

**AN INTERNATIONAL INSTITUTIONALIST APPROACH
TO THE GLOBALIZATION OF EMERGING
INFECTIOUS DISEASES**

Master of Arts in Law and Diplomacy Thesis

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MALD THESIS

INTRODUCTION: GLOBALIZATION

Globalization is often discussed in the context of economics, through telecommunications, international trade, manufacturing strategies, and global capital flow. Whether or not a state is democratically elected, the effects of globalization are more often than not seen yielding state sovereignty to industrialists, investment bankers, media moguls and other transnational actors. Over the past forty years these processes of globalization have caused a dramatic increase in the emergence and reemergence of more deadly forms of infectious disease. Professor David Fidler asserts that because of the eroding boundaries between and within states, “the effects of globalization have undermined that ability of sovereign states to protect their citizens from emerging infectious diseases¹ in the conventional ways.”² The unprecedented speed of the spread of infectious disease has eroded the distinction between national and international public health.³ While politicians, scholars and business leaders recognize that the forces of globalization are among the most potent at work within late twentieth century international relations, they have yet to realize the extent to which the evolving boundaries of state sovereignty in the global community will affect the spread and combat of emerging infectious disease (EID).⁴ Infectious diseases more readily cross borders as a result of the proliferation of interstate travel and trade, this increases contact among humans with dissimilar immune capacities and facilitates the transmission of

¹ Emerging infectious diseases are those whose incidence in humans has increased during the last two decades or which threatens to increase in the near future (eg SARs or HIV).

² David P. Fidler, *The Globalization of Public Health: Emerging Infectious Diseases and International Relations*, 5 *Ind. J. Global Legal Stud.* (1997);page 1

³ *Ibid* 2

⁴ *Ibid* 1

disease by increasing the availability of vulnerable hosts. This has raised concerns that have threatened the international state system for centuries. In the 14th Century, quarantine procedures were first introduced to help curb the impact of infectious agents carried aboard commercial ships. While commercial shipping remains a channel for disease transmission, air travel has raised new and more complex dangers with respect to transmission. Poor air circulation aboard international flights can infect an entire flight with respiratory viruses such as SARS, and air travel facilitates the spread of highly contagious hemorrhagic viruses such as the Ebola virus of central Africa, as well as Mad Cow disease and other prion-like illnesses that could be transmitted on the shoes of contaminated individuals.⁵

The structure of the state system with its focus on sovereignty further complicates the challenges posed by the spread of infectious disease. Traditionally, state sovereignty has protected the way individual states regulate their physicians and pharmaceuticals, thus keeping international regulation at bay. With few enforceable incentives to cooperate and regulate antibiotics, private actors mismanage and overuse antibiotics. More often than not antibiotics are over prescribed, sold over the counter, or sold on the black market. Overuse of antibiotics dramatically increases the extent to which microbial agents develop resistance in the developing world, this overuse has contributed to increased resistance in such cases as malaria, tuberculosis, and more recently, syphilis.⁶

Beyond the added challenge of drug resistance there are the socioeconomic concerns that follow when new microbes proliferate in developing countries. Although early warning mechanisms might protect other states in the immediate future, they have

⁵ The Coming Plague, Laurie Garret p580

⁶ David P. Fidler, *The Globalization of Public Health: Emerging Infectious Diseases and International Relations*, 5 *Ind. J. Global Legal Stud.* (1997); page 9

the potential to destroy the already unsteady economies of the developing states by engendering fear among tourists.⁷ This not only makes it more difficult to combat the disease, but also provides a disincentive for states to warn people of emerging illness.

The current international health regulation policies of the World Health Organization have met limited success. “The WHO, does not have the necessary enforcement power to effectively combat the newly emerging illnesses that pose the greatest threat to the world community. International health institutions have yet to neither develop the necessary resources nor take advantage of the international institutional mechanisms available to meet their public health goals. I will argue that through the development of global public policy (GPP) networks in the context of the international institutionalist approach, laid out by Robert Keohane, one will not only strike the necessary balance between the protection of state sovereignty and the protection of the health of individual citizens, but also find the most effective and efficient approach.

In the following section, I will discuss the relevant international theoretical approaches to enforcement of international rules and regulations, in order to describe the framework and policy guidelines that have lead to my conclusions about the effectiveness of GPP networks as they apply to EID. In section II, I will discuss to origins and nature of the threat posed by EID along with the current economic and social implications. In section III, I will discuss three internationally significant EIDs, how they are spread, describe the globally significant consequences of such threats and how GPP networks can not only help to limit disease proliferation but pool together valuable resources that can

⁷ For one account of the dramatic and widespread effect of SARS on the global economy, see Keith Bradsher, “The SARS epidemic: the economic impact,” *The New York Times*, April 21, 2003, p. 1.

facilitate the finding of a cure. Finally in section IV, I will summarize the GPP approach, and describe its future potential.

SECTION I:

IR THEORY

a. Realist IR theory and EID:

International relations theory provides different approaches to the threat posed by emerging infectious disease. The two main theoretical approaches include realist and liberal IR theory. While liberal IR theory focuses on the importance of interstate cooperation realist IR theory focuses on the power structure. While the focus of this paper involves a liberal IR theoretical approach realist IR theory provides a number of relevant insights critical to understanding the nature of the problems posed by EID.

Realist IR theory holds that states are the primary actors in international relations and that the anarchical nature of the international system ensures that states will prioritize the pursuit of power above all else. As Fidler has stated, “the rational pursuit of power by states in an anarchical system leads inevitably to conflict and war between states, which places a premium on the possession of military power.”⁸ From the realist perspective, then, international law and international organizations represent mechanisms of temporary accommodation in the struggle for power, but do not fundamentally alter the dynamics of international relations.⁹

For realists, the control of emerging infectious disease is critical since control affects both economic and military power. Infectious diseases can ultimately destroy the

⁸ David P. Fidler, *The Globalization of Public Health: Emerging Infectious Diseases and International Relations*, 5 *Ind. J. Global Legal Stud.* (1997);

⁹ David P. Fidler, *The Globalization of Public Health: Emerging Infectious Diseases and International Relations*, 5 *Ind. J. Global Legal Stud.* (1997);

state from its core by spreading through the state's workforce undermining its economic productivity and power. This further threatens the capability of a nation's military and thus its structural integrity as a whole.¹⁰ Thus for realists, EIDs pose a major threat but realists doubt the effectiveness of international cooperation in combating the spread of illness.

Internationalization in the EID arena runs headlong into the realist skepticism about international law and international organizations. Realists argue that internationalization involves only a temporal convergence of national interests which are effective only as long as the national interests remain congruent and advantageous to the parties involved or at least perceived as such.¹¹

b. Liberal IR theory and EID:

Liberal IR theory, unlike realist IR theory, is interested in the type of state government and economy because they are fundamental to individual liberty. According to liberal IR theory international relations is not about obtaining power but about protecting individual liberty locally while promoting individual liberty internationally.¹² Liberal theorists argue that by supporting the economic interdependence of states through free trade, promoting the utility of international law and international organization, and seeking to foster the development of democracy one can ameliorate the tensions of state interaction in the international system.¹³

For liberal IR theory individual liberty is a major concern because both the actual threat of illness and the fear of illness on populations indirectly threatens individual

¹⁰ David P. Fidler, *The Globalization of Public Health: Emerging Infectious Diseases and International Relations*, 5 *Ind. J. Global Legal Stud.* (1997);

¹¹ David P. Fidler, *The Globalization of Public Health: Emerging Infectious Diseases and International Relations*, 5 *Ind. J. Global Legal Stud.* (1997);

¹² David P. Fidler, *The Globalization of Public Health: Emerging Infectious Diseases and International Relations*, 5 *Ind. J. Global Legal Stud.* (1997);

¹³ David P. Fidler, *The Globalization of Public Health: Emerging Infectious Diseases and International Relations*, 5 *Ind. J. Global Legal Stud.* (1997);

liberty by restricting travel, leading to loss of work, and loss of access to necessary resources. By encouraging globalization, governments expose their citizens to EIDs through increased travel and trade, while at the same time they make themselves more vulnerable to disease by yielding what little control they have left to the market and further restricting individual liberty.¹⁴ Thomas Friedman has remarked on the increasing power of the market:

The basic truth about globalization is: that no one is in charge. The global marketplace today is an electronic herd of anonymous stock, bond, currency, and multinational investors, connected by screens and networks. It cuts no one any slack nor does it recognize anyone's unique circumstances. The herd knows only its own rules. Democracies vote about a government's policies once every two or four years. But the electronic herd votes every minute of every hour of every day.¹⁵

Thus one of the basic problems for democratic governments is how to provide the necessary freedom for economic growth without yielding so much control to the market that government cannot adhere to its responsibility to protect its citizens.

Globalization weakens the state's power to respond to social, economic and environmental problems. It also reduces the policy flexibility of the government to devote more resources to public health by complicating fiscal and budgetary conditions.

“Governments are often handicapped by the globalization of markets and prevented from effectively addressing the social, economic and environmental problems that benefit EIDs and from committing adequate resources to public health systems”¹⁶

The liberal response to the globalization challenge of EID involves more effective development of interstate cooperation even though such cooperation by itself does not

¹⁴ Thomas Friedman, *The Lexus and the Olive Tree: Understanding Globalization*, New York, 1999; p93-94

¹⁵ *Ibid* 93-94

¹⁶ David P. Fidler, *The Globalization of Public Health: Emerging Infectious Diseases and International Relations*, 5 *Ind. J. Global Legal Stud.* (1997);

necessarily create successful internationalization of infectious disease control. Contrary to the liberal approach realists argue that interstate cooperation would be effective in a world of only like-minded liberal states. Therefore, since there is no homogeneity among liberal states and if liberal theorists accept the proposition that there also exist nonliberal states how then would they expect to effectively develop the cooperation they need? Not only would liberal theorists have to overcome heterogeneity among liberal states but they would also have to overcome the heterogeneity of nonliberal states for effective cooperation.¹⁷ Anne-Marie Slaughter has argued that liberal states are the ones most likely to create and abide by relatively liberal international institutions. According to this logic, liberal institutions will change the behavior of liberal state but not illiberal ones, leading to divergence of state behavior.

The way EIDs limit the extent to which states interact will force states to cooperate in ways considered impossible from the realist interpretation of international relations. The realist argument that states exist in an anarchical world where states seek only to maximize gains and cooperation is not feasible, is flawed. Cooperation is feasible from the liberal institutionalist perspective because institutions can change a state's calculations about how to maximize its gains. Keohane suggests that institutional rules can do this in four ways.

First, they increase the number of transactions between particular states over time. As mentioned above iterations transform collaborative problems into coordination problems. This raises the opportunity cost of cheating by creating the prospect of future gains through cooperation. Second, rules can tie together interactions between states in different issue areas. This creates a greater interdependence between states, which will be more reluctant to cheat in one issue area for fear that the victim will retaliate in another issue area. Third, a structure of rules can increase the

¹⁷ David P. Fidler, *The Globalization of Public Health: Emerging Infectious Diseases and International Relations*, 5 *Ind. J. Global Legal Stud.* (1997);

amount of information available to participants in the agreement allowing for close monitoring and making it more likely that the cheater would get caught. Fourth, rules reduce the transaction costs, so that both sides can benefit from increased efficiency.¹⁸

“Institutionalists argue that the threat of EID offer states an opportunity to strengthen common interests and values through international cooperation on public health policies.”¹⁹ Contrary to the value realists attribute to state power, institutionalists emphasize the potential for interstate cooperation.²⁰

The term “institution” has come to take on a variety of meanings in different contexts and disciplines. “Institutions are sets of rules that stipulate the ways in which states should cooperate and compete with each other.”²¹ In general, an “institution” can be understood as a relatively stable collection of rules and practices, which define an appropriate behavior for specific groups of actors in specific situations. These rules and practices are rooted in structures of meaning and schemes of interpretation that help to legitimize and explain particular identities and the rules and practices associated with them.²² “Rules and practices are also rooted within the resources and the principles of their allocation that make it possible for individuals to enact roles in an appropriate way for a collectivity to socialize individuals and sanction those who wander from proper behavior.”²³

¹⁸ Keohane, Hass, and Levy, *Institutions for the Earth*, MIT Press, April 1993 pp 11.

¹⁹ David Fidler, *Return of the Fourth Horseman: Emerging Infectious Diseases and International Law*, 81 *Minn. L. Rev.* (1997) 843-49 (analyzing the failure of WHO member states to comply with the International Health Regulations and how the IHR have failed to achieve their objectives) p 13.

²⁰ Peter Katzenstein, Robert Keohane, Stephen Krasner, “International Organization in the Study of World Politics” in Peter Katzenstein, Robert Keohane, Stephen Krasner, *Exploration and Contestation in the Study of World Politics*, MIT Press, Cambridge MA 1999. p7

²¹ Douglass C. North and Robert P. Thomas, “An Economic Theory of the Growth of the Western World,” *The Economic History Review*, 2nd series, Vol. 23, No. 1 (April 1970), p.5.

²² James March and Johan Olsen, “The Institutional Dynamic of the International Political Order” in Peter Katzenstein, Robert Keohane, Stephen Krasner, *Exploration and Contestation in the Study of World Politics*, MIT Press, Cambridge MA 1999. p308

²³ *Ibid* 308

Since the challenge of combating EID involves so many issues areas requiring significant coordination and collaboration a broad institutional approach is fundamental to meeting the complexity of the challenges particularly with respect to interstate health policies. Robert Keohane suggests that high transaction costs and asymmetrical uncertainty could lead, under conditions such as those modeled by Prisoner's Dilemma (PD), to suboptimal outcomes when trying to coordinate interstate action.²⁴ As such, rational action by individual states could impede cooperation that is mutually beneficial. Keohane suggests that institutions would be effective to the degree that they allowed states to avoid short-term temptations to renege, thus realizing available mutual long term benefits.²⁵

Collaboration problems, like PD, are characterized by individual incentives to defect and the existence of equilibria that are not Pareto optimal.²⁶ What incentive would there be for state A to report a cholera outbreak to state B when if it relies so heavily on tourist revenue from state B? Getting states to collaborate their efforts in combating EID, when states have such diverse underlying interests, is one of the real challenges to the institutionalist approach. The solution to this problem is to find ways to lock states into their collaborative interests.

