms, especially international surveillance, that will aid the effective functioning of such national defenses; and mitigate the drag infectious disease problems in developing countries create for the achievement of other foreign policy and national security objectives through, for example, modest support for, and funding of, global health initiatives.

This response to the axis of illness resonates with the incorporation of public health into national security thinking prompted by the axis of evil. As discussed above, bioterrorism preparedness in the United States focuses on two goals: (1) improving domestic public health capabilities against intentionally caused disease outbreaks; and (2) supporting international cooperative endeavors, such as global surveillance, that interface with stronger national-level public health response capacities. Bioterrorism defense policy would also support modest international assistance on public health problems around the world because it might contribute to the willingness of other governments to join the United States in fighting the dangerous link between weapons of mass destruction and international terrorism. The axes of evil and illness combine to create policy rationales closely aligned to the premises of the power paradigm.

C. *Paradise Backlash: Rejecting the Hegemony of the Power Paradigm*

The return of the power paradigm in conceptualizing pathogenic threats, reinforced by the policy prescriptions of bioterrorism preparedness, has given this paradigm near hegemonic status in thinking about global infectious disease problems. This development has not escaped the attention of critics who find the return of the power paradigm unacceptable as a basis for addressing global disease issues. One of the most passionate and eloquent critics is Paul Farmer, a doctor and anthropologist on the faculty of Harvard Medical School. Farmer blasts what he calls “the self-serving relativism of the public health *realpolitik*,”¹⁹⁹ an approach to infectious diseases that favors the powerful and disadvantages the poor and vulnerable. He condemns public health *realpolitik* by citing the provision in the Preamble of the WHO Constitution that provides: “Unequal development in different countries in the promotion of health and control of disease, especially communicable disease, is a common danger.”²⁰⁰ In a statement that qualifies as a succinct critique of the return of the power paradigm, Farmer argued:

in a wealthy country, the specter of biological warfare, for which there is exceedingly slender evidence, triggers a sort of officially blessed paranoia. In a poor country tightly bound to the rich one, real infections continue to kill the poor At best, those of us working in places like Haiti can hope for trickle-down funds if the plagues of the poor are classed as “U.S. security interests.”²⁰¹

For Farmer, the estimated six million deaths annually attributable to HIV/AIDS, tuberculosis, and malaria—“three treatable diseases that reap their grim harvest almost exclusively among populations without access to modern medical care”²⁰²—reflect what he calls “structural violence” perpetrated by the rich and powerful against the poor and weak.²⁰³

Farmer’s alternative agenda strikes chords sounded in the Preamble of the WHO Constitution and the Declaration of Alma-Ata. To begin, he argues that an agenda focused on “health and human rights” should replace public health *realpolitik*.²⁰⁴ Such a focus connects to the paradise paradigm’s emphasis on health as a fundamental human right.²⁰⁵ Farmer’s “new agenda for health and human rights” includes other themes from the paradise paradigm, including notions of

199. PAUL FARMER, *PATHOLOGIES OF POWER: HEALTH, HUMAN RIGHTS, AND THE NEW WAR ON THE POOR* 195 (2003).

200. *Id.*

201. FARMER, *supra* note 42, at xiii.

202. FARMER, *supra* note 199, at 22.

203. *Id.* at 50.

204. *Id.* at 213-46.

205. WHO Const., *supra* note 66, pmb., at 2; Declaration of Alma-Ata, *supra* note 110.

human solidarity, equity in access to health services and health outcomes, and redistribution of resources from rich to poor.²⁰⁶

The prominence of Farmer's writings demonstrates that the paradise paradigm still lives in the global public health community. The guardians of the paradigm's vision appear largely to be non-state actors, such as non-governmental organizations, that have taken up the challenge of promoting the right to health, health equity across and within borders, and redistributive health justice. Kickbusch observed, for example, that "NGOs exert increasing influence on the global health agenda, and their main points of reference are human rights and ethics, the global health gap, and health as a component and expression of global citizenship."²⁰⁷ Farmer encourages this dynamic by arguing that "[w]e need to be untrammelled by obligations to powerful states and international bureaucracies."²⁰⁸ Promoting global civil society actors as the engine of progressive change in the world politics of public health parallels critical agendas developed in other domains of international relations, including the area of human rights.

The emphasis on non-governmental organizations and other like-minded non-state actors represents a change in the paradise paradigm from its halcyon days after World War II. The Preamble of the WHO Constitution and the Declaration of Alma-Ata are instruments adopted by states to guide health policies within and among countries. Farmer calls attention to the emptiness of such solemn charters and documents, arguing that the victims of structural violence do not require more idealistic pronouncements from cynical states and compromised international organizations, but need "pragmatic solidarity" built through networks of non-state actors pooling their efforts to alleviate the health suffering of the poor and vulnerable.²⁰⁹

Farmer's passionate vision for overcoming public health *realpolitik* is impressive but also leaves one uncertain how, from a context in which the power paradigm prevails, global civil society moves the world politics of public health back in the direction outlined in the Preamble of the WHO Constitution and the Declaration of Alma-Ata. As analyzed earlier, the paradise paradigm prevailed in international health policy when powerful countries lost interest in international health cooperation. As Kickbusch argued, the task facing global public health today is simply too large to leave to networks of non-governmental organizations and well-meaning philanthropists.²¹⁰ What seems to be required is not public health *realpolitik* but *realpolitik* for public health. This transformation requires that the great powers have sufficient incentives to exercise their power for, rather than against, global public health. This logic explains why so many efforts have been

206. FARMER, *supra* note 199, at 237-46.

207. Kickbusch, *supra* note 39, at 138.

208. FARMER, *supra* note 199, at 242.

209. *Id.* at 242-43.

210. Kickbusch, *supra* note 39, at 138.

made to convince the great powers that emerging infectious diseases affect their fundamental foreign policy and national security interests.

As Kagan's analysis of U.S. and European world views argues, there is no paradise without power. Kagan believes the Europeans mistakenly project their "paradise" onto the behavior of the United States and wonder why the Americans do not act more like Europeans. The Europeans forget that their paradise would not exist but for American power. The backlash against the contemporary hegemony of the power paradigm voiced by Farmer and shared by others does not provide a means for public health to escape the conundrum of being caught, like the Europeans, between paradise and power. In the context of public health, Farmer's global civil society movements are the "Europeans," projecting a vision of health for all that cannot exist without supportive intervention by the "Americans," the great powers.

VI. CONCLUSION: GIVING POWER MEANING THROUGH HEALTH

The friction between the paradise and power paradigms at the heart of this article's analysis resembles, in many ways, similar tensions in the fields of international law and international relations. Martti Koskenniemi identified, for example, a dynamic involving "apologia" and "utopia" in international law.²¹¹ A debate between "idealism" and "realism" has marked the study of international relations.²¹² Stanley Hoffmann argued that the field of international relations contains a permanent dialogue between the pessimistic realist Jean-Jacques Rousseau and the perpetual peacenik Immanuel Kant.²¹³ Public health's predicament of being caught between paradise and power simply represents a different version of an age-old political discourse between the practical exigencies of the present and normative aspirations for the future.

Part of the revolution that public health has experienced in the last decade is the importance of this age-old discourse to global health activities. Public health as an issue in international relations has always involved politics and has always been a political endeavor, but international public health has historically been relegated to the obscurity of "low politics" and "mere humanitarianism." The waxing of the paradise paradigm and the waning of the power paradigm in the post-World War II period did not generate a global public health version of Rousseau and Kant's permanent dialogue, at a difficult time when other pressing issues of international relations entered this dialogic space. The return of the power paradigm in its contemporary form has elevated public health from being just a humanitarian issue

211. MARTTI KOSKENNIEMI, FROM APOLOGY TO UTOPIA: THE STRUCTURE OF INTERNATIONAL LEGAL ARGUMENT (1989).

212. See, e.g., Michael Nicholson, *Realism and Utopianism Revisited*, in THE EIGHTY YEARS' CRISIS: INTERNATIONAL RELATIONS 1919-1999, at 65 (Tim Dunne et al. eds., 1998).

213. Stanley Hoffmann, *Rousseau on War and Peace*, in STANLEY HOFFMANN, JANUS AND MINERVA: ESSAYS IN THE THEORY AND PRACTICE OF INTERNATIONAL POLITICS 25, 47 (1987).

and has triggered a debate about reconciling the need for the exercise of real power and the ideals of health for all.

Idealism/realism debates in international law and international relations sometimes pit material power against intangible values, as if the two have no common ground. But another aspect of these debates is the attempt to give power normative meaning. A common strategy in this regard was the “harmony of interests” doctrine—what was in the national interests of one state was also in the interests of others.²¹⁴ Realists argued that the “harmony of interests” doctrine was merely a way for strong states to maintain their advantages in power and influence and to deny legitimacy to the claims of weaker states for change.²¹⁵ At times, arguments linking infectious diseases and U.S. national security and foreign policy constitute little more than “harmony of interests” thinking,²¹⁶ the harmony of which disguises serious differences in interests.²¹⁷

Giving power normative meaning beyond the shallow “harmony of interests” is critical to navigating the shoals of the idealism/realism conflict. The discipline of international relations theory contains a number of competing theories, including institutionalism, liberalism, Marxism, critical theory, and social constructivism, each of which provides a normative alternative to realism’s bleak perspective on international politics. Historically, health has not factored as an issue in these grand theoretical debates about power and purpose in world politics because it has either been ignored or treated as matter of “low politics” or, at best, “soft power.”

The predicament of being caught between paradise and power confronts public health with a challenge to bridge two radically different ways to conceptualize pathogenic threats and other risks to health. The power paradigm conceives of health in terms of power. The paradise paradigm thinks of power in terms of health. Whether those two conceptions can be reconciled in an environment where global public health is deeply dependent on exogenous disease threats to, and the material capabilities of, the great powers, especially the United States, remains unclear. The impact on the power paradigm of the threat of bioterrorism, which

214. EDWARD HALLETT CARR, *THE TWENTY YEARS' CRISIS, 1919-1939: AN INTRODUCTION TO THE STUDY OF INTERNATIONAL RELATIONS* 55 (1939) (“The politician pursues the concrete interest of his country, and assumes (if he makes the assumption at all) that the interest of the world as a whole is identical with it.”).

215. *Id.* at 51-53.

216. *Why Health Is Important to U.S. Foreign Policy* argues that “U.S. leadership in international health affairs can provide an unequivocally positive framework for pursuing what is in our interest as well as that of the world.” Kassalow, *supra* note 2. The U.S. Office of Global Health Affairs likewise marries U.S. national interests with universal purpose in arguing that “[a]ctive U.S. engagement in global health is *in the interest of U.S. diplomacy and national security; it also is simply the right thing to do.*” U.S. Department of Health and Human Services Office of Global Health Affairs, *Global Health Core Messages*, at <http://www.globalhealth.gov/quotes.shtml#nationalecurity> (last visited Feb. 8, 2004) (copy on file with the *McGeorge Law Review*).

217. See, e.g., National Intelligence Council, *SARS: Down But Still a Threat* (Intelligence Community Assessment ICA 2003-09, Aug. 2003), at 32 (noting diverging interests between developing countries and the United States with respect to responses to SARS and arguing that “[s]ome developing countries may argue that they will work to improve surveillance for SARS if the United States and the international community do more to help them fight diseases which claim more lives in their countries, such as malaria and tuberculosis”).

predominantly concerns the great powers, exacerbates the difficulty of the reconciliation task.

Kagan ends his analysis of the divergence in U.S. and European world views by arguing that European weakness actually gives U.S. power normative meaning that binds the United States and Europe together. The exercise of U.S. power has helped produce the new Europe, “a blessed miracle and a reason for enormous celebration—on both sides of the Atlantic.”²¹⁸ Kagan’s argument touches something much deeper than a superficial “harmony of interests” between the United States and the countries of the European Union. Rather, Kagan communicates that American power was exercised in a manner that permitted the Europeans to produce a liberal, transnational community singularly spectacular in the history of world politics.

Reconciling the power and paradise paradigms in global public health will require the great powers to exercise their material capabilities in ways that help empower the governments and peoples of the developing world to produce achievable improvements in health conditions. The axis of illness teaches that no one strategy will deliver such a reconciliation but that health outcomes deserve to be an important item on many different political and diplomatic agenda—from national security to international trade to human rights. Those concerned about the future of global public health can perhaps take some comfort in the resilience health as an issue demonstrates across these disparate policy areas. Something with potential is afoot when the U.S. Central Intelligence Agency,²¹⁹ the World Trade Organization,²²⁰ and human rights advocates²²¹ all promote the importance of public health in the “high politics” of international relations. This reality does not represent policy convergence between the power and paradise paradigms because the two remain far apart in terms of their premises and objectives. What we have is concurrency—both paradigms engaged on their own terms with the growing importance of global public health.

The concurrency that entities as distinct as the Central Intelligence Agency, World Trade Organization, and human rights advocates display on the new political importance for public health does not mean that harmony prevails, or will prevail, in the aftermath of public health’s political revolution. Kagan reminds Americans and Europeans that, despite not sharing a common view of the world, they share common beliefs and aspirations for the world. Solidarity on the political importance of health in international relations is not as developed as the political

218. KAGAN, *supra* note 8, at 97.

219. National Intelligence Council, *supra* note 136; National Intelligence Council, *supra* note 194; National Intelligence Council, *supra* note 217.

220. See, e.g., World Trade Organization, *supra* note 144. In addition, the Appellate Body of the WTO held, for example, that the protection of health is a value “both vital and important in the highest degree.” See European Communities—Measures Affecting Asbestos and Asbestos-Containing Products, Appellate Body Report, Mar. 12, 2001, WT/DS135/AB/R, ¶ 172.

221. See, e.g., Médecins Sans Frontières, *Access to Essential Medicines Campaign*, available at <http://www.msf.org/content/index.cfm?indexid=6ADD6A11-CC75-11D4-B1FF0060084A6370> (last visited Jan. 19, 2004) (copy on file with the *McGeorge Law Review*).

belief-system shared by Americans and Europeans, and such deep consensus may never materialize in the context of public health. The concurrency that has occurred provides, however, an opportunity to produce some common understanding on health that may, one day, lead to significant progress in rich and poor countries. To borrow again from Kagan, let me conclude by saying that “[p]erhaps it is not too naïvely optimistic to believe that a little common understanding could still go a long way.”²²²

222. KAGAN, *supra* note 8, at 103.