A JOURNEY OF A THOUSAND LEAGUES: FROM QUARANTINE TO INTERNATIONAL HEALTH REGULATIONS AND BEYOND

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1. INTRODUCTION

Any disease or infection which is naturally transmissible from vertebrate animals to man is classified as a zoonosis.1 A large number of communicable diseases are either directly transmitted from animals to humans or exist in closely antecedent veterinary strains.2 About 75% of the new and re-emerging infectious diseases that have affected humans over the past 20 years have been caused by pathogens originating from an animal or from products of animal origin.3

And yet these diseases were assumed to be nearly defeated when William H. Stewart, U.S. surgeon general in 1969, told Congress that the era in which infectious diseases represented a serious threat was coming to an end.4 Due to factors this paper will examine in greater detail below, more than three decades after this declaration, the World Health Organization ("WHO") estimates that a new individual is infected with the tuberculosis

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3 See Brown, supra note 1, at 435 (suggesting that a recent stream of new diseases has elevated the importance of understanding emerging zoonotic diseases).

bacilli approximately every second.\(^5\) Overall, around one-third of the world population is infected with the tuberculosis bacilli.\(^6\) In the 1990s, a cholera epidemic swept through Latin America several decades after experts assumed the disease had been eradicated.\(^7\) Africa, in particular, has seen an alarming increase in the scale and frequency of infectious disease outbreaks. Cholera and meningitis cases outbreaks are distressingly common,\(^8\) and in the past decade, there have been of epidemic yellow fever in Burkina Faso,\(^9\) Rift Valley fever virus in the Sudan,\(^10\) and Lassa fever in Sierra Leone.\(^11\) The 2003 outbreak of Severe Acute Respiratory Syndrome ("SARS")\(^12\) finally shattered the complacency of three decades and boosted the topic of infectious zoonoses to new prominence on the world agenda. States joined together to design a more effective surveillance and response system. One result of these efforts is the 2005 International Health Regulations ("IHR").\(^13\)

This Comment will examine the new powers and tasks that the 2005 IHR confers upon the WHO and how these new powers fit into the increasingly complex administrative architecture of global and regional public health governance, particularly with regard to developing a unified approach to preventing and coping with the

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\(^6\) Id.


\(^8\) See World Health Organization, WHO WATER DISEASES FACTSHEET, available at http://www.who.int/water-sanitation-health/diseases/cholera/en/ (reporting 140,000 cases in the year 2000); WORLD HEALTH ORGANIZATION, WHO MENINGOCOCCAL MENINGITIS FACTSHEET, available at http://www.who.int/mediacentre/factsheets/fs141/en/ (reporting infection rates of up to 800 cases per 100,000 population in some regions of Africa).


emergence and reemergence of zoonoses. The emerging potential of regional trade organizations to overcome some of the legitimacy issues implicated in any implementation of a truly global public health regime will also be considered. Section 2 reviews some of the most prominent emerging or re-emerging infectious zoonoses of recent years and discusses why the threat they represent has been magnified by global environmental and technological trends. Section 3 examines the theoretical framework for the spectrum of global administrative organizations, and seeks to place the WHO and its infectious disease efforts in the proper contextual light. Section 4 considers the institutional history of the WHO as well as the possible impact of the 2005 IHR from that global administrative law perspective. Section 5 examines priorities enshrined in the founding documents of several regional trade organizations and how these may open a way for greater regional public health governance. As it stands now, there is the risk that the powers and responsibilities outlined in the 2005 IHR represent merely another iteration, albeit a noticeably enhanced iteration, of the same response mechanisms of surveillance and quarantine used, with varying degrees of efficacy, for centuries. A deeper, truly interdisciplinary and integrated, global surveillance mechanism that places equal emphasis on supporting veterinary public health standards and environmental standards with appropriate incentives for participation is still needed.

2. SURVEY OF EMERGING ZOONOSES

It would be far beyond the scope of this paper to examine the astonishing breadth of diseases meeting the definition of zoonoses.14 Humans are exposed to zoonoses through two different epidemiological patterns.15 The first involves direct human contact with the source of the zoonotic agent or, alternatively, human contact with an animal vector such as blood-feeding arthropods.16 Generally, if the zoonotic agent is not constantly reintroduced the infection will die out in the human population; however, with more frequent human contact or wide dissemination of the animal vector the zoonotic agent can appear

14 See Brown, supra note 1, at 436-37 (providing numerous examples of recent emerging zoonoses and their harmful impact on society).
15 Bolin et al., supra note 2, at 20-21.
16 Id.
in more places and even be maintained and transmitted among humans only. The second pattern involves indirect contact through foods, water, environmental contamination, or other methods that do not rely on direct contact between human and animal hosts. Accordingly, not all zoonoses present the same degree of threat or potential impact. There are diseases that follow the pattern of graduating from animal-to-human transmission to human-to-human transmission in known circumstances. They emerge in a setting of high human population density and result from close contact to otherwise wild animals. The virus has the capacity for human-to-human spread. It demonstrates the potential for the global spread of disease via rapid international travel. Finally, transmission among healthcare workers is often intensified by modern health care techniques and the associated invasive nature of intensive care. It occurs classically for the influenza virus, which "causes pandemics in humans after periodic exchanges of genes between the viruses of wild and domestic birds, pigs, and humans." Nucleic acid sequence analyses have demonstrated direct transmission of avian influenza to humans and have identified potential primate reservoirs from which HIV types 1 and 2 originated. Other diseases, though familiar, resist efforts to identify a pattern of circumstance, cause, and effect. In this category belongs the search for the still-elusive natural reservoir hosts for Ebola and Marburg viruses. Clearly, there is both a problem and a problem accurately detecting and responding to that problem.

17 Id.
18 Id. at 21.
20 Id.
21 Id.
22 Id.
23 Id.
24 Peter Daszak et al., Emerging Infectious Diseases of Wildlife: Threats to Biodiversity and Human Health, 287 SCIENCE 443, 446 (2000).
25 Id.
26 Id.
2.1. Tuberculosis

"Tuberculosis may be viewed as an emerging infection over a long timeline.... Evidence of tuberculosis.... exists in ancient Egypt and South America."27 It is believed that cows were the original disease vector, though tuberculosis is one zoonosis that has long since maintained a presence in the human population and been transmitted as such.28 Tuberculosis may be transmitted whenever infectious individuals talk, cough, sneeze, or spit.29 "Infectious" has a specific meaning in this situation, however: only those whose tuberculosis infection has reached their lungs are infectious.30 If untreated, persons with an active tuberculosis infection will infect, on average, between ten and fifteen people every year.31 But individuals infected with tuberculosis bacilli do not necessarily become sick with the disease.32 The immune system isolates the tuberculosis bacilli which, protected by a thick coat, can lie dormant for years.33 When an individual’s "immune system is weakened, the chances of becoming sick are greater."34 Should an individual with an active tuberculosis infection fail to obtain proper treatment, "extensively drug-resistant" tuberculosis may develop, a far more difficult illness to treat.35

Astonishingly, someone in the world is newly infected with tuberculosis approximately every second.36 Overall, about one-third of the world’s population is infected.37 The WHO estimates that the largest number of new tuberculosis (TB) cases in 2005 occurred in the South-East Asia Region, which accounted for

28 See id. (explaining that the first known cases of tuberculosis may have been bovine tuberculosis rather than "true human tuberculosis").
29 See WORLD HEALTH ORGANIZATION, supra note 5 ("When infectious people cough, sneeze, talk or spit, they propel TB germs, known as bacilli, into the air.").
30 Id.
31 Id.
32 Id.
33 Id.
34 Id.
35 See id. ("Drug-resistant TB is caused by inconsistent or partial treatment ....").
36 Id.
37 Id.
thirty-four percent of incident cases globally.\textsuperscript{38} It is estimated that 1.6 million deaths resulted from TB in 2005.\textsuperscript{39} Both the highest number of deaths and the highest mortality per capita are in Africa.\textsuperscript{40}

\textbf{2.2. Lyme Disease}

An excellent example of the interaction of human activity and behavior with infection risk is presented by the emergence and spread of Lyme disease across the Northeast United States. There is evidence of Lyme disease in the Northeast from the 1940s and earlier, and certainly in Europe for at least one-hundred years....

The spread of Lyme disease is directly related to ecological changes, as well as to the reintroduction of deer and their explosive population growth, in the Northeast. For most of the nineteenth century, the Northeast was cleared agricultural land, with the virgin forest virtually eliminated. The only deer that survived were located on islands off the coast. In the closing years of the nineteenth century, as agriculture moved west and scrub forest started to reclaim the land, the cleared land gave way to reforestation and suburban yards.... Deer were reintroduced and protected, and therefore rebounded to unprecedented populations.\textsuperscript{41}

Early infection with Lyme disease usually presents as a mild flu-like illness with a rash wherever the tick embedded itself.\textsuperscript{42} If left untreated however, up to seventy percent of patients suffer bacterial invasion of organs and systems including the brain, heart,

\textsuperscript{38} Id.
\textsuperscript{39} Id.
\textsuperscript{40} Id.
\textsuperscript{41} DeMaria, supra note 27, at 43–44 (footnotes omitted); see also David H. Persing et al., \textit{Detection of Borrelia burgdorferi DNA in Museum Specimens of Ixodes dammini Ticks}, 249 SCIENCE 1420, 1420 (1990) (recalling the recording of Lyme disease in Europe in the early twentieth century and the discovery of Lyme disease in museum ticks which were found in the Northeast United States in the 1940s).

eyes, nerves, or joints. 43 The consequences can be disabling though usually not fatal.44 It is the most common arthropod-vectored disease in the United States.45

Deer are hosts to the adult *Ixodes* ticks which transmit the Lyme disease-causing organism. . . . Larvae, nymphs, and the adult ticks feed and breed on deer, and then may transmit infection to humans.

. . . Given the increased human suburban and exurban population, the situation is ideal for humans to be bitten . . . and acquire Lyme disease. Had social and environmental conditions remained unchanged, Lyme disease would be perhaps no more than an occasional clinical oddity.46

2.3. Healthcare-associated Infections and Ebola

DeMaria observes, "[h]ospital-associated infections were often thought of as an institutional problem, but have developed a broader, international dimension."47

A potentially more dramatic threat is raised by the Ebola virus, which causes a usually fatal, overwhelming, and communicable disease in West Africa. Ebola virus infection has no effective treatment. Many secondary cases of Ebola occur in care-givers exposed to blood and body fluids of patients in homes and health care facilities with primitive levels of infection control and limited resources. It is possible that a health care provider from the developed world working in such a facility could have unrecognized

43 Id.
44 Id.
45 See id. (explaining that 9,465 cases of Lyme disease were formally reported in the United States in 1991).
46 DeMaria, supra note 27, at 44–45 (footnote omitted); see also Barbour & Fish, supra note 42, at 1611 (describing how larvae and nymphs "feed on all terrestrial mammal species").
contact with Ebola and return to their home country before
the onset of symptoms.48

The incubation period for Ebola can range from a few days to
three weeks.49 “Delay in proper diagnosis could lead to more
health care workers being exposed and a subsequent healthcare-
related outbreak of Ebola, which then could potentially spread to
community contacts of the infected health care workers.”50

The WHO recommends that:

All hospital personnel should be briefed on the nature of
the disease and its routes of transmission. Particular
emphasis should be placed on ensuring that invasive
procedures such as the placing of intravenous lines and the
handling of blood, secretions, catheters and suction devices
are carried out under strict barrier nursing conditions. Hospital staff should have individual gowns, gloves, masks
and goggles. Non-disposable protective equipment must
not be reused unless they have been properly disinfected.

Infection may also be spread through contact with the
soiled clothing or bed linens from a patient with Ebola. Disinfection is therefore required before handling these
items.51

According to the WHO, Ebola haemorrhagic fever (“EHF”) is a
haemorrhagic illness which causes death in 50-90% of all clinically ill cases . . . .52 The natural reservoir of the Ebola virus seems to
reside in the rain forests of the African continent and in areas of the
Western Pacific.53 The Ebola virus is transmitted by direct contact
with the blood, secretions, organs or other bodily fluids of infected persons.54

48 DeMaria, supra note 27, at 47 (footnote omitted).
49 CENTERS FOR DISEASE CONTROL AND PREVENTION, U.S. DEPARTMENT OF
HEALTH AND HUMAN SERVICES, EBOLA HEMORRHAGIC FEVER INFORMATION PACKET 3
Fact_Sheets/Ebola_Fact_Booklet.pdf
50 DeMaria, supra note 27, at 47-48.
51 See World Health Organization, Ebola Haemorrhagic Fever, available at
52 Id.
53 Id.
54 Id.
"Several human and animal Ebola outbreaks have occurred" from 2000 to 2004 in Gabon and the Republic of Congo. One study found that "[t]he human outbreaks consisted of multiple simultaneous epidemics caused by different viral strains, and each epidemic resulted from the handling of a distinct gorilla, chimpanzee, or duiker carcass. These animal populations declined markedly during human Ebola outbreaks, apparently as a result of Ebola infection." A "high number of animal carcasses in forested areas just before and during the 2001 human Ebola outbreaks" were noted by researchers in Gabon. Their research concluded that "Ebola outbreaks occur abruptly, exterminating exposed animal populations very rapidly and very locally (groups living in other parts of the sanctuary were barely affected)." The carcasses found may have represented only a fraction of possibly thousands dead. The study concluded that the slow reproductive cycle of the great apes following such high mortality levels, together with hunting and poaching, could lead to their extinction in western central Africa.

3. GLOBAL ADMINISTRATIVE LAW: A CONTEXT

The perceived authority of global institutions to bind national governments can be grossly simplified into the familiar question of whether the means fit the ends. Put another way, perceived authority—and thus the effectiveness of that authority—may be determined by considering who is exercising that authority and whether such exercise is intended to be formally binding. Commentators in the emerging field of global administrative law often categorize global institutions either by formal organizational structure or the qualitative aspects of institutional competence.

56 Id.
57 Id.
58 Id. at 388.
59 Id. at 389.
60 Id.
61 Id.
62 Benedict Kingsbury et al., The Emergence of Global Administrative Law, 68 LAW & CONTEMP. PROBS. 15, 20 (2005) (noting the emergence of global administrative law, categorizing some actors, and proposing arguments for and against unification of this type of law); See, e.g., Daniel C. Esty, Good Governance at the Supranational Scale: Globalizing Administrative Law, 115 YALE L.J. 1490, 1510–11
The latter will be relied on more intensively here as the 2005 IHR present an exercise within the institutional competence of the WHO and not one which impacts its formal organizational structure. Two models, proposed by Daniel Esty\(^6\) and Eric Stein,\(^6\) provide helpful visual assistance in defining the parameters of the issue of perceived authority and thus providing a context within which to evaluate the 2005 IHR as an exercise in authority.

\section*{3.1. Modeling Legitimacy}

Daniel Esty proposes visualizing the relationship between institutional competence and effective authority as two intersecting axes, taking the form of a matrix.\(^6\) The first encompasses the spectrum of decisionmakers and the second encompasses the range of consequences of a decision, from formal-mandatory to informal-voluntary.\(^6\) A global institution will face greater or lesser resistance to the exercise of its authority depending on its place within this matrix.\(^6\) The lower-right side of this matrix is the realm of treatymaking, wherein national officials are the primary decisionmakers and decisions have formal-mandatory consequences; in the lower-left side, national officials are still the primary decisionmakers but the results of decisions are informal-voluntary.\(^6\) Moving into the upper left side, international officials are the decisionmakers but their decisions are informal-voluntary; this changes on the upper right where international officials make decisions with formal-mandatory consequences.\(^6\)

Eric Stein models a similar question of legitimacy that centers on the relationship between the formal-mandatory effect of decisions made through global institutions and the level of cultural and political similarity between the affected components of that

\footnote{Esty, \textit{supra} note 62.}
\footnote{Eric Stein, \textit{International Integration and Democracy: No Love at First Sight}, 95 AM. J. INT'L L. 489, 494-495 (2001) (suggesting that the level of integration of an international organization or regime is determined by normative-institutional and empirical-social factors).}
\footnote{Esty, \textit{supra} note 62, at 1509.}
\footnote{\textit{Id.}}
\footnote{\textit{Id. at} 1510.}
\footnote{\textit{Id. at} 1511.}
institution. Stein names his axes the "normative-institutional" and the "empirical-social." Stein's matrix assigns an integration value to the global institution under consideration; integration, for both his purposes and the purposes of this Comment, is defined as a measure for the degree of transfer of public national powers to global institutions.

Factors that align upon the normative-institutional axis include: the composition of institutional organs and procedures such as voting mechanisms, as well as whether the institution is cooperative and non-rule directed and thus essentially "a forum for [the] exchange of information." Perhaps most importantly, "normative-institutional" characteristics are also determined by considering whether the institution may impose international obligations or rules, and whether the institution serves any "rule enforcing" function. The "empirical-social" axis contemplates the "political, economic, and cultural impact of the measures adopted" by a global institution. It asks whether there exists "a level of common interest sufficient to overcome cultural differences between the . . . states," or alternatively, whether there is a level of popular support that will suffice to buttress the transfer of some traditionally national function to a global institution. States with comparable political and legal systems are deemed more likely to accept a higher level of integration.

3.2. The Legitimacy Problem: Perspectives and Proposals

Criticism of the authority of global institutions is thus founded on one of two complaints: either a lack of democratic accountability or a lack of procedural rigor and transparency. The two categories necessarily overlap in many areas, but the choice of foundation usually colors both diagnosis of the problem and proposed solutions. When, for example, Eleanor Kinney writes

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70 Stein, supra note 64, at 489.
71 Id.
72 Id. at 493–94 (offering Karl Deutsch’s definition of integration, as “a process of transforming ‘previously separate units into components of a coherent system,’” (citing KARL W. DEUTSCH, THE ANALYSIS OF INTERNATIONAL RELATIONS 198 (2d ed. 1978))).
73 Id. at 494.
74 Id.
75 Id.
76 Id.
about the sense of unease that globalization generally can provoke, she assigns primary responsibility for this unease to two perceptions. First, she argues that local and national governments are ceding or losing power to international regulatory bodies and that these organizations and networks are seen as accessible and unaccountable to ordinary people. Second, the processes by which these organizations make important decisions and policies are not democratic. Kinney accordingly concludes that increased accountability, transparency, and accessibility will necessarily democratize the decisionmaking processes of global institutions and thus enhance their perceived legitimate authority. Stein too is primarily concerned with two trends: the internationalization of decision making in global institutions and the expansion of democracy. Stein posits that these may be in conflict and have thus led to a tension that underlies all discourse on the democracy-legitimacy deficit in national and international arenas. In order to bring this tension into equilibrium, states should encourage the greatest degree of participation possible by national delegations in dialogue with the global institution on rulemaking procedures. Organizations with a low level of integration must first focus on transparency, openness to the outside world, and effective policy results. However, organizations with a higher level of integration should seek to decentralize and disaggregate some power through greater

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78 See id. at 427 (explaining that globalization has caused decision making power to shift from the local level to the international level via the creation of international regulatory bodies).

79 Id.

80 Id., at 428–31 (discussing the unique characteristics of international law that make transparency, accountability, and accessibility indispensable attributes of a democratic international law regime).

81 See Stein, supra note 64, at 489–90.

82 I use the two concepts as one word here to convey the degree to which the two concepts are intertwined for certain commentators.

83 See Stein, supra note 64, at 492.

84 Id. at 531–34.

85 Stein includes the WHO in this assessment.

86 See Stein, supra note 64, at 531–34.
reliance on regional and local authorities. At this level of integration, it is suggested that the principle of subsidiarity should be honored.

On the other hand, returning to Esty’s model, democracy recedes into the background as a laudable goal, but one not essential in the task of achieving legitimate and accountable global administrative governance. Questions of legitimacy and authority increase in importance as a global organization moves away from the “safest” realm of the lower left, essentially providing a forum for national officials to discuss informal-voluntary measures, and into the upper-right quadrant, where international officials make decisions with formal-mandatory effect. These questions derive from a composite of anxieties, and can be roughly divided into two categories: anxieties regarding legitimacy and anxieties regarding accountability. Intermingled with these two categories is the problem of accessibility. In the case of legitimacy, the foremost concern is often the erosion, perceived or real, of national sovereignty. The presence of an additional layer of governance to which the highest national officials must answer at a minimum involves an additional layer of bureaucracy which certain measures and programs must navigate. Additional bureaucracy inevitably invokes the issue of efficiency: it may be troubling for citizens of a hegemonic nation such as the United States to turn over certain policy responsibilities to far-away global institutions such as the United Nations. Furthermore, procedural transparency varies widely depending on the global institution in question and there are no uniform norms of administrative procedure or transparency. Transparency issues are also related to the larger question of accountability or the lack thereof. The

87 Id.

88 The principle of subsidiarity, as generalized from the amended European Community Treaty, may be defined as follows: an international institution should take action only if and insofar as the objective of the proposed action cannot be sufficiently achieved by the member states, and therefore, by reason of the scale or effects of the proposed action, can be better achieved by the international institution. See Treaty Establishing the European Community, Nov. 10, 1997, 1997 O.J. (C 340) 173.

89 See Esty, supra note 62, at 1515-23.


91 See Esty, supra note 62, at 1515-23.

92 Id.
additional layer of bureaucracy that global institutions can represent, as described earlier, also means that the international officials making policy decisions are that much farther removed from the citizens of a given nation and often unconstrained by any system of institutional checks and balances. Ensuring that these officials can and are acting in the best interests of those citizens is thus a prerequisite of adequate governance in a global institution.

This alternative understanding of the foundational question behind issues of global institutional legitimacy and authority leads to different potential solutions as well. The encouragement and implementation of more democratic representation systems in global institutions is certainly one potentially helpful mechanism but it is by no means a panacea. In this model, legitimacy may be derived a number of ways and refer to different sources of authority.93 Results-based legitimacy refers to the governing institution's proven ability to deliver good outcomes.94 Order-based legitimacy is simply governmental authority that is perceived as legitimate because the system is one built on tradition and provides some measure of order and authority.95 Systemic legitimacy relies on the dispersion of authority among many institutions with competing interests as a way of ensuring effectiveness and efficiency as decisions are critiqued over multiple iterations.96 This is particularly useful when triangulating difficult policy choices where there is factual uncertainty or normative disagreement. Finally, deliberative legitimacy refers to the idea that dialogue which includes participation by those representing a wide range of views reinforces perceptions of legitimacy.97 Esty models "global administrative law toolbox" to further enhance any source of authority and legitimacy which features, among others: systematic and sound rulemaking transparency, public participation, and a structured, transparent fact-finding process with open option evaluation.98 International organizations with greater legitimacy buttressed by appropriate rulemaking procedures are likely to be given greater authority. These forces combine in an iterative process in which institutional design and

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93 See Esty, supra note 62, at 1515-23.
94 Id. at 1517.
95 Id. at 1518.
96 Id. at 1519.
97 Id. at 1520.
98 Id. at 1515-23.
administrative law develop alongside authority and legitimacy. WHO activities in the past have combined a high degree of interdependence with relatively limited and technical issues, thus reducing conflict on sensitive political and cultural point, but provisions in the 2005 IHR allocate greater decisionmaking authority than ever before to WHO officials and impose greater public health requirements upon member states. These additional responsibilities stem from the assertion made in the WHO Constitution that health is a human right: a state that is not limited to the mere absence of disease or infirmity.\textsuperscript{99}

Global institutions first emerged as organizations to facilitate a limited degree of necessary dialogue and cooperation between the great powers of the day. That legacy has sometimes been recognized and described in a radical form of critique, wherein the current institutions of global governance are depicted as "imperial" institutions, "furthering the goals and stabilizing the dominance of Northern industrialized countries at the expense of the South, and of the dominant capitalist classes at the expense of subaltern peoples."\textsuperscript{100} The legal commentators discussed above, as well as, political scientists stress the importance of opportunity for genuine participation rather than the club-like setting and privileges of the past.\textsuperscript{101} Both Stein and Esty model a potential progression from the limited, dialogue-oriented global institutions of the past to significantly more expansive, regulatory bodies with a high level of integration in the given area of competence. The 2005 IHR developed from a series of international sanitary conventions dating back to the nineteenth century; these sanitary conventions included the major trading and colonial powers of the day and aimed primarily to restrict the overenthusiastic use of quarantines and trade blockades with respect to a few recognized infectious diseases.\textsuperscript{102} In the intervening century, as will be discussed in more detail subsequently, the sanitary conventions became the 1968 IHR, revised and promulgated again in 2005. With the promulgation of the 2005 IHR, the WHO has abandoned


\textsuperscript{100} Kingsbury, supra note 62, at 52.


\textsuperscript{102} Lesley A. Jacobs, Rights and Quarantine During the SARS Global Health Crisis: Differentiated Legal Consciousness in Hong Kong, Shanghai, and Toronto, 41 Law & Soc'y Rev. 511, 520 (2007).
its former strictly limited quarantine system for a handful of specified infectious diseases.\textsuperscript{103} A significantly more open-ended decision instrument now determines the degree of intervention necessary.\textsuperscript{104} This new approach redefined the WHO's area of competence, formerly both technical and quite restricted: the WHO may now potentially exert some degree of authority upon controversial political and cultural landscapes.

4. THE WORLD HEALTH ORGANIZATION

The WHO was established on April 7, 1948 when its constitution was adopted by the International Health Conference held in New York in July 1946 and was signed by sixty-one representatives of states.\textsuperscript{105} The organization is a specialized agency of the United Nations that has a mandate, among others, "to act as the directing and coordinating authority on international health work."\textsuperscript{106} It is the sole such international authority. The WHO has over 190 member states and its policies and programs are governed by the World Health Assembly ("WHA"), which is composed of representatives of the WHO member states.\textsuperscript{107}

4.1. History

The Charter of the United Nations gives the WHO a mandate to promote and protect health within the UN system.\textsuperscript{108} The Constitution of the WHO enumerates significant treaty-making powers, but to date these powers remain largely unused.\textsuperscript{109} At the creation of the WHO in 1948, it was predicted that international law would play a major role in global health policy.\textsuperscript{110} The WHO

\textsuperscript{103} David P. Fidler, \textit{From International Sanitary Conventions to Global Health Security: The New International Health Regulations}, \textit{4 Chinese J. Int'l L.} 325, 361 (2005) (stating that public health considerations, rather than commercial interests, were used to define the scope and purpose of the new IHR).

\textsuperscript{104} Id.

\textsuperscript{105} World Health Organization, History of WHO, http://www.who.int/about/history (last visited Apr. 11, 2008).

\textsuperscript{106} Constitution of the World Health Organization, \textit{supra} note 99, art. 2.

\textsuperscript{107} World Health Organization, Governance of WHO, http://www.who.int/about/governance (last visited Apr. 11, 2008).


\textsuperscript{109} See Fidler, \textit{supra} note 103 and accompanying text.

\textsuperscript{110} Objiofor Aginam, \textit{Globalization of Infectious Diseases, International Law and the World Health Organization: Opportunities for Synergy in Global Governance of
Constitution provides the organization with authority to promote and adopt conventions, regulations, and recommendations that address any matter within its competence. This competence is broad, considering that the WHO definition of health is "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity." This gives the organization an expansive legal basis upon which to develop and promote international law.

Complementing the authority of the WHO, the WHA has the authority to adopt regulations on sanitation and quarantine issues, nomenclatures of diseases, causes of death, public health practices, and standards for international diagnostic procedures. The WHA also has the authority to promulgate standards for "the safety, purity and potency of biological, pharmaceutical and similar products moving in international commerce," and regulations governing the "advertising and labeling of biological, pharmaceutical and similar products moving in international commerce." This necessitates close cooperation between the WHO and other international bodies such as the World Trade Organization ("WTO"), World Organization for Animal Health ("OIE"), and the Food and Agricultural Organization of the United Nations ("FAO"). The WHO Constitution also explicitly imagines that the institution acts as a key actor with interests in the protection of the global environment.

4.2. Article 19

Article 19 of the WHO Constitution gives the organization treaty-making powers. It provides:

[T]he Health Assembly shall have the authority to adopt conventions or agreements with respect to any matter within the competence of the Organization. A two-thirds vote of the Health Assembly shall be required for the
adoption of such conventions or agreements, which shall come into force for each Member when accepted by it in accordance with its constitutional processes.\footnote{Id. art. 19.}

The language of Article 19 provides for a standard treaty-making power in accordance with the competencies of multilateral organizations generally, but some scholars argue that when combined with the ambitious objectives of the WHO, objectives not listed in the founding documents of any of the WHO’s predecessors, “the attainment by all peoples of the highest possible level of health,”\footnote{Id. art. 1.} and the WHO’s equally ambitious definition of health as “a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity...”\footnote{Id. at Principles of Constitution.} Article 19 provides the WHO with virtually limitless treaty-making power.\footnote{David P. Fidler, Constitutional Outlines of Public Health’s “New World Order” 77 TEMP. L. REV. 247, 260 (2004).} If one subscribes to this interpretation then the treaty-making power certainly surpasses any treaty power possessed by the WHO’s precursors: the Pan American Sanitary Bureau, the International Office of Public Health, and the Health Organization of the League of Nations.\footnote{See Fidler, supra note 103, at 341 (illustrating how “[t]he WTO intensified the relationship between public health and international trade law.”).}

An ambitious Preamble is certainly not unknown among the founding documents of international organizations; it is the combination of this latent ambition and the unusual default-approval mechanism outlined in Article 21\footnote{Constitution of the World Health Organization, supra note 99, art. 21.} that make of the WHO a potentially regulatory/administrative body.

4.4. Article 21

Article 21 of the WHO Constitution provides for a unique treaty-making procedure that is unparalleled in the practice or organization of other multilateral institutions, namely the power of the World Health Assembly to adopt legally binding regulations concerning:

(a) sanitary and quarantine requirements and other procedures designed to prevent the international spread of disease;
(b) nomenclatures with respect to diseases, cause of death and public health practices;
(c) standards with respect to diagnostic procedures for international use;
(d) standards with respect to the safety, purity and potency of biological, pharmaceutical, and similar products moving in international commerce; [and]
(e) advertising and labeling of biological, pharmaceutical and similar products moving in international commerce.  

Article 21 therefore affords the World Health Assembly the power to adopt legally binding regulations without obligation to work within the traditional consent mechanisms of and by states. This authority is rarely utilized by the WHO but its exercise would effectively shift the WHO to the formal-mandatory end of the spectrum in both Esty’s and Stein’s models of administrative authority. For regulations adopted under Article 21, there is a “contracting out” procedure described in Article 22.

Regulations adopted pursuant to Article 21 shall come into force for all Members after due notice has been given of their adoption by the Health Assembly except for such Members as may notify the Director-General of rejection or reservations within the period stated in the notice.

Articles 21 and 22 of the WHO Constitution have been described as creating a “quasi-legislative procedure that constitute[s] a radical departure from conventional international rulemaking and norm-generation.”

4.5. Article 23

Article 23 of the WHO Constitution gives the WHA the authority to make recommendations with respect to any matter within the competence of the organization. This soft-law mechanism has been the WHO’s most-utilized tool in recent decades. Stein noted this preference for voluntary, soft-law

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122 Id.
123 Id. art. 22.
124 Aginan, supra note 110, at 64.
126 See Fidler, supra note 4, at 838 (describing WHO’s preference for Article 23).
oriented guidelines and noted that while the WHO, due to the provisions discussed above, could potentially be a highly integrated, global institution, it consistently failed to utilize its mandatory authority. The WHO has, until very recently, moved in a very low-integration pattern.

4.6. Inter-Organization Cooperation

The WHO has participated in a number of joint projects with other UN agencies in the area of international public health and the environment, though it has not yet promulgated any binding regulations or resolutions on the level of the IHR that contemplate the scope of the interdependence of human health and the larger environment. The WHO has been particularly active in the realm of veterinary public health ("VPH") and implements programs directed towards VPH in all of its regional offices. VPH activities are also closely coordinated with the FAO and OIE; assistance is available upon request to member states but the permanent partners are all global institutions. WHO also has a strong scientific evidence base, a joint partnership with the United Nations Environmental Program ("UNEP") named the Health and Environmental Linkages Initiative ("HELI") and infrastructures such as the Global Outbreak Alert and Response Network ("GOARN"). that can promote both environmental and health protection in developing countries. In spite of this potential, in the fifty-plus years of its history, international legal scholars

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127 See Stein, supra note 64 at 531–34 (noting that disproportionate reliance on the WHA is an emerging challenge in the WHO).

128 See, e.g., World Health Organization, Environmental Management for Vector Control, available at http://www.who.int/water_sanitation_health/resources/envmanagement/en/ (defining Environmental Management for Vector Control as the "activities for the modification and/or manipulation of environmental factors or their interaction with man with a view to preventing or minimising vector propagation and reducing man-vector-pathogen contact").


have primarily criticized the organization for marginalizing international law in most of its post-1948 global health programs and policies. The recent revision of the IHR and the negotiation of the Framework Convention on Tobacco Control ("FCTC") as well as two other zoonoses-related initiatives discussed infra signal a fundamental change of direction and approach.

Global Early Warning System for Major Animal Diseases, including Zoonoses ("GLEWS") is a joint system that builds on the added value of combining and coordinating the alert mechanisms of FAO, OIE and WHO to assist in prediction, prevention and control of animal disease threats, including zoonoses, through sharing of information, epidemiological analysis and contribute to joint field missions to assess and control the outbreak.

This initiative has several goals, among them, to "[p]rovide technical input into coordinated joint responses to animal health emergencies." Accordingly, "if in consultation between the three partners there is clear [need] for [onsite] assessment of the [emerging] situation, GLEWS can provide technical input into an urgent joint field mission [while also] engaging the country authorities . . . ."

Mediterranean Zoonoses Control Programme ("MZCP") is the only regional zoonoses control program working directly under the auspices of the WHO. Member countries include: Bulgaria, Cyprus, Egypt, Greece, Lebanon, Kuwait, Portugal, Saudi Arabia,


136 Id.

137 Id.

138 Id. (alteration in original)

Spain, Syrian Arab Republic and Turkey.\textsuperscript{140} The MZCP works to promote programs for zoonoses prevention as to maintain surveillance and control measures of zoonoses and related foodborne diseases.\textsuperscript{141} The MZCP also implements training activities and promotes veterinary public health activities and public health education.\textsuperscript{142}

5. FROM SANITATION TO HEALTH: EVOLUTION OF THE REGULATIONS

International law and public health scholar David Fidler divides the evolution of international public health law into three periods.\textsuperscript{143} During the first phase (1830–1900), travel and trade restrictions in the form of quarantine measures represented the sole disease-prevention strategy pursued on the international level.\textsuperscript{144} In accordance with this model, the International Sanitary Convention ("ISC") dealing with cholera was adopted in Venice in 1892, followed by another convention dealing with plague in 1897.\textsuperscript{145} International law played an important role during this first phase in achieving the primary goals of the regime participants: the harmonization of restrictive national quarantine practices in order to prevent unfair trade disruption, and the establishment of surveillance systems in order to allow for the timely erection of quarantine barriers.\textsuperscript{146}

Advances in science ushered in the second phase (1900–1940).\textsuperscript{147} The ISC unified and replaced the conventions of the early

\textsuperscript{140} \textit{Id.}

\textsuperscript{141} \textit{Id.}

\textsuperscript{142} \textit{Id.}

\textsuperscript{143} See generally Fidler, supra note 103 (providing a detailed history of international law on infectious disease control).

\textsuperscript{144} See \textit{id.} at 329 (arguing that prior to international cooperation on defending against the spread of infectious diseases, countries imposed trade and quarantine regulations in response to the threat of spreading disease).

\textsuperscript{145} \textit{Id.} at 330.

\textsuperscript{146} See \textit{id.} at 329 ("[T]he nature of the problem forced States to engage in certain kinds of co-operation, which formed the classical regime’s architecture. This architecture’s purpose was to protect States against the international spread of infectious diseases in a way that minimized interference with international trade and travel.").

\textsuperscript{147} See \textit{id.} at 335 (stating that changes in scientific knowledge accounted for amending the process by which international law on infectious disease was adopted).
nineteenth century.\textsuperscript{148} The ISC was in turn replaced by the International Sanitary Regulations ("ISR") in 1951; the ISR was meant to unify the previous conventions and replace the cyclical process of creating updated conventions. Only six diseases were initially subject to the ISR: cholera, plague, yellow fever, smallpox, typhus and relapsing fever.\textsuperscript{149} This early “regime pursued protection against the international spread of infectious diseases through international legal obligations requiring that (1) States notify other countries about outbreaks of specified diseases; and (2) maintain adequate public health capabilities at points of disease entry and exit (e.g., sea ports and, later, airports).”\textsuperscript{150} The early regime “sought to minimize public health interference with international trade and travel by requiring that disease-prevention measures restrictive of international trade and travel be based on scientific evidence and public health principles.”\textsuperscript{151} But neither the new scientific discoveries nor the emerging interest in public health interventions translated into a broadening of the material scope of international disease-control law. Rather, quarantine harmonization and disease surveillance continued to be at the center of the international health law debate.

Revolutionary medical discoveries such as antibiotics and vaccines led into the third phase of international disease control (1940–90).\textsuperscript{152} In 1969, the ISR was renamed the IHR and typhus and relapsing fever were taken off the list of diseases covered, leaving only four. In this period, international law came to play a diminishing role in the struggle against infectious diseases. Several factors contributed to this decline.\textsuperscript{153} First, modern means of transportation and general improvements in public health gradually rendered quarantine, and with it the entire body of quarantine conventions, anachronistic. Second, scientific advances drastically increased the popularity of medical intervention as a

\textsuperscript{148} See David P. Fidler, Microbialpolitik: Infectious Diseases and International Relations, 14 AM. U. INT’L L. REV. 1, 24 (1998) (describing the efforts to make “infectious disease control a common value of international society”).

\textsuperscript{149} Fidler, supra note 103, at 330.

\textsuperscript{150} Id. at 329.

\textsuperscript{151} Id.

\textsuperscript{152} See id. at 335 (“The development of antibiotics and vaccines for many infectious diseases in the post-World War II period created resources not present when the classical regime emerged and proliferated.”).

\textsuperscript{153} See id. at 333 (previewing the “reasons behind the classical regime’s marginalization & stagnation”).
disease-prevention strategy, overshadowing traditional alternatives. Consequently, the surveillance of diseases and the harmonization of travel and trade restrictions became auxiliaries.

5.1. Reformation of the IHR

The IHR gradually fell into irrelevance. The three infectious diseases discussed at the first international sanitary conference in 1851—cholera, plague and yellow fever—were the only infectious diseases subject to the then-current 1981 IHR after the WHA amended the IHR to remove smallpox from the list. The removal of smallpox from the IHR’s list of infectious diseases left the IHR applicable to cholera, plague and yellow fever—the Asiatic diseases—“quarantinable diseases” and “pestilential diseases of the past.”

SARS has already been discussed as playing a role in reawakening interest in an international law approach to infectious disease control. However, SARS itself was but an emblem of the convergence of several trends. First, international trade and travel act as effective channels for microbial traffic. Second, public health capabilities are deteriorating or nonexistent, while antimicrobial drugs are losing their effectiveness. Third, the internationalization of public health through international health organizations has largely failed. Fourth, unprecedented levels of deeply-rooted social, economic, and environmental problems that provide diseases with fertile conditions have developed all over

154 See id. at 333-38 (elaborating upon the factors which contributed to the decline of the “classical regime” and to the increasing cooperation between nations in the arena of international public health law).
155 Id. at 337-38.
156 Id. at 338.
158 See id. at 210 (“[T]he world has become an increasingly smaller place, resulting in the transfer of health problems across borders.”).
159 See Scott Burris, Law as a Structural Factor in the Spread of Communicable Disease, 36 Hous. L. Rev. 1755, 1761 (1999) (describing the re-emergence of diseases, such as tuberculosis and the plague, that were previously susceptible to antimicrobial drugs).
And finally, fifth, the globalization of markets has weakened the state's ability to control its domestic economy and to address public health concerns and problems. The logic of global governance classically arises from such a situation: the presence of issues that cannot be contained within traditional political boundaries and the need to manage this uncomfortable interdependence.

5.2. The 2005 IHR

In combination, Articles 19, 21, and 22 of the constitution of the WHO indicate an awareness of a potentially very different framework for the conduct of international public health governance as compared to the soft-law recommendations used by the WHO in the recent past. This potential framework brings more meaning to the term "governance" and enforces standardized global compliance in a realm traditionally bound by the police powers of the domestic state. This has only just begun to occur; the reasons behind this are myriad. Perhaps the most obvious reason, however, is the decline in major global infectious diseases for much of the early 20th century. As illnesses like smallpox dropped off the IHR list, national governments saw no adverse consequences to their interests in pursuing either transparent or opaque public health regimes in near-total independence. It would not be until 2003 and the international awareness of SARS that nation-states began to comprehend the potential chaos of such a fragmented approach and the long-overdue revision of the IHR began in earnest.

Changes in information technologies at the threshold of the new century made it possible for the first time for the WHO to be independent of sovereign reporting whims. Non-governmental

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161 See Blum, supra note 157, at 208-13 (outlining the current global conditions which contribute to the spread of infectious diseases).

162 See, e.g., Lawrence O. Gostin, Why Rich Countries Should Care About the World’s Least Healthy People, 298 J. AM. MED. ASS’N 89, (2007) (arguing that the world’s wealthiest nations should lend assistance to less developed nations in order to improve conditions in public health).

163 See Fidler, supra note 103.

164 See Burris, supra note 159.

165 See Fidler, supra note 103.


167 See Gostin, supra note 162.
Organizations ("NGOs") and individual experts could communicate unusual discoveries nearly instantaneously, free of political restrictions. This idea of a network of global health information would be institutionalized as the GOARN.\textsuperscript{168}

Almost immediately the deployment of GOARN produced promising results. In 2003, WHO reported that between January 1998 and March 2002, WHO employed GOARN to identify and investigate 538 outbreaks of international concern in 132 countries.\textsuperscript{169} GOARN-induced investigations from the beginning involved infectious diseases not subject to the IHR, including meningitis, hemorrhagic fevers, viral encephalitis and anthrax.\textsuperscript{170} The volume of the surveillance information gathered, the speed with which such information was collected and assessed, and the disease coverage of the GOARN effort surpassed anything ever accomplished under the IHR specifically or the earlier regime generally.\textsuperscript{171} In fact, the new IHR specifically grants WHO the power to use non-governmental sources of information, something not permitted under the old IHR.\textsuperscript{172} This authority changes the surveillance dynamic between WHO and Member States in ways that favor global health security over national sovereignty.

5.3. No More Lists: The New IHR Decision Instrument

Bearing in mind the narrowness of the old IHR method of listing a handful of monitored infectious diseases, it is worthwhile to consider the deliberate breadth of the new definitions included in the 2005 IHR. The new definitions demonstrate a calculated response to the crippling restrictions imposed on the previous IHR incarnation. Not only are there no specific diseases delimited, the language in the decision instrument permits one to go beyond the classic categories of infectious diseases and into the realm of public


\textsuperscript{172} IHR 2005, supra note 13.
health events caused by, for example, toxic contamination or even biological or chemical weapons incidents though there is some limitation on those responses to prevent the WHO from infringing on what may be an area of Security Council competence. "Disease" is broadly defined as: "[A]n illness of medical condition, irrespective of origin or source, that presents or could present significant harm to humans." 173 An "event" is: "[A] manifestation of disease or an occurrence that creates a potential for disease." 174 A "public health risk" is: "[A] likelihood of an event that may affect adversely the health of human populations, with an emphasis on one which may spread internationally or may present a serious and direct danger." 175 A "public health emergency of international concern" is: "[A]n extraordinary event which is determined, as provided in these Regulations: (i) to constitute a public health risk to other States through the international spread of disease; and (ii) to potentially require a coordinated international response." 176

The new IHR's requirement that state parties notify WHO of any event that may constitute a public health emergency of international concern in its territory is significantly broader than the old IHR's duty to report cases of only three specific infectious diseases. 177 That the WHO no longer must wait for a state party and may act on convincing information from GOARN augments this fact. Article 10(4) also allows the WHO to share information about a significant public health risk with other States Parties over the objection of the State Party in whose territory the event is occurring. If the State Party instead collaborates fully with the WHO, that alert may not be necessary; accordingly this mechanism provides an incentive for states to act early in alerting the WHO. The broad scope of the notification requirement is consistent with WHO's desire to build a comprehensive framework for addressing the international spread of disease. 178 Expanding the notification obligation around the concept of a "public health emergency of international concern" required, however, the construction of an

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173 Id. art. 1, para. 1.
174 Id.
175 Id.
176 Id.
177 Id. art. 2.
178 See Milne, supra note 166 (describing more generally a global pandemic and presenting possible solutions).
approach radically different from one based on identified infectious diseases.\textsuperscript{179} This new approach requires more detailed decision-making mechanisms that guide the States Parties in determining whether a disease event may constitute a public health emergency of international concern.\textsuperscript{180}

The new IHR require States Parties to use a “decision instrument” to assess whether a disease event might be a public health emergency of international concern and thus notifiable to WHO under the new IHR.\textsuperscript{181} The decision instrument contains three pathways for States Parties to determine whether they must notify a disease event to WHO.\textsuperscript{182} First, if the disease event involves a case of smallpox, poliomyelitis due to wild-type polio virus, human influenza caused by a new virus subtype, or SARS, it shall be notified to WHO.\textsuperscript{183} The new IHR essentially deem any case of these diseases to be an event that may constitute a public health emergency of international concern.\textsuperscript{184} This pathway is disease-specific like the notification approach in the old IHR, but the infectious diseases on the disease-specific list do not include cholera, plague, or yellow fever.\textsuperscript{185} Disease events that fall within the second and third pathways have to be assessed by states parties’ answering four questions: (1) “is the public health impact of the event serious?”; (2) “is the event unusual or unexpected?”; (3) “is there a significant risk of international spread?”; and (4) “is there a significant risk of international travel or trade restrictions?” If a state party answers “yes” to any two of these questions, the event is deemed one that may constitute a public health emergency of international concern and must be reported to WHO under the new IHR.\textsuperscript{186}

\textsuperscript{179} See IHR 2005, supra note 13, art. 2 (stating that the purpose and scope of the regulations is to respond and prevent against “international spread of disease”).

\textsuperscript{180} See id. annex 2 (presenting a decision tree for the “assessment and notification of events” that could raise international health concern).

\textsuperscript{181} Id.

\textsuperscript{182} See id. (indicating that after an event is detected, there are 3 different options to take).

\textsuperscript{183} Id.

\textsuperscript{184} See Fidler, supra note 103 (presenting a comprehensive analysis of the new IHR).

\textsuperscript{185} See IHR 2005, supra note 13, annex 2 (using only smallpox, poliomyelitis, human influenza, and SARS).

\textsuperscript{186} Id.
The new IHR also expand the scope of obligations in another seminal way. The revised regulations require states parties to develop, strengthen, and maintain core capacities to (1) detect, assess, notify, and report disease events; and (2) respond promptly and effectively to public health risks and public health emergencies of international concern.\textsuperscript{187} This requirement is interesting in that, while Annex 1 lays out benchmarks for core capacities, there is no room for petition, even in the case of developing countries. Nor is there any mention of assistance should a Member State require such in attaining these core capacities. The five-year timeline also appears to be inflexible. Such a requirement as this, in order to be effective, would require a very high level of integration as measured by Stein’s model; in Esty’s model, this measure would reach the upper-right quadrant where international officials are promulgating mandatory regulatory measures to be enforced upon nation states.

This brings us to a basic contradiction in the realm of global public health. This contradiction encompasses the IHR but extends beyond them. The core-capacity requirement is an example of the growing lack of state control over its own public health situation; however, the nation-state unit is by no means a vanishing concept. Illnesses may be ignorant of the trappings of sovereignty, but their movements do not change the fundamental nature of the international system, which recognizes states as primary actors. It is tempting but simplistic to observe the speed and scope of the transmission of a disease like SARS and conclude that all public health solutions must be global in character. There is a grain of truth there, perhaps, but it does not change two fundamental facts: that all disease is ultimately local when it strikes and human beings remain divided into nation states.\textsuperscript{188} On the other hand, even in the nineteenth century era of sanitary conventions, states understood that international surveillance represented a wiser choice than national quarantine in addressing infectious disease problems. The nature of disease thus demands that nation states

\textsuperscript{187} See id. annex 1 (describing detection and response requirements at different community levels to meet “core capacity requirements under [the] [r]egulations”).

\textsuperscript{188} See Fidler, supra note 148 (describing the nature of infectious diseases and the impact on the international system, society, and global society in a world structured by the modern state system).
develop and adhere to rules and institutions that commit all to this common cause.189

If we conclude that global rules and global institutions are inevitable in the realm of public health, then the next issue is the problem of legitimacy and accountability first discussed above. Democracy is an easy answer but not a practicable one in this situation. There are fragmented global publics as opposed to the genuine public present in democratic sense. “There is no juridical public on a global level [because] no legal institution [exists to] define a public with the authority to act globally.”190 “There is also no sociological public, [however], because only . . . small [numbers] of people . . . [actually] identify and communicate with other people on a global basis.”191 However, accountability does not necessarily require some globally representative democracy; accountability can be exercised “through chains of delegation.”192

6. REGIONAL TRADE ORGANIZATIONS AND PUBLIC HEALTH

One possible solution to cut down the distance between the regulated and the global institutional regulator is to incorporate more robust public health chapters, addressing standard and norm creation, into regional trade organizations.193

It is axiomatic that harmonizing national systems on a global level is extremely difficult and problematic, whether the subject is trade or public health. Deep integration on the regional level is far easier.194 Bilateral or regional cooperation on public health matters has traditionally been rare,195 particularly in comparison to the

189 See id. (arguing, for example, that an effective international health organization is required).
190 Grant & Keohane, supra note 90, at 34.
191 Id.
192 See Keohane, supra note 101, at 9.
195 See generally Mark David Davis, Multilateral and Regional Efforts to Integrate Markets: The Uruguay Round, NAFTA, Asia Pacific Economic Cooperation Initiatives
relative plethora of regional trade cooperation vehicles. However, even in the context of trade, the mutual reliance of nations in a given region is acknowledged; some theorists advocate regional trade organizations in the belief that it promotes regional stability by providing a set of rules and an institution to avoid the spillover effects of profound inequality in a region.\textsuperscript{196} It has been found that "negotiations among a smaller number of regional participants tend to produce better outcomes in less time."\textsuperscript{197} The knowledge gained through the smaller-scale trial and error of these negotiations may serve as a valuable foundation for negotiations at the multilateral level. And where a nation may be hesitant to adopt a policy or practice by mandate of a multilateral organization, that nation may be more willing if it first had the opportunity to voluntarily test that policy or practice on the regional level. Likewise, regional trade organizations represent multiple fora for policy debate and experimentation.

6.1. Legal Framework

Article 14 of the 2005 IHR provides in paragraphs one and two that the "WHO shall cooperate and coordinate its activities, as appropriate, with other competent intergovernmental organizations or international bodies in the implementation of these Regulations, including through the conclusion of agreement and other similar arrangements."\textsuperscript{198} In Article 44, the 2005 IHR encourage States Parties to collaborate and assist each other in the detection and assessment of, and response to, events.\textsuperscript{199} And finally, in Article 57, entitled "Relationship with Other International Agreements," paragraph 3 explicitly states that "[w]ithout prejudice to their obligations under these Regulations, States Parties that are members of a regional economic integration organization shall apply in their mutual relations the common

\textsuperscript{196} Alan C. Swan, \textit{The Dynamics of Economic Integration in the Western Hemisphere: The Challenge to America}, 31 U. MIAMI INTER-AM L. REV. 1, 6-7 (2000) (discussing the potential for regional action to remedy wealth disparities in the Americas).


\textsuperscript{198} IHR 2005, \textit{supra} note 13, art. 14.

\textsuperscript{199} Id. art. 44.
rules in force in that regional economic integration organization."\textsuperscript{200}

Article XX(b) of GATT is the source of GATT/WTO jurisprudence on public health.\textsuperscript{201} Article XX allows the adoption of any measures to protect human, animal, or plant life so long as these measures do not constitute either arbitrary discrimination between countries with substantially similar conditions or a disguised restriction on international trade. Article XXIV of the GATT provides for the establishment of regional trade organizations.\textsuperscript{202}

6.2. Health and Trade

The economic cost of infectious disease outbreaks are a global concern. Beyond the obvious costs in mortality and morbidity, there is a "clear economic cost" of emerging infectious diseases in wildlife.\textsuperscript{203} Estimates on the cost of the SARS outbreak range from $10 billion to $30 billion.\textsuperscript{204} This can be compared to the 1994 locally contained outbreak of plague in Surat, India—estimated to have cost $2 billion—and the 1997 Avian Flu in Hong Kong estimated to have cost hundreds of millions of dollars in lost poultry production, commerce, and tourism.\textsuperscript{205}

For example, in 1994, preventive treatment for 665 people who had potential contact with a single rabid kitten in a pet store in New Hampshire cost $1.1 million, and it has been estimated that the economic burden of Lyme disease treatment in the United States may be around $500 million per year. In Australia, a recent epizootic of pilchards reduced fisheries production by around AU$12 million over three years.\textsuperscript{206}

\textsuperscript{200} Id. art. 57.
\textsuperscript{202} Id. art. XXIV.
\textsuperscript{203} Dazsak, supra note 24, at 447.
\textsuperscript{204} Id.
\textsuperscript{205} Id.
\textsuperscript{206} Id.
The economic impacts of zoonotic emerging infectious diseases may be difficult to predict and may have complex consequences.

For example, the recent proposal to ban blood donation in the United States by persons who have spent longer than six months cumulatively in the United Kingdom during 1980-96 and are considered as potential carriers of the bovine spongiform encephalopathy agent, will reduce the U.S. blood supply by 2.2%. The cost of introduced disease to human, livestock, and crop plant health is over $41 billion per year in the United States. Although the value of biodiversity and significance of disease threats can be calculated or at least approximated, the cost of global biodiversity loss due to disease is yet to be assessed.\textsuperscript{207}

Providing for regional public health standards that correlate with those promulgated by the WHO is entirely aligned with the interests of regional trade organizations and represents no departure from their purpose but rather an expansive view of enlightened self-interest.

The conflict between cooperative necessity and sovereign interests has created an accountability and legitimacy deficit in the growing exercise of transnational regulatory power. Two different types of responses are possible: first, the attempted extension of domestic administrative law into intergovernmental regulatory decisions that affect a nation; and second, the development of new mechanisms of administrative law at the global level to address decisions and rules made within the intergovernmental regimes.\textsuperscript{208}

The incorporation of regional trade organizations represents an equilibrium point in the tension. Regional organizations allow their members far greater control over policies or practices adopted than multilateral organizations. However, they still allow a scale of coordination, particularly when abetted with the technical knowledge and resources of global institutions such as the WHO.

\textsuperscript{207} Id.

\textsuperscript{208} See Kingsbury, supra note 62, at 20-22 (discussing potential mechanisms for global administration). See also Lawrence O. Gostin & Benjamin E. Berkman, \textit{Pandemic Influenza: Ethics, Law and the Public's Health}, 59 ADMIN. L. REV. 121, 128-29 (2007) (discussing the need for intergovernmental coordination in efforts to control flu outbreaks); Fidler, supra note 119, at 248-50 (discussing the effects of vertical and horizontal allocations of power on international health responses).
appropriate for confronting the zoonoses that have been spilling over and around political boundaries since the first map marked one territory distinct from the next.