In contrast, coordination problems are characterized by the existence of multiple Pareto-optimal equilibria. The problem in this case is how to choose among the multiple equilibria as opposed to avoiding the temptations to defect. These choices may be

²⁴Ibid 22

²⁵ Ibid 104

²⁶Ibid 104

relatively simple and resolved by identification of a focal point, if the equilibria are not sharply differentiated from one another in terms of the distribution of benefits.²⁷

Krasner argues that when states attempt to cooperate with one another, there are multiple challenges and reaching the Pareto-optimal solution while achieving efficiency gains is often not the most difficult one. “There are often many equilibria along the Pareto frontier, and specifying one of these equilibria as the locus of cooperation through bargaining and the exercise of state power, dominates empirical examples of international cooperation.”²⁸ This is consistent with the folk theorems of noncooperative game theory that show that the iterative play of a PD-like game gives rise to many—in fact, infinite equilibria. Thus, repetition transforms collaboration problems into coordination problems. In most cases, states have to simultaneously worry about reaching efficient outcomes and resolving distributional conflict.²⁹

One mechanism by which institutions can help states to achieve the Pareto-optimal solutions towards combating the challenges of EID is through the dissemination of information between states that enable them to more effectively identify and achieve their objectives. Institutions could alter state strategies by changing the costs of alternatives; institutionalization could thus promote cooperation.³⁰ In this regard an institution could be most influential at promoting cooperation when it is a relatively independent, “expert” source of information and when such information is scarce and valuable to states. The application of institutions as information providers is particularly useful with respect to international issue areas characterized by information asymmetries

²⁷Ibid 104

²⁸Ibid 105

²⁹ Ibid 105

³⁰ Ibid 22

or in the development of expert knowledge. “Institutions may further prove useful in allowing for credible cross-issue deals between states where those with intense interest in particular issues dominate policymaking on that dimension and when institutional mechanisms prevent states from renegeing on cross-issue deals, even if performance on different dimensions is not simultaneous.”³¹

Keohane argues that institutions matter because they can monitor compliance, provide information, facilitate issue linkages, increase iterations, offer salient solutions, and define cheating. “He does not deny the importance of power, but within the constraints imposed by the absence of hierarchical global governance, states could reap gains from cooperation by designing appropriate institutions.”³²

In response to realist challenges regarding the importance of state power and the ever-present incentive to cheat on collaborative agreements in order to maximize individual gains, Keohane argues that institutions offer a solution to overcoming the problems created by cheating, thus facilitating the interstate cooperation necessary for effective coordination of health policies.³³ To circumvent the problem of cheating you must convince the other that there is a collective interest in making what appear to be short-term sacrifices for the sake of long-term benefits.³⁴ If both parties agree to report on emergent disease outbreaks both might for example lose tourist revenue for one season but they would together promote a sense of trust between the states and effectively limit the spread of illnesses across each others borders over the long run and effectively provide mutual long-term gains. The problem is that in accepting the short-term sacrifices

³¹ Ibid 102

³² Ibid 22

³³ John Mearsheimer, “The False Promise of International Institutions,” *International Security*, Vol 19, Issue 3 (Winter, 1994-1995), pp. 14

³⁴ Ibid 17

you must trust the other not to renege on the agreement for the short-term benefit at your expense.

Robert Axelrod argues that the PD could be resolved if the payoff matrix is not overly skewed in favor of the sucker's payoff, if games are frequently iterated, if the costs of retaliating and monitoring others' behavior were sufficiently low, and if actors did not discount the future at too high a rate.³⁵ "Institutions could affect the values of these parameters, by nesting particular games in durable rules, providing information about other states' activities, and furnishing standards for evaluation whether cheating was taking place."³⁶

Despite the many advantages of international institutions for resolving coordination and cooperation dilemmas, John Mearsheimer and Joseph Grieco have identified two particularly important problems with this approach. First, they argue that international institutionalism has limited application to the context of national security because in such a context the costs of betrayal could threaten the integrity of the state, lead to war or some other unacceptable risk. Second, they assert that the institutionalist argument fails to consider the obstacle of relative gains concerns.³⁷ Even though states often wish to maximize their gains in an agreement, they may also be concerned with where they stand relative to other states. In other words, State A may fear that since the benefits of cooperation to any state could be translated into military advantages, any disproportionate advantage to State B, a potential adversary, would effectively amount to a loss for State A.

³⁵ Peter Katzenstein, Robert Keohane, Stephen Krasner, "International Organization in the Study of World Politics" in Peter Katzenstein, Robert Keohane, Stephen Krasner, *Exploration and Contestation in the Study of World Politics*, MIT Press, Cambridge MA 1999. 22

³⁶Ibid 22-23

³⁷Ibid 98

To the contrary, Snidal suggests that increasing the number of states in the system can mitigate the concern of relative gains. “More actors enhance the possibility of protecting oneself through forming coalitions; and, generally, the less well united one’s potential enemies, the safer one is.”³⁸ Further, when actors in a system realize the longer shadow of the future and the inevitability of engaging the other actors, reputation is more important and there is more binding power to agreements when considering relative gains.³⁹ As such, the extent to which states are concerned about relative gains would be extremely limited⁴⁰

Other more recent models of domestic institutions draw on noncooperative game theory. The basic assumptions of noncooperative game theory are that actors are often strategic, opportunistic, and rational, and that outside actors will not step in to enforce agreements. Therefore, agreements that will often make a difference must be self-enforcing.⁴¹ “In many respects the problems encountered by individual legislators mirror those faced by individual states in the international system.”⁴² Individual actors encounter situations where they must cooperate arrangements. Often there is no external authority to enforce cooperative agreements the agreements must be self-enforcing. Self-enforcement takes the form of exclusion from the benefits of cooperation, which is a coercive measure.⁴³

³⁸ Duncan Snidal, “Relative Gains and the Pattern of International Cooperation,” *The American Political Science Review*, Vol. 85, No. 3. (Sep., 1991), pp. 716.

³⁹ James D. Fearon, “Bargaining, Enforcement, and International Cooperation,” *International Organization*, vol. 52, no. 2 (1998), p 270.

⁴⁰ Lisa Martin and Beth Simmons, “Theories and Empirical Studies of International Institutions,” in Peter Katzenstein, Robert Keohane, Stephen Kraser, *Exploration and Contestation in the Study of World Politics*, MIT Press, Cambridge MA 1999. p98

⁴¹ *Ibid* 99

⁴² *Ibid* 102

⁴³ *Ibid* 102

For mitigating the coordination problems posed by realists with respect to EID, effective institutions not only resolve collaboration problems through monitoring and other informational functions but also provide mechanisms for resolving distributional conflict. Institutions help to resolve distributional conflict in a number of ways including the exercise of state power, market dominance, and alternative methods of bargaining such as making trades across issues. In this perspective, institutions can make a difference if they lock in a particular equilibrium thus providing stability.⁴⁴ “Rather than reflecting power in an epiphenomenal fashion, as realist would have it, institutions in this formulation prevent potential challengers from undermining existing patterns of cooperation, explaining why powerful states may choose to institutionalize these patterns rather than relying solely on ad hoc cooperation.”⁴⁵

Institutions may also serve a less controversial signaling function, therefore minimizing bargaining costs. This would be the case if institutions construct focal points or if they primarily keep account of the pattern of benefits over time. In either case, they effectively increase path dependence. Once a particular equilibrium is chosen, institutions lock it in.⁴⁶ In one such mechanism, institutions may establish focal points and then identify one possible equilibrium as the default or “obvious” one, so as to reduce state-to-state bargaining about the choice of a particular pattern of outcomes. “The role of the European Court of Justice is captured in part by this type of constructed focal-point analysis. When states fear that the benefits of cooperation are disproportionately flowing

⁴⁴ Ibid 106

⁴⁵ Ibid 106

⁴⁶ Lisa Martin and Beth Simmons, “Theories and Empirical Studies of International Institutions,” in Peter Katzenstein, Robert Keohane, Stephen Kraser, *Exploration and Contestation in the Study of World Politics*, MIT Press, Cambridge MA 1999 106

to others, institutions can provide reliable information about state behavior and the realized benefits of cooperation to allay such fears.⁴⁷

Another way institutions can limit distributional conflict is to keep track of the deals that were made along with the compromises and gains of the parties involved, particularly in complex multi-issue institutions. “The networks established within the supranational institutions of the European Union, for example, provide the necessary scope for issue-linkage and institutional memory to perform the function of assuring that all members, over time, achieve a reasonably fair share of the benefits of cooperation.”⁴⁸ Without first resolving the problems of equilibrium selection, even the most recognized third-party monitoring will not permit stable international cooperation.⁴⁹

Once states have overcome the challenges of coordination and collaboration states must consider the incentives for adhering to the agreement. “If unpleasant and unexpected outcomes frequently occur, states as sovereign actors retain the right to pull out of institutions. Why might they choose to remain in?”⁵⁰ A simple answer is that the benefits of staying with the institution are greater than the costs. This answer becomes more complicated when one considers the conditions under which institutional membership is likely to provide the greatest benefits. Some of these have been spelled out in functionalist theory. Keohane asserts that the demand for international institutions is greatest under conditions of interdependence, when states face a dense network of relations with one another and where information is somewhat scarce.⁵¹

⁴⁷ Ibid 105

⁴⁸ Ibid 105

⁴⁹ Ibid 105

⁵⁰ Ibid 111

⁵¹ Ibid 111

Further, one could argue that states are less willing to withdraw from an institution in the face of unanticipated consequences when they are dealing with issues that exhibit increasing returns to scale, which, in turn, create conditions of path dependence.⁵² Consider the establishment of the regional trading agreements in the 1990s. These agreements provided members with economic benefits, while those outside the agreements found themselves losing investment and trading opportunities. Increasing returns to scale create a high demand for institutional membership. “Under these conditions, it seems likely that these states will be willing to put up with a high level of unexpected outcomes before they would seriously consider withdrawing from an institution.”⁵³

Perhaps one of the most important benefits of international institutions is their ability to effectively substitute for domestic practices and serve as a valuable tool for domestic political institutions. If domestic institutions are sources of persistent policy failures, if they inhibit the realization of certain societal preferences, or if they interfere with the pursuit of mutual benefits with other states, turning functions over to the international level can enhance national welfare.⁵⁴ An example of this type of logic analogous to the necessary approach to EID involves the time-inconsistent preferences of political actors with respect to monetary policies.

Since high levels of inflation often bring immediate benefits to politicians up for reelection, allowing monetary policy to be dictated by the politicians themselves may

⁵²Ibid 111

⁵³Lisa Martin and Beth Simmons, “Theories and Empirical Studies of International Institutions,” in Peter Katzenstein, Robert Keohane, Stephen Kraser, *Exploration and Contestation in the Study of World Politics*, MIT Press, Cambridge MA 1999 111

⁵⁴ Ibid 113

create a welfare-decreasing inflationary bias to the economy.⁵⁵ Thus establishing additional constraints on policy, by joining a system of fixed exchange rates or a common currency area, can help to overcome this time-inconsistency problem. Overall, if pursuit of gains over time involves short-term sacrifices, international institutions are an attractive option for domestic policy makers.⁵⁶

A classic example of this approach involves the arguments about why high-inflation states such as Italy might choose to enter the European Monetary Union. High inflation is a public bad, leading to lower overall welfare than low inflation. However, as mentioned above the short-term benefits to politicians from allowing spurts of unanticipated inflation make it difficult to achieve low rate of inflation unless institutions that set monetary policy are independent of political influence.⁵⁷ Thus, the transferring of authority to a supranational institution that is relatively free from political influence, and that itself has a preference for low inflation, can provide overall welfare benefits for the country. It is this logic that lead Italy to take the unusual step of transferring a core aspect of sovereignty control over the currency—to a European Central Bank.⁵⁸

Beyond monetary union there are a number of other applications to the convergent effects of the transfer of domestic authority to an international institution. Environmental institutions should lead to convergence of environmental indicators, such as carbon dioxide emissions. Human-rights institutions acting as substitutes should lead members to adopt increasingly similar human-rights practices. International health institutions could lead to convergence of international health indicators, such as life expectancy, and

⁵⁵ Ibid 108

⁵⁶ Ibid 108

⁵⁷ Ibid 113

⁵⁸ Ibid 113

morbidity and mortality. The transfer of authority to an international health institution, which is more insulated from domestic political influences, could dramatically help establish more effective populations based medical care than domestic governmental institutions that are often subject to political influences. “Even if full convergence does not occur, the major effect of such an institution that is acting as a substitute will be to bring state practices more closely in line with one another.”⁵⁹

c. International Political Legalization:

International political legalization through both hard and soft law provides a more systemic approach to establishing more effective international cooperation and coordination in the face of EID. Effective enforcement of political legalization is essential when combating EID in order to ensure cooperation. Without broad and compliant interstate cooperation, defeating EID is futile its failure was best exemplified by the proliferation of influenza in the early 20th century while cooperative success was best demonstrated with the small pox eradication efforts of the mid-20th century.

The necessary legalization involves a more specific form of discourse that requires justification and persuasion in terms of applicable rules and pertinent facts, emphasizing factors such as text, policy and practice.⁶⁰ “International legalization enhances credibility by constraining self-serving auto-interpretation. Precision of individual commitments, coherence between individual commitments and broader legal principles, and accepted modes of legal discourse and argument all help limit such

⁵⁹ Ibid 113

⁶⁰ Judith Goldstein, Miles Kahler, Robert Keohane, and Anne-Marie Slaughter, Legalization and World Politics, MIT Press, Cambridge MA 2001. p45

opportunistic behavior.”⁶¹ The yielding of interpretive authority to courts or other legal institutions further restricts auto-interpretation.

One of the principal ways in which legalization enhances institutional credibility is by increasing the costs of renegeing. Regime scholars argue that agreements are strengthened when they are linked to a broader regime: violating an agreement that is part of a regime entails disproportionate costs, because the reputational costs of renegeing apply throughout the regime.⁶² Legalization enhances the capabilities of enforcement mechanisms in a number of ways.

“First, hard legal commitments are interpreted and applied by arbitral or judicial institutions, such as those associated with the EU and the European human rights regime or the WTO. Because legal review allows allegations and defenses to be tested under accepted standards and procedures, it increases reputational costs if a violation is found. Second, the law of state responsibility fixes consequences for legal violations. In particular, like some legalized regimes, it authorizes proportional “countermeasures” where other remedies are unavailable. This legitimizes retaliation and clarifies its intent, reducing costs and risks of self-help. Third, international law can draw on some forms of centralized enforcement, through institutions like the UNSC and the international finance institutions.”⁶³

According to Thomas Franck, legitimacy creates an independent, “compliance pull.” Individuals, government agencies, and other institutional organizations incorporate rules so that the advantages and disadvantages of compliance do not need to be recalculated each time they are invoked.⁶⁴

“The legitimacy of rules varies according to certain substantive qualities—determinacy and coherence, among other properties—and the procedures by which they

⁶¹ Ibid 43

⁶² Ibid 43

⁶³ Ibid 43

⁶⁴ Ibid 44

were approved.”⁶⁵ Legal rules are often more enforceable on these dimensions: fairly precise, consistent, and are adopted through formalized and often complex procedures.⁶⁶

i) Hard law:

“Hard law refers to legally binding obligations that are precise and that delegate authority for interpreting and implementing the law.”⁶⁷ In the context of EID hard law provides an assurance mechanism for states that are concerned about other state’s lack of adherence to the agreement. In this case the benefits of cooperation are great but the potential for opportunism and its costs are high for developing states. These conditions are often found in contracts or covenants such as trade agreements, environmental treaties, or labor commitments. In agreements concerning coordination between states opportunism is less of a concern since these forms of agreements are more often self-enforcing. As such international coordination standards are often voluntary and develop through institutions in which private actors play a more dominant role.⁶⁸

States can utilize hard legalization to increase the integrity of commitments when noncompliance is more difficult to detect. Such legal arrangements thus require effective monitoring provisions. As an aspect of delegation these monitoring provisions can be either centralized or decentralized. To compensate for the reduced likelihood of detection the legal commitments must increase the costs of violations.⁶⁹

States should find hard law particularly valuable when forming coalitions of committed states, such as EU and NATO.

⁶⁵Ibid 44

⁶⁶Ibid 44

⁶⁷Ibid 37

⁶⁸Ibid 45

⁶⁹Ibid 45

In this case international political legalization functions as an ex ante sorting device: because hard legal commitments impose greater costs on violators a willingness to make them identifies one as having a low propensity to defect. Conversely, hard legalization is less significant in looser groupings like the Asia Pacific Economic Cooperation forum.⁷⁰

Hard law is useful within states as elected officials can use it to force political groups and domestic organizations to commit when the elected officials choose to make international agreements that differ significantly from those of competing power centers.⁷¹

Finally, legal commitments can be more credible when they are made by states with certain characteristics. “Externally, participation in other international legal regimes can enhance credibility: it exposes states to greater reputational costs and makes them more vulnerable to countermeasures. Internally, strong domestic legal institutions and traditions should enhance credibility.”⁷²

Hard law effectively limits the options available for dispute settlement and negotiation. Even when delegation is relatively low, legalization implies that most disputes and questions of interpretations should be addressed through established procedures, that are operated principally by legal professionals using professional modes of discourse.⁷³

Even when directly negotiated solutions are permitted despite the presence of legal institutions, the fact that the legal institutions exist implies that states will continue to bargain their position in spite of the anticipated legal decisions. When legal rules are in

⁷⁰ Judith Goldstein, Miles Kahler, Robert Keohane, and Anne-Marie Slaughter, Legalization and World Politics, MIT Press, Cambridge MA 2001. p46

⁷¹ Judith Goldstein, Miles Kahler, Robert Keohane, and Anne-Marie Slaughter, Legalization and World Politics, MIT Press, Cambridge MA 2001. p46

⁷²Ibid 46

⁷³Ibid 46

effect, unauthorized coercive behavior common to more powerful states is seen as illegitimate. Legalization in the WTO was explicitly tied to a requirement that member states resolve their trade disputes through the new dispute settlement procedures, not through unilateral determinations. This provision aimed directly at the coercive tactics of the US.⁷⁴

Despite the many advantages of hard law there remain a number of enforcement limitations. In practice power asymmetries are one of the principle reasons for the enforcement limitations, the problems being more pronounced the greater the power differential. However, in general, legalization is an effective mechanism for organizing ongoing interactions. At a minimum hard law is effective at reducing the costs of enforcement compared to the alternatives of frequent renegotiation, persuasion or coercion.⁷⁵

One particular disadvantage of hard law involves the degree of legal precision. When coordinating agreements with hard law, states are often forced to plan ahead for highly unlikely occurrences in order to establish a certain degree of certainty. However, in the end this may prove extremely counterproductive and inefficient. Ultimately it may lead to a degree of undesirable rigidity that may prevent the agreement altogether.⁷⁶ “There is no way to write an agreement that anticipates every contingency, inviting opportunistic behavior and discourages both relation-specific investments and value enhancing agreements.”⁷⁷

⁷⁴Ibid 47

⁷⁵Ibid 47

⁷⁶ Ibid 49

⁷⁷ Ibid 49

An effective way of dealing with information asymmetries and incomplete contracting problems is to utilize third parties to interpret, implement, and apply legal rules through delegation.⁷⁸ International institutions are designed for this problem. They utilize administrative and judicial institutions to interpret and extend broad legal principles. For example, The Treaty of Rome grants the ECJ the authority to elaborate and apply general principles of competition law, such as “concerted practices” and distortion of competition,” through individual cases and general regulations.⁷⁹

Depending upon the state of international politics the costs of hard legalization vary. Costs are magnified when states become defensive of their sovereign autonomy which they are reluctant to limit through legalized commitments. State security concerns intensify the greater the degree of uncertainty. “The scope of bargaining is often not clearly delimited, since the issues themselves are ill defined. Finally, the thinness of the international institutional context does little to lower the costs of agreement.”⁸⁰

One approach to remedy the concerns of states that are protective of their autonomy with real security concerns is to take advantage of softer forms of legalization. Such forms of legalization involve nonjudicial procedures that do not necessarily require state consent. As opposed to hard legalization gives greater independence to judicial bodies but requires them to pursue agreed upon principles and act only on specific disputes and requests. This along with the background rules and expectations of international law, legitimizes the authority delegated to the independent judicial body.⁸¹ “One can hypothesize that states will grant such authority when the anticipated gains

⁷⁸ Ibid 49

⁷⁹ Judith Goldstein, Miles Kahler, Robert Keohane, and Anne-Marie Slaughter, Legalization and World Politics, MIT Press, Cambridge MA 2001. p49

⁸⁰ Ibid 51

⁸¹ Ibid 50

from cooperation are large and there is reasonable consensus on general principles, but specific applications are difficult to anticipate.”⁸²

ii) Soft law:

One of the principal advantages of soft law is that it involves more flexible agreements allowing for a more effective discourse setting the stage for hard law which is more useful to states once they have established a greater trust and more genuine links. This is particularly useful for broadening the scope of international health agreements which is critical when trying to completely eradicate certain types of illness. The costs of establishing agreements in soft law are significantly less than those of hard law. Soft law can mitigate the security and distributional concerns of states by permitting escape clauses, imprecise commitments, or political forms of delegation that allow them to maintain future control should adverse circumstances arise.⁸³ These institutional mechanisms protect the autonomy of the states and reduce costs along with the risks of agreement while still providing some of the advantages of legalization. Furthermore, soft legalization gives states the opportunity to learn about the consequences of their agreements without prohibitively binding commitments.⁸⁴

Less binding agreements can serve as learning periods during which states can better evaluate their relationships with the states involved and formally decide whether or not more binding hard law agreements are justified as such states can dramatically reduce the costs of subsequent moves towards hard law agreements. These advantages are best illustrated by the international nuclear regime but apply in an analogous manner to state coordination of defense policies against the spread of disease. In the Nuclear Non-

⁸²Ibid 50

⁸³Ibid 50

⁸⁴Ibid 50

Proliferation Treaty, even though there are basic nonproliferative obligations, many more sensitive issues such as the protection of nuclear materials are regulated through recommendations of the IAEA.

The IAEA recommendations deal with the technical matters of inventory and transportation at such detailed levels that they would be prohibitively inefficient in treaty negotiations. Recommendations also address domestic policy concerns, such as the organization of national regulatory agencies along with the supervision of private actors regarded as too sensitive for treaty regulation by states.⁸⁵ “When a high level of consensus forms around an IAEA recommendation, member states may incorporate its provisions into a binding treaty—as occurred with rules on the management of spent nuclear fuel and radioactive waste—but even these treaties must usually be supplemented by recommendations on technical issues.”⁸⁶

Another example that illustrates the effectiveness of soft law on contracting costs involves the establishment of the WTO as the major international trade institution. “In addition to covering a wide range of economic issues, the original charter of the ITO contemplated legally binding commitments with limits on the right of withdrawal and significant institutionalization.”⁸⁷ The potential strength of such an institution posed a significant threat to the more powerful states accustomed to their more influential economic status. The threat this institution posed to such nations complicated the negotiation processes particularly with the United States. As a result the participating states adopted the 1947 GATT, which served as a low-cost, temporary framework for

⁸⁵ Judith Goldstein, Miles Kahler, Robert Keohane, and Anne-Marie Slaughter, Legalization and World Politics, MIT Press, Cambridge MA 2001. p51

⁸⁶Ibid 51

⁸⁷Ibid 52

tariff reductions. In order to persuade states that felt threatened by the legislation the principles upon which GATT was adopted were rooted in soft law. “GATT was adopted provisionally, it included a withdrawal clause, and created only skeletal institutions.”⁸⁸ As states began to appreciate the advantages of hard legislation over time GATT developed into the WTO.

International agreements affect state sovereignty in different ways, thus the state’s concerns vary depending upon the nature of the agreement. States are often more willing to make legal commitments that limit their behavior in particular circumstances. They are threatened when agreements affect their relationship with their citizens as is the case in agreements where states are expected to accept external authority. International human right’s institutions are by their nature designed to circumscribe a state’s ability to regulate its citizens.⁸⁹ It is this concern that has kept the United States from subscribing to the jurisdiction of the ICC so as to protect its soldiers on peacekeeping operations.

There are various mechanisms by which states can limit sovereignty costs with soft law. One such approach that proved particularly useful in getting states to commit to US efforts to control the international laundering of criminal profits. Many states were reluctant to commit to such efforts because of concerns that the greater scrutiny of financial transactions might interfere with legitimate business dealings and with the division of domestic authority between prudential regulators and prosecutors. In order to address these concerns the OECD put together a task force of financial experts and asked them to develop a series of policy guidelines, administer a system of peer review, and

⁸⁸Ibid 52

⁸⁹Ibid 53

even impose mild sanctions.⁹⁰ In doing so the OECD was able to expand the range of available institutional arrangements. These soft law policy guidelines helped to provide a common basis for domestic implementation, guide behavior, and create expectations that violations will bring political costs. Further such guidelines helped to legitimize participation in national decisions by international actors and by concerned domestic bureaucracies and NGOs.⁹¹

States become particularly concerned with sovereignty when considering issues of national security. “Adversaries are extremely sensitive to unanticipated risks of agreement for the standard reasons advanced by realists, including relative gains. Even allies facing common threats are reluctant to surrender autonomy over their security affairs.”⁹² Soft law provides a number of alternatives for dealing with the unanticipated risk.

Up to a certain point, precise legal agreements offer a way of mitigating risk by helping to manage and optimize risk sharing. But when circumstances are so uncertain that the range of all potential outcomes is almost completely unknown states often prefer to leave agreements ambiguous rather than risk the possibility of being committed to an agreement that they ultimately find unfavorable⁹³

Soft law compromises make it harder to determine whether a state is living up to its commitments and therefore creating opportunities to shirk. They also weaken the ability of governments to commit themselves to policies by invoking firm international

⁹⁰Ibid 56

⁹¹ Judith Goldstein, Miles Kahler, Robert Keohane, and Anne-Marie Slaughter, Legalization and World Politics, MIT Press, Cambridge MA 2001. p56

⁹²Ibid 56

⁹³Ibid 58

commitments and therefore make it easier for domestic groups, including other branches of government, to undo the agreement.⁹⁴

In sum, states face tradeoffs in choosing the between hard and soft legalization. Hard legalization, despite the startup costs is particularly useful for managing and enforcing commitments. All agreements entail some negotiating costs whether they involve coming together, learning about the issues, or bargaining. The process is further complicated when one considers the various legal traditions across states. Often approval and ratification involve acquiring complex forms of legislative authorization, which is difficult to achieve.

Soft law cannot yield all of the hard law benefits of commitment but because of its more dynamic nature is a particularly useful mechanism for limiting the startup costs and facilitating the agreement process.⁹⁵ The flexibility of soft may weaken the credibility of the states' commitment. This can make it difficult for states to realize potential opportunities.

Overall, soft law in itself is valuable, not simply as a stepping-stone to hard law. "Soft law also helps to establish a basis for efficient international "contracts," and it creates normative "covenants" and discourse that can reshape international politics. International legalization in all its forms must be considered one of the most significant institutional features of international relations."⁹⁶

For coordinating interstate behavior to combat EID the importance of a more comprehensive and integrative network of state actors is critical. As such states should

⁹⁴Ibid 62

⁹⁵ Judith Goldstein, Miles Kahler, Robert Keohane, and Anne-Marie Slaughter, Legalization and World Politics, MIT Press, Cambridge MA 2001. p50

⁹⁶Ibid 72

seek tentative agreements through soft law mechanisms to identify the relevant issues pertaining to the state's involved and then transition to hard law as all the relevant issues become more entrenched in the interstate politics so as to more effectively assure interstate cooperation. Similar to the approach of the IAEA with respect to nuclear regimes tentative soft law interstate agreements can be made via the recommendations of and international health committee such as the IHA of the WHO. Such recommendations over time often develop into enforceable hard law agreements.

iii. State cooperation and EID:

The institutionalist approach to the challenge of EID encourages states to strengthen international ties identify common values with both government and industry to coordinate efforts to combat disease. Public health is no longer a concern of individual states but has become an issue of international law in a variety of contexts from the human right to access of health care, to freedom of movement, and along with issues concerning the internal governance and structure of national public health systems.⁹⁷ “The decision by member states of the EC to grant authority to the EC in the area of public health through the 1992 Treaty on European Union is perhaps the best expression of this sentiment.”⁹⁸

From the realist perspective EID generate conflict in the international system, compromising efforts towards cooperation. The major set of international legal rules on infectious disease control the International Health Regulations have not been successful. States have tended not to report serious disease outbreaks to other countries or WHO

⁹⁷ David Fidler, Return of the Fourth Horseman: Emerging Infectious Diseases and International Law, 81 Minn. L. Rev. (1997) 843-49 (analyzing the failure of WHO member states to comply with the International Health Regulations and how the IHR have failed to achieve their objectives) p 13.

⁹⁸Ibid 13.

because they fear such reporting will reduce tourism and trade. According to Garret “nearly every country initially denied or covered up the presence of the HIV virus within its borders” and that “at least ten nations known to be in the midst of HIV epidemics refuse to cooperate with WHO, deliberately obfuscating incidence reports or declining to provide and statistics.” Egypt denied that the Nile contains cholera bacteria; Saudi Arabia does not want to warn pilgrims traveling to Mecca about mosquitoes carrying dengue virus, and Serbia canceled an international epidemic alert concerning the deadly Crimean-Congo hemorrhagic fever when it learned WHO planned to send American scientists to investigate. In recent years, several countries in the Caribbean did not notify other countries of dengue epidemics, believing that news of the epidemic would hurt their tourist industries. The outbreaks only came to the attention of other countries when their tourists returned home sick.⁹⁹ Fears of lost trade and tourism appear to be well founded. The cholera outbreak in Peru in 1991 resulted in an estimated loss in trade and travel of \$800 million for that country.¹⁰⁰

1. INCREASE IN TRANSACTIONS INCREASE COOPERATION:

According to Keohane increasing the number of transactions between states enhances cooperation by linking states to each other and developing a greater degree of interdependency. With this increase in state interaction there lies an increasing threat of EID. Microbes have an incredible capacity to survive and adapt to changing environments making it more likely that such organisms can more readily survive transit and conventional quarantine procedures. Further, there is the continued concern of antimicrobial resistance. Just as quickly as pharmaceutical companies develop new drugs

⁹⁹Ibid 13.

¹⁰⁰ Octavio Gomez-Dantes, “Health” in *Managing Global Issues Lessons Learned*, P.J. Simmons & Chantal de Jonge Oudraat, The Brookings Institution Press, Washington DC, (2001) p 415

and get them to where they are needed the microbes themselves are able to develop resistance. “We must accept that mutation and change are facts of nature, and that human health and survival will be challenged, ad infinitum, by new mutant microbes, with unpredictable pathophysiological manifestations.”¹⁰¹ Thus, given the developing interdependency of states there is no alternative but for states to cooperate and to adhere to the agreed upon rules and regulations established by the World Health Organization, it would be irresponsible to simply wait for medical science to develop a cure when medical science at best can only slow the proliferation of EID.

2. RULES TIE TOGETHER INTERACTIONS:

Rules too can generate greater interdependence among states, by linking interactions between states in a variety of different issue areas. Rules keep states in check, states will be less willing to cheat in one issue area out of a fear of retaliation by the victim state. When considering EID, unfortunately, the structure of the international system as it stands today helps the microbes by establishing barriers to effective disease control particularly at the level of commerce. New and emerging infectious diseases link the health of the developed world's people to the health of people in other nations, infectious diseases can and do disseminate rapidly around the globe, and global surveillance for emerging infections is vital to public health.¹⁰²

Capitalist states by their nature often favor commerce, and prefer to limit any form of barriers that may slow commerce or limit trade in such a way as to result in financial losses. These states often fail to realize the long-term value of the health of their

¹⁰¹ Allison Jacobson, Emerging and Re-Emerging Viruses: An Essay. Internet (last accessed) 7-19-04, <http://www.rense.com/health3/emerg.htm>

¹⁰² Allison Jacobson, Emerging and Re-Emerging Viruses: An Essay. Internet (last accessed) 7-19-04, <http://www.rense.com/health3/emerg.htm>

citizens and are more concerned with short-term gains, which more often than not win elections. The establishment and acceptance of rules by international organizations with some form of supranational authority that can insulate governments from the effects of short-term losses can dramatically facilitate cooperation and coordination of interstate public health policies.

A coordinated health policy will help to allay fears among the diverse populations engaging in commerce that the merchandise they purchase from abroad will not infect them with some unknown contagion. Further, the coordinated efforts of interdependent nations can more effectively bring together both the necessary minds and resources to treat developing problems. Cheating within this system is detrimental to the community as a whole.¹⁰³

3. RULES INCREASE THE AMOUNT OF INFORMATION AVAILABLE:

Increasing the amount of available information encourages cooperation. This not only makes it easier for scientists to coordinate their efforts but it also makes it harder for states to cheat, it makes monitoring easier and it helps states realize the potential gains. With more information available physicians, scientists and public health experts around the world can more effectively monitor and treat outbreaks of infectious disease. Further, this may help to deter the extent to which antibiotics are overused by making it easier for health experts to disseminate knowledge of anti-microbial resistance and to inform physicians in the field about which drugs are most effective at which time. The lack of medical regulation of such drugs has largely contributed to the problem of anti-microbial

¹⁰³ Allison Jacobson, Emerging and Re-Emerging Viruses: An Essay. Internet (last accessed) 7-19-04, <http://www.rense.com/health3/emerg.htm>

resistance. Although strict regulations might not be feasible the moral, ethical and scientific persuasion of a recognized international body might prove more effective.

4. RULES REDUCE TRANSACTION COSTS:

Although Keohane describes rules reducing transaction costs more in the context of facilitating and coordinating trade, one might also see how rules in the context of infectious disease control can reduce interstate transaction costs by reducing the burden of disease on populations. States that do not have to worry about the burden of disease on their populations will not only save on operating costs like insurance but will also maintain a more healthy and productive workforce. This will generate investor confidence and stimulate growth. At this point in time states are not equipped to effectively deal with EID, investors might be turned off by the potential rise in transaction costs for the short term. The difficulty here is to demonstrate the long-term benefits to investors and state governments.

iv. Global Public Policy Networks:

1. DEVELOPMENT:

One important way of preventing the spread of EID involves finding more effective and efficient ways of coordinating institutional action. This involves networking the policy objectives of the numerous international institutions along with both state and local governments. “According to the Yearbook of International Organizations, the number of international NGOs increased by more than 60% between 1981 and 1996. Some countries saw even more dramatic expansions. In sub-Saharan Africa, for example it was not uncommon for the number of registered NGOs in a country to increase by as

much as 400% within a decade.”¹⁰⁴ The number of countries classified as economic democracies by Freedom House increased from 69 in 1987 to 117 in 1998.¹⁰⁵ It is believed by some that much of the economic liberalization of the 80s and 90s carried with it significant political liberalization. “This political liberalization has led in many countries to a proliferation of organizations of civil society and has, at the same time, enabled these organizations to form transnational alliances.”¹⁰⁶

Effective distribution of health funding and support through international NGOs is critical when trying to limit the spread of illness particularly in an acute setting. Support through state governments is often less effective because of the potential that the funding is lost within state bureaucracies. In fact international NGOs disburse approximately 15% of all public development assistance worldwide. When combined with other sources of funding, NGOs deliver more than \$10 billion worth of relief aid and services worldwide. This has led to the establishment of more direct relationships between international and local organizations almost completely circumventing government. As a result, a large sector of civil society is linked to sources of international finance.¹⁰⁷

When approach the issue of EID from the view of prevention, the participation of civil society is critical. By involving civil society one is more able to effectively isolate the needs of local populations prone to develop EID and help to develop valuable new insights into the pathogenesis and spread of illness. National and transnational organizations of civil society have helped to pressure international institutions and states to create new ways of providing access to political participation. From the domestic

¹⁰⁴ Wolfgang Reinicke, Francis Deng, *Critical Choices The United Nations, Networks and the future of Global Governance*, International Development Research Centre, Ottawa, ON, Canada. 2000, p11

¹⁰⁵ Ibid 11

¹⁰⁶ Ibid 11

¹⁰⁷ Ibid 12

perspective many of the conventional means of political participation have over time lost their public appeal and effectiveness as many of the issues have changed and the way citizens view their world has changed.¹⁰⁸ From the international perspective, important political actors have emerged from civil society and organizations have been able to effectively challenge international institutions by more adequately addressing the population's interests and concerns.¹⁰⁹

Given the extent to which socioeconomic integration has been able to extend the scope of public health beyond national borders, public-policymakers are left with extensive gaps in information between themselves and the nonstate socioeconomic networks throughout the globe. Relative to these global networks, governments are more limited in their response to global challenges such as EID and other threats posed to public health. "Governments lack access to the necessary information since they are effectively trapped by the territoriality of their power. They have little choice but to address the symptoms of public bads, rather than the causes."¹¹⁰ Existing public-policy concerns are becoming more integrated and therefore more difficult to define. "This broadening of the problem domain challenges the knowledge and information base of national bureaucracies and their structures."¹¹¹

2. GPP NETWORK APPLICATIONS:

¹⁰⁸ Ibid 13

¹⁰⁹ Ibid 13

¹¹⁰ Ibid 16

¹¹¹ Ibid 20

Global public policy (GPP) networks are interconnected organizations and groups that pool together resources in order to address issues like EID that often require a more multilateral approach.¹¹²

They provide a means of responding to the uncertain and rapidly changing conditions of our relentlessly liberalizing and technologizing global environment. GPP networks address problems that defy disaggregation and parcelization among technocrats within a territorial hierarchy. They offer solutions that both reflect and embody the underlying forces of technological change and integration.¹¹³

The primary function of GPP networks involves the establishment of a global policy agenda that offers effective mechanisms for the development of a global public discourse. They effectively bridge gaps between the public sector national, state, and local governments, as well as intergovernmental bodies along with the other two sectors of society: the business community and civil society.¹¹⁴ They facilitate the negotiation process and the establishment of global standards, work to develop and disseminate knowledge critical towards addressing transnational challenges and provide mechanisms for implementing global agreements.¹¹⁵

Currently there are as many as 50-60 GPP networks in existence, they range in focus from crime and pollution to fisheries and public health. There are very prominent and well-known GPP networks such as the International

¹¹² Ibid 3

¹¹³ Ibid 3

¹¹⁴ Wolfgang Reinicke, Francis Deng, Critical Choices The United Nations, Networks and the future of Global Governance, International Development Research Centre, Ottawa, ON, Canada. 2000, p3

¹¹⁵ Ibid 3

Campaign to Ban Landmines as well as less well-known networks such as the World Commission on Dams.¹¹⁶

GPP networks have traditionally been paid little attention because of their lack of binding legal authority along with the informality of their procedures. However, it may be this nonbonding legal character that is one of the primary advantages of GPP networks, allowing for loose state and industry cooperation across various issue areas that can help establish the groundwork for more effective commitments in the long run. Cooperation across different sectors often helps states and international organizations to live up to their commitments and fulfill their missions.¹¹⁷

On the other hand advocacy networks although nonbonding can maintain a certain degree of enforceability by working to move public opinion, and raising awareness to public policy issues. Margaret Keck and Kathryn Sikkink have identified what they call “transnational advocacy networks,” which consist of networks whose sole purpose is to pressure states and international organizations to address specific policy issues.¹¹⁸ Advocacy networks generally form between civil-society groups and individual states to lobby intergovernmental organizations, other states, and the business sector to adopt certain measures.¹¹⁹

GPP networks are institutional innovations that build on a number of ideas developed in other fields. Successful networks consist of a diverse body of organizations and people with complimentary resources. What is unique about networks is that they do

¹¹⁶Ibid 4

¹¹⁷Ibid 4-5

¹¹⁸ Ibid 31

¹¹⁹Ibid 31

not simply aggregate resources but are structured to take advantage of the fact that each participating sector brings different resources to the fore. Networks are able to combine the voluntary efforts and ingenuity of business with the rule-making authority and coordination of international organizations.¹²⁰

3. TECHNOLOGY/COMMUNICATION:

Technological advances in global networks provide both advantages and disadvantages for efforts to address emerging global issues including public health. With respect to EID, insight into the full clinical spectrum of illness is critical but requires sustained surveillance, which in most countries is not feasible, owing to technical, logistic and financial constraints. Advances in communications technologies have improved governments' ability to process information and knowledge. The activities of states and international organizations are becoming better coordinated and may yet culminate in what one observer calls an "international governmental information marketplace. On the other hand, technology often evolves faster than the social and regulatory environment in which it is embedded. As a result, social, cultural, and economic relations become more intertwined and inherently difficult to predict or stabilize."¹²¹

The technological advantages of these networks is best exemplified by the EIN emerging infections network is a health care provider—based, sentinel network that was established in 1996. Its central feature is an email listserv with 946 participants from all 50 states within the US and 36 foreign countries. The majority of the participants are infectious-disease consultants in academia or private practice; 16% work in the public

¹²⁰Ibid 29

¹²¹Ibid 14

health sector. Participants communicate by means of a closed e-mail system and website. The purpose of the EIN is to detect new EID outbreaks, acquire knowledge rapidly about new infections, facilitate research and foster communication and education.¹²²

The information and technology revolution has dramatically driven down the costs of interstate communication and coordination. As a result, enhanced communication has helped to facilitate bottom-up organization processes that strengthen nonstate actors, including businesses and NGOs. By relying on horizontal and flat organizational structures, rather than convention hierarchies, industry has taken a strong foothold which was traditionally dominated by governments that rely on hierarchical principles. In general more horizontally organized institutions are more effective at making use of knowledge in innovative ways.¹²³

Public policy has only recently begun to adapt to the changing global climate. Technological advances with respect to speed and transparency of information have not only affected our individual lives but also how we coordinate our social and political institutions. In the long term advances in technology and information will dramatically alter the framework within which policy is made.¹²⁴

4. THE MEDIA:

¹²² On March 24 2004 an EIN member from NYC used the listserv to request advice about the care of a patient with a rare surgical wound infection after a tummy tuck operation in the Dominican Republic(DR). The message was seen by a colleague in Springfield MA, who recently diagnosed a similar infection who had undergone another abdominal procedure in the DR. After it was determined that the patients had undergone surgery in the same clinic, a local investigation identified 3 more cases linked to the clinic. Within 24 hours of the initial contact on the listserv the NYC department of health and the CDC were informed of the possible outbreak. (Eric Granowitz MD, "Using the Internet to Identify Infectious-Disease Outbreaks," The New England Journal of Medicine, Vol 351 No 24 December 9, 2004, 2558)

¹²³ Wolfgang Reinicke, Francis Deng, Critical Choices The United Nations, Networks and the future of Global Governance, International Development Research Centre, Ottawa, ON, Canada. 2000, p15

¹²⁴Ibid 15

One area where advocacy networks have found much success is through the strategic use of the mass media. An effective media approach could provide a crucial role in the dissemination of acute health information, coordinating state and local health policies seeking to prevent disease spread, and along similar lines international health policies setting the stage for more concrete agreements. This is best exemplified by the ICBL, which consists of a coalition of NGOs, and governments of various nations that brought the issue of landmines to the global agenda. These efforts culminated with the signing of the Ottawa Convention in 1997.¹²⁵

Along similar lines, another advocacy network was established known as the International Coalition to Stop the Use of Child Soldiers. Like the effort to ban landmines this network took advantage of the media and influential individuals, through regional conferences and a select group of governments, to draw worldwide attention to the issue of children in the military.¹²⁶

5. CHALLENGE FOR GPP NETWORKS:

At this point there is no global public forum beyond the WHO in which the pertinent international actors can engage in an open and participatory discourse to discuss relevant transnational challenges such as EID. The problem with the WHO is that it is largely limited to state actors and fails to effectively regulate transnational industry. Industries that can effectively move across borders essentially free from state control are more insulated from WHO regulations and have little incentive to adhere to such regulation. This is not to say that the WHO has been unsuccessful thus far with respect to regulating transnational industry. In fact the organization has had some remarkable

¹²⁵Ibid 32

¹²⁶Ibid 32

successes particularly with the International Code of Marketing of Breast Milk Substitutes which will be discussed later.

“A more effective forum would not only enhance the governance of industry and civil society but would also reinforce the legitimacy of states and international institutions by facilitating the democratic process.¹²⁷ “It is creating the institutional framework in which the interests of the industry, civil society, and the state, can be adequately represented and integrated into public policy making defines the challenges that GPP networks are designed to address.”¹²⁸

Beyond establishing the institutional framework, GPP networks then face the task of finding effective implementation mechanisms in order to coordinate policies. Some GPP networks are designed specifically as implementation mechanisms, typically for intergovernmental treaties that address transboundary problems. A prime example is the Global Environment Facility (GEF)¹²⁹ where the challenges of implementation provided momentum for broadening an established network from an intergovernmental to a multisectoral one, in order to enhance participation.¹³⁰

Unfortunately, networks concerned with issues of security often require secrecy and confidentiality in order to ensure implementation. This to a large extent limits the participation of civil-society. Therefore it is necessary to find a balance between transparency and confidentiality in order to provide civil society with sufficient access to pertinent information. Networks that weigh too much on confidentiality and neglect the

¹²⁷ Ibid 23

¹²⁸ Wolfgang Reinicke, Francis Deng, *Critical Choices The United Nations, Networks and the future of Global Governance*, International Development Research Centre, Ottawa, ON, Canada. 2000, p23

¹²⁹ Organization established by UNEP and the World Bank to provide grants and other funds to nations for projects and activities oriented towards the goal of global environmental protection.

¹³⁰ Wolfgang Reinicke, Francis Deng, *Critical Choices The United Nations, Networks and the future of Global Governance*, International Development Research Centre, Ottawa, ON, Canada. 2000, p57

participation of civil society run the risk of losing credibility and cease to serve their purpose.¹³¹

The strength of GPP networks lies in their ability to generate transnational policy discourse by facilitating social interaction among people and organizations. In many cases GPP networks have been able to coordinate and foster activity between opposing parties. “To use Robert Putnam’s terminology, networks of ‘civic engagement’ allow dilemmas of collective action to be resolved by fostering norms of generalized reciprocity and the emergence of trust, building what one might call global social capital.”¹³²

In sum, GPP networks can play a critical role in the coordination of institutional policies. They help pool together resources of competing groups and can integrate activities in a way that all groups become stakeholders. This distributes responsibility and adds a greater degree of legitimacy to the decision process. By bringing together all actors the networks generate a more constructive discourse with a more comprehensive knowledge base that can respond to the uncertain and rapidly changing conditions of the globalized environment.

6. ROLL BACK MALARIA INITIATIVE:

One principle basic to all networks is the ability to develop and share knowledge. Some networks are designed to take advantage of technology in order to coordinate people and institutions confronted with similar problems. In addition such networks develop share and disseminate relevant knowledge on how to approach their common problems.¹³³ Recent advances in technology and information have dramatically facilitated the extent to which innovative solutions can be shared. The Roll Back Malaria initiative

¹³¹Ibid 61

¹³²Ibid 62

¹³³Ibid 47

is one such network. It is dedicated to create share and disseminate knowledge and to better coordination of public and private efforts in the fight against malaria.¹³⁴

The Roll Back Malaria Partnership (RBM) is a global network made up of more than 90 partners launched by the World Health Organization, the World Bank, the UN Children’s Fund, and UNDP, jointly in November of 1998. The partnership is comprised of international organizations, bilateral development agencies, businesses, NGOs, the research community and the media.¹³⁵ The overall goal is to improve the general health systems of countries where malaria is endemic by strengthening the local health-care communities, public health systems, civil society, and private providers. More specifically RBM hopes to reduce the burden of malaria by half before 2010 and by 75% before 2015.¹³⁶ “It has identified six key areas for malaria control and prevention: early detection, rapid treatment, preventive measures, improved coordination, a cohesive global movement, and improved research.”¹³⁷

In order to achieve its overall goal the network focuses on creating and sharing knowledge through better coordination of previously existing initiatives in malaria control and by bringing both civil society and the business sector into the fight against malaria to a greater extent than before.¹³⁸ “This emphasis on sharing knowledge across sectors can serve as a model for many other GPP networks.”¹³⁹

The strategy taken by the RBM initiative was derived from lessons learned from failures of various WHO initiatives to combat disease in the developing world. By

¹³⁴ Wolfgang Reinicke, Francis Deng, *Critical Choices The United Nations, Networks and the future of Global Governance*, International Development Research Centre, Ottawa, ON, Canada. 2000, p47

¹³⁵ Ibid 49

¹³⁶ Ibid 49

¹³⁷ Ibid 49

¹³⁸ Ibid 51

¹³⁹ Ibid 51

drawing from the experiences of the various actors involved with the network and consolidating this pool of knowledge, the RBM initiative seeks to maximize its efficiency and avoid redundancy. Before RBM the main organizations within the network were already working on malaria, but maintained limited communication with each other and at times did not even know that similar work was being done elsewhere. Thus, one of the principal benefits of the network was the reinforcement of communication mechanisms and the establishment of contact among the staff members of the subsidiary organizations at RBM meetings.¹⁴⁰

Enhanced communication is particularly useful for the network participants engaged in research. Under the RBM network research groups are able to coordinate activities and make full use of each other's comparative advantages of science and technology. "In the past, reliance on this principle had been limited by the lack of interagency communication, and this had led to agencies taking on tasks in which they had no particular advantage, or it led to tasks simply not being undertaken at all."¹⁴¹

"Although actual implementation has not yet started, the biggest challenges facing the RBM network is the transformation of its organizational culture away from one based on vertical initiatives toward one relying on sector-wide approaches."¹⁴² The RBM partnership thus seeks to build on local initiatives. For example, in countries where malaria is endemic RBM encourages local development of approaches towards solving the problem as opposed to conventional approach of bringing in outside experts who have less experience with the local culture and are less able to design solutions that are more compatible with the local population. In order to facilitate this process the RBM provides

¹⁴⁰Ibid 51

¹⁴¹Ibid 51

¹⁴²Ibid 67

countries with the information necessary to make informed decisions. These plans are then forwarded to international organizations that can assist in their implementation. The idea behind this approach is to allow the affected states to establish their own set of priorities.¹⁴³ The affected nations are different in so many respects that one uniform approach would prove counterproductive, whereas individual approaches established as needed by the affected states could more effectively combat the illness.

The RBM also works with its multilateral members to restructure the healthcare sectors in affected countries. The network offers direct help and expertise to countries unable to develop implementation plans. Previous attempts at establishing effective implementation plans have been limited by financial constraints and poor access to information. Industrialized states have tried to enable developing country participation by providing financial support but have been unsuccessful to raise enough support.¹⁴⁴

Beyond financial resources and implementation one of the most important elements of a GPP network is institutional leadership. In the RBM, it was the institutional leadership of the WHO and a group of committed leaders within the organization that got this network off the ground by bringing together researchers and existing networks. The WHO continues to exercise institutional leadership within the RBM providing the network with strategic direction and working to build and maintain global partnerships, and ensuring that all aspects of RBM's activities are adequately monitored.¹⁴⁵

7. GLOBAL ALLIANCE FOR VACCINES AND IMMUNIZATION:

¹⁴³ Wolfgang Reinicke, Francis Deng, *Critical Choices: The United Nations, Networks, and The Future of Global Governance*, International Development Research Centre, 2002, p86

¹⁴⁴Ibid 88

¹⁴⁵Ibid 66-67

Another effective GPP network also directed at disease prevention is the Global Alliance for Vaccines and Immunization (GAVI). Its principal goal is “to fulfill the right of every child to be protected against vaccine-preventable diseases.” Effective immunization should encompass at least 80 percent of the relevant population in order to protect a large enough portion of the population to effectively halt the spread of disease.¹⁴⁶ This is a challenge that requires a sustained institutional effort, for which a trisectoral network that brings together international organizations, civil society, and private industry seems well suited.”¹⁴⁷

In order for GPP health networks such as GAVI to effectively achieve their goals there must be a well-established structure to the inter-institutional relationships within the network. To that end it is important that there be a comprehensive review process within the network to avoid the pitfalls of turning into another over inflated bureaucracy. The HIV-AIDS network demonstrated the importance of being able to build on existing institutions while limiting their own secretariats. During the 1980s the HIV-AIDS network developed into an agency of its own as its secretariat inflated to the extent that other partners within the network essentially fused into one agency under the predominant HIV-AIDS secretariat. On the other hand, GAVI has restricted the activity of its secretariat to coordination and limiting competition for operational activities. This allows partners to identify their strengths and maximize comparative advantages.¹⁴⁸

a. Medicines for Malaria Venture

¹⁴⁶ Katarina, Tomasevski, “Health” in Oscar Schachter, United Nations Legal Order, vol 2, Cambridge University Press, 1995 pg 868-869

¹⁴⁷ Wolfgang Reinicke, Francis Deng, Critical Choices: The United Nations, Networks, and The Future of Global Governance, International Development Research Centre, 2002, p 70

¹⁴⁸ Ibid 74

GPP networks are useful for creating and fueling markets, as well as both linking buyers to producers and borrowers to lenders.¹⁴⁹ “Left to their own devices, markets sometimes fail to produce certain goods whose provision would be in the broader public interest. This can be seen at the global as well as the local level.”¹⁵⁰ One particular area where GPP networks contribute to the creation of markets is in the control of EID by helping to develop and distribute vaccines against malaria.¹⁵¹

In this regard the new Medicines for Malaria Venture (MMV) was established to help resolve the problem of the lack of investment in malaria vaccine research and development from the private sector. The MMV seeks to provide industry with incentives to develop new antimalarial medications and spur development of new drugs that otherwise might not have been brought to market.¹⁵²

The ultimate goal of MMV is to secure registration of one new antimalarial drug that is affordable to the worst hit populations and is capable of countering the growing resistance to existing vaccines. To achieve this goal the MMV links academic institutions to medical communities and the pharmaceutical industry to the public sector. The MMV has coordinated the efforts of the WHO, the International Federation of Pharmaceutical Manufacturers Associations, the World Bank, the Government of the Netherlands, the UK Department for International Development, the Swiss Agency for Development and Cooperation, the Global Forum for Health Research, the Rockefeller Foundation, and the RBM partnership.

¹⁴⁹Ibid 52

¹⁵⁰Ibid 52

¹⁵¹ Wolfgang Reinicke, Francis Deng, Critical Choices The United Nations, Networks and the future of Global Governance, International Development Research Centre, Ottawa, ON, Canada. 2000, p52

¹⁵²Ibid 53

Public sector and private foundations fund the research and development. The idea being to create a more predictable business environment for the pharmaceutical companies that have made a commitment to provide expertise and resources. “The network is structured as an entrepreneurial, not-for-profit business venture that will funnel royalties from its products into a general fund to offset the need for future donations.”¹⁵³ If successful, MMV hopes to make its first product commercially available before 2010.

Pharmaceutical companies have traditionally been reluctant to invest in malaria research for economic reasons. Malaria research is a very complex and costly venture for the pharmaceutical industry because of the nature of the illness and its lack of a profitable market. Tropical and subtropical rural populations in the developing world are most often affected and are unable to bear the burden of cost for such new medications. In other words the vaccine is too expensive to make and the people who need it most wouldn't be able to afford it. Thus the challenge for the MMV is to manipulate the market in such a way as to change the incentive structure confronting potential vaccine producers.¹⁵⁴ “By creating a market mechanism for the distribution of vaccines, the MMV contributes to RBM's ambitious goal of halving the global malaria burden by 2010.”¹⁵⁵

8. ROLE OF GPP NETWORKS IN THE UNITED NATIONS:

In his 1999 address to the Annual Meetings of the World Economic Forum, UN Secretary-General Kofi Annan observed the following: The United Nations once dealt only with governments. By now we know that peace and prosperity cannot be achieved without partnerships involving

¹⁵³Ibid 54

¹⁵⁴Ibid 55

¹⁵⁵Ibid 55

governments, international organizations, the business community, and civil society.¹⁵⁶

Mark Brown, the administrator of UNDP described, the emergence of new, less formal structures of global governance, where governments, civil society and private industry are forging coalitions across geographic and political boundaries to more effectively meet the demands of a more global citizenry.¹⁵⁷ “These coalitions use the convening power and the consensus-building, standard—setting and implementing roles of the United Nations, the Bretton Woods institutions and international organizations.”¹⁵⁸

The Secretary General, in the Millennium Report, identified the value of GPP networks in redefining the role of the UN and described the importance of being able to mobilize skills and other resources of various global actors underscoring the need for loose global policy networks that cut across national, institutional and disciplinary lines.¹⁵⁹ GPP networks provide the necessary scope, speed and informational capacity that is lacking in the conventional institutional arrangements of the UN that are unable to keep pace with the changing global agenda. Again this is to a large extent because the UN and its specialized agencies were designed to work within the structure of a state-based system and have until recently adopted more integrative institutional mechanisms consistent with the GPP network model such as the above mentioned MMV or the RBM.

By forging the development GPP networks, the United Nations can play an intermediary role between states, industry and civil society.¹⁶⁰ Because technology has enabled industry to escape the territorial constraints of the state, it is fundamental to the

¹⁵⁶Ibid 91

¹⁵⁷ Wolfgang Reinicke, Francis Deng, *Critical Choices: The United Nations, Networks, and The Future of Global Governance*, International Development Research Centre, 2002, p91

¹⁵⁸Ibid 91

¹⁵⁹ Ibid 92

¹⁶⁰Ibid 92

UN's role as an international legal institution to maintain and reinforce links between industry and the state in order to keep industry in check. This is not to say the GPP networks are the only means of maintaining both industry and the state in check, it is a more efficient means of maintaining both industry and state in check. The UN as an institution has the necessary framework within which it can coordinate such activity. As described above institutions can effectively coordinate and enforce policy by increasing transactions, establishing rules to tie together interactions, increasing information availability, and reducing transaction costs.

The changing global environment has challenged the UN's commitment to universalism. There are more states in the UN today than ever before, and the economic and informational inequalities between states have risen dramatically. Developing and working with GPP networks is not only important for providing more policy options but is critical in helping the UN to meet its goals both effectively and efficiently. In order for the organization to decide which roles to assume in these networks and how it can coordinate its actions with those of other players, it needs to develop mechanisms of prioritization, coordination, and engagement with private firms and civil society.¹⁶¹

The UN has a comparative advantage in organizing and convening meetings on issues where conflict arises across the North-South divide. By providing a platform for GPP networks many UN agencies have been particularly successful at mediating negotiations with power asymmetries, and developing a comprehensive knowledge base in both scientific and technical fields: examples include UNEP, WHO, and the technical agencies.¹⁶² In this regard UN agencies are in a unique position to help coordinate

¹⁶¹Ibid 93

¹⁶²Ibid 98

activity between the business community and NGOs to reinforce relationship help identify collaborative advantages. Collaboration in networks for global public-policy-making requires adjustment on the part of network participants and the existing institutions in charge of public policy, that is, states and international organizations. This raises a number of critical issues with regard to institutional management, learning, and change.¹⁶³

The UN has found most success with GPP networks when more agencies have been involved each bringing its own comparative advantages. This is demonstrated in the Polio Eradication Network, where the WHO provides technical leadership and coordination, while UNICEF provides the vaccines and immunization equipment along with serving as the network's global advocate. In the RBM initiative, the WHO again provides technical leadership and coordination, while the World Bank provides policy advice on health reform.¹⁶⁴ The comparative advantages of the individual agencies are best identified when the stakeholders and policy objectives are made clear and shared by the agencies involved. To maximize these comparative advantages interagency coordination is needed.¹⁶⁵

The UN can become more involved in GPP networks by forming coalitions with its external partners. This involves finding unmobilized constituencies and encouraging existing ones to move forward on implementation of existing networks.¹⁶⁶ “To evolve into a credible intermediary between sectors, the United Nations has to strengthen its

¹⁶³Ibid 115

¹⁶⁴ Wolfgang Reinicke, Francis Deng, *Critical Choices: The United Nations, Networks, and The Future of Global Governance*, International Development Research Centre, 2002, p105

¹⁶⁵Ibid 105

¹⁶⁶Ibid 109

efforts to enter into a fruitful and cooperative dialogue with NGOs and the business community.”¹⁶⁷

The United Nations has yet to capitalize on the dramatic increase in civil society’s interest in participation, which was the legacy of the significant expansion of the NGO participation in the series of world conferences.¹⁶⁸ “These gains are now threatened by a reduction in NGO’s access to the meetings set up to evaluate progress toward the commitments made at those conferences.”¹⁶⁹

NGOs have offered a variety of proposals to reinforce various formal mechanisms that enhance their participation in UN activities. Such proposals include strengthening UN-NGO partnerships, increasing the resources for Non-governmental Liaison Service, and reestablishing the trust fund for developing-country NGOs to provide funding for travel and additional costs associated with participation at UN events and meetings.¹⁷⁰

Network participants must be carefully selected in order to protect the balance of power and inclusiveness. As such with each addition to the network the UN must find a way of linking its initiatives with the NGOs and businesses. If NGOs and business are considered separately without integrating the participants initiatives, the UN risks undermining both its credibility and its effectiveness.¹⁷¹

The UN should see participation in GPP networks as long-term investments that will ultimately help the organizations meet its objectives.¹⁷² Resources must be spent on

¹⁶⁷Ibid 109

¹⁶⁸Ibid 109

¹⁶⁹Ibid 109

¹⁷⁰ Wolfgang Reinicke, Francis Deng, *Critical Choices: The United Nations, Networks, and The Future of Global Governance*, International Development Research Centre, 2002, p110

¹⁷¹Ibid 111

¹⁷² Adapted from Reinicke’s application of governments in GPP networks. Wolfgang Reinicke, Francis Deng, *Critical Choices: The United Nations, Networks, and The Future of Global Governance*, International Development Research Centre, 2002, p115

ensuring broad inclusiveness in GPP networks that protect the environment, combat crime, ensure food security, and limit the spread of emerging infectious diseases.¹⁷³

v. World Health Organization:

1. Structure and Function:

The UN's main public health organ, the WHO, as described above often plays an integral role in many of the discussed health based initiatives. As an institution the WHO plays a fundamental role in limiting disease spread and coordinating and developing interstate health policy. The organization holds a unique position in the world and involves one of the earliest fields of international cooperation. International health is one of the first areas within which an international governmental organization was created but whose scope of activities was limited.¹⁷⁴ The restricted functions of nineteenth and early-twentieth century international health organizations included combating infectious and communicable diseases and controlling their transfer across national borders. For example, the major activities of the first permanent international health organization, L'Office International d'Hygiene Publique, were limited to the international exchange of epidemiological information, the scientific study of disease, and the administration of international conventions.¹⁷⁵

The WHO was established in 1946. Its purpose was to serve as the principal multilateral organization in charge of implementing the right to health. This role is based on, the organization's Constitution, the UN Charter, and the International Covenant on

¹⁷³Ibid 115

¹⁷⁴ ¹⁷⁴ Allyn Taylor, Making the WHO Work: A Legal Framework for Universal Access to the Conditions for Health, 18 Am. J. L. & Medicine. 301, 302 (1992) p 8

¹⁷⁵ Allyn Taylor, Making the WHO Work: A Legal Framework for Universal Access to the Conditions for Health, 18 Am. J. L. & Medicine. 301, 302 (1992) p 8

Economic and Social Rights (ICESCR) inter alia.¹⁷⁶ “With six regional offices, more than 180 member nations, and an annual budget exceeding 800 million dollars, the WHO is the largest international health organization and one of the largest specialized agencies of the United Nations.”¹⁷⁷

2. *WHO and Health Law*

The international right to health was first codified in the preamble to the constitution of the WHO where it states that, “the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition.” Further the preamble defines health as, “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.”¹⁷⁸

Under the ICESCR nations are required to submit reports on the progress that has been made in protecting all of the rights recognized by the ICESCR. The specialized agencies have been assigned specific duties to facilitate reporting these include such tasks as reviewing state reports and monitoring the progress of states with respect to compliance with the terms of the Covenant. The WHO is the specialized agency in charge of the Covenant’s health initiatives. In this regard the WHO serves to supervise, assist and encourage member states to fulfill their international legal responsibility to recognize and protect the right to health of their people.¹⁷⁹

In order to limit the spread of diseases across borders the WHO established the International Health Regulations (IHR) in 1951.

¹⁷⁶ Ibid 6

¹⁷⁷ Ibid 6

¹⁷⁸ Ibid 6

¹⁷⁹ Allyn Taylor, Making the WHO Work: A Legal Framework for Universal Access to the Conditions for Health, 18 Am. J. L. & Medicine. 301, 302 (1992) p 6

The purpose of the International Health Regulations is to help prevent the international spread of disease, with the minimum interference in world traffic. To achieve maximum security against international disease spread, the IHR requires, among other things, WHO members to (1) notify WHO of outbreaks of specific diseases subject to the Regulations (originally six diseases, reduced to only cholera, yellow fever, and plague by 1983); and (2) maintain certain public health capabilities at points of international entry and exit (e.g., the capability to de-rat ships or disinfect aircraft).¹⁸⁰

The IHR are binding upon all member states except those that have opted out. As such the efficacy of these regulations depends upon the willingness of the states that have voluntarily accepted them. Unfortunately there are no incentives for states to adhere to these principles nor are there any sanctions for noncompliance.¹⁸¹

The WHO however, has had some success with its noncompulsory approach. One instance where this approach has demonstrated some success involves the international regulation of baby food. During the 1970s there developed extensive marketing campaigns for breast-milk alternatives when it was known that breast-milk was best for children's health. As a result, an international campaign against such marketing developed and ultimately led to the adoption of International Code of Marketing of Breast-Milk Substitutes by the WHO.¹⁸² "The Code did not however, prohibit the advocacy of replacing breast-milk by substitutes, nor did it create binding norms for states to ban such practices."¹⁸³ The executive board of the WHO decided that the moral force of a unanimous recommendation would be more persuasive than a binding regulation lacking unanimous support.

¹⁸⁰ David Fidler, Revision of the World Health Organization's International Health Regulations, ASIL, April 2004, Internet: (last accessed 7-20-04) <http://www.asil.org/insights/insigh132.htm>

¹⁸¹ Katarina, Tomasevski, "Health" in Oscar Schachter, United Nations Legal Order, vol 2, Cambridge University Press, 1995 pg 865

¹⁸² Ibid 880

¹⁸³ Ibid 880

A substantial number of countries have adopted all or substantially all of the code's provisions as legal requirements. In countries where the provision has become compulsory a significant number of women have been protected from the aggressive marketing tactics compared to those that have not adopted the code.¹⁸⁴

Overall the WHO approaches international health standards by heavily relying on soft law built upon more ethical rather than legal principles.¹⁸⁵ Although this limits implementation, it allows for states to adjust to necessary changes and to prevent states from outright ignoring such regulations. “Its aim being to reduce health hazards, and/or prevent exposure to them, and to improve the potential of individuals and communities to cope with health hazards.”¹⁸⁶ The organization may overly rely on soft law and would benefit from a more enforceable approach, that would provide incentives for state action and disincentives for state inaction. Since the adoption of the IHR, states have been unwilling to report outbreaks of epidemics. In some cases states fear the economic consequences and in others states interpret the regulations to strictly apply to only three illnesses, cholera, yellow fever, and plague.

The WHO believes that the threat of EID constitute an international crisis. Given the status of the WHO in the international arena, the WHO as an institution must step forward and fulfill its role as the preeminent organization for the coordination of interstate efforts to combat and limit the spread of EID. In addition, the WHO, should serve as the forum within which states, can voice their concerns and work to establish the most effective institutional mechanisms to coordinate their efforts. It is in this regard, that

¹⁸⁴ Anna Taylor, *Violations of the international code of marketing of breast milk substitutes: prevalence in four countries*, BMJ. 1998 April 11; 316 (7138): 1117–1122

¹⁸⁵ Katarina, Tomasevski, “Health” in Oscar Schachter, *United Nations Legal Order*, vol 2, Cambridge University Press, 1995 pg 859

¹⁸⁶ *Ibid* 860

the WHO as an institution must capitalize on the advantages of hard and soft international law where appropriate.

The WHO has already acknowledged the historical role of international law on infectious disease control as well as its future role in containing and preventing outbreaks of infectious diseases.¹⁸⁷ The organization has yet to develop an effective mechanism to see that states adhere to its recommendations. Its inclusion in various global health networks is a step in the right direction. Information acquired from the multiple sectors of the global health networks might provide organization with the necessary incentives to enhance state action. Further such networks would prove useful in monitoring compliance with WHO standards and the effectiveness of the institution as a whole.

SECTION II.

WHY HAVE EIDS BECOME SUCH A MAJOR THREAT?

a. The Problem of Microbial Resistance:

Having discussed the various ways of approaching the challenges of EID, I would now like to discuss the etiology and nature of EIDs along with some of the more salient clinical/epidemiological implications in order to illustrate the importance of the more integrated institutional approach that I have been advocating for in this paper.

Resistance of diseases to antimicrobial¹⁸⁸ drugs has increased dramatically in the last decade. This effect has limited the extent to which the medical community has been able to combat diseases such as tuberculosis, malaria, cholera, dysentery and pneumonia. The result is that people become infected for longer periods of time, epidemics are

¹⁸⁷ David Fidler, Return of the Fourth Horseman: Emerging Infectious Diseases and International Law, 81 Minn. L. Rev. (1997) 843-49 (analyzing the failure of WHO member states to comply with the International Health Regulations and how the IHR have failed to achieve their objectives) p2

¹⁸⁸ Term antimicrobial in this context is meant to describe both antibacterial and antiviral medications.

prolonged and people run a greater risk of succumbing to the disease. Newly developed resistant organisms have no natural barriers and aided by ever more frequent international air travel can move quickly from remote locations to have a worldwide impact.¹⁸⁹ As resistant microbes spread, the effectiveness of the antimicrobial drugs decreases. Antimicrobial resistance more often than not develops at a faster rate than the antimicrobial drugs. In many cases the pharmaceutical industry fails to see profitability in the markets for these drugs. This is best exemplified by malaria where the majority of individuals affected live in developing countries that are unable to afford newer more effective medications. The proliferation of malaria has become an even more serious threat because not only are the actual parasites themselves developing resistance to the drugs, but many of the mosquito vectors are developing resistance to the insecticides, which has up until recently been able to slow the proliferation of malaria in many areas.

Another species of microbe that has also become more of an impending threat is the tuberculosis bacilli. Resistant strains of tuberculosis are developing at alarming rates in much of the developing world, most notably Russian prisons. A number of multi-drug resistant strains have already been identified in the US. Other organisms showing an increasing prevalence include various pneumonia causing organisms such as streptococcus pneumonia and mycoplasma pneumonia. The same holds true for salmonella, which is leading cause of food borne infections, and enterococci bacteria, which can cause a number of complications in elderly and hospitalized patients.

¹⁸⁹ Allison Jacobson, Emerging and Re-Emerging Viruses: An Essay. Internet (last accessed) 7-19-04, <http://www.rense.com/health3/emerg.htm>

Nosocomial¹⁹⁰ infections pose a serious threat worldwide and are responsible for nearly 70,000 deaths per year in the US alone.¹⁹¹ As the elderly population in the US continues to rise, most elderly individuals move into nursing homes where populations of antimicrobial resistant organisms flourish amid the selective pressures of the numerous antibiotics taken by the nursing home clientele.

The proliferation of antibiotics and lack of medical regulation of such drugs abroad have raised increasing concerns of antimicrobial resistance. In many countries drugs that in the US require a physician's prescription are sold inexpensively over the counter. The problem with this is that this gives the microbe more time to adapt and to develop resistance to the drug. In the developing world this misuse is most pronounced with respect to malaria and tuberculosis.¹⁹²

b. Changes in human behavior:

Beyond antimicrobial resistance another reason for the increased proliferation of EIDs involves the dramatic changes in human behavior that have occurred over the past 35 years, particularly in the west with respect to sexuality. In, *The Coming Plague*, Laurie Garret identified the late 1960s through the 1970s as periods of sexual liberation and experimentation for both homosexuals and heterosexuals.¹⁹³ During this time illicit drug use and multiple partner sex became more common. This along with dramatically increased international travel provided a fertile environment for pathogenic organisms to proliferate into new and defenseless niches. "Between 1965 and 1975, cases of gonorrhea

¹⁹⁰ Nosocomial infections are infections acquired in the hospital setting.

¹⁹¹ World Health Report 1996 Executive Summary. Internet (last accessed 7-19-04)
<http://www.who.int/whr2001/2001/archives/1996/exsume.htm>

¹⁹² David P. Fidler, *The Globalization of Public Health: Emerging Infectious Diseases and International Relations*, 5 Ind. J. Global Legal Stud. (1997); p9

¹⁹³ Return of the Fourth Horseman: Emerging Infectious Diseases and International Law," David P. Fidler, *Minnesota law review* 81, 771 (1997). p10

and syphilis in the US tripled and quadrupled respectively. In the 1970s and 1980s, cases of chlamydia steadily increased in the US. Genital herpes, caused by the herpes simplex type II virus, experienced a nine-fold increase in the US between 1966 and 1981. From 1975 to 1987, reports of chancroid increased tenfold in the US.”¹⁹⁴ Further as the number of single parent families increased and women more frequently moved into the workforce childcare facilities were more often used. Like nursing homes the greater use of childcare facilities contributed to the increased proliferation of multi-drug resistant organisms.

c. Social and governmental activity:

States that are involved in civil war or social unrest frequently find themselves vulnerable to outbreaks of EID. “Economic degradation and urbanization by economic exploitation of natural resources fosters poverty, poor sanitation and diets making populations more susceptible to EIDs.”¹⁹⁵ The conditions within which the poverty stricken lower classes live provide a hospitable environment for rapidly evolving pathogenic organisms. The poor populations of such nations often live in overcrowded housing complexes lacking adequate ventilation and sanitation. These people generally have worse diets than the affluent, making their weakened immune systems more vulnerable to infectious diseases, typically have limited or no access to primary health care, and tend to make up the majority of economic migrants, whether the migration is from rural areas to cities within a country or from developing countries to the developed world.¹⁹⁶ Individuals living under these conditions have little access to primary

¹⁹⁴ Ibid 10

¹⁹⁵ David Fidler, Return of the Fourth Horseman: Emerging Infectious Diseases and International Law, 81 Minn. L. Rev. (1997) 843-49 (analyzing the failure of WHO member states to comply with the International Health Regulations and how the IHR have failed to achieve their objectives) p 12.

¹⁹⁶ Ibid 12.

healthcare and are often unable to afford a healthy diet and are thus unable to develop an effective immune system, which leaves them even more vulnerable to infection.

In all one can see that the challenge of EID does not simply involve getting the right medicine to the right group of people but involves a more integrated systemic approach at all levels. Governments, NGOs, private industry and even individuals themselves must take on this challenge. The effort, however, must be coordinated and the different groups involved must capitalize on their complementary resources to prevent redundancy while at the same time avoiding the pitfalls of competing interests and relative gains, with a cooperative effort the long term benefits outweigh all potential costs.

SECTION III:

THREE GLOBALLY SIGNIFICANT EIDS:

a. SARS:

In the last section of this paper I will discuss three specific EIDs, their global impact and both the appropriate and current means of meeting the challenge of each illness. The three diseases discussed are SARS, HIV and Mad-Cow disease. First I will discuss SARS because of its recent spread, its impending threat, and its ease of proliferation. Second I will discuss HIV because of its global impact, its potential economic impact in the developing world, and because of the variety of approaches that have been developed to combat the illness. Finally I will discuss Mad-Cow disease because of uniqueness of the disease and its means of proliferation. The way it spreads is unlike any of the conventional forms of EID and reflects the importance of regulating

interstate commerce. Further it demonstrates the importance of not only interstate cooperation but also the importance of cooperation within the scientific community.

Severe acute respiratory syndrome (SARS) is a viral respiratory illness caused by a virus, called SARS-associated coronavirus (SARS-CoV). SARS was first reported in Asia in February 2003. Over the next few months, the illness spread to more than two-dozen countries in North America, South America, Europe, and Asia. The SARS global outbreak of 2003 was contained; however, it is possible that the disease could re-emerge.¹⁹⁷

According to the World Health Organization (WHO), during the SARS outbreak of 2003, a total of 8,098 people worldwide became sick with SARS; of these, 774 died. In the United States, there were 192 cases of SARS among people, all of whom got better. Through July 2003, laboratory evidence of SARS-CoV infection had been detected in only eight U.S. cases. Most of the U.S. SARS cases were among travelers returning from other parts of the world with SARS.¹⁹⁸

There were very few U.S. cases among close contacts of travelers, including health-care workers and family members. Out of sheer luck the proliferation of SARS was extremely limited in the United States.

In general, SARS begins with a high fever (temperature greater than 100.4°F [$>38.0^{\circ}\text{C}$]). Other symptoms may include headache, an overall feeling of discomfort, and body aches. Some people also have mild respiratory symptoms at the outset. About 10 to 20 percent of patients have diarrhea. After 2 to 7 days, SARS patients may develop a dry cough. Most patients develop pneumonia.¹⁹⁹

¹⁹⁷ Harrison's Principles of Internal Medicine Online edition, accessed via Tufts University Health Sciences Knowledgebase. [http://80-harrisons.accessmedicine.com.ezproxy.library.tufts.edu/cgi-bin/external_source.cgi?url=http%3A%2F%2Fwww.cdc.gov%2Fncidod%2Fsars&book=HARRISONS&subdir=EX_UPDATES](http://80-harrisons.accessmedicine.com.ezproxy.library.tufts.edu/cgi-bin/external_source.cgi?url=http%3A%2F%2Fwww.cdc.gov%2Fncidod%2Fsars&book=HARRISONS&su bdir=EX_UPDATES)

¹⁹⁸ Harrison's Principles of Internal Medicine Online edition, accessed via Tufts University Health Sciences Knowledgebase. Chapter 189 SARS update June 4, 2003.

¹⁹⁹ Ibid

SARS appears to spread by close person-to-person contact. The causative virus is thought to be transmitted in respiratory air droplets that are produced when an infected person sneezes or coughs. These droplets are propelled up to 3 feet through the air and are deposited on the mucous membranes of the mouth, nose or eyes of nearby persons. The virus can also be spread when a person manually exposed to the virus touches his or her mouth, nose or eyes.²⁰⁰ It can survive on plastic surfaces such as an elevator button for up to 24 hours, and can live in human feces for up to 4 days complicating toilet sanitation in hospitals and homes.

The first approach states often take to limiting EID spread is to protect their borders from infectious human borne illness by restricting immigration. Within the US for example, federal immigration laws authorize immigration authorities to exclude non-citizens infected with communicable disease of public health significance. Immigration law also gives the president authority to suspend the entry of any group of aliens whose entry he deems detrimental to the interests of the US.²⁰¹

Immigration restrictions with borders as large as the US are extremely difficult to maintain. At the moment there are an estimated 8-9 million undocumented aliens now in the United States, a figure growing by as many as 500,000 per year.²⁰² “China is the largest contributor to undocumented immigration outside the western hemisphere, funneling illegal aliens into the United States through elaborate smuggling networks.

²⁰⁰Ibid

²⁰¹ Peter, Spiro, The Legal Challenges SARS Poses, Findlaw Columnist, Special to CNN.com; internet: last accessed 7-15-04 at <http://www.cnn.com/2003/LAW/04/29/findlaw.analysis.spiro.sars/>

²⁰²Ibid

SARS could just as easily make serious inroads into the U.S. through this backdoor rather than the front.”²⁰³

Another approach individual states often take to limit the proliferation of an EID such as SARS would be to apply quarantines. “Under the Public Health Service Act anyone may be quarantined at an international port of entry if they are reasonably believed to be carrying a designated communicable disease. As of April 4, 2003 Executive Order by President Bush SARS is now a designated disease.”²⁰⁴

Generally quarantines on anything but the smallest scale are difficult to maintain and face numerous legal challenges.²⁰⁵ “Quarantines involve deprivations of liberty and as such implicate due process concerns. Whatever the reason, restricting a person's freedom of movement may separate that person from family, occupation, or school. Mass quarantines would inevitably involve confining the infected with the healthy, at their peril.”²⁰⁶

The SARS epidemic rapidly spread across China, Hong Kong, Singapore and Canada leading legal experts to review relevant international and national laws on quarantine, control and even potential liability. According to Professor David Fidler, “states maintain broad discretion over the control of EID. For instance, international law has long recognized that governments may infringe on civil and political rights for public health purposes.”²⁰⁷ However there are certain criteria that states must meet when they suspend civil and political rights for public health purposes. First the public health

²⁰³Ibid

²⁰⁴Ibid

²⁰⁵Ibid

²⁰⁶ Peter, Spiro, The Legal Challenges SARS Poses, Findlaw Columnist, Special to CNN.com; internet: last accessed 7-15-04 at <http://www.cnn.com/2003/LAW/04/29/findlaw.analysis.spiro.sars/>

²⁰⁷ ASIL Insights SARS and International Law By [David P. Fidler](#) April 2003 internet: last accessed 7-15-04. <http://www.asil.org/insights/insigh101.htm>

measures must be prescribed by law; Second, they must be applied in a non-discriminatory manner; Third, they must relate to a compelling public interest in the form of a significant infectious disease risk to the public's health; and Fourth they must be necessary to achieve the protection of the public, meaning that the measure must be (a) based on scientific and public health information and principles; (b) proportional in its impact on individual rights to the infectious disease threat posed; and (c) the least restrictive measure possible to achieve protection against the infectious disease risk.²⁰⁸

As previously described “the IHR were established by the WHO under Article 21 of its Constitution and, according to the WHO, the IHR constitute the ‘only international health agreement on communicable diseases that is binding on [WHO] Member States.’”²⁰⁹ “The purpose of the IHR ‘is to ensure the maximum security against the international spread of diseases with a minimum interference with world traffic.’²¹⁰ To achieve maximum security against the international spread of disease, the IHR established a global surveillance system to facilitate the spread of relevant epidemiological information regarding the diseases subject to the IHR,²¹¹ it requires ports and airports to maintain essential health-related capabilities,²¹² and it sets out disease specific provisions along specific procedures for the covered diseases.²¹³

²⁰⁸ UN Doc. E/CN.4/1984/4) to the context of infectious disease control.,
<http://www1.umn.edu/humanrts/instree/siracusaprinciples.html>

²⁰⁹ ASIL Insights SARS and International Law By [David P. Fidler](#) April 2003
<http://www.asil.org/insights/insigh101.htm> citing WHO, *Division of Emerging and Other Communicable Diseases Surveillance and Control Strategic Plan 1996-2000*, WHO/EMC/96.1, at 10.

²¹⁰ IHR, Foreword. <http://www.who.int/csr/ihr/en/>

²¹¹ Ibid. arts. 2-13.

²¹² Ibid. arts. 14-22.

²¹³ Ibid. arts. 23-75.

The IHR have been unable to ensure maximum security against the international spread of infectious diseases with the minimum interference with world traffic.²¹⁴ One of the primary reasons for the ineffectiveness of the IHR is that they are restricted to such a small number of diseases. According to IHR states are only required to report outbreaks of cholera, plague and yellow fever.²¹⁵ New and potentially more virulent diseases such as SARS, HIV and Creutzfeld Jakob²¹⁶ are not regulated by the IHR. The WHO has been trying to enhance the scope of the IHR. The emerging threat of EID may help to accelerate the development of a more broad legal framework for coordinating the control and limiting the spread of EID.²¹⁷

It is in this regard that a more inclusive institutionalist approach with GPP networks may facilitate interstate cooperation to develop the necessary legal framework. The WHO is best suited to coordinate these interstate efforts. A global network modeled after the RBM initiative could help coordinate the most effective UN agencies, NGOs and business sector to generate the necessary foundational objectives to approach this emerging threat. With the right institutional framework and the flexible soft law guiding principles states will be more readily convinced to work out tentative agreements where they will be better able to evaluate the long-term costs and benefits of enhancing the scope of the IHR.

b. HIV:

UNAIDS, an integrated HIV/AIDS advocacy network of UN agencies, has estimated that in the past two decades, approximately 65 million people have contracted

²¹⁴ David P. Fidler, *International Law and Infectious Diseases* 65-71 (1999).

²¹⁵ World Health Organization's International Health Regulations internet: access 7-15-04 from <http://www.who.int/csr/ihr/current/en/>

²¹⁶ Disease associated with Mad Cow.

²¹⁷ David P. Fidler, *International Law and Infectious Diseases* 65-71 (1999).

HIV/AIDS, and perhaps 25 million of them have already died.²¹⁸ More than 40 million people are infected with HIV worldwide, much more than estimated by epidemiologists a decade ago. While the cure continues to elude scientists, medical science has made a number of significant advances. In the developed world, advances in HIV research have been able to control many of the clinical symptoms but not without significant financial burden. The average yearly cost of the AIDs cocktail is approximately \$20,000 per year, with the most recent forms of therapy the cost of the cocktail increases by another \$20,000. These treatments do not cure the disease but merely prolong the latency period of the virus allowing patients to live longer with the disease. As a result, in the developed world, the number of people living with HIV has increased dramatically while the number of people who actually succumb to the illness has decreased. Evidence suggests that this trend will change as the virus maintains the ability to rapidly mutate and evolve various forms of resistance to the combinations of available treatments.

Globally, less than 20% of people have access to basic HIV prevention programs. According to a research team led by UNAIDS and the WHO, two-thirds of the 45 million new HIV infections that are projected to occur between now and 2010 could be averted, if proven prevention strategies, used in combination are scaled up.²¹⁹

“In sub-Saharan Africa where one in three adults is living with HIV/AIDS, some of the countries’ infection rates continue to rise beyond levels previously thought possible.”²²⁰ UNAIDS estimated HIV/AIDS mortality rates in sub-Saharan Africa to be

²¹⁸ Nicholas Eberstadt, “The Future of AIDS,” *Foreign Affairs*, v. 81 i6, Nov-Dec 2002, p22

²¹⁹ J. Stover et al., Can we reverse the HIV/AIDS pandemic with an expanded response? *Lancet* 2002; 360:19-20

²²⁰ Nicholas Eberstadt, “The Future of AIDS,” *Foreign Affairs*, v. 81 i6, Nov-Dec 2002, p22

over 2 million in 2001.²²¹ The life expectancy in the African and Asian states most dramatically affected by AIDS is projected to drop to 25 years by 2010 according to the US Agency for International Development.²²² South Africa has one of the largest infected populations in the world with 4.7 million people infected with HIV.²²³

“Recent data suggests that the proportion of the world’s new HIV infections occurring in Asia has risen sharply in the past two years as the epidemic has outstripped efforts to stop it according to a UN report released on July 6, 2004.”²²⁴ To the surprise of UN health officials 1.2 million of the estimated 4.8 million new infections in 2003 occurred in Asia. That figure rose from one in five, or about 910,000 of the 4.4 million new infections in 2001.²²⁵ China and India stand on the brink of widespread epidemics, as HIV spreads from groups at higher risk to the broader population. UNAIDS has suggested that there were about four million Indians who were HIV positive in 2001 a figure is consistent with New Delhi’s official estimates.²²⁶ “In June of 2002 an unnamed UN official told *The New York Times* that there could be as many as 6 million HIV cases in China today. If that claim proves accurate, China would currently have the largest HIV population of any country in the world.”²²⁷ The H.I.V. epidemics in Asian countries

²²¹ Nicholas Eberstadt, “The Future of AIDS,” *Foreign Affairs*, v. 81 i6, Nov-Dec 2002, p22

²²² Laurie Garret, “The Return of Infectious Disease”, *Foreign Affairs*, Jan-Feb 1996 v74 n1 p66 (14) (internet p 4)

²²³ South Africa HIV/AIDS statistics, www.avert.org. Internet (last accessed 7-19-04) <http://www.avert.org/safricastats.htm>

²²⁴ Lawrence Altman, “ UN Report Shows Concern Over Rise of HIV in Asia”, *New York Times*, July 7,2004. <http://www.nytimes.com/2004/07/07/international/asia/07aids.html>

²²⁵ Ibid

²²⁶ Nicholas Eberstadt, “The Future of AIDS,” *Foreign Affairs*, v. 81 i6, Nov-Dec 2002, p22 internet 3

²²⁷ Ibid internet 4

began largely among drug users who inject themselves, prostitutes and gay men, but are now quickly moving into the general population.²²⁸

Infection rates have dramatically increased in Russia as well, due to widespread injection drug use and earlier initiation of sexually transmitted diseases.²²⁹

Over the past 15 years, Russian medical authorities have registered a cumulative total of about 200,000 HIV-positive patients. Independent estimates, are much higher. According to UNAIDS the figure was 700,000 carriers in 2001. The Russian Academy of Medicine's suggests that the total was close one million in mid-2002.²³⁰

Much of the problem lies with the lack of government action. Early on when the epidemic began, China and the USSR rebuked attempts to promote educative efforts over restrictive measures. "China denied the existence of homosexuals, drug users, and prostitutes within it borders, thus insisting AIDS couldn't threaten the People's Republic while the Soviet Minister of Health Yevgeny Chazov insisted that Slavic genetic superiority had rendered the populace immune to the virus."²³¹ More recently, the Russian government has restricted nonrussian organizations from financing related health activities, the World Bank- proposed programs to combat tuberculosis, which is associated with HIV infection that is now endemic throughout the country.²³² The South African leadership has gone as far as to express doubts about the relationship between AIDS and HIV and has raised questions about the effectiveness of the standard drug treatment.²³³

²²⁸ Lawrence Altman, " UN Report Shows Concern Over Rise of HIV in Asia", New York Times, July 7,2004. <http://www.nytimes.com/2004/07/07/international/asia/07aids.html>

²²⁹ Ibid 2 internet

²³⁰ Ibid 2 internet

²³¹ The Coming Plague, Laurie Garret p476

²³² Nicholas Eberstadt, "The Future of AIDS," Foreign Affairs, v. 81 i6, Nov-Dec 2002, internet 3

²³³ New York Times July 10, <http://www.nytimes.com/2003/07/10/international/africa/10PREX.html?hp>

Studies suggest a relationship between the distribution of HIV and the transnational socioeconomic order. Further, the spread of HIV in the 1970s and 1980s was remarkably prevalent in the migrant labor populations as well as those involved in sexual commerce.²³⁴ A UN report from 1992 found that a major risk factor for HIV infection in women is being married. Each day three thousand women become infected, and five hundred infected women die.²³⁵ This is not to say that it is marriage per se that places young women at risk. Throughout the world, most women with HIV are living in poverty. “The means by which confluent social forces, such as gender inequality and poverty come to be embodied as risk for infection with this emerging pathogen have been neglected in biomedical, epidemiological, and even social science studies on AIDS.”²³⁶

Another area of particular concern is the effect the disease has on the military capabilities of the more affected nations. It was recently discovered that 40% of Uganda’s military was infected with HIV. States that cannot control the proliferation of HIV in their militaries stand to become weaker states and susceptible to civil unrest.²³⁷ “The adverse impact of infectious diseases on economic and military capabilities amplify the ravages of AIDS. Therefore, Infectious diseases would not only have the potential to contribute to individual and social disintegration but it could also contribute to interstate and civil war.”²³⁸

In Eurasia HIV continues to proliferate at a rate close to that of sub-Saharan Africa. The majority of the world’s population lives in Eurasia. It is estimated that five

²³⁴ Paul Farmer, *Social Inequalities and Emerging Infectious Diseases*, 2 *Emerging Infectious Diseases*, (Oct-Dec 1996) p6

²³⁵ *Ibid* 6

²³⁶ *Ibid* 6

²³⁷ *Ibid* 14

²³⁸ *Ibid* 14

out of every eight people on the planet live there.²³⁹ It has substantial economic weight with a combined GNP in 2000 of \$15 trillion exceeding the GNP of the United States. Four out of five of the world's million- strong armies, and four of the seven declared nuclear states are located within Eurasia.²⁴⁰ Thus, unlike in sub-Saharan Africa, Eurasia is less insulated from the world and an unfolding HIV/AIDS epidemic will have major worldwide repercussions.²⁴¹ “Over the decades ahead, HIV/AIDS is set to be a factor in the very balance of power within Eurasia and thus in the relationship between Eurasian states and the rest of the world.”²⁴²

The recent XV International AIDs Conference highlighted concerns that the magnitude and impact of the HIV/AIDS pandemic is falling out of focus as the world responds to terrorism, war and a poor economy. Further that not enough is being done to provide greater access of AIDs drugs to populations most in need ²⁴³

There is no single preventive mechanism that will eliminate HIV/AIDS, the already proven medical interventions must be made available and targeted toward the most affected populations. Doing so will require dramatic declines in drug prices which involves the coordinated efforts of both the pharmaceutical industry and governments. Novel agreements have already been made with developing countries to produce generic forms of the medications, but more can be done to incentivize the pharmaceutical industry to pursue such efforts. The cost of developing many of these new medications is often prohibitive so care must be provided to maintain financial incentives to keep the

²³⁹ Nicholas Eberstadt, “The Future of AIDS,” *Foreign Affairs*, v. 81 i6, Nov-Dec 2002, p22

²⁴⁰ *Ibid* 22

²⁴¹ Nicholas Eberstadt, “The Future of AIDS,” *Foreign Affairs*, v. 81 i6, Nov-Dec 2002, p22

²⁴² *Ibid* 2

²⁴³ International AIDS Conference XV Bangkok. Internet (last accessed 7-19-04)
<http://www.unaids.org/en/default.asp>

industry in business, which involves among other things effective governmental/legal reforms.

Conquering HIV/AIDS not only involves medical interventions but should also involve community-based activities that encourage delaying sexual activity, condom promotion, voluntary HIV testing and counseling. In Sub-Saharan Africa, the region hardest hit HIV/AIDS only six percent of people have access to voluntary counseling and testing, in fact many young people are unaware of the basic facts about HIV/AIDS. In Asia and Eastern Europe approximately ten percent of injecting drug users are benefiting from harm reduction programs such as needle exchange and substitution therapy.²⁴⁴

Despite the disturbing epidemiological evidence presented here along with the potentially devastating destabilizing effects of the disease spread, a massive HIV/AIDS epidemic is not inevitable. There already exist numerous preventive mechanisms and institutions working on both disease prevention and cure. Much of the infrastructure necessary for reversing the effects of this pandemic is already in place. The UN with its joint advocacy network, UNAIDS, is moving in the right direction by coordinating interagency activities. However, there is still room for improvement with respect to efforts to curb the socioeconomic and geopolitical impact of the illness. It is not enough to simply coordinate the activity of UN agencies, the organization must further reach out to NGOs, IGOs, industry, individuals, and to the scientific/academic communities to establish a more effective and complimentary network. A GPP network modeled after the trisectoral approach of the RBM partnership would be effective in coordinating the efforts of these sectors and helping to put into focus the concerns and often overlapping

²⁴⁴ “Access to HIV Prevention, Closing the Gap,” Supplement to Foreign Affairs, Global HIV Prevention Working Group May 2003, page 2.

interests of the actors involved. The state, civil society and industry all have different incentives for finding a cure and different approaches to conquering the disease. The RBM approach demonstrated how each sector can find its strength and the network can maximize the comparative advantages of each sector. Despite differing incentives and competing interests of the actors involved, with a more integrated approach and an established set of agreed upon principles, the potentially competing actors will have more incentive to cooperate and capitalize on the advantages of a GPP network.

c. Mad Cow Disease/new variant Cruztfeld/Jacob:

Bovine Spongiform Encephalopathy (BSE), or Mad Cow Disease appeared in the United Kingdom about twenty years ago and has since had a profound worldwide impact. Beyond the United Kingdom, Mad Cow Disease has been confirmed in Belgium, Denmark, France, Germany, Ireland, Liechtenstein, Luxembourg, the Netherlands, Northern Ireland, Portugal, Spain, and Switzerland. The disease essentially destroyed the British cattle industry and generated fears among leaders and citizens around the world. As a result the European Union attempted to curb the crisis while it was in its infancy.²⁴⁵ Because of the interdependent relationship between the EU and the US the consequences of the actions taken in Europe were ultimately felt in the US. Twenty-four percent of EU exports travel to the United States, and 23% of U.S. exports reach the EU.²⁴⁶

BSE is a chronic degenerative illness affecting the central nervous system of cattle. Animals that are affected by the disease may exhibit changes in temperament, such

²⁴⁵ Heather Berit Freeman Trade Epidemic: *The Impact of the Mad Cow Crisis on EU-US Trade Relations*, Internet (last accessed 7-15-04)

http://www.bc.edu/bc_org/avp/law/lwsch/journals/bciclr/25_2/08_FMS.htm

²⁴⁶ Heather Berit Freeman Trade Epidemic: *The Impact of the Mad Cow Crisis on EU-US Trade Relations*, Internet (last accessed 7-15-04)

http://www.bc.edu/bc_org/avp/law/lwsch/journals/bciclr/25_2/08_FMS.htm

as nervousness or aggression, abnormal posture, lack of coordination, decreased milk production, or loss of body weight despite continued appetite among other things.²⁴⁷

The period between the point at which an animal is infected until it begins to demonstrate signs of BSE is between two and eight years.²⁴⁸ Following the onset of the signs and symptoms of the disease, (two weeks to six months) the animal rapidly deteriorates and must be destroyed.²⁴⁹ The diagnosis is confirmed by a microscopic examination of the animal brain post-mortem by a veterinary pathologist.

Scientists believe that mad cow disease is transmitted through animal feed containing meat and bone meal contaminated with what are called prions. What is unique about prions is that they are neither viruses nor bacteria in fact they have no genetic material. Prions are infectious proteins that are believed to have the ability to change the structure of other proteins in infected individuals and convert them into other prions. Evidence suggests that the source of the contamination is the result of feeding cattle protein produced from the carcasses of other cattle or sheep that have been infected. BSE is classified as a transmissible spongiform encephalopathy (TSE), forms of which affect sheep and goats (scrapie), deer and elk (chronic wasting disease), domestic and wild cats (feline spongiform encephalopathy), and humans (Creutzfeld-Jakob Disease or CJD).²⁵⁰

²⁴⁷ Department for Environment Food and Rural Affairs, UK, Transmissible Spongiform Encephalopathies – BSE, Internet: last accessed 7-16-04 <http://www.defra.gov.uk/animalh/bse/bse-science/level-4-bse.html#symptoms>

²⁴⁸ Dr. Craig Embree, Large Animal and Medicine and Surgery course, Bovine Spongiform Encephalopathy Lecture, Tuft University Science knowledgebase: (last accessed 7-16-04) <http://www.tusk.tufts.edu/hfdb4/content/102941/103193>

²⁴⁹ Dr. Craig Embree, Large Animal and Medicine and Surgery course, Bovine Spongiform Encephalopathy Lecture, Tuft University Science knowledgebase: (last accessed 7-16-04) <http://www.tusk.tufts.edu/hfdb4/content/102941/103193>

²⁵⁰ Heather Berit Freeman Trade Epidemic: *The Impact of the Mad Cow Crisis on EU-US Trade Relations*, Internet (last accessed 7-15-04) http://www.bc.edu/bc_org/avp/law/lwsch/journals/bciclr/25_2/08_FMS.htm

Creutzfeld-Jakob Disease is a neurodegenerative illness native to cannibalistic tribes in Papua New Guinea. The illness was transmitted when members of the tribe consumed brain tissue of the recently deceased in a ritual as a means of preserving their spirit. “In May and October of 1995 three patients in Britain presented with a CJD-like illness after consuming potentially infected cattle meat.”²⁵¹

A new form of Creutzfeld-Jakob Disease called New Variant Creutzfeld-Jakob Disease (nvCJD) has been linked to the consumption of BSE-infected beef. This illness was identified almost ten years after the earliest reports of BSE. “Thus, assuming that the first case of nvCJD echoes the earliest exposure to BSE, the incubation period for the human illness could be ten to fifteen years. If this is true, the rapid increase of cattle infected with BSE in the late 1980s could lead to a parallel increase of nvCJD in the next few years.”²⁵² Before September 22, 2001, there had been 110 cases of nvCJD worldwide: 106 in the UK, 3 in France, and 1 in Ireland.²⁵³ The discovery of nvCJD turned this veterinary problem into an international public health problem.

The current institutional mechanisms for limiting the spread of such illness are governed by the WTO agreement on Sanitary and Phytosanitary Measures (SPS). The purpose of this agreement is not only to protect against the spread of food borne illness but also to protect trade against measures whose motives are more political. The SPS Agreement, prohibits the implementation of measures that are not based on scientific

²⁵¹Ibid

²⁵²Ibid

²⁵³Ibid

principles and assessment of risk.²⁵⁴ This is reflected in Article 5.7 of the SPS

Agreement. Article 5.7 states:

In cases where relevant scientific evidence is insufficient, a Member may provisionally adopt sanitary or phytosanitary measures on the basis of available scientific information, including that from the relevant international organizations as well as from sanitary and phytosanitary measures applied by other Members. In such circumstances, Members shall seek to obtain the additional information necessary for a more objective assessment of risk and review the sanitary or phytosanitary measures accordingly within a reasonable period of time.²⁵⁵

What is unique about this EID scenario compared with the others is that this type of illness is more controllable. The infection is not transmitted from person to person and can be controlled by limiting contact with infected animals and consumption of related animal products. WTO agreements in this scenario are more enforceable and effective because preventing transmission does not involve quarantining humans or dramatically restricting travel. The illness had a major global impact on the beef industry with repercussions in a number of other industries particularly the pharmaceutical industry which relies on bovine serum for producing vaccines.

Overall I think that the institutional mechanisms already in place were effective at preventing what could have been a major international public health hazard and more likely than not saved thousands of lives. The disease was identified early on and effective cattle quarantining procedures were quickly put into place along with meticulous screening procedures. The approach taken by the

²⁵⁴ Heather Berit Freeman Trade Epidemic: *The Impact of the Mad Cow Crisis on EU-US Trade Relations*, Internet (last accessed 7-15-04)

http://www.bc.edu/bc_org/avp/law/lwsch/journals/bcicl/25_2/08_FMS.htm

²⁵⁵ WTO agreement on Sanitary and Phytosanitary Measures, internet: last accessed 7-19-04:

http://www.wto.org/english/tratop_e/sps_e/sps_agreement_cbt_e/c8s2pl_e.htm

WTO appeared to have been effective at halting the spread of BSE to humans. The institutional procedures were well applied, rules were well established, there was a high degree of interaction tied together by these rules, the necessary information was available and there was a reasonable degree of cooperation among states despite numerous trade conflicts.

Although all of these mechanisms were able to effectively control the illness the system failed to protect cattle industry. The economic consequences of the outbreak on the cattle industry did more harm to more people than the illness itself. I think that this is where a GPP network with a more integrated set of complimentary actors would have been more helpful at mitigating the negative consequences associated with protecting the human population. By bringing together actors from the cattle industry, state governments, consumers, and the scientific community, a GPP network would be able to more effectively clarify the underlying interests and find better ways of controlling and monitoring the spread of the illness without completely destroying the economic well being of those most reliant on the cattle industry.

Better allocation of research funding through a GPP network might help to more quickly identify an effective vaccine or a cure as opposed to destroying hundreds of thousands of potentially infected livestock. More integrated research might lead to the development of more effective screening techniques and safety procedures regarding cattle feed. More effective communication among veterinarians and cattle herders might help to more quickly identifying the illness and preventing disease infiltration. All of this would serve not only to prevent the

spread of illness within the human population but it would also mitigate the financial impact of those reliant on the cattle industry.

SECTION IV

CONCLUSIONS:

It is almost self-evident that deeper social and economic integration, coupled with the revolution in technology, requires that a growing number of public goods be provