Public Health and National Security in the Global Age: Infectious Diseases, Bioterrorism, and Realpolitik

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INTRODUCTION: LINKING PUBLIC HEALTH AND NATIONAL SECURITY

In the not too distant past, attempts to connect public health and national security would have raised eyebrows and perhaps condescending sympathy from experts in both areas. The discipline of public health focuses on "what we, as a society, do collectively to assure the conditions in which people can be healthy." Although public health has long been an issue in international relations, public health studies have had a strong domestic focus. For example, public health law texts "in the United States from the twentieth century . . . contain little or no discussion of international considerations." Even when public health analysis ventures beyond the domestic to consider international aspects of population health, the issues examined, such as the cross-border transmission of infectious diseases, do not typically involve the problems at the heart of national security studies, such as the military balance of power. By contrast, the study of national security traditionally has concentrated analysis on external threats, mainly of a military nature, to a country's interests, security, and survival. Historically, analysts in
this field have not studied public health problems as national security threats.

Arguments linking public health and national security have, however, become frequent in the past seven to eight years. Increased concerns about the proliferation of biological weapons and the potential for bioterrorism have brought national security and public health closer together than has traditionally been the case. The perpetration of bioterrorism in the United States in October 2001 brought the public health-national security connection more prominence and policy attention. This Article examines the linkage of public health and national security in order to understand the origins, nature, and future implications of this new development in the foreign policy arena.

Analyzing the public health-national security linkage is important for many reasons. This linkage connects, for example, public health with developments in the area of security studies and debates about the nature and meaning of national security. Different perspectives on what "security" means compete for attention, and the literature that brings public health and national security together forces those in public health to contemplate these different perspectives and how they relate to the public health mission of protecting population health. The linkage also challenges those studying national security to consider issues, such as the relationship of public health to a state's material capabilities, previously alien to national security debates. The different perspectives on the meaning of security further relate to larger theoretical concepts concerning the structure and dynamics of

6. Contagion and Conflict, supra note 5, at vii (arguing that "today's world, in which globalization and the information revolution bring people and problems together in surprising ways, finds health and security intersecting with greater frequency"). The leading developments in this linkage are analyzed in Section I.B infra.


international relations. The linking of public health and national security thus raises deeper theoretical issues and controversies about world politics in the global era.

First, using the literature that posits and analyzes the public health-national security linkage, this Article examines the emergence of the concept of “public health security,” which refers to the policy areas in which national security and public health concerns overlap (Part I). Delineating the overlap requires defining both “public health” and “national security,” which proves difficult with both terms. Second, in connection with defining security, this Article examines four different conceptions of security—the realpolitik, common, human, and ecological security perspectives—and how these conceptions produce different visions of public health security (Part II). This analysis focuses on the two dominant themes in the literature on the public health-national security linkage: the threats posed by emerging and reemerging infectious diseases and biological weapons. Contrary to most of the literature on the public health-national security linkage, I argue that the realpolitik security perspective is relevant to thinking about how to conceptualize public health security.

Finally, this Article assesses how recent events involving the United States inform the scope and substantive concept of public health security, and what these developments tell us about the relationship between public health and theories of international relations (Part III). This Article argues that the evidence to date indicates that the realpolitik perspective on national security is driving the development of the concept of public health security in the United States. This part of the Article concludes by examining whether the conceptual and practical analyses of realpolitik-driven notions of public health security hold deeper implications for understanding public health in the age of the globalization of infectious diseases and point to the economic, military, and geopolitical interests of the great powers determining the direction of infectious disease diplomacy.

I. THE PUBLIC HEALTH-NATIONAL SECURITY LINKAGE DEVELOPS

A. Public Health as a National Security Concern?

Public health problems, especially infectious diseases, have been the focus of diplomatic activity among states since at least the mid-
nineteenth century. The prevention and control of infectious diseases has, therefore, been a foreign policy concern of states for a long time. Public health as a foreign policy concern is not the same thing, however, as public health constituting an issue of national security. Traditionally, for most states, national security is one of the most important, if not the most important, foreign policy concern. Although public health has been the subject of diplomatic activity for over 150 years, other foreign policy concerns, such as the balance of military power and international trade, have been more important to statecraft than public health. The novelty of the recent literature on infectious diseases as a national security issue rests in elevating public health from an obscure, neglected foreign policy area to the heights of the “high politics” of national security.

Analysis of national security historically paid no attention to public health. Similarly, the public health discipline has been uninterested in whether its domain connects to discourse on national security. This mutual neglect holds true even for the most obvious threat linking national security and public health—biological weapons. Although biological weapons have been on the national security agenda of states since at least the prohibition of the use of biological weapons in 1925, national security analysts and international relations specialists did not devote much attention to these weapons until the 1990s. National security analysis during the Cold War focused most of its energy on the relative strengths


10. The editors of a casebook on national security law emphasize the importance of national security when they argue that “[i]n a world that bristles with animosity and danger, an inadequate national defense would jeopardize our lives and ideals.” National Security Law 1 (Steven Dycus et al. eds., 2d ed. 1997).


12. Contagion and Conflict, supra note 5, at vii (“Health has rarely, if ever, been defined as a national security issue.”).

and weaknesses of American and Soviet nuclear and conventional weapons. The United States' unilateral renunciation of offensive biological weapons in the late 1960s further pushed biological weapons into the shadows of national security analysis. From the public health perspective, concerns about Soviet biological weapons stimulated some public health preparedness efforts in the first decade after World War II, but this activity faded from the public health agenda until the latter half of the 1990s when the role of public health in bioweapons policy emerged from obscurity.

B. The Emergence of Public Health-National Security Linkage Arguments

The first development that began to bring health and security together was the general broadening of security studies in the 1980s and first half of the 1990s through which analysts began to consider "nonmilitary security threats, such as environmental scarcity and degradation, the spread of disease, overpopulation, mass refugee movements, nationalism, terrorism, and nuclear catastrophe." Dennis Altman also noted this shift in observing that attempts to redefine security often added "issues of health generally, and epidemics of infectious diseases more specifically" to the list of new security threats. In the latter half of the 1990s, governmental, intergovernmental, non-governmental, and academic statements, policies, and analyses began to flesh out the linkage between health and security. Much of this analysis appeared before the events on September 11th and anthrax attacks in the United States in 2001, so those historic events do not inform a great deal of the linkage literature. The development of the public health-national security linkage in the 1990s flows from four important causes: (1) the devastating scale of the HIV/AIDS pandemic in the developing world; (2) the recognition of the global problem

19. Altman, supra note 5, at 34.
20. UNAIDS, REPORT ON THE GLOBAL HIV/AIDS EPIDEMIC 2002, at 44 (2002) ("Twenty years after the world first became aware of AIDS, it is clear that humanity is facing one of the most devastating epidemics in human history."); see also UNAIDS, AIDS Epi.
of emerging and reemerging infectious diseases;\textsuperscript{21} (3) renewed concerns about the proliferation of biological weapons by states;\textsuperscript{22} and (4) increased fears about the use of biological weapons by terrorists.\textsuperscript{23}

From a governmental perspective, the best-known linkage arguments came from the Clinton administration, which claimed that emerging and re-emerging infectious diseases, especially HIV/AIDS, constituted a national security threat and foreign policy challenge for the United States.\textsuperscript{24} The previous Democratic administration under Jimmy Carter sought to elevate the foreign policy importance of health in the late 1970s.\textsuperscript{25} The Reagan administration ordered "federal agencies to develop a model that could predict the global spread of AIDS and its demographic effects,"\textsuperscript{26} and Congress held hearings in the late 1980s on the threat HIV/AIDS posed to international development efforts in the developing world.\textsuperscript{27}

\textsuperscript{21} \textbf{DEMIC UPDATE:} \textit{DECEMBER 2002, at 3 (2002)} (discussing the grim statistics on the scale of the HIV/AIDS pandemic, and in particular, listing numbers of people infected with and living with HIV/AIDS and the number of deaths from AIDS).

\textsuperscript{22} \textbf{WORLD HEALTH ORGANIZATION,} \textit{WORLD HEALTH REPORT 1996: FIGHTING DISEASE, FOSTERING DEVELOPMENT, at v (1996) [hereinafter WORLD HEALTH REPORT 1996]} (arguing that the world stands "on the brink of a global crisis in infectious disease" because "[i]nfectious diseases are attacking us on multiple fronts"); \textit{see also WORLD HEALTH ORGANIZATION, REMOVING OBSTACLES TO HEALTHY DEVELOPMENT: REPORT ON INFECTIOUS DISEASES (1999)} (containing more information on the global crisis in emerging and re-emerging infectious diseases).


\textsuperscript{24} Michael T. Osterholm & John Schwartz, \textit{Living Terrors: What America Needs to Know to Survive the Coming Bioterrorist Catastrophe} (2000).

\textsuperscript{25} U.S. \textit{NATIONAL SCIENCE AND TECHNOLOGY COUNCIL COMMITTEE ON INTERNATIONAL SCIENCE, ENGINEERING, AND TECHNOLOGY (CISET) WORKING GROUP ON EMERGING AND RE-EMERGING INFECTIOUS DISEASES, INFECTIOUS DISEASES—A GLOBAL THREAT} (1995); \textit{see also INSTITUTE OF MEDICINE, AMERICA'S VITAL INTEREST IN GLOBAL HEALTH} (1997) [hereinafter AMERICA'S VITAL INTEREST IN GLOBAL HEALTH] (arguing that the interests of the United States are best served through decisive action to promote health around the world).

\textsuperscript{26} New Directions in International Health Cooperation: A Report to the President (1979).

\textsuperscript{27} Loch K. Johnson & Diane C. Snyder, \textit{Beyond the Traditional Intelligence Agenda: Examining the Merits of a Global Public Health Portfolio, in PLAGUES AND POLITICS: INFECTIOUS DISEASE AND INTERNATIONAL POLICY} 214, 217 (Andrew Price-Smith ed., 2001); \textit{see also Altman, supra note 5, at 35} (noting evidence "that officers in the Central Intelligence Agency (CIA) have been pushing their superiors to consider the impact of HIV/AIDS on national and global stability since 1990").

\textsuperscript{27} AIDS and the Third World: The Impact on Development, Hearing Before the Select House Comm. on Hunger, 100th Cong. (1988).
The Clinton administration’s arguments that infectious diseases should be a U.S. foreign policy concern were not novel. The linkage between infectious diseases and national security, however, sets the Clinton administration’s policy initiative apart. The infectious disease-national security connection crystallized when the Central Intelligence Agency’s National Intelligence Council issued a report in January 2000 entitled *The Global Infectious Disease Threat and Its Implications for the United States*, which presented infectious diseases as a national security threat to the United States. The argument from the world’s remaining superpower that pathogenic microbes represented a *national security threat* raised the profile of infectious diseases within the United States government and beyond. This development was without precedent in U.S. national security discourse.

Another event without precedent occurred in January 2000 when the United Nations (U.N.) Security Council focused on the HIV/AIDS crisis in sub-Saharan Africa. Never before had the U.N. Security Council debated the security problems created by a microbial foe. The U.N. had been fighting HIV/AIDS from the original efforts of the World Health Organization’s Global AIDS Programme, established in 1986 through the creation in 1996 of the multi-organizational UNAIDS. The elevation of the HIV/AIDS catastrophe in sub-Saharan Africa to an issue of international peace and security at the U.N. Security Council level, however, was a profoundly different kind of intergovernmental treatment of an infectious disease problem. The World Health Organization also began to frame its reinvigorated efforts on infectious diseases in terms of “global health security,” consciously appropriating the concept of security to promote global infectious disease control.  

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Calls for the United States and other leading states to see infectious diseases as a national security issue came from journalists and non-governmental organizations (NGOs). Journalist Laurie Garrett argued that the United States had to pay more attention to emerging infectious diseases as a matter of foreign policy and national security.\textsuperscript{32} Think tanks engaged in the issue as well. The Chemical and Biological Arms Control Institute (CBACI) and the Center for Strategic and International Studies (CSIS) International Security Program issued a report in January 2000 that focused on health as a global security challenge.\textsuperscript{33} CBACI followed up this initial report with a second publication in December 2001 entitled \textit{Health, Security, and U.S. Global Leadership}\.\textsuperscript{34} The International Crisis Group—a NGO devoted to strengthening the capacity of the international community to prevent and contain conflict—issued a report in June 2001 called \textit{HIV/AIDS as a Security Issue}.\textsuperscript{35} The Council on Foreign Relations and the Milbank Memorial Fund produced a document in May 2001 calling for the United States to place more foreign policy attention on infectious diseases and international health cooperation, arguing that “[s]upporting public health worldwide will enhance U.S. national security.”\textsuperscript{36} In 2003, RAND supported and published as report entitled \textit{The Global Threat of New and Reemerging Infectious Diseases: Reconciling U.S. National Security and Public Health Policy}.\textsuperscript{37}

Academics also contributed to thinking about the linkage between public health and national security. Dennis Pirages argued, for example, that pathogenic microbes might constitute the greatest threat to security and stability in the post-Cold War

\textsuperscript{32.} LAURIE GARRETT, \textsc{The Coming Plague: Newly Emerging Diseases in a World Out of Balance} (1994); Laurie Garrett, \textit{The Return of Infectious Disease}, 75 FOREIGN AFF. 66 (1996); Laurie Garrett, \textit{Betrayal of Trust: The Collapse of Global Public Health} (2000) [hereinafter \textsc{Betrayal of Trust}].

\textsuperscript{33.} \textsc{Contagion and Conflict}, supra note 5.

\textsuperscript{34.} JONATHAN BAN, \textsc{Health, Security, and U.S. Global Leadership} (2001).


\textsuperscript{36.} JORDON S. KASSALOW, \textsc{Why Health is Important to U.S. Foreign Policy} (2001), \textit{at http://www.milbank.org/reports/ForeignPolicy.html} (last visited Jan. 2, 2003).

\textsuperscript{37.} JENNIFER BROWER & PETER CHALK, \textsc{The Global Threat of New and Reemerging Infectious Diseases: Reconciling U.S. National Security and Public Health Policy} (2003).
world. He observed that “[t]he greatest challenges to human well-being in the next century are more likely to come directly from nature than from the malignant designs of malevolent dictators.” Andrew Price-Smith developed empirical analysis indicating that infectious disease prevalence in a country negatively affects state capacity, suggesting that infectious diseases in many developing countries may contribute to poverty, state failure, and national and regional destabilization. Price-Smith used his empirical evidence to argue that infectious diseases constitute both a direct and indirect threat to the security of nation-states in the global age.

This overview of leading examples of the public health-national security linkage literature does not suggest that everyone participating in the discourse accepted that infectious diseases constituted a national security threat, or even that establishing the linkage was easy or persuasive. Despite the Clinton administration’s claim that infectious diseases, especially HIV/AIDS in sub-Saharan Africa, represented a national security threat to the United States, the administration behaved in ways that indicated it did not practice what it preached. The most glaring discrepancy on this issue came in the hard line the Clinton administration took against developing countries, such as South Africa, that sought to increase access to antiretroviral therapies for HIV/AIDS-ravaged populations.

Reviewing the National Intelligence Council’s report on The Global Infectious Disease Threat and Its Implications for the United States in Foreign Affairs, Philip Zelikow argued: “The analysis is fascinating, and the case for international humanitarian action is compelling. But why invoke the “national security” justification for intervention? The case for direct effects on U.S. security is thin.”

Frustration also accompanied efforts to delineate the linkage. CBACI and the CSIS International Security Program engaged in an

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41. Id.
eighteen-month research project on the question of whether the "growing number of intersections between health and security issues create a national security challenge for the United States" only to conclude that "we still cannot provide a definitive answer." The report on the proceedings of a June 2001 CBACI workshop on health and security also highlighted continuing uncertainty about linking national security and public health.

The anthrax attacks in the United States in 2001 changed the landscape of the linkage discourse in ways still being felt. The threat of biological weapons proliferation and bioterrorism constituted part of the arguments that infectious diseases represented a national security threat to the United States and other countries in the pre-anthrax attack literature; but many in the national security and public health communities did not believe that states or terrorists would use biological weapons against the United States or any other country. When bioterrorism visited the United States less than a month after the September 11th terrorist attacks, the national security threat of bioterrorism specifically and biological weapons generally became terrifyingly clear to every American as well as people in other countries.

C. The Concept of "Public Health Security"

The emergence of policy and academic literature analyzing the nexus between public health and national security suggests that a new concept of "public health security" has entered both the public health and national security communities—communities that have traditionally had little to do with each other. Public health security consists of the policy areas in which national security and public health concerns overlap (see Figure 1). The literature on the public health-national security linkage does not argue that the public health and national security worlds are synonymous but rather attempts to demonstrate that they intersect. The analytical

44. CONTAGION AND CONFLICT, supra note 5, at vii.
45. BAN, supra note 34, at 9 ("[T]he traditional national security establishment is not wholly convinced that framing . . . health issues in security terms is useful. Many feel that drawing this relationship dilutes or stretches the parameters of what should fall under the rubric of national security to a point that may be counterproductive. This view maintains that national security should be largely confined to military affairs—protecting borders, fighting wars, and devising military strategy.").
46. Jonathan B. Tucker, Lessons from the Case Studies, in TOXIC TERROR: ASSESSING TERRORIST USE OF CHEMICAL AND BIOLOGICAL WEAPONS 249, 267 (Jonathan B. Tucker ed., 2000) [hereinafter Lessons] (arguing that "[b]ased on historical trends identified in this study, however, only a tiny minority of terrorists will seek to inflict indiscriminate fatalities [with chemical or biological weapons], and few if any of them will succeed[ ]").
challenge comes in defining the extent to which public health and national security overlap as policy endeavors and the importance of the overlap for policy purposes.

Is "public health security" a narrow concept, dealing only with the threat of biological weapons, or does it include challenges posed by emerging and reemerging infectious diseases generally? The public health-national security linkage literature attempts, for the most part, to construct a generous overlap that includes both biological weapons and infectious disease threats, which produces a broad conception of public health security. This broad conception contains a more diverse set of substantive issues (e.g., biological weapons and naturally occurring infectious diseases) than a narrow notion (e.g., biological weapons only).

Identifying the scope and substance of public health security depends, however, on how one defines "national security" and "public health." Although most people have a rough idea what national security means, the concept of public health causes confusion.47 Public health is often mistaken for health

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47. Michael H. Merson, Robert E. Black, & Anne J. Mills, Introduction to International Public Health, at xvii (Michael H. Merson et al. eds., 2001) ("The term public health evokes different ideas and images. One is often asked: Is it a profession, a discipline, or a system? Is it concerned primarily with health care of the poor? Does it mean working in an urban clinic, or providing clean water and sanitation?"); Betrayal of Trust, supra note 32, at 6 ("[T]he 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.").
care\textsuperscript{48} or, more specifically, health care for the poor.\textsuperscript{49} According to Lawrence Gostin, experts distinguish public health from health care in several respects:

Public health focuses on: (1) the health and safety of populations rather than the health of individual patients; (2) prevention of injury and disease rather than treatment and care; (3) relationships between the government and the community rather than the physician and patient; and (4) population-based services grounded on the scientific methodologies of public health (e.g., biostatistics and epidemiology) rather than personal medical services.\textsuperscript{50}

Thus, public health differs fundamentally from health care because of its focus on population health and the responsibility of the government in protecting populations from health threats.

Distinguishing public health from health care proves helpful in understanding what public health involves, but the concept remains difficult because most contemporary definitions of “public health” and “health” are broad. The definition of health in the Constitution of the World Health Organization (WHO) captures this expansive conception of public health: the WHO defines health to include not only the absence of disease but also the physical, mental, and social well-being of human beings.\textsuperscript{51} Other experts have also stressed the expansive nature of public health, illustrated by the argument that “[s]ocial justice is the main pillar of public health.”\textsuperscript{52} Although many have criticized the expansive view of public health,\textsuperscript{53} most public health literature acknowledges

\begin{thebibliography}{2}
\bibitem{49} \textit{Betrayal of Trust}, supra note 32, at 8 (“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.”).
\bibitem{52} Merson, Black, & Mills, \textit{supra} note 47, at xviii.
\bibitem{53} \textit{Betrayal of Trust}, \textit{supra} note 32, at 8 (criticizing the Institute of Medicine’s broad definition of public health, \textit{see} \textit{supra} note 1 and accompanying text, as revealing “no agreement about what constituted ‘public health’ other than assuring that people were healthy”); Rothstein, \textit{supra} note 1, at 145, 147 (criticizing the Institute of Medicine’s definition of public health as “a vague definition that fails to indicate the primary objective or
that public health today is a broad field encompassing infectious and non-communicable diseases, physical and mental health, prevention and treatment of diseases, and policy activities at the local, national, international, and global levels.\textsuperscript{54}

The public health-national security linkage literature does not involve the entirety of contemporary public health concepts, so concerns about the expansive definition of public health do not prove debilitating in this context. The linkage literature focuses exclusively on infectious disease threats and does not mention the significant global health problems caused by non-communicable diseases, such as those connected with tobacco consumption.\textsuperscript{55}

Many areas of contemporary public health practice that involve significant and growing national and global morbidity and mortality are not within the emerging public health security concept.

The scope and substance of the concept of "national security" also raises controversies. National security and international relations experts have engaged in a debate for two decades (if not longer) on how they should define "national security" and "security."\textsuperscript{56} Part II below explores this debate because the various concepts of security create different visions of public health security. The broad conception of public health security found in the public health-national security linkage literature incorporates, therefore, expanded notions of what should constitute security in the global age. To understand public health security as a concept, we need to delve into the different perspectives on the meaning of security in the context of international relations.

\textsuperscript{54} Public Health: An Introduction, reprinted in DAVID P. FIDLER, INTERNATIONAL LAW AND PUBLIC HEALTH: MATERIALS ON AND ANALYSIS OF GLOBAL HEALTH JURISPRUDENCE 3, 4 (2000) ("The modern view of health is broad. It goes beyond individual diseases or viruses and includes all of the aspects of life that can affect our physical, mental, or social well-being.").

\textsuperscript{55} Press Release, World Health Organization, WHO Atlas Maps Global Tobacco Epidemic 82 (Oct. 15, 2002), at http://www.who.int/infos/en/fact221.html (last visited Jan. 2, 2003) (describing a "galloping worldwide epidemic" in tobacco-related diseases, which currently kill 4.9 million people per annum globally and which are projected to kill 8.4 million people a year by 2020, with the developing countries bearing 70% of the projected mortality); see also WORLD HEALTH ORGANIZATION, WORLD HEALTH REPORT 1997: CONQUERING SUFFERING, ENRICHING HUMANITY (1997) (discussing the global scale of non-communicable disease problems).

II. CONCEPTS OF SECURITY

One reason why some experts resist the public health-national security linkage is that it forces us to think hard about the meaning of "national security" in the context of the globalization of infectious disease. Like any prominent terms in policy and academic discourse, "national security" and "security" have been sources of definitional controversy. Understanding the debate about the security concept is important in evaluating public health security as an evolving area of foreign policy concern. In this Part, I present four different concepts of security and connect them with the discourse on the public health-national security linkage.57 Table 1 summarizes the main elements of the four security concepts.

A. Four Concepts of Security

1. The Realpolitik Perspective—Protecting National Security

The traditional framework for analyzing security comes from the international relations theory called realism.58 Realism holds that the anarchical nature of the international system means that states are the primary actors59 and the states seek power in order to survive and be secure.60 As a result, realism defines security as

57. These four concepts of security do not necessarily exhaust the possible perspectives that exist about what "security" means or should mean. Roland Paris noted, for example, that the terms human security, common security, global security, cooperative security, and comprehensive security have all been developed to "encourage policymakers and scholars to think about international security as something more than the military defense of state interests and territory." Paris, supra note 8, at 87. In addition, other theories of international relations, such as feminism, offer perspectives on security not utilized in this Article. J. ANN TICKNER, GENDER IN INTERNATIONAL RELATIONS: FEMINIST PERSPECTIVES ON ACHIEVING GLOBAL SECURITY (1992). I select the concepts and theories used in this Article because they appear, to me, to be the most relevant for illuminating the public health-national security linkage.

58. For overviews of the realist theory of international relations, see Scott Burchill, Realism and Neo-Realism, in THEORIES OF INTERNATIONAL RELATIONS 67 (Scott Burchill & Andrew Linklater eds., 1996); REALISM: RESTATEMENTS AND RENEWAL (Benjamin Frankel ed., 1996); Timothy Dunne & Brian C. Schmidt, Realism, in THE GLOBALIZATION OF WORLD POLITICS: AN INTRODUCTION TO INTERNATIONAL RELATIONS 141 (John Baylis & Steve Smith eds., 2d ed. 2001).

59. KENNETH N. WALTZ, THEORY OF INTERNATIONAL POLITICS 93-97 (1979) (discussing why states are the primary actors in the anarchic structure of international relations); Benjamin Frankel, Restating the Realist Case: An Introduction, in REALISM: RESTATEMENTS AND RENEWAL, at xiv-xv (Benjamin Frankel ed., 1996) (noting realism’s premise that states are the central actors in an anarchic world); John J. Mearsheimer, The False Promise of International Institutions, INT’L SECURITY, Winter 1994/1995, at 5, 10 (noting as one of realism’s assumptions that the international system is anarchic and that states are the main political units of that system).

60. HANS J. MORGENTHAU, POLITICS AMONG NATIONS 5 (5th ed. rev. 1978) (arguing that, under realism, "statesmen think and act in terms of interest defined as power");
TABLE 1. FOUR CONCEPTS OF SECURITY

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<th>Security concept</th>
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“national security”—the security of the state. Threats to national security are exogenous and come from rival states that likewise are seeking power and security in anarchy. Realists believe that international cooperation is little more than an exercise in expediency and that cooperative arrangements break down once the national interests of states change. Self-help in the face of the dangerous world of international politics is the only reliable strategy for a state. Under realism, the pursuit of national security involves

WALTZ, supra note 59, at 113 (arguing that “international politics is the realm of power”); Frankel, supra note 58, at xv (noting the realist assumption that states seek to maximize their security or power).

61. Mearsheimer, supra note 59, at 12 (noting that, under realism, the self-interested behavior of states limits their ability to cooperate).

62. WALTZ, supra note 59, at 111 (arguing that states in anarchy “must rely on the means they can generate and the arrangements they can make for themselves. Self-help is necessarily the principle of action in anarchy”).
power politics among states, creating the "security dilemma" that other states will perceive one state's effort to achieve national security as constituting a threat, necessitating their response, which the first state will view as a threat, and so on.\textsuperscript{68} In this world view, states achieve national security by maintaining military power and other forms of material power (e.g., economic and technological prowess)\textsuperscript{64} and preserving a balance of power among competing states.\textsuperscript{65} The great powers maintain international or systemic security and order through maintenance of a balance of power.\textsuperscript{66}

For realism, power manifests itself through material capabilities in many contexts—political, economic, and military. As Jeffrey Legro and Andrew Moravcsik argued, "[r]ealists have long insisted that control over material resources in world politics lies at the core of realism. . . . material resources constitute a fundamental 'reality' that exercises an exogenous influence on state behavior no matter what states seek, believe, or construct."\textsuperscript{67} Under realism, the most important measure of power in the anarchy of international relations historically has been military power.\textsuperscript{68} Under realist thinking, achieving national security requires the creation and maintenance of national power in the form of various kinds of material capabilities. Realism traditionally focused little or no attention on politics, economics, or culture within states\textsuperscript{69}—except

\textsuperscript{63} Dunne & Schmidt, supra note 58, at 153 (discussing the security dilemma in the context of realist theory).

\textsuperscript{64} Jeffrey W. Legro & Andrew Moravcsik, Is Anybody Still a Realist?, INT’L SECURITY, Fall 1999, at 5, 17 (arguing that, under realism, a state’s influence is proportional to its underlying power, defined as access to various material resources and capabilities, which includes, but is not limited to, military power).

\textsuperscript{65} Waltz, supra note 59, at 116-28 (discussing the importance of the balance of power to a structural theory of international politics); Steven L. Lamy, Contemporary Mainstream Approaches: Neo-Realism and Neo-Liberalism, in THE GLOBALIZATION OF WORLD POLITICS: AN INTRODUCTION TO INTERNATIONAL RELATIONS 185 (John Baylis & Steve Smith eds., 2d ed. 2001) (noting realism’s emphasis on the balance of power as the central mechanism for international order).

\textsuperscript{66} Hedley Bull, The Anarchical Society: A Study of Order in World Politics 206-07 (1977) (arguing that the great powers manage international order through, among other things, preserving the general balance of power).

\textsuperscript{67} Legro & Moravcsik, supra note 64, at 18; see also Waltz, supra note 59, at 131 (discussing the relevant material capabilities of states as including "size of population and territory, resource endowment, economic capability, military strength, political stability and competence").

\textsuperscript{68} Lamy, supra note 65, at 185 (noting that traditional realists and neo-realists agree on the importance of military power to a state’s security and survival).

\textsuperscript{69} Anne-Marie Slaughter, International Law and International Relations, 285 RECUEIL DES COURS 9, 33-34 (2000) (noting the realist premise that states are "rational unitary actors who are functionally identical," like billiard balls colliding with one another in the international system).
to the extent such internal matters connect to material capabilities the state needs to survive and be secure in the dangerous game of power politics.


Although the *realpolitik* perspective on security has dominated security studies in the post-World War II period, critics have attacked it as being inadequate to explain security in an interdependent and globalized world. Theorists can trace theoretical dissatisfaction with the *realpolitik* concept of national security to the origins of international relations theory. Immanuel Kant opposed, for example, balance of power politics and the focus on the state’s security because these produced war and human misery rather than order and security. After World War II, Edward Carr argued that the state had become an anachronism for providing security because the state could no longer, by itself, provide its citizenry with any kind of security, be it military, economic, or political. Carr urged people to think of security without relying on the traditional *realpolitik* notions of power, sovereignty, and borders. A different challenge to prevailing notions of national security appeared in the human rights movement after World War II. Drawing on the experience of Nazi Germany, post-war human rights advocates believed that how a government treated its citizens was an indicator of the likelihood that the government would become a menace not only to its own people but also international peace. Human rights were, in other words, important for national security thinking.


73. Id. at 39-72.

74. Anne-Marie Slaughter, *A Chance to Reshape the UN*, WASH. POST, April 13, 2003, at B7 (arguing that “the very origins of the Universal Declaration of Human Rights reflect at least in part the recognition that Hitler’s horrific abuses of his own people foreshadowed the threat he posed to the rest of the world[ ]”). The preamble of the European Convention for the Protection of Human Rights and Fundamental Freedoms also expressed this
Challenges to realism’s conception of national security developed more systematically in the 1970s and the 1980s, when international relations specialists began to question the realist paradigm of security. Jessica Mathews argued that “[i]n the 1970s the concept [of national security] was expanded to include international economics as it became clear that the U.S. economy was no longer the independent force it had once been, but was powerfully affected by the economic policies in dozens of other countries.”75 In 1983 Richard Ullman noted that “[o]ver the past decade or so a vast array of public interest organizations have begun to put forward alternate conceptions of national security . . . devoted to particular issues—limiting population growth, enhancing environmental quality, eradicating world hunger, protecting human rights, and the like.”76 Ullman’s analysis challenged the realist approach because he expanded security threats to include events that degraded the quality of life of a state’s inhabitants or narrowed the policy choices of a government and non-state actors within a state.77 Ullman included “decimating epidemics”78 in the list of events that threaten the quality of life of a state’s citizens, directly opening the security debate to public health concerns. In 1987 Caroline Thomas argued that security studies should consider internal security in terms of secure systems of food, health, money, and trade.79 Thomas’ argument also implicates public health by suggesting that health—typically an issue internal to a state of no interest to realists—should be a security concern under an expanded definition of that concept. In 1989 Mathews asserted that “[t]he 1990s will demand a redefinition of what constitutes national security” and advocated expanding the “definition of national security to include resource, environmental and demographic issues.”80

perspective as the signatory governments reaffirmed “their profound belief in those Fundamental Freedoms which are the foundation of justice and peace in the world and are best maintained on the one hand by an effective political democracy and on the other by a common understanding and observance of the Human Rights upon which they depend”. European Convention for the Protection of Human Rights and Fundamental Freedoms, Nov. 4, 1950, 213 U.N.T.S. 222.

76. Ullman, supra note 56, at 152
77. Id. at 133.
78. Id.
80. Mathews, supra note 75, at 162.
The security debate expanded again after the Cold War. The full context of this debate in the late 1980s and 1990s is beyond the scope of this Article, but I focus on one perspective that gained stature during this period—the “common security” perspective. This perspective rejected the realpolitik emphasis on state power (especially military power) and argued that states face threats the realist framework does not address. Experts pushing the common security agenda frequently mentioned economic and environmental problems as threats to security—threats that interdependence and globalization exacerbate. J. Ann Tickner argued, for example, that “[t]he multidimensionality of security defined in military, economic, and ecological terms, and the interdependence between them is at the heart of common security thinking.” As noted above, the efforts to broaden security studies to new challenges created space for public health in the discourse, even if experts did not occupy this space until the latter half of the 1990s. As Altman observed, “[i]n contemporary attempts to redefine security, it is now common to list a number of issues (for example, international terrorism, drug trafficking) to which issues of health generally, and epidemics of infectious diseases more specifically, are often added.”

The common security agenda recognized that states remain important actors but emphasized two issues that separated it from realism’s perspective on security. First, as Ullman’s emphasis on threats to the quality of life indicates, the security of the individual within the state interested common security analysts. Tickner noted that most common security proponents stressed the security of the individual, and this emphasis recalls the Kantian effort to refocus attention from the state to the individual as the central concern of foreign policy. Second, common security analysts rejected the

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82. Tickner, supra note 70, at 182.
83. Altman, supra note 5, at 34.
84. Ullman, supra note 56, at 133-35.
85. Tickner, supra note 70, at 182 (arguing that all proponents of the common security approach emphasize the security of the individual and call into question the state as the provider of security).
"self-help" modus operandi of realism and underscored the importance of international cooperation among states.\textsuperscript{86} Emphasis on cooperation was not idealistic but grounded in a realistic understanding of the nature of the threats faced.\textsuperscript{87}

These observations suggest that liberalism\textsuperscript{88} provides the theoretical foundation for the common security perspective. Liberalism argues that individuals and private groups, not states, are the primary actors in international relations.\textsuperscript{89} Although liberalism accepts the importance of states and the reality of states interacting in a condition of anarchy, it does not agree with realism that structural anarchy determines state behavior. In contrast to realism, liberalism looks inside the state to explain behavior in international politics. Moravcsik argues that a core assumption of liberal theory is that states "represent some subset of domestic society, on the basis of whose interests state officials define state preferences and act purposively in world politics."\textsuperscript{90} Unlike realism, liberalism "explains policy as a function of social context, and focuses on how domestic conflict, not international anarchy, imposes suboptimal outcomes."\textsuperscript{91}

The policy and social preferences of individuals and private groups not only determine state preferences but, through transnational commerce, create a "pattern of interdependent state preferences [that] impose[] a binding constraint on state behavior."\textsuperscript{92} For liberalism, the key variables in understanding how security, order, and peace can be achieved in anarchy are the form of governments through which individuals and private groups create preferences and how states create patterns of interdependent pref-

\textsuperscript{86} As Mathews argued in connection with environmental challenges, "the need for new diplomacy and for new institutions and regulatory regimes to cope with the world's growing environmental interdependence is even more compelling." Mathews, \textit{supra} note 75, at 174.

\textsuperscript{87} Tickner, \textit{supra} note 70, at 181-82 ("Common security assumes that there are global dangers which threaten the entire system and which cannot be solved by boundary protection; by emphasizing common dangers, it bases its appeal for co-operative behaviour, not on altruism, but on a larger sense of collective self-interest.").


\textsuperscript{89} Andrew Moravcsik, \textit{Taking Preferences Seriously: A Liberal Theory of International Politics}, 51 \textit{INT'L ORG.} 513, 516 (1997).

\textsuperscript{90} \textit{Id.} at 518.

\textsuperscript{91} \textit{Id.} at 537.

\textsuperscript{92} \textit{Id.} at 520.
erences in the economic realm. Liberalism posits that democratic governments and liberalized trade and economic intercourse provide the best foundations for security and order.

Like liberalism, the common security agenda redirects the focus of security studies from the state to the individual level while accepting the framework of the state and the inter-state system. The common security approach broadens the security agenda to include transnational phenomena that threaten the security of individuals and communities, including drug trafficking, environmental degradation, or disease epidemics. To achieve common security, the state must redefine its security to include the wider range of threats creating insecurity for individuals and cooperate with other states to mitigate such security problems. The common security idea stresses the interdependence of individual, national, and international security in the same fashion as liberalism.

From a public health viewpoint, the common security perspective opens space for discussing health as a security problem. As public health histories record, infectious diseases have had a devastating impact on the quality of life of individuals in most nations. In fact, infectious disease morbidity and mortality far exceed war-related death and disability in human history. Given the nature of pathogenic microbes, states have to cooperate to mitigate the threat to individuals in their territories from infectious diseases. National security in infectious disease terms can only be achieved by states cooperating to create international security against microbial threats. The long history of international cooperation on infectious disease control then becomes relevant not only as a foreign policy but also a security issue. The common security perspec-

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93. Id. at 531 (arguing that liberal theory holds that "aggressive behavior ... is most likely in undemocratic or inequalitarian polities where privileged individuals can easily pass costs on to others").

94. Id. at 530 (arguing that liberal theory posits that "the more diversified and complex the existing transnational commercial ties and production structures, the less cost-effective coercion is likely to be").


96. PRICE-SMITH, supra note 40, at 2 ("Throughout recorded history, infectious disease has consistently accounted for the greatest proportion of human morbidity and mortality, surpassing war as the foremost threat to human life and health."). Two examples from the twentieth century illustrate this fact. Experts estimate that smallpox alone killed 500 million people during the twentieth century. DAVID KOPLOW, SMALLPOX: THE FIGHT TO ERADICATE A GLOBAL SCOURGE 1 (2002). The 1918-1919 influenza pandemic killed between an estimated 20 and 100 million people in a short period of time. GINA KOLATA, FLU: THE STORY OF THE GREAT INFLUENZA PANDEMIC OF 1918 AND THE SEARCH FOR THE VIRUS THAT CAUSED IT 4-7 (1999).
tive creates, thus, something akin to a collective public health security framework in which each state in the international system acknowledges that the public health security of one state is the concern of all and agrees to cooperate in a collective response to pathogenic threats.\(^9\)

3. The Human Security Perspective—Constructing Global Security

The third competing concept is the "human security" perspective.\(^9\) The United Nations Development Programme (UNDP) popularized the concept of "human security" in the first half of the 1990s.\(^9\) According to the 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.\(^1\)

The UNDP asserted that human security has two main elements: protection from (1) chronic threats, such as hunger, disease, and repression; and (2) sudden and harmful disruptions in the patterns of daily life.\(^1\) Globalization adds to the need to think about security in human rather than state-centric terms: "In the globaliz-

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98. Paris, supra note 8, at 87 (providing a detailed analysis of the "human security" concept). My presentation of human security differs from Paris' analysis because I connect the concept to underlying theories of international relations, critical international theory and social constructivism. I take this approach to avoid the problems created by the expansive way in which human security is often presented. As Paris critically observed, "if human security means almost anything, then it effectively means nothing at all." Id. at 93. My approach captures the central focus of human security literature on the security of individuals and communities but adds a prescriptive focus that such security is to be achieved transnationally by non-state actors rather than internationally by states and international organizations. This prescriptive focus is what separates human security from common security conceptually.


100. Id. at 22.

101. Id. at 23. Under this approach, UNDP identified seven core elements of human security: (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.
ing world of shrinking time, shrinking space and disappearing bor-
ders, people are confronting new threats to human security—
sudden and hurtful disruptions in the pattern of daily life."

The human security perspective is more critical of the existing
structure and dynamics of international relations than the com-
mon security perspective. Like common security, human security
moves the focus away from the state toward the individual. The
common security agenda accepts the reality of the state and the
inter-state system and seeks to use them constructively through
international cooperation. The human security perspective
expresses skepticism about the capacities of the state and the inter-
state system to provide people-centered security and stresses the
need for non-state actors and transnational social movements to
engage in the quest for human security. As Tickner observed in
discussing critical perspectives on security, "many critics of realism
claim that, if security is to start with the individual, its ties to state
sovereignty must be severed."

Further, she noted that such critics "claim that the creative
energy for reformulating security in less exclusionary terms is com-
ing from social movements which operate across national bounda-
ries and which grow out of a concern for human security defined
in economic and ecological as well as political/military terms." With
human security, we have traveled far from realism because the
state is neither the focus nor the critical actor in the provision
of security. The human security perspective contains a vision of
security more critical and radical than the common security con-
cept because human security relies on notions of transnational
human solidarity that transcend the statist instruments (e.g., the
state, international law, and international organizations) the com-
mon security outlook utilizes.

102. UNITED NATIONS DEVELOPMENT PROGRAMME, HUMAN DEVELOPMENT REPORT:
GLOBALISATION WITH A HUMAN FACE 3 (1999).
103. BROWER & CHALK, supra note 37, at 4-5 (“The key idea behind human security . . .
is the focus on the individual as the primary object of security.”).
104. Id. at 4 (“Such statecentric paradigms are clearly unable to deal with issues that
originate within national borders but whose effects transcend international boundaries
and affect the security of people worldwide.”).
105. Id. at 6 (arguing that “human security stresses the potential for individual/com-
unitarian cooperation that is undertaken to achieve (absolute) gains that will be to the
benefit of all.”).
106. Tickner, supra note 70, at 189.
107. Id. at 190.
Theoretically, the human security perspective connects with post-Marxist critical international theory\textsuperscript{108} and social constructivism.\textsuperscript{109} Marx and Engels rejected the state and the instruments of inter-state relations (e.g., war, diplomacy, and international law) and condemned them as part of the superstructure of the capitalist exploitation of the working class.\textsuperscript{110} The Marxist outlook on security was, thus, radically different from traditional state-centric approaches because it thought \textit{transnationally} along socio-economic lines rather than \textit{internationally} between states. Today, critical international theory shows a similar interest in exposing the injustice inherent in existing political structures, such as the interstate system, and identifying possible emancipatory levers to pull in order to reform radically human affairs.\textsuperscript{111}

Social constructivism likewise posits that ideas rather than power shape anarchy. As Alexander Wendt argued, “constructivists argue that material resources [so critical to realism] only acquire meaning for human action through the structure of shared knowledge in which they are embedded.”\textsuperscript{112} Social constructivists would focus, thus, on the ideational move away from the narrow, realist concept of national security toward more expansive notions of security, such as human security, a shift that illustrates the power of ideas to shape how humans socially construct their relations globally. To borrow from Wendt’s version of social constructivism, the move toward human security might represent a shift from a Hobbesian...
(i.e., foreigner as enemy) to a Kantian (i.e., foreigner as friend) culture of anarchy. Jennifer Brower and Peter Chalk labeled the theoretical approach informing human security the "'globalist' school of thought . . . that asserts that an 'international society' has emerged that integrates communications, cultures, and economics in new ways and in a manner that transcends statecentric relations."

The human security concept opens more space for public health than the common security perspective. The rejection of statist approaches and solutions to human security allows public health problems to be framed as transnational threats to communities and individuals that require transnational responses. Public health, thus, escapes its traditional association with the nation-state and becomes a comprehensive idea that more accurately reflects the nature of health threats in the global era, especially infectious diseases. Not only is the concept of "public health" reconstructed, but this ideational revision allows the new public health perspective to re-evaluate traditional attitudes toward international relations. Foremost in this reevaluation is the empowerment of non-governmental actors in global politics as a strategy to avoid relying on statist models that reproduce structural injustice and violence. The growing interest in the involvement of non-state actors, such as multinational corporations and NGOs, in public health through "global health governance" and "global public-private partner-
ships for health'117 resonates with the human security perspective. In addition, Ilona Kickbusch's argument that social constructivism (rather than realism or liberalism) offers the best theoretical framework for global health analysis118 suggests that the ideas alive in the human security concept relate to emerging themes in global health studies. Thus, the human security perspective aims not for the statist forms national or international security sought by realism and liberalism respectively but for global security focused on people-centered, people-led transnational human relations.

4. The Ecological Security Perspective—Maintaining Epidemiological Security

In his analysis of the globalization of infectious diseases at the end of the twentieth century, Pirages argued that the traditional perspectives on international relations—the realist, liberal, and critical schools of thought—"offer little policy guidance in dealing with issues of twenty-first century globalism."119 Central to Pirages' disparagement of these theories was the biological threat to the human species posed by emerging and reemerging infectious diseases.120 In place of traditional approaches to explaining international relations, Pirages offered what he called an "ecological approach":

A predictive theory of international relations that can account for these biological threats to human security and deal with the causes and myriad human consequences of globalization, including emerging and resurgent infectious diseases, is best grounded in an ecological perspective. This approach stresses the evolutionary interactions among human populations, between them and the physical environment, and between them and pathogenic microorganisms.121


118. Kickbusch, supra note 11, at 195 (arguing that the social constructivist framework "offers the best theoretical starting point to help understand the dynamics of global health governance"). But see David P. Fidler, Disease and Globalized Anarchy: Theoretical Considerations on the Pursuit of Global Health, 1 SOC. THEORY & HEALTH 21, 32-33, 37 (forthcoming 2003) (arguing that using social constructivism as the theoretical vehicle for global health advocacy faces serious problems).

119. Pirages, Ecological Theory, supra note 38, at 54.

120. Id. at 53.

121. Id. at 56.
According to Sarah Glasgow and Pirages, "ecological security" for any human population depends on maintaining evolutionary equilibrium in four relationships that produce four security modes: (1) between human populations and the sustaining physical environment—environmental security; (2) between human populations and those of other species—species security; (3) among human populations sharing the same ecosystems—military security; and (4) between human populations and pathogenic microorganisms—microsecurity.\(^\text{122}\)

As a perspective on security, ecological security is broader than even human security because it looks not only at human populations on a global scale, but also the macro and micro natural environments in which human populations live. The security at issue in this perspective is the security of neither states nor individuals but the natural environment that sustains human life. Thus, this approach to security differs from the argument that environmental changes threaten national security by replacing a state-centric, anthropocentric focus with one that concentrates on the ecological/environmental context in which human life transpires.

Ecological security is also broader than human security because its scope incorporates the insecurity of non-human living species and non-living natural resources on a global scale. The theoretical sources for ecological security come from the study of ecology and evolution, producing what Pirages called "an eco-evolutionary point of view that can yield rich insights into the sociopolitical consequences of human interactions with nature and pathogenic microorganisms."\(^\text{123}\) In terms of infectious disease threats, ecological security promotes more effective "international management of the epidemiological consequences of globalization,"\(^\text{124}\) in essence the pursuit of *epidemiological security*.

Pirages' ecological approach echoes writers who focus not on the security dilemma among states but on "a more wide-ranging 'planetary security dilemma'" that constitutes a crisis originating not in "a competitive game between states but rather one that has its source in a cooperative game against nature."\(^\text{125}\) It also resonates with those who


\(^{124}\) *Id.* at 63.

\(^{125}\) Ian Clark, The Hierarchy of States: Reform and Resistance in the International Order 62 (1989); see also Matthew Paterson, Green Politics, in *Theories of International Relations* 252 (Scott Burchill & Andrew Linklater eds., 1996) (discussing "green political theory" and international relations).
have argued that traditional concepts of security need to include environmental issues. In a sense, the ecological approach removes the concept of "security" from the structure and dynamics of the anarchical international system and forces people to confront the common nemesis of nature's looming revenge on anthropomorphic abuse of the planet's environment.

B. The Four Perspectives and the Concept of Public Health Security

As noted previously, two themes in the literature on the public health-national security linkage are (1) the threat posed by emerging and re-emerging infectious diseases, and (2) the threat posed by biological weapons through state proliferation and bioterrorism. In this Section, I slot these two threats into the four perspectives on security described in Part II.A. The literature on the security threat posed by infectious diseases does not, for the most part, engage in this type of theoretical analysis. Most of the literature attempts to reach policy-making audiences in the United States, who tend to be more pragmatic and less theoretical, as illustrated by the titles and sub-titles of some of the reports (e.g., *America's Vital Interest in Global Health; The Global Infectious Disease Threat and Its Implications for the United States; Why Health is Important to U.S. Foreign Policy; Health, Security, and U.S. Global Leadership; Reconciling U.S. National Security and Public Health Policy*). One of the reports, *HIV/AIDS as a Security Issue,* almost defies theoretical categorization as it argues that HIV/AIDS represents a personal, economic, communal, national security, and international security threat.126

When theoretical matters arise, as they do in some analysis, the arguments note the inadequacy of realism to assist formulating responses to globalized pathogenic threats. As illustrated by Ullman's redefinition of security,127 academic work often replaces realism's national security perspective with something broader. Pirages dismissed realism as "possibly useful in explaining the machinations of nineteenth-century European autocrats or the behavior patterns of contemporary despots in less industrialized countries" but "of little use in predicting and explaining changes in the contemporary world."128 Price-Smith argued that "Realist policy prescriptions (which emphasize self-help strategies) will not protect states from the negative consequences of disease resur-

126. *INTERNATIONAL CRISIS GROUP,* supra note 35, at i-ii.
127. Ullman, supra note 56.
gence" and that "Liberal theory . . . is likely to provide a better theoretical foundation than Realism for tackling problems posed by the resurgence of infectious disease and other global issues."\textsuperscript{129} Brower and Chalk explicitly rejected traditional concepts of security to apply the human security idea to infectious disease threats.\textsuperscript{130}

In keeping with the more policy-oriented public health-national security linkage literature, Price-Smith's work points analysis in the direction of the common security perspective with its emphasis on the interdependence of individual, national, and international security.\textsuperscript{131} The same emphasis appears in CBACI's observation that the objective is "to enhance the security of individuals, communities, nations, and the international community."\textsuperscript{132} Pirages, on the other hand, dismisses liberalism as "not particularly useful in building relevant theory or offering policy guidance for dealing with the mounting biological and ecological challenges to the existing global order."\textsuperscript{133}

1. \textit{Realpolitik}, Biological Weapons, and Infectious Diseases

a. Biological Weapons

The threat posed by biological weapons fits within the \textit{realpolitik} perspective on national security because such weapons correlate with its emphasis on exogenous military threats to a state's physical and material security. Realism has little trouble accommodating the scenario in which one state uses or threatens to use a biological weapon against another state. Nor does realism have much difficulty accounting for the proliferation of biological weapons in the international system; such proliferation represents the convergence of the security dilemma with advancing biotechnological capabilities on the part of states.

The development of international law regarding biological weapons reflects the realist perspective. States banned the use of biological weapons in the Geneva Protocol of 1925; but the states limited the Protocol's prohibition in two respects: (1) it only applied between states parties to the Protocol,\textsuperscript{134} and (2) many states

\begin{itemize}
  \item \textsuperscript{129} Price-Smith, \textit{supra} note 40, at 183.
  \item \textsuperscript{130} Brower \& Chalk, \textit{supra} note 37, at 1-12.
  \item \textsuperscript{131} Price-Smith adopts Ullman's definition of security in his analysis, demonstrating that Price-Smith rejects the traditional realist framework for thinking about security in connection with infectious diseases. \textit{Id.} at 119.
  \item \textsuperscript{132} Ban, \textit{supra} note 34, at 71.
  \item \textsuperscript{133} Pirages, \textit{Ecological Theory}, \textit{supra} note 38, at 55.
  \item \textsuperscript{134} Geneva Protocol, \textit{supra} note 13 (stating that the states parties "agree to be bound as between themselves").
\end{itemize}
reserved the right to retaliate in kind in response to a first-use of biological weapons by another state party.\textsuperscript{135} The Geneva Protocol, in essence, only prohibited the first-use of biological weapons and enforced this prohibition by the threat of retaliation in kind, or biological deterrence. Further, the United States' unilateral renunciation of biological weapons made the prohibition on the development of biological weapons negotiated in the Biological and Toxin Weapons Convention of 1972 possible.\textsuperscript{136} This renunciation followed a review by the United States that concluded that biological weapons had little utility as military weapons,\textsuperscript{137} and thus—in the realist framework—were expendable because they added little if anything to U.S. material power in international politics. Realism even accounts for the biological weapons proliferation by states that has occurred since states adopted the Biological and Toxin Weapons Convention, as a result of realism's view of the weakness of international law in the face of the competing interests of states.

In addition, realist analysis accommodates arguments that biological weapons may be more attractive to weaker states that confront the overwhelming conventional military superiority of the United States.\textsuperscript{138} Experts argued that "it is entirely conceivable that a state threatened militarily by a superior conventional power such as the United States will attempt to deter war, or deter specific military actions, through the threat or use of NBC [nuclear, biological, and chemical] weapons against U.S. or allied civilian or military targets."\textsuperscript{139} This "asymmetrical" security dilemma increases the importance of biological weapons and their proliferation in realist thinking.

More difficult from the realpolitik perspective is the specter of bioterrorism. Realism's traditional focus has been on states and their interactions in a condition of anarchy, and realism typically

\textsuperscript{135} A number of states parties to the Geneva Protocol entered reservations that declared that the Protocol would cease to be binding if another state party violated its terms. DOCUMENTS ON THE LAWS OF WAR 144-146 (Adam Roberts & Richard Guelff eds., 2d ed. 1989) (listing reservations to the Geneva Protocol).

\textsuperscript{136} Convention for 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.

\textsuperscript{137} Lessons, supra note 46, at 249-67.

\textsuperscript{138} Richard A. Falkenrath, Robert D. Newman & Bradley A. Thayer, America's Achilles Heel: Nuclear, Biological, and Chemical Terrorism and Covert Attack 221-25, 228-29 (1998) (discussing the attractiveness of nuclear, biological, and chemical weapons in asymmetrical conflict with the United States).

\textsuperscript{139} Id. at 222.
downplays the importance of non-state actors, such as multinational corporations and NGOs. Terrorists are non-state actors. The growth of terrorism as a phenomenon in international relations has presented realism with a dilemma because terrorism’s increased prominence suggests that (1) states do not have a monopoly on violence in international politics, and (2) the anarchical structure of the international system is not the only source of conflict and violence.

In connection with state-sponsored terrorism, realism’s dilemma is attenuated because state sponsorship of unconventional violence fits within the general framework of realist analysis—terrorists are merely instruments of power and violence among competing states. The policy response has been to confront, sometimes with military force, the state sponsors of terrorism. The so-called “new terrorists” who are not necessarily state-sponsored pose a more difficult problem for realism. As Richard Falkenath, Robert Newman, and Bradley Thayer argued:

[T]here is a growing body of evidence that non-state actors are becoming more interested in causing human casualties on a massive scale. This is a relatively new development, and is poorly understood. The classic conceptual model of a terrorist organization—that of an established group with limited political aims, a strategy of controlled violence for achieving them, and an interest in self-preservation—appears to be breaking down. New groups are emerging with hazier objectives, shorter life spans, and a more direct interest in violence for its own sake, often for reasons rooted in religious fundamentalism or political radicalism. . . . In short, the nature of terrorism is changing in a way that suggests there will be an expanding range of groups that are both capable of using weapons of mass destruction and interested in inflicting casualties at levels well beyond the terrorist norms of the previous decades.

Until September 11th, “new terrorism” remained manageable for realism because its violence remained isolated and on a small scale (for example, the chemical terrorism of Aum Shinriyko in Japan), not disturbing the machinations of states in the anarchical international system.

140. One of the best known examples of the use of military force against a state sponsor of terrorism is the U.S. military strikes against Libya in 1986 following a Libyan-sponsored terrorist attack against U.S. military personnel in Berlin.

141. FALKENRATH, NEWMAN & THAYER, supra note 138, at 169-70.

One potential feature of the "new terrorism"—bioterrorism—contains, however, the potential to disrupt a state’s power and material capabilities *vis-à-vis* other states. Bioweapons pose threats to military assets at home and abroad and thus the ability of a country to use such assets to protect its overseas interests and territorial security. Likewise, the dangers bioweapons pose for disrupting the domestic governance and economic infrastructure that supports military power surpass the dangers created by conventional terrorist weapons. Bioweapons are both weapons of mass disruption as well as weapons of mass destruction. Therefore, domestic military and civilian prevention of and preparedness for bioterrorism becomes important to *realpolitik* thinking about national security.143

b. Infectious Diseases

The more general threat from infectious diseases proves harder to connect with the *realpolitik* perspective on national security. The literature on the public health-national security linkage posits two kinds of threats from naturally occurring infectious diseases: direct and indirect. The direct threat comes from pathogenic microbes "invading" a state through global travel and trade, undermining military, economic, and political capabilities and thus the state’s foundations of power. The indirect threat manifests itself when infectious diseases contribute to "state failure" in other regions of the world, causing military, political, and economic instability that adversely affects the strategic interests of other states. HIV/AIDS in sub-Saharan Africa is an example experts frequently employ in the public health-national security linkage literature to argue that infectious disease problems in other countries represent an indirect national security threat to the United States.144

From the *realpolitik* perspective, the "direct threat" argument is hard to maintain in connection with the national security of the great powers, which are the primary focus of realism. HIV/AIDS "invaded" the United States and European nations during the

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1980s and caused epidemics. Infectious disease morbidity and mortality, and the economic costs associated with dealing with the consequences, have climbed in the United States\textsuperscript{145} and other nations\textsuperscript{146} over the past twenty years. The increasing problems associated with microbial invaders specifically and infectious diseases generally did not, however, undermine or challenge the great power status of the United States and countries in Western Europe. Analysts of international politics generally recognized that the United States and Europe grew in absolute and relative power \textit{during} the first two decades of the HIV/AIDS pandemic and the time period associated with emerging and re-emerging infectious diseases.\textsuperscript{147} For the United States as a great power, the microbial incursion of HIV/AIDS and other pathogens has not affected its ability to defend the nation against external attack or project its power in other regions of the world. As Price-Smith concluded, "the globalization of disease is not a direct threat to the security of industrialized nations at the present time."\textsuperscript{148}

The "direct threat" thesis holds true, however, for realist analysis applied to many developing countries. The military, economic, and governance devastation being wrought by HIV/AIDS in sub-Saharan Africa demonstrates that infectious diseases can directly undermine material sources of a state's power, particularly its economic capabilities. Robert Ostergard argued, for example, that "African countries differ from most of the rest of the world in that the HIV/AIDS pandemic has reached a level of concern to them that would warrant perceiving the virus as a direct security threat."\textsuperscript{149} Similarly, Price-Smith has analyzed how HIV/AIDS con-


\textsuperscript{146} WORLD HEALTH REPORT 1996, supra note 21, at 15 ("During the past 20 years, at least 30 new diseases have emerged to threaten the health of hundreds of millions of people.");

\textsuperscript{147} Francis Fukuyama, \textit{The End of History?}, NAT'L INT., Summer 1989, at 3, 3 ("The triumph of the West, of the Western idea, is evident first of all in the total exhaustion of viable systematic alternatives to Western liberalism."); Samuel P. Huntington, \textit{The Clash of Civilizations?}, 72 FOREIGN AFF. 22, 39 (1993) ("The West is now at an extraordinary peak of power in relation to other civilizations.").

\textsuperscript{148} PRICE-SMITH, supra note 40, at 179.

\textsuperscript{149} Ostergard, supra note 144, at 347.
stitutes a direct and indirect national security threat to South Africa.\textsuperscript{150}

The\textit{ realpolitik} perspective is not, thus, theoretically resistant to incorporating infectious disease threats, whether endogenously or exogenously driven, to a state’s material capabilities and power. The infectious disease/state power dynamic has not received much realist attention because it has not, and does not presently, adversely affect the great powers, upon which most realist analysis focuses. Analysts are, however, beginning to employ traditional realist approaches to HIV/AIDS, as illustrated by Nicholas Eberstadt’s argument that “[d]riven by the spread of the disease in the region’s three largest countries—China, India, and Russia—the coming Eurasian pandemic threatens to derail the economic prospects of billions and alter the global military balance of power.”\textsuperscript{151}

The\textit{ realpolitik} perspective can incorporate public health as an element of material state power, much in the same way it does military, economic, demographic, and technological contributions to a state’s national security. Realism has no theoretical trouble accepting Price-Smith’s argument that “it must be understood that any agent that directly threatens to destroy a significant proportion of a state’s population constitutes a direct threat to that state’s national security.”\textsuperscript{152} Thus, realist analysis of the South African government’s failure to confront South Africa’s HIV/AIDS crisis\textsuperscript{153} would condemn President Mbeki and his advisors for undermining South Africa’s military, economic, demographic, and political power in international politics.

The South African example indicates that direct threats from infectious diseases are not beyond the\textit{ realpolitik} perspective on national security as is generally claimed in the public health-national security linkage literature. This position holds true even for great powers such as the United States because it is not inconceivable that pathogenic microbes could cause extensive damage to American power in a manner similar to what South Africa currently suffers. Capabilities to handle infectious diseases—public

\begin{itemize}
\item \textsuperscript{150} Andrew T. Price-Smith, \textit{Pretoria’s Shadow: The HIV/AIDS Pandemic and National Security in South Africa} (Chem. and Biological Arms Control Inst., Health and Security Series Special Report No. 4, 2002) [hereinafter \textit{Pretoria’s Shadow}].
\item \textsuperscript{151} Nicholas Eberstadt, \textit{The Future of AIDS}, 81 FOREIGN AFF. 22, 22 (2002).
\item \textsuperscript{152} \textit{Pretoria’s Shadow}, supra note 150, at 3-4.
\item \textsuperscript{153} \textit{Id.} at 34 (“Historically, South Africa’s ruling ANC party has shown itself to be less than apt when it comes to formulating a coherent and effective national policy to address the HIV/AIDS epidemic.”).
\end{itemize}
health capacity—represent a material capability of a state and fall within the narrow national security perspective of *realpolitik*.

Perhaps only highly transmissible and virulent infectious diseases could cause significant damage to U.S. material capabilities and power, which limits realism’s interest in public health capabilities to “strategic diseases”—those which have the potential to inflict serious harm on U.S. military, economic, demographic, and political capabilities. At present, the list of strategic diseases under a realist national security perspective is short, perhaps containing only two infectious diseases—smallpox used as a biological weapon and pandemic influenza as a naturally occurring threat. Pathogens genetically engineered to be more transmissible, virulent, or resistant to existing vaccines and drugs would also come within realism’s concept of public health security.

As Kenneth Waltz argued, “[a] key proposition derived from realist theory is that international politics reflects the distribution of national capabilities, a proposition daily borne out.”

HIV/AIDS invaded both the United States and South Africa with divergent effects on the material sources of national power because of, among other things, differences in national public health capacity.

154. Although not using realism as a framework, Price-Smith’s analysis is again relevant because he identifies, as a task for future research, the need “to distinguish pathogens that generate great mortality and/or morbidity in a population and significantly affect state capacity (e.g., HIV/AIDS and the malaria and tuberculosis pathogens) from relatively innocuous or rare pathogens (e.g., rhinovirus and legionella).” *Price-Smith*, supra note 40, at 180-81.


156. The Ottawa Group, made up of the Group of Seven ministers of health and the Mexican minister of health and established to explore ways to improve collaboration on preparing for bioterrorism after September 11th and the anthrax attacks, has added international cooperation on preparedness for pandemic influenza to its agenda. *U.S. Department of State, Fact Sheet Released by the U.S. Delegation to the 5th Review Conference of the BWC* (Nov. 14, 2002).

157. *Judith Miller, Stephen Engelberg & William Broad, Germs: Biological Weapons and America’s Secret War* 81 (2001) (“With the right equipment, military scientists could make a pathogen much harder or even more lethal. Researchers might use the new techniques to turn harmless germs into killers. Overall, the advances [in genetic engineering] threatened to tip the balance between offense and defense decisively in favor of the attacker. Genetic manipulation made it possible to redesign bugs like anthrax so that they could evade vaccines, one of the best protections against a biological weapon.”).

The presence of public health capacity mitigates the impact of infectious diseases on sources of U.S. power, while the absence of such capacity in South Africa contributes to the devastation HIV/AIDS inflicts on the South African military, economy, population, and governing elite.

Further, the United States and European countries applied their national economic and technological capabilities to develop antiretroviral drugs and, through their use, transform an incurable, fatal disease into a medical condition that can, in many circumstances, be handled as a chronic condition. The great powers engaged in self-help to produce this transition in HIV/AIDS, and the progress they have made against HIV/AIDS has not been dependent on international cooperation or international institutions, such as WHO or UNAIDS. By contrast, South Africa lacks the material capabilities to handle its HIV/AIDS epidemic through self-help. The U.S. and South African experiences with HIV/AIDS reflect the distribution of national public health and other material capabilities, which realists can analyze.

My argument differs from Price-Smith’s observation that “infectious disease constitutes a real threat to the national security of all states, but particularly those that are most vulnerable to the ravages of disease—that is, states with low endogenous capacity” because Price-Smith rejects realism and uses a national security concept broader than realpolitik. Similarly, my analysis challenges other writers, such as Brower and Chalk, who reject traditional concepts of security in order to adopt more expansive notions of security. My thesis contends that realism is relevant for thinking about the direct threats infectious diseases pose to states in the global era.

Much of the literature on the public health-national security linkage works hard to make the case that infectious disease-related damage in developing countries threatens the national security of the United States and other developed countries. The persuasive-


160. Price-Smith, supra note 40, at 119.

161. Id. at 119, 183 (adopting Ullman’s rejection of realism’s conception of security and his broader definition of security and expressly rejecting realism as a theoretical approach to disease threats); Pretoria’s Shadow, supra note 150, at 3 (accepting the broadening of the definition of national security “to include such phenomena as terrorism, resource scarcity, migration, and now threats to population health”).

162. See Brower & Chalk, supra note 37, at 1-12.
ness of this "indirect threat" thesis is, however, questionable from the realpolitik perspective on national security. Whether HIV/AIDS cripples Botswana or contributes to instability in southern Africa does not address the main concern of the realist—does the weakening of individual African countries or regional instability in sub-Saharan Africa threaten U.S. military or strategic interests (for example, access to critical resources or essential markets)? The answer to these questions would be in the negative because sub-Saharan Africa is not currently either strategically or economically vital to the great powers. In this regard, Eberstadt provides a classic realpolitik analysis of HIV/AIDS in sub-Saharan Africa:

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 African governments are primarily preoccupied with local troubles. The states of the region are thus not well positioned to influence events much beyond their own borders under any circumstances, good or ill—and the cruel consequence is that the world pays them little attention.\(^{163}\)

Ostergard similarly argued:

The end of the global ideological tug-of-war between the USA and former Soviet Union marginalised Africa in US foreign policy and in the international community and consequently marginalized Africa's social problems, not least of which was the growing HIV/AIDS epidemic. The spread of HIV/AIDS in Africa was not a direct security threat to the West in any sense of the word.\(^{164}\)

The Group of Eight (G-8) countries' response at their 2002 summit in Canada to pleas for help and partnership from African leaders illustrates the ambivalence of the hegemons toward Africa's plight with HIV/AIDS. While the G-8 countries pledged $20 billion for reducing the threat to their security of weapons and materials of mass destruction,\(^{165}\) they offered no new money for the fight

\(^{163}\) Eberstadt, supra note 151, at 23.

\(^{164}\) Ostergard, supra note 144, at 339.

against HIV/AIDS in sub-Saharan Africa.\textsuperscript{166} This result is consistent with a realist perspective on national security: the threat from weapons of mass destruction, including biological weapons, constitutes a graver concern for the great powers than HIV/AIDS in Africa.\textsuperscript{167} Even though September 11th may have taught the lesson that "failed states are a national security problem,"\textsuperscript{168} realists would see a myriad of "internal" factors that contribute to "state failure" in sub-Saharan Africa, which limits the credibility of elevating infectious disease over other causal factors, such as poverty, civil war, or ethnic hatred.

Perhaps sensing the difficulty of the "hard case" of the indirect threat thesis, the public health-national security linkage literature often turns its attention to the indirect threat to U.S. military and strategic interests posed by infectious disease problems in countries experts perceive are strategically important to U.S. national security interests—Russia, India, and China. Citing Russia, India, and China, CBACI argued, for example, that "[d]ecaying health trends \textit{in countries of strategic importance} where conflict and instability could have profound consequences for regional and global security are particularly disturbing."\textsuperscript{169} Again, this emphasis on infectious disease problems in strategically important countries illustrates that realism is not theoretically resistant to incorporating public health considerations into power-political calculations at the heart of the \textit{realpolitik} perspective on national security, even in the context of indirect infectious disease threats.

These observations converge to produce a \textit{realpolitik} policy stance on the threat of infectious diseases generally. Public health is important to preserving material sources of military and economic

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\item\textsuperscript{166} \textsc{Group of Eight, G8 Africa Plan} (June 27, 2002), \textit{at} http://www.g8.gc.ca/kan_docs/afraction-e.asp (last visited Jan. 3, 2002).
\item\textsuperscript{167} A similar realist analysis can be undertaken concerning the financial difficulties facing the Global Fund to Fight AIDS, Malaria, and Tuberculosis and the substance of President Bush's Emergency Plan for AIDS Relief. David P. Fidler, \textit{Racism or Realpolitik? The HIV/AIDS Catastrophe in Sub-Saharan Africa and U.S. Foreign Policy}, \textit{J. Gender, Race & Just.} \textbf{97} (2003).
\item\textsuperscript{169} \textsc{Ban}, \textit{supra} note 34, at 14 (emphasis added). The same emphasis, especially on China, India, and Russia, can be found in other writings on the public health-national security linkage. \textsc{Contagion and Conflict}, \textit{supra} note 5; \textsc{National Intelligence Council}, \textit{supra} note 28; \textsc{Kassalow}, \textit{supra} note 36; \textsc{Eberstadt}, \textit{supra} note 151 at 22-23 (emphasizing Russia, China, and India's problems with HIV/AIDS over sub-Saharan Africa's); \textsc{National Intelligence Council}, \textit{The Next Wave of HIV/AIDS: Nigeria, Ethiopia, Russia, India, and China} (Intelligence Community Assessment 2002-04D, Sept. 2002) [hereinafter \textit{The Next Wave}].
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power at home and to projecting both kinds of power abroad, and public health cooperation with strategically important countries may be necessary to prevent instability that may threaten a country's national security and foreign policy objectives. Problems and instability caused by infectious diseases in countries or regions marginal to great power interests do not register significantly in realpolitik's linkage of public health and national security.

2. Common Security, Biological Weapons, and Infectious Diseases

a. Biological Weapons

Because the common security perspective does not deny that traditional military attacks on the physical integrity of a state can occur, it can accommodate the threat of state use of biological weapons. The common security perspective differs from realpolitik's power-oriented approach by stressing the importance of creating and strengthening international cooperative norms and regimes to deter the development and proliferation of bioweapons by states, such as the Biological and Toxin Weapons Convention. Such international cooperation becomes critical when factoring in biotechnology's inherent "dual use" nature, growing global diffusion and rapid development of genetic engineering technologies. Such advances in biotechnology increase the threat of bioweapon proliferation and heighten the need for sustainable international cooperation on biological weapons.

The non-state actor wrinkle posed by bioterrorism that causes realism some difficulty is more easily incorporated into the common security perspective because it recognizes non-traditional threats to national security, whether those threats come from terrorism or environmental degradation. The common security perspective would focus on both domestic public health preparedness (because protecting the quality of life of the citizenry from threats is an objective of common security) and international cooperation on preventing and preparing for bioterrorism (because self-help against bioterrorism would prove futile in a globalized world).

b. Infectious Diseases

The common security perspective also distinguishes itself from realpolitik in how it relates to the direct and indirect threats posed by infectious diseases generally. The common security perspective—with its shift of focus from state power to individual quality of life—is more sensitive to the threats pathogenic invaders pose to
the populations of nation-states, both developed and developing. In connection with HIV/AIDS, Soloman Benetar sounded this theme in arguing that South Africa had to engage in a “shift in expenditure from security against war towards expenditure that could reduce threats from social disintegration, if we are to move towards safer and more secure societies.” Nor can the common security perspective cabin its concern for countries devastated by infectious diseases to those that are “strategic” because such a perspective relates to rejected balance-of-power thinking.

Because liberal theory informs the common security perspective, economic development internally and economic interdependence between peoples (not between governments) are important strategic objectives. As public health studies show, rising infectious disease morbidity and mortality create increasing economic costs to domestic economies, and these costs represent not only lost economic opportunities but also indicators of a declining quality of life. The belief in economic interdependence among peoples is not based on charity but on the mutual economic need societies have for each other. In other words, economic interdependence contains, purposefully, selfish as well as altruistic motivations. The emphasis on economic interdependence means that liberalism as a theory of international relations encourages global trade and travel, which constitute important vectors in spreading microbial pathogens around the planet. Therefore, the common security perspective contains a tension between promoting economic interdependence among nations and shielding populations from infectious disease threats.

The trade-public health nexus becomes, thus, central to the common security perspective. The public health-national security literature stresses one aspect of this nexus—the economic

171. COMMISSION ON MACROECONOMICS AND HEALTH, MACROECONOMICS AND HEALTH: INVESTING IN HEALTH FOR ECONOMIC DEVELOPMENT 22 (2001) (“The economic costs of avoidable disease, when taken together, are staggeringly high.”).
172. INSTITUTE OF MEDICINE, EMERGING INFECTIONS: MICROBIAL THREATS TO HEALTH IN THE UNITED STATES 77-84 (1992) [hereinafter EMERGING INFECTIONS] (discussing international travel and commerce as factors in global spread of infectious diseases).
173. M. Kent Ranson et al., The Public Health Implications of Multilateral Trade Agreements, in HEALTH POLICY IN A GLOBALISING WORLD 18 (Kelley Lee et al. eds., 2002); Meri Koivusalo, Assessing the Health Policy Implications of the WTO Trade and Investment Agreements, in HEALTH IMPACTS OF GLOBALIZATION: TOWARDS GLOBAL GOVERNANCE 161 (Kelley Lee ed., 2003); WORLD HEALTH ORGANIZATION & WORLD TRADE ORGANIZATION, WTO AGREEMENTS AND PUBLIC HEALTH—A JOINT STUDY BY THE WHO AND WTO SECRETARIATS (2002).
opportunities the United States loses because of the economic impact of infectious diseases in the developing world. Jordon Kas-
salow argued, for example, that the "[l]ack of attention to the bur-
den of disease in these [developing] countries, which receive 42
percent of U.S. exports, may depress demand for those goods and
services and thus threaten the jobs of Americans."\(^{174}\) Another
aspect of the trade-public health linkage—the importation of infec-
tious diseases through trade and travel—also appears frequently in
the public health-national security linkage literature.\(^{175}\) A final
aspect involves the extent to which international regimes liberaliz-
ing trade recognize the need for countries to restrict trade for pub-
lic health purposes.\(^{176}\)

Infectious diseases also provide the common security perspective
with an "amplifier" for its broader approach to security. As litera-
ture on emerging and reemerging infectious diseases notes, many
factors contribute to disease emergence, reemergence, and
spread—from poverty to environmental degradation.\(^{177}\) Infectious
diseases provide an excellent focus for the common security per-
spective because it brings other non-traditional threats into view,
which connect to the broad concept of "public health." Notions of
"environmental security" can, thus, easily overlap with the concept
of public health security because of the close relationship between
environmental conditions and the protection of population
health.\(^{178}\)

In addition, infectious diseases fit the common security frame-
work well because, as public health experts often opine, the global
challenge of infectious diseases can only be addressed through
expanded and deepened international cooperation.\(^{179}\) The com-
mon security perspective's emphasis on international cooperation

\(^{174}\) Kassalow, supra note 36.

\(^{175}\) Contagion and Conflict, supra note 5, at 4-5 (discussing impact of economic
globalization on spread of infectious diseases).

\(^{176}\) Ranson et al., supra note 173, at 18; Koivusalo, supra note 173, at 161; World
Health Organization & World Trade Organization, supra note 173; David P. Fidler,
International Law and Infectious Diseases 114-168 (1999) (analyzing international
trade law and infectious disease control).

\(^{177}\) Emerging Infections, supra note 172, at 34-112 (analyzing the many factors of
infectious disease emergence).

\(^{178}\) See, e.g., Y. Von Schirnding, W. Onzivu, A. O. Adede, International Environmental
Law and Global Public Health, 80 Bull. World Health Org. 970 (2002); David P. Fidler,
Challenges to Humanity's Health: The Contributions of International Environmental Law to

\(^{179}\) U.S. Department of Health and Human Services & Centers for Disease Con-
trol and Prevention, Protecting the Nation's Health in an Era of Globalization: CDC's Global Infectious Disease Strategy 5 (2002) ("Although safeguarding U.S. health
among states and non-state actors helps distinguish it from the skepticism of such cooperation found in realism.

3. Human Security, Biological Weapons, and Infectious Diseases

a. Biological Weapons

Locating the threats from biological weapons within the human security perspective proves more difficult than one at first might believe. The human security perspective seeks to move security analysis away from the kind of narrow, statist thinking realism adopts, but this move creates difficulties for dealing with the development and deployment of biological weapons by states. State-based threats do not disappear even if the human security perspective wishes to move beyond state-centric analysis of security. The proper policy response for human security thinking presumably would be to see non-state actors, especially transnational civil society movements, as critical to curtailing the development and deployment of biological weapons by states.

The human security perspective’s attachment to the normative role of non-state actors does not include bioterrorists, whose malevolent use of microbes not only strikes at state institutions and power but also threatens the health and well-being of communities and individuals. The human security perspective would perhaps be more sensitive than realpolitik and common security approaches to the “root causes” of terrorism and terrorist interest in biological weapons. In other words, states cannot secure human security until the states mitigate the underlying social injustices that feed terrorism. Again, the main actors in such mitigation efforts are not states and international organizations but civil society groups operating transnationally.

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is a domestic goal, its achievement requires international action and cooperation. This is because U.S. health and global health are inextricably linked.

180. Brower and Chalk list biowarfare and bioterrorism as one element of the threats infectious diseases pose to human security, but their discussion of these threats is cursory compared to the attention they pay to infectious diseases generally, especially HIV/AIDS. See Brower & Chalk, supra note 37, at 10-11 (on biowarfare and bioterrorism), 72-73 (on bioterrorism).

181. The human security perspective is thus likely to see promise in efforts such as the Bioweapons Prevention Project, which “is dedicated to reinforcing the norm against the weaponization of disease. It is a global civil society activity that tracks governmental and other behaviour under the treaties that codify the norm. It nurtures and is empowered by an international network, and acts both through that network and its publications.” Bioweapons Prevention Project, at http://www.bwpp.org/ (last visited Jan. 3, 2003).
b. Infectious Diseases

In terms of direct and indirect threats from infectious diseases generally, the human security perspective’s focus on the transnational unity of peoples make it receptive to arguments that greater global solidarity is needed to confront the problems pathogenic microbes pose. This perspective would sharpen analytical focus on transnational problems that exacerbate infectious disease spread, such as poverty, racism, gender oppression, inequitable access to health technologies and services, and ecosystem destruction.  

While the human security perspective would find rich veins of transnational injustice to mine, its normative public health edge is more difficult to pin down. Classically, experts view public health as a “public good,” which private actors have neither adequate incentives nor resources to produce. The responsibility for public health falls, then, to the state. The human security perspective is, however, determined not to be state-centric analytically or normatively. Globally, the human security perspective posits that non-state actors and transnational movements will play a leading role in improving human welfare rather than state institutions. The increasing attention being paid to the role of non-state actors in “public-private partnerships” producing “global public goods for health” and “global health governance” may provide evidence of the human security perspective’s insights on the public health-security linkage that cannot be dismissed out of hand.

More generally, experts have expressed concern that the expansive scope of human security itself threatens to scuttle its relevance for discussing security threats. Ostergard argued that raising issues such as disease, crime, drugs, and pollution “to the level of a security problem is almost meaningless” because “[c]hanging their status from problems of good governance to a security threat diminishes their distinct importance.” Ostergard asserts that “[i]f all human maladies are a security threat (as the UNDP seems

182. See, e.g., Brower & Chalk, supra note 37, at 13-30 (analyzing factors associated with the increased incidence and spread of infectious diseases).
183. See supra note 115.
184. See supra note 117.
186. See supra note 116.
187. Ostergard, supra note 144, at 336; see also Paris, supra note 8, at 93 (arguing that “if human security means almost anything, then it effectively means nothing”).
to propose), then the potential for complacency or apathy becomes the real threat.\textsuperscript{188} The expansive scope of human security creates a problem of prioritization—in the vast universe of "new security threats," what should be addressed first? Price-Smith argued that "the threats to the health of populations from infectious diseases (such as HIV/AIDS) are far more immediately destructive than are migration and resource scarcities, and thus states should accord a position of prominence among the new security threats of the twenty-first century."\textsuperscript{189} Placing infectious diseases higher on the list of new security threats runs, however, headlong into the daunting list of political, economic, social, and epidemiological causes behind the emergence and re-emergence of pathogenic threats. What causes on this foreboding list are to be given priority?

As noted earlier, realism can incorporate the destructiveness of infectious diseases in its theoretical perspective on security, but it is less clear whether the underlying theories informing the human security perspective—critical international theory and social constructivism—provide reasons why public health deserves greater attention than other problems affecting human security. As I have argued elsewhere, neither of these theories proves very helpful in developing normative blueprints that would assist infectious disease control specifically or global health advocacy generally.\textsuperscript{190}

4. Ecological Security, Biological Weapons, and Infectious Diseases

The ecological security perspective would see biological weapons, whether in the form of state or terrorist deployment or use, as part of the biological and ecological perils that face the human race and the global ecosystem that supports it. Ecological security's concern with biological weapons would be greatest in connection with highly contagious pathogens, such as smallpox, or genetically-engineered pathogens that might, upon release, not only kill humans in large numbers but throw ecological and evolutionary processes into disequilibrium, triggering other eco-evolu-

\textsuperscript{188} Ostergard, supra note 144, at 337.
\textsuperscript{189} Price-Smith, supra note 40, at 3.
\textsuperscript{190} See David P. Fidler, The Globalization of Public Health: Emerging Infectious Diseases and International Relations, 5 Ind. J. Global Legal Stud. 11, 46-50 (1997) (analyzing the potential contribution of critical international theory to understanding the globalization of public health and the problem of emerging infectious diseases); Fidler, supra note 118, at 33 (arguing that social constructivism "provides no blueprint for selecting what ideas to construct and how such ideas should be constructed").
tionary threats to humankind and the natural world. The introduction of smallpox into a world with increasingly large and vulnerable human immune-compromised populations (e.g., those living with HIV/AIDS) would be an eco-evolutionary nightmare of the first order.

Although ecological security views biological weapons as a potential threat, its approach to security would focus more attention on the problems caused by pathogenic microbes generally. Compared to the morbidity and mortality created by infectious diseases (e.g., HIV/AIDS, tuberculosis, and malaria), actual or foreseeable deaths and illness from biological weapons remain small. Further, the eco-evolutionary complexity of emerging and re-emerging infectious diseases make this pathogenic challenge much more a source of global epidemiological insecurity than biological weapons. Part of this eco-evolutionary complexity involves the interaction of human technology (e.g., antimicrobial drugs) with the evolutionary capabilities of the microbial world. Drug resistance in the pathogens that cause AIDS, tuberculosis, malaria, and other infectious diseases represents global epidemiological insecurity that needs urgent attention. These observations make clear that ecological security reverses the public health security priorities of realism by making the general infectious disease threat primary and the biological weapons threat secondary.

5. Differing Concepts of Public Health Security

As the previous paragraphs demonstrate, the four visions of security—realpolitik, common security, human security, and ecological security—translate into different concepts of public health security. The realpolitik perspective on public health security is narrowest, followed in breadth by the common and human security perspectives, with ecological security being the broadest vision. One lesson learned from slotting the public health-national security linkage literature into the four concepts of security is that theo-

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rists cannot dismiss realism from discourse concerning public health security as such literature has generally done.

As noted above, much of the public health-national security linkage literature attempts to move U.S. national security thinking away from realpolitik to something closer to the common security perspective. As Pirage's and Price-Smith's dismissals of realism illustrate, most experts leave realism behind in discussing how to deal with threats from infectious diseases and biological weapons. Realism's ability to incorporate public health concerns as part of its power-oriented outlook is, however, more robust than its dismissal suggests. In Part III below, when attention turns from theory to practice, the relevance of realism comes more into focus because realpolitik is determining the scope and substance of the concept of public health security in the most important country in this debate, the United States.

III. THE EMERGING SCOPE AND SUBSTANCE OF PUBLIC HEALTH SECURITY IN THE UNITED STATES

Having laid out four concepts of security and translated these into different visions of "public health security," this Article endeavors to discern from recent events the emerging scope and substance of public health security as this concept relates to the United States. Admittedly, this enquiry is American-centric, but the public health-national security linkage literature concentrates, for the most part, on the United States; thus, my focus parallels the literature informing this Article. In addition, the United States has taken a lead role in shaping the concept of public health security because it has been the victim of bioterrorism. Finally, as the world's leading economic and military power, trends and developments in the United States have global importance, and this fact holds true in connection with the development of the public health security concept as well.

193. Altman briefly notes the relevance of the realist framework when he argues that, in the HIV/AIDS-security debate, "the primary concern is for the 'security' of the rich world, not for those already infected and those most at risk of infection. Yet if self-interest leads to a greater realism about HIV, it could not only improve prevention efforts, it may help break down stigma that remains a major part of the problem for those already infected." Altman, supra note 5, at 43.

194. But see Price-Smith, supra note 40 (focusing on South Africa). Price-Smith's analysis of South Africa is "the first in a series that looks at the health and security interactions in a number of countries" that CBACI will publish in the future. Id. at iv.
A. The Threat from Biological Weapons

The threat from biological weapons dominates the emerging concept of public health security in the United States. As indicated before, pre-September 11th and pre-anthrax literature on the public health-national security linkage included the biological weapons threat; but the terrorist attacks against New York and Washington, D.C. and the subsequent bioterrorism profoundly changed the political landscape of the public health-national security debate. Terrorists directly attacked the United States with unconventional weapons—hijacked passengers planes and anthrax-laced letters. Not since World War II had a group attacked the territory of the United States with such death and destruction as occurred on September 11th. Never before had the United States experienced biological terror within its borders of the sophisticated, widespread kind fomented by the anthrax attacks. These ominous events shattered American complacency about national security in the post-Cold War era.

The resulting domestic and foreign policy responses in connection with biological weapons connect to the realpolitik perspective on national security in a number of ways. In terms of foreign policy, the threat from biological weapons to the national security of the United States has become central to U.S. post-September 11th strategic thinking. The strategic importance of the biological weapons threat became clear in President Bush’s January 2002 State of the Union Address, when he named the “axis of evil” as the main threat to U.S. national security in the forthcoming years. This “Bush Doctrine” also featured in the national security strategy released by the Bush administration in September 2002, which stated “[w]e must be prepared to stop rogue states and their terrorist clients before they are able to threaten or use weapons of mass destruction against the United States and our allies and friends.”

The Bush administration’s National Strategy to Combat Weapons of Mass Destruction, released in December 2002, also argued that

195. The United States experienced bioterrorism previously when the Rajneeshee cult in Oregon contaminated salad bars in an attempt to influence a local election in the early 1980s. W. Seth Carus, The Rajneeshees, in TOXIC TERROR: ASSESSING TERRORIST USE OF CHEMICAL AND BIOLOGICAL WEAPONS 115 (Jonathan B. Tucker ed., 2000). This bioterrorism incident was, however, not understood as such until years later, remained local in nature, and did not terrorize the nation as a whole.


The manner in which the United States has implemented the Bush Doctrine also reflects realism. As the world’s military hegemon, the United States dominates the “war on terrorism” in Afghanistan and elsewhere. One of the earliest casualties of this war was the Taliban government of Afghanistan. The United States and its allies destroyed an existing government that harbored terrorists responsible for attacking the United States. In March and April 2003, the United States waged war against Iraq to destroy its capabilities to develop weapons of mass destruction. Even when military action is not likely against members of the “axis of evil,” as appears to be the case with North Korea, the United States is not shying away from confrontation with states that fit the characteristics laid out in the Bush Doctrine.

A key development in this regard is the Bush administration’s arguments that the United States can use force preemptively against threats posed by an enemy’s possession of weapons of mass destruction:

The United States has long maintained the option of preemptive actions to counter a sufficient threat to our national security. The greater the threat, the greater the risk of inaction—and the more compelling the case for taking anticipatory action to defend ourselves . . . [I]n an age where enemies of civilization openly and actively seek the world’s most destructive technolo-

200. National Strategy to Combat Weapons of Mass Destruction, supra note 198, at 1 (“We must accord the highest priority to the protection of the United States, our forces, and our friends and allies from the existing and growing WMD threat.”).
gies, the United States cannot remain idle while dangers gather.\footnote{201}

The military victory in Iraq, in all likelihood, has strengthened the Bush administration's commitment to the doctrine of preemptive self-defense in connection with threats posed by states seeking or possessing weapons of mass destruction.

In terms of other concerns about weapons of mass destruction, the United States—much to the consternation of its allies—has exhibited strong unilaterality, or self-help. Contrary to common security preferences for international cooperation, the United States effectively killed ongoing diplomatic negotiations to strengthen the Biological and Toxin Weapons Convention through a verification protocol.\footnote{202} The United States also flexed its muscle by successfully leading the ouster of the director-general of the Organization for the Prohibition of Chemical Weapons under the Chemical Weapons Convention of 1993.\footnote{203} On nuclear weapons, the United States unilaterally withdrew from the Anti-Ballistic Missile Treaty of 1972 and continued plans to develop a “national missile defense” system.\footnote{204} All these moves represent strong and controversial examples of self-help in the face of threats from weapons of mass destruction.

On the domestic front, the realpolitik perspective is evident in the massive federal government effort to strengthen “homeland security” against threats from other states, terrorists, and weapons of mass destruction.\footnote{205} The concept of homeland security involves

\footnote{201. \textit{National Security Strategy of the United States of America}, supra note 197, at 15; \textit{see also National Strategy to Combat Weapons of Mass Destruction}, supra note 198, at 1 (“We will not permit the world’s most dangerous regimes and terrorists to threaten us with the world’s most destructive weapons.”).}


protecting the territory and people of the United States from attack and preparing them in case of attack. 206 While the Bush Doctrine constitutes part of public health security because of its efforts to prevent and deter attacks involving weapons of mass destruction, homeland security efforts in the United States provide the emerging concept of public health security with significant content. From the Defense Against Weapons of Mass Destruction Act of 1996 207 through the Public Health Security and Bioterrorism Preparedness and Response Act of 2002, 208 the United States has tried to improve its domestic preparedness against potential state or terrorist uses of biological and other weapons of mass destruction. 209 The domestic preparedness effort went into overdrive after the anthrax attacks, and homeland security policy in the United States today places strategic attention on improving the nation's public health capabilities. 210 Congress has appropriated significant funding for improving U.S. public health systems against biological weapon attacks (e.g., $2.9 billion for fiscal 2002 211 ) and passed important new legislation on bioterrorism. 212 Further, President Bush requested $5.9 billion for fiscal 2003 to strengthen national defenses against biological terrorism. 213 The federal government rapidly developed contingency plans for dealing with a possible smallpox attack, 214 including acquisition of millions of doses of

206. Id. at 5 (“Our great power leaves these enemies with few conventional options for doing us harm. One such option is to take advantage of our freedom and openness by secretly inserting terrorists into our country to attack our homeland. Homeland security seeks to deny this avenue of attack to our enemies and thus to provide a secure foundation for America’s ongoing global engagement.”).


209. See also Falkenrath, supra note 143.

210. Office of Homeland Security, supra note 205, at 41-45 (describing efforts to be made to prepare the United States for responding to emergencies caused by terrorist attacks, including preparing public health and health care providers for catastrophic terrorism).


smallpox vaccine\(^{215}\) and the crafting of a smallpox vaccination strategy.\(^{216}\)

Most of the biological weapons' component of homeland security policy deals only with the United States. The billions Congress has appropriated for public health improvements will be spent largely at home to protect the American homeland. The United States recognizes a foreign component of biodefense in the need to coordinate with other countries, as the Ottawa Plan,\(^{217}\) the G-8 Global Partnership Against the Spread of Weapons and Materials of Mass Destruction,\(^{218}\) and the international cooperation elements of National Strategy for Homeland Security\(^{219}\) indicate; but this international coordination is classically realist in its expediency—the United States now has significant national security interests in international coordination on biodefense. Further, as the United States' rejection of the proposed protocol to the Biological and Toxin Weapons Convention and the voluntary nature of the Ottawa Plan and G-8 commitments suggest, the United States does not seek to bind its hands through international legal commitments in the pursuit of public health security against biological weapons.

Although one can connect the movement to strengthen homeland security against biological weapons in the United States to the realpolitik perspective on national security, this movement also raises some questions for realism. As indicated in the earlier discussion of different concepts of security, critics have argued that realism has become antiquated as a theory of national security because of its emphasis on the utility of military power and the projection of military power abroad. Homeland security policies on biodefense that involve strengthening the nation's public


\(^{218}\) G8 GLOBAL PARTNERSHIP, supra note 165.

\(^{219}\) OFFICE OF HOMELAND SECURITY, supra note 205, at 61 (noting that "the United States will seek to establish cooperative endeavors with Canada and Mexico for cross-border efforts to detect biological weapons attacks; eventually, these programs may be expanded to include other friendly nations").

health system seem to underscore the futility of relying primarily on military power to defend a nation's security. The U.S. public health system now joins the military forces as national security assets, which is something new in national security thinking in the United States. Further, the military might of the United States cannot physically shield the U.S. population from biological attack because borders have become too porous. The sharp distinction between the domestic and the international in realist thinking does not, in the scenario of biological weapons, seem sustainable.

These caveats are important, but the problem of biological weapons does not stump realist thought. The U.S. military and diplomatic responses to the September 11th attacks indicate that the United States flexed its military power to deter any state from sponsoring or harboring terrorists hostile to the United States. Military prowess remains critical to defending the United States from future terrorist attacks, whether or not they involve biological weapons. Realism teaches exactly this lesson.

Realism can also accommodate the movement toward "homeland security" with its internal as opposed to external focus. Realism's focus on the material capabilities of a state includes not only military power and its projection overseas but also other material sources of power—economic, technological, political, and demographic. During the Cold War, the United States engaged in many internal efforts to maintain and increase U.S. power vis-à-vis its adversaries, especially the Soviet Union. The civil defense program to protect U.S. citizens and other assets in case of nuclear attack is one example. The building of the U.S. interstate highway system also exemplified concerns about military defense in case of attack against the United States. Another example comes from the U.S. space program, into which Congress poured billions of dollars because of its importance in the ongoing power struggle on Earth and in space with the Soviet Union. The United States undertook to vet mergers and acquisitions of U.S. companies by foreign enterprises for national security reasons. Maintaining a national market open to international trade also had strategic rationale—to provide weaker allies in close geographical proximity to Soviet power (e.g., recovering West European countries and Japan) with a source of economic development and growth through access to the

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221. WALTZ, supra note 59, at 131.
U.S. domestic market. In short, realism’s focus on exogenous threats does not mean that it has no theoretical sensitivity to guarding and nurturing internal economic, technological, governance, and population assets that provide the foundation for U.S. power and its projection abroad. Homeland security efforts to strengthen national public health capabilities represent the latest effort to improve and protect internal material capabilities in order to protect U.S. power internationally.

B. The Threat from Infectious Diseases Generally

As the public health-national security linkage literature illustrates, experts have been trying to convince the United States government that the direct and indirect threats posed by infectious diseases generally constitute national security concerns. Prior to September 11th and the anthrax attacks, these arguments were more prominent in the linkage discourse. These attacks so altered the national security landscape in the United States, however, that the bio-weapon threat overshadows perceived threats from infectious diseases generally. As mentioned earlier, the attention given and resources pledged at the G-8 summit in June 2002 to fighting weapons of mass destruction dwarfed the issue of helping Africa deal with its HIV/AIDS crisis. Infectious disease problems in the developing world did not rate high on the U.S. national security agenda before the anthrax attacks, despite Clinton administration rhetoric to the contrary. After the attacks, however, such problems may be even less important to U.S. national security and foreign policy. As Richard Parker noted, these attacks threaten the “ability to maintain interest in the seemingly more long-term and distant security concerns of issues such as HIV/AIDS.”

As analyzed above, arguments that infectious diseases coming from other countries through international trade and travel constitute a direct national security threat to the United States were not persuasive. “Germs don’t recognize borders” did not impress the national security community in the United States, and the seismic shift precipitated by the anthrax attacks reinforces this skepticism. At the time of this writing, for example, the global spread of Severe

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223. See supra notes 158-59 and accompanying text.
224. David P. Fidler, Bioterrorism, Public Health, and International Law, 3 CHI. J. INT’L L. 7, 25 (2002) (arguing that “[i]nfectious disease problems in the developing world will be even less important to the United States in the post-anthrax world than they were previously”).
Acute Respiratory Syndrome (SARS)—a new, contagious disease causing severe public health and economic problems in Asia and Canada—was not being discussed in the United States as a national security issue, except in connection with how SARS may affect U.S. military efforts in Iraq. The emerging concept of public health security in the United States only weakly recognizes the national security importance of the globalization of infectious diseases.

This argument does not mean that the globalization of infectious diseases is entirely absent from the post-anthrax U.S. foreign policy agenda. The Bush administration's national security strategy includes frequent references to the foreign policy importance of HIV/AIDS, and President Bush's announcement in January 2003 of an Emergency Plan for AIDS Relief represented a dramatic proposal for increased U.S. humanitarian assistance to nations in Africa and the Caribbean significantly affected by HIV/AIDS. As

226. For statistics on the SARS epidemic as of April 23, 2003, see World Health Organization, Cumulative Number of Reported Probable Cases of Severe Acute Respiratory Syndrome (SARS), at http://www.who.int/csr/sarscountry/2003_04_23/en/ (last visited Apr. 24, 2003). As of April 23, 2003, the United States had reported only thirty-nine probable SARS cases and no deaths. Id.

227. U.S. Issues a Middle East Laundry List, CINCINNATI POST, Apr. 19, 2003, at A9 [2003 WL 2915696] ("The Pentagon also is wary of SARS, clipping all but essential travel to Asia and keeping movement of troops in the region to a minimum. A particular fear is that the virus will somehow be transmitted to U.S. troops in or bound for Iraq."). At least two developing countries, Malaysia and the Philippines, considered SARS to be a national security issue. See Raissa Robles, Returning Filipinos Greeted by Masked Medics, not Smiles; Airport Authorities Go on Full Alert in Manila to Bar SARS Carriers from Slipping into the Country for the Easter Holidays, SOUTH CHINA MORNING POST, Apr. 14, 2003, at 3 [2003 WL 17705027] (noting that, in the Philippines, "SARS is now regarded as a national security threat after the World Health Organisation listed the Philippines as one of 30 countries 'with suspected or probable SARS cases'. . ."); Monique Chu, Malaysia Freezes Visas for Taiwanese, Citizens of HK, China, Vietnam, Canada, TAIPEI TIMES, Apr. 12, 2003 [2003 WL 4152230] (reporting on Malaysia's handling of SARS as a national security issue); Annie Freedia Cruez, SARS: Four More Families Placed Under Home Quarantine, THE NEW STRAIT TIMES, Apr. 8, 2003, at 1 [2003 WL 3361418] (reporting that the Malaysian government "viewed the spread of SARS as serious and as threat to national security").

228. NATIONAL SECURITY STRATEGY OF THE UNITED STATES OF AMERICA, supra note 197, at vi ("We will also continue to lead the world in efforts to reduce the terrible toll of HIV/AIDS and other infectious diseases."). 19 ("We will ensure that the WTO intellectual property rules are flexible enough to allow developing nations to gain access to critical medicines for extraordinary dangers like HIV/AIDS, tuberculosis, and malaria."). 22 (noting funding increases to poor countries for HIV/AIDS), 23 (stating that growth and development in countries affected by HIV/AIDS and other epidemics is threatened and that the United States strongly backed the new global fund for HIV/AIDS), 27 (noting that the spread of HIV/AIDS is on the U.S.-China foreign policy agenda).

indicated earlier in this Article, not all foreign policy issues rise, however, to the level of being national security concerns. As a consequence, global infectious disease problems do not feature strongly in the emerging scope and substance of public health security in the United States.

The problems caused by the globalization of disease for the United States feature in public health security discourse in a different, more indirect way. A theme in the public health literature on biological weapons is the benefits that biodefense efforts would produce for public health generally. For example, money spent to improve infectious disease surveillance to detect acts of bioterrorism also improves public health capabilities to conduct infectious disease surveillance generally, and *vice versa*. This biodefense/public health synergy plays out both domestically and internationally, but the bulk of the political attention and public money in the United States is going into *domestic* public health programs that create biodefense and public health synergies *domestically*. The importance of international and global surveillance (and the cooperation these activities entail) receives recognition most strongly in connection with efforts to bolster domestic biodefense (e.g., the Ottawa Plan and proposed Global Pathogen Surveillance Act*231*), with general infectious disease problems as a secondary concern. The benefits for international public health generally produced by national biodefense efforts represent a positive externality produced by biodefense policy. This situation accords with the *realpolitik* perspective on national security—international cooperation is expedient when it contributes to the preservation of a state's national security.


Similarly, the indirect threat to U.S. national security from the effects of infectious diseases in other countries argued in the public health-national security linkage literature features only weakly in the emerging concept of public health security in the United States. Even with weak recognition, realism's distinctive imprint can be discerned. Increasing U.S. concern about emerging and reemerging infectious diseases in the 1990s coincided with important developments in global public health generally. Most prominent has been a shift toward economic and utilitarian frameworks for thinking about global public health problems. The World Bank's *World Development Report 1993: Investing in Health*\(^{232}\) marks perhaps the beginning of this trend away from the traditional "health for all" ideology of the WHO based in the belief that health is a fundamental human right.\(^{233}\) The Institute of Medicine's 1997 publication *America's Vital Interest in Global Health* followed the economic line when it stressed "enhancing our economy" as a strategic rationale for U.S. involvement in global health.\(^{234}\)

The more recent *Report of the Commission on Macroeconomics and Health*\(^{235}\) perhaps represents a new high-water mark in shifting analytical and ideological approaches to global public health problems toward economics and away from rights-based perspectives. The Commission on Macroeconomics and Health (CMH) frames health as both an input and output of economic development.\(^{236}\) The CMH Report details the drag that infectious diseases create for developing-country economies and urges developed nations to promote economic development by investing in the public health of developing countries.\(^{237}\) The CMH Report does not directly form part of the public health-national security linkage literature because it does not discuss public health threats in the context of security. Viewed through the competing perspectives on national


\(^{233}\) Constitution of the World Health Organization, supra note 51, at 1 (proclaiming that "[t]he 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").


\(^{235}\) *Commission on Macroeconomics and Health*, supra note 171.

\(^{236}\) Id.

\(^{237}\) Id.
security presented earlier, the CMH Report would fall into the common security perspective because the Report's economic approach, recommendations for international cooperation, and support for the participation of non-state actors echo liberalism.

The emphasis on the economic damage infectious diseases can inflict on countries, especially developing states, resonates with realism's interest in the material capabilities of the state. As indicated above, the devastating impact of HIV/AIDS on the military forces, economies, and governance systems of countries in sub-Saharan Africa represents a direct national security threat to those countries under the tenets of realpolitik because HIV/AIDS is destroying the material sources of state power. The scale of the devastation wrought by HIV/AIDS has reached the level where even the world's hegemon, the United States, has become more engaged, as suggested by the Emergency Plan for AIDS Relief. This engagement does not, however, mean that the United States government believes that HIV/AIDS in sub-Saharan Africa directly threatens U.S. national security.238

A simple comparison of funds allocated and proposed by the federal government provides a window on where HIV/AIDS problems overseas sit as a national security priority in the United States. Prior to the announcement of the Emergency Plan for AIDS Relief, the United States pledged $500 million to the Global Fund to Fight AIDS, Tuberculosis, and Malaria (Global Fund), compared to $19.5 billion in fiscal year 2002 and a proposed $37.7 billion for fiscal year 2003 for homeland security and $1.4 billion in fiscal year 2002 and a proposed $5.9 billion for domestic biodefense for fiscal year 2003.239 Further, the United States pledged $10 billion toward the $20 billion G-8 Global Partnership Against the Spread of Weapons and Materials of Mass Destruction

238. The proposed legislation to implement the Emergency Plan for AIDS Relief has Congress making findings that HIV/AIDS constitutes threat to "personal security" (sec. 2(6)) and "economic security" (sec. 2(7)); "poses a serious security issue for the international community" (sec. 2(10)); and is a major "national security" crisis (sec. 301(a)). The United States Leadership Against HIV/AIDS, Tuberculosis, and Malaria Act of 2003, supra note 229. From the realpolitik perspective, the finding that HIV/AIDS in the developing world is a national security crisis for the United States is not credible. The notion of a national security crisis would, however, be accurate under realpolitik for those countries whose economic, military, and governance capabilities are being devastated by HIV/AIDS. See supra note 149 and accompanying text.

in June 2002.\textsuperscript{240} The Emergency Plan for AIDS Relief would, if enacted by Congress, increase the U.S. financial contribution to international HIV/AIDS efforts to $3 billion annually starting in fiscal 2004 through fiscal 2008. Although a significant increase over prior funding levels, the Emergency Plan for AIDS Relief is still small compared to U.S. spending on perceived direct threats to U.S. national security.

Lurking within the economic analysis and public health policy recommendations of the CMH, the World Bank, and donors such as the United States is another feature that contains hints of realpolitik. The CMH Report recommends conditioning financial aid to developing countries wracked by infectious diseases on those countries using the money appropriately.\textsuperscript{241} The money should come, in other words, with strings attached. The policy framework that emerges from the CMH, World Bank, and great-power donors constitutes what can be called "structural adjustment for public health." As literature on World Bank and International Monetary Fund structural adjustment policies argues, conditionality for loans and grants represents the exercise of power by the strong against the weak.\textsuperscript{242} The Emergency Plan for AIDS Relief will also utilize conditions in distributing funds. President Bush proposed that only $1 billion of the $15 billion initiative be earmarked for the Global Fund,\textsuperscript{243} and distribution of that $1 billion is to be "conditioned on the Fund showing results."\textsuperscript{244} Under the President's


\textsuperscript{241}. \textit{Commission on Macroeconomics and Health, supra note 171, at 5} ("Where countries are not willing to make a serious effort, though, or where funding is misused, prudence and credibility require that large-scale funding should not be provided.").


\textsuperscript{243}. \textit{See also} The United States Leadership Against HIV/AIDS, Tuberculosis, and Malaria Act of 2003, supra note 229, at sec. 202(d)(1) (appropriating $1 billion for the Global Fund).

\textsuperscript{244}. \textit{The White House, supra note 229}. The proposed implementing legislation for the Emergency Plan for AIDS Relief also contains conditions on U.S. contributions to the
Plan, the United States would distribute the remaining $14 billion through bilateral aid efforts not through international institutions. Consistent with realpolitik, the Emergency Plan for AIDS Relief represents a shift away from the multilateralism of the Global Fund toward the unilateral exercise of U.S. financial power. Advocates for the Global Fund have criticized the unilateralism animating the Emergency Plan for AIDS Relief.245

Even those not inclined to see realism as helpful in understanding U.S. attitudes toward the indirect threat of infectious diseases sense that the great powers need to throw their weight around in helping developing countries in terms of public health. Price-Smith observes, for example, that the international norm against intervention in the domestic affairs of sovereign states hampers the ability of developed countries to assist some developing nations. He writes: “In the case of states such as South Africa and Zimbabwe, where there remains an enduring culture of denial regarding HIV/AIDS, this means that the international community has little choice but to stand by and watch the ruling elites of these countries preside over the destruction of their populaces.”246 He further noted that “the governments of Russia and China have

Global Fund. See The United States Leadership Against HIV/AIDS, Tuberculosis, and Malaria Act of 2003, supra note 229, at sec. 202(c)(4)(A)(i)-(iii), (v) (limiting U.S. contributions to the Global Fund to no more than 33% of the total funds contributed to the Fund from all other sources; withholding contributions if the Global Fund provides assistance to a country determined by the United States to have provided support for international terrorism; and withholding contributions if the expenses of the Global Fund exceed 10% of the total expenditures for the Global Fund for any 2-year period; withholding contributions if the salary of any individual employed by the Global Fund exceeds the salary of the Vice President of the United States). The proposed implementing legislation also provides that not less than 33% of the amounts appropriated for HIV/AIDS prevention shall be expended for abstinence-until-marriage programs. Id. at sec. 405(a). On the controversy surrounding the abstinence-until-marriage provision, see Eilperin & Goldstein, supra note 229, at A1.


246. Price-Smith, supra note 40, at 136.
opposed the inclusion of public health matters within the global security agenda on the ground that such an inclusion would result in increased intervention within their internal affairs.\textsuperscript{247} The only alternatives available to the developed world are to use “a carrot-and-stick approach, with financial and technological incentives use to obtain compliance from recalcitrant regimes”\textsuperscript{248} or to make additional financial assistance “to non-compliant regimes conditional on effective action to slow the spread of contagion within national borders.”\textsuperscript{249}

Realists do not, however, have much tolerance for the principle of non-intervention when they perceive that other countries threaten a state’s national interests. The emerging concept of public health security suggests that the United States might seek to intervene more dramatically if infectious diseases in other countries threaten, directly or indirectly, its military, technological, and economic power. The Emergency Plan for AIDS Relief provides evidence of the United States’ willingness to exercise its power unilaterally in contexts where infectious diseases and foreign policy overlap.

The growing involvement of non-states actors in global public health policy, as recognized by analysis of “public-private partnerships” and “global health governance,” might appear to cause some difficulties for the thesis that the realpolitik perspective informs the emerging concept of public health security in the United States. The involvement of non-state actors—multinational pharmaceutical corporations, NGOs, and philanthropic foundations—is, without question, a feature of global public health today. The legislation proposed to implement the Emergency Plan for AIDS Relief expressly supports, for example, the use of non-state actors in the fight against HIV/AIDS.\textsuperscript{250}

\textsuperscript{247} Id. China’s initial secretive and uncooperative approach to the SARS outbreak reflected this perspective because “[t]he Chinese government often treats disease epidemics as state secrets and a national security concern and have been extremely cautious about reporting the SARS epidemic to the public.” Robert J. Saiget, China SARS Cases Expected to Rise as Epidemic Not Controlled, WHO Says, \textit{AGENCE FRANCE-PRESSE}, Mar. 28, 2003 [2003 WL 2765562].

\textsuperscript{248} Price-Smith, \textit{supra} note 40, at 136.

\textsuperscript{249} Id. at 137.

\textsuperscript{250} See The United States Leadership Against HIV/AIDS, Tuberculosis, and Malaria Act of 2003, \textit{supra} note 229, at sec. 2, para. 21(F) (finding that a comprehensive, long-term, and international response to HIV/AIDS includes “encouraging active involvement of the private sector, including businesses, pharmaceutical and biotechnology companies, the medical and scientific communities, charitable foundations, private and voluntary organizations and nongovernmental organizations, faith-based organizations, community-based organizations, and other nonprofit entities”).
The involvement of non-state actors does not, however, stump the realist. For example, Bill Gates' prominence in global public health today represents, in some degree, how uninterested the great powers have been and perhaps remain in the health matters the Gates Foundation funds. More substantively, the realist emphasis on states as the main actors does not mean states cannot utilize non-state actors to pursue realpolitik policies. The realist focus on military power, for example, does not mean that the instruments of military power have to be entirely developed or owned by governments. For-profit manufacturers of military technology have been critical to the development of U.S. military power. The U.S. government used such non-state actors to achieve its overriding goal of military power and security. Similarly, the great powers can utilize non-state actors, both for-profit and non-profit, in their attempts to deal with foreign policy challenges posed by infectious diseases. Non-state actors are, thus, simply material assets that states expediently use to address perceived threats to their security and national interests.

C. The Emerging Concept of Public Health Security: The Relationship Between Public Health and Realpolitik

Section III.B argued that the concept of public health security in the United States reflects the realpolitik perspective on national security much more than other conceptions of security. Again, this argument questions the dismissal of realism seen in much of the pre-September 11th and pre-anthrax literature on the public health-national security linkage. Perhaps the realpolitik tenor of the emerging U.S. concept of “public health security” flows from the short-term policy responses to the historic terrorist attacks on the United States in September and October 2001 and will eventually mellow into a broader concept, informed by other more expansive conceptions of security in the global age. In this section, I explore whether realpolitik-driven public health security notions have deeper implications for understanding public health in the age of the globalization of infectious disease.

Realism as a theory of explaining international relations generally has not informed, and still does not inform, analysis of global

251. BILL & MELINDA GATES FOUNDATION, STRIVING FOR GLOBAL HEALTH EQUITY, at http://www.gatesfoundation.org/globalhealth/infectiousdiseases/default.htm (last visited Jan. 3, 2003) (“The Bill & Melinda Gates Foundation has committed more than $1 billion to projects focused on the prevention and control of infectious disease.”).
public health.\textsuperscript{252} Ulysses Panissett's review of theories of international health identified conceptual categories that do not connect at all with the basic tenets of realism.\textsuperscript{253} One of the most prominent of these theories—that international health is public health activities for the poor\textsuperscript{254}—diverges dramatically from the state-centered, power-driven, and skepticism-laden realist outlook on international politics. In fact, one of the reasons why the discipline of international relations has ignored public health as a field of study may stem from the public health's attachment to (1) issues and methodological approaches not related to great-power politics, international order, and national security, and (2) improving health conditions in poor, weak countries at the periphery of realism's central concern with the great powers.

The selfish interests and schemes of the great powers mark, however, the field of international health. Specifically, international health's roots are in the economic, military, and geopolitical concerns of the great powers. International health diplomacy arose in the mid-nineteenth century because the European great powers were increasingly concerned about the direct threat "Asiatic diseases," such as cholera, posed to their foreign trade and domestic economic interests. Trade and economics drove international health cooperation among the European powers not altruistic concern with the health of non-European peoples.\textsuperscript{255} The international health cooperation attempted in the nineteenth century was not expressly connected to notions of national security, but the European great powers made infectious disease control a foreign policy issue, especially as connected with trade and commercial matters.

The selfish interests of the great powers characterize other aspects of public health's development in the nineteenth century and early twentieth century. European militaries adopted sanitary reforms to mitigate the adverse effects of infectious diseases on military preparedness and effectiveness before governments began to

\textsuperscript{252} Fidler, \textit{supra} note 190, at 38 n.115 (noting that "public health has rarely, if ever, been discussed in any realist analysis of international relations").


\textsuperscript{254} Id. at 33-56 (analyzing perspective that international health is public health activities for the poor).

do the same for civilian populations, illustrating how realism can incorporate public health concerns.

The great powers also perceived public health as related to their efforts to project power in other parts of the world, whether through imperialism or spheres of influence. European interest in tropical medicine resulted from the threat infectious diseases posed to imperial ventures (e.g., the establishment of the London School of Hygiene & Tropical Medicine). U.S. concerns with yellow fever in the Americas stemmed from its effort to maintain military and economic hegemony in the Western hemisphere.

These historical examples show how public health played a role in important nineteenth and early twentieth century contexts relevant to realist thinking: preservation of military power, protection and expansion of economic and commercial power, and projection of national power and influence overseas. The great powers did not sustain these public health activities during most of the twentieth century because they reduced the threat and burden of infectious diseases to their militaries, economies, and societies through domestic public health reform and the development of powerful health technologies, such as antibiotics and vaccines.

Whether public health improvements on infectious diseases in the United States and European countries in the first half of the twentieth century owed anything to international health cooperation and international health regimes is doubtful. As the engagement of the great powers waned, international health policy morphed into more humanitarian modes of activity, such as providing technical assistance to improve public health in poor countries. The proc-

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257. **Philip H. Manson-Bahr**, *History of the School of Tropical Medicine in London* 31 (1956) (arguing that, in the late 1890s, British political officials and physicians realized that "[i]nstruction in tropical medicine was urgently necessary in this country as it was the centre of a great and growing tropical Empire").

258. **Medical Museum of the Armed Forces Institute of Pathology, Yellow Fever** 1 (1964) (observing that "the history of its [yellow fever's] control and cure is written in the annals of the United States Army"); **Medical Museum of the Armed Forces Institute of Pathology, Conquerors of Yellow Fever** 1 (1964) ("Among the triumphs of military medicine, few can equal the conquest of yellow fever by medical officers of the United States Army.").


261. **Howard-Jones**, *supra* note 255, at 1036 (noting this shift in the work of the Health Organization of the League of Nations, which promoted programs under "which the more advanced countries could, through an international agency, confer benefits upon countries whose technical resources were more limited").
lamination of health as a fundamental human right in the Constitution of the World Health Organization in 1946\textsuperscript{262} symbolizes the shift from the \textit{realpolitik} origins of international health statecraft toward a humanitarian, rights-based ethos.

The public health-national security linkage literature suggests that the universalist, right-to-health ideology that guided international public health in the WHO's first five decades is, controversially, giving way to arguments centered again on the self-interests of the great powers. In their different ways, the public health-national security linkage literature and the World Bank 1993 \textit{World Development Report}'s and the CMH Report's economic approaches to global public health problems attempt to provide the great powers of the international system with direct, selfish motivations to engage more intensively in international health activities. \textit{America's Vital Interest in Global Health} lists three strategic rationales for United States' engagement: "protecting our people," "enhancing our economy," and "advancing our international interests."\textsuperscript{263} The document \textit{Why Health is Important to U.S. Foreign Policy} also provides a classic example of this phenomenon because it argues that the United States needs to make health a foreign policy concern out of "narrow self-interest" and "enlightened self-interest."\textsuperscript{264}

The pattern that emerges from these contemporary efforts to reengage the great powers in international health could be taken directly from the pages of nineteenth century international health diplomacy because we see again the emphasis on economic, military, and geopolitical aspects of infectious disease threats from the perspective of the great powers. The public health-national security linkage literature emphasizes that the United States should see infectious diseases as a national security threat because it is once

\footnotesize{262. Constitution of the World Health Organization, supra note 51, at 1.}

\footnotesize{263. INSTITUTE OF MEDICINE, supra note 24, at Chapters 4-6.}

\footnotesize{264. KASSALOW, supra note 36. Such arguments from self-interest for the United States to increase its involvement in international health matters are not new. In 1971, Representative Hugh L. Carey, arguing in favor of the proposed International Health Agency Act of 1971, said the following:}

\textit{\textit{Again as a practical matter it is in our self-interest to find and fight disease in foreign lands as a safeguard for our own population. Pandemic diseases respect no borders. . . . A second practical consideration is that improved health among the developing peoples abroad means more viable young nations and betters hopes for a peaceful environment throughout the world. I submit that health care is our lowest cost form of international security and protection against war and violence. . . . Third, improved health overseas in all age brackets means expanding consumer markets and increased trade for U.S. products.}}

\textit{See Hearing on H.R. 10042 Before the House Subcomm. on Int'l Orgs. & Movements of the Comm. on Foreign Affairs, 92nd Cong. 5 (1971) [hereinafter 1971 Hearings].}
again vulnerable to the importation of infectious diseases from countries, especially developing countries. The literature also stresses the increasing economic costs of emerging and reemerging infectious diseases on international trade and commerce. The public health-national security arguments frequently include concerns about infectious disease threats to military preparedness and effectiveness for the United States, developing countries, and U.N. peacekeeping missions. Finally, this literature stresses the infectious disease threat to strategic areas of the world in which the United States needs to protect its interests and project influence, such as Russia and China.

The parallels between nineteenth century international health diplomacy and the contemporary public health-national security literature are telling in their appeal to the economic, military, and geopolitical interests of the great powers. The parallels between history and contemporary events raise a number of questions for those interested in global public health. Despite over 150 years of international health activity, is the twenty-first century public health advocacy really affected by nineteenth century realpolitik arguments? The realist would answer this question in the affirmative because realism stresses that the anarchical structure of the international system creates repetition in state behavior over time. In other words, the feeling of *dejà vu* comes naturally to the realist.

The parallels reviewed above more fundamentally challenge those seeking to broaden the concept of public health security through the common, human, and ecological security approaches. In terms of the common security approach, this framework does not abandon the concept of the national interest because states remain central to the normative liberal project informing this perspective. The common security objective is to broaden the parameters of the "national interest" to accommodate new kinds of challenges to the nation that go beyond traditional state-based threats. The parallels between nineteenth century motivations and the public health-national security literature suggest, however, that the core questions remain narrow and selfish—how are diseases predominantly originating in other countries adversely affecting a great power's military, economic, and geopolitical interests?

Those in favor of the human security agenda may experience either delight or dismay at the parallels outlined above. Critical international theorists would see such parallels as further evidence that the statist status quo is fundamentally unjust and incapable of significant self-reform. Social constructivists might despair that the
concept of "public health security" is being socially constructed (again) in the image of realpolitik rather than an image more conducive to human solidarity or emancipation through health protection and promotion.

Neither critical international theory nor social constructivism seems, at present, capable of producing an alternative blueprint that would have credibility and traction in the current public health security context. The human security approach fostered by these two theories has not, to date, comes to grips with the dual nature of public health in the global age—all disease is local and global. Public-private partnerships involving global NGOs can contribute to public health improvements, but the heavy lifting of public health at the national and local level remains a "public good" that governments must shoulder.

Does public health have a built-in need for statist architecture that critical international theory and social constructivism seek either to circumvent or overcome? Does public health in some fashion confront what Philip Allott called the "tyranny of the actual"? Does public health have to follow the path taken by liberalism in accepting the anarchical and statist nature of international relations but trying to ameliorate the dangerous and violent tendencies of such a structure for human relations? The public health-national security linkage literature’s resonance with common security concepts suggests that public health’s best hope rests in liberalism and not more radical theories of human emancipation. This conclusion is basically the one Price-Smith reached in his analysis.

The realpolitik imprint on the emerging concept of public health security in the United States also confronts notions of ecological security with difficulties. Ecological security would stress general infectious disease threats more than those from biological weapons, but the opposite is in fact happening in the United States. Ecological security thinking could dismiss these developments as further examples of the inability of statespersons to see the eco-evolutionary threats to the human race, but ecological security does not necessarily help us understand why realpolitik has and continues to influence global public health activities.

As with critical international theory and social constructivism, the ecological approach to security does not provide a clear

266. PRICE-SMITH, supra note 40, at 183.
blueprint for policy action. Pirages stressed that “the international management of the epidemiological consequences of globalization” must be a top priority “for the emerging council of the global village.” Pirages does not describe the governance structure and dynamics of this “council,” but presumably he does not mean either states interacting in a condition of anarchy or international organizations. Perhaps this “council” notion ties into developments in global public health, such as public-private partnerships and global health governance; but whether these new features of global public health activism reflect the eco-evolutionary approach of ecological security thinking is doubtful.

As argued in this Article, realism rather than the other theories of international relations currently shapes the scope and content of public health security in the United States. The historic terrorist attacks in the United States have much to do with this stark imprint of realpolitik on the public health-national security nexus, but the reasons for the deep nature of the imprint may not all be connected with those awful events. The sobering parallels between nineteenth century international health statecraft and arguments in the public health-national security linkage literature perhaps provide a window on understanding how adversely the anarchical structure of international relations—the central focus of realism—affects global public health efforts.

The typical mantra, seen in the common security perspective and in literature on the globalization of infectious diseases, is that only international cooperation can produce adequate responses to threats posed by biological weapons and the globalization of infectious diseases. The realpolitik imprint on public health security in the United States calls this mantra into question. The reductions in infectious disease morbidity and mortality achieved in the era of the globalization of infectious diseases in the latter half of the nineteenth and first half of the twentieth centuries suggests that the strategic driver was not international cooperation but domestic public health reforms—in other words, self-help.

267. Pirages, Ecological Theory, supra note 38, at 63.
268. For more on the problems anarchy poses for global public health, see Fidler, supra note 118.
269. Interestingly, Robert Koch, one of the leading scientists behind the triumph of germ theory in the late nineteenth century, argued that, concerning cholera, all “these international efforts are quite superfluous” and that the best approach would be for each country to engage in self-help: “seize cholera by the throat and stamp it out.” Howard-Jones, supra note 9, at 76.
Other problems exist with the common security approach's call for more international cooperation on public health. The exact nature of the international cooperation needed is rarely specified. The emerging concept of public health security in the United States does not reject international cooperation but views it as an expedient means to prevent and control public health threats to U.S. territory and economic, military, and geopolitical power and interests. In other words, international cooperation involves the exercise of national power to achieve selfish ends.

In his classic work *The Twenty Years' Crisis*, E.H. Carr noted that liberal states have had a tendency to use the "harmony of interests" doctrine to justify their exercises of power in pursuit of selfish ends.\(^{270}\) The "harmony of interests" doctrine generally holds that whatever is in the national interest of one state is also in the interest of the rest of the world.\(^{271}\) The divergent interests of states usually reveal the "harmony of interests" to be the argument of strong, status quo states.\(^{272}\) The appearance of the "harmony of interests" doctrine in the public health-national security linkage literature should come, then, as no surprise. *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."\(^{273}\) 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."\(^{274}\) The many controversies surrounding U.S. foreign policy on global health issues, from criticism of strong U.S. support for patent rights over greater access to infectious disease drugs to complaints about the funding the United States provides the Global Fund, demonstrate that the "harmony of interests" language in the public health-national


\(^{271}\) *Id.* at 55 ("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.").

\(^{272}\) *Id.* at 51-53.

\(^{273}\) KASSALOW, *supra* note 36.

\(^{274}\) OFFICE OF GLOBAL HEALTH AFFAIRS, *supra* note 234. Representative Donald M. Fraser made essentially the same "harmony of interests" argument in 1971 when he claimed that "sound health of the human body" represents "[a] positive goal consistent with American ideals and shared by most of the people of the world." See 1971 HEARINGS, *supra* note 264, at 2.
security literature suffers the fate of this doctrine identified by Carr—states have divergent rather than harmonious interests.

One of the problems confronting reliance on the liberal preference for international law and international organizations in the public health context is the recognized weaknesses of such institutions during the post-World War II period. Realist analysis suggests that regime formation and maintenance depends on hegemonic leadership—hegemons exercise their power to make regimes work. The hegemons bear greater costs and produce benefits for others, but the key element in successful international regimes is hegemonic commitment. Experts widely recognize that the WHO suffered in the post-World War II period from a sometimes ambivalent, sometimes hostile relationship with the great powers, especially the United States. The public health-national security linkage literature recognizes the importance of the power dynamic in regime sustainability by arguing that the leadership of the United States in global health is critical.

Similarly, advocates for global health have often argued that public health needs to be higher on the political and diplomatic agenda of important, powerful countries, especially the United States. In short, public health needs to move from “low politics” (e.g., humanitarianism) to “high politics” (e.g., national security). A higher political profile for public health will, however, bring it into direct contact with the volatile and power-laden politics generated by states interacting in a condition of anarchy. As the emerging concept of public health security shows, the United

277. Ilona Kickbusch, Influence and Opportunity: Reflections on the U.S. Role in Global Public Health, 21 Health Aff. 131 (2002). Again, arguments for the elevation of health on the agenda of U.S. foreign policy are not new. See, e.g., 1971 Hearings, supra note 264, at 1 (congressional hearings on proposed legislation to create “an international health agency in the Federal Government in order to permit greater American involvement in furnishing health assistance to the developing world”); New Directions in International Health Cooperation, supra note 25, at 2 (recommending in 1978 “that international health be elevated to an active and positive concern of all U.S. Government agencies, and particularly, that in the State Department, international health should play a strong role in the basic human needs strategy of U.S. foreign policy”).
278. Altman, supra note 5, at 46 (arguing for “the need to put global health onto the table of ‘high politics’”).
States has put public health on the national security agenda but not in the way the public health-national security linkage literature necessarily advocated. Realist analysis holds that the realpolitik imprint on the public health security concept in the United States was predictable, and those advocates of putting public health into "high politics" who would recoil from the dominance of realism did not understand the game they wanted to join. The anarchical structure and dynamics of international politics constitute a virus to which public health is not immune when health and security converge.

**Conclusion**

This Article's argument that the realpolitik perspective on national security is relevant to understanding global infectious disease problems and now dominates the public health security concept in the United States does not mean that other perspectives on the public health-national security nexus disappear and become irrelevant. Realism has lost much of its theoretical credibility in the eyes of critics.\(^2\) Realpolitik had its day in the sun during the Cold War, the argument goes; and today the states need new, more sophisticated and persuasive explanations of globalization. In this sense, the realpolitik imprint on public health security in the United States bucks not only the normative thrust of the public health-national security linkage literature but also the dressing-down of realism in international relations theory. Perhaps public health security in the image of realpolitik will have its brief day in the sun and fade as the attacks of September and October 2001 loosen their grip on U.S. domestic politics and foreign policy.

The development of a public health security concept in the United States that bears the imprint of realism might, however, be an indication that public health as a discipline in the global age will feature what Stanley Hoffmann called the "permanent dialogue" between the liberal Kant and the realist Rousseau in international relations theory.\(^2\) This dialogue is not a conversation with which many in the public health world have experience, and the challenge becomes to ensure that those already participating in the dialogue hear what public health advocates have to say about the threats from infectious diseases. Whether hearing constitutes listening remains for history to determine.

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\(^2\) Legro & Moravcsik, *supra* note 64, at 6-9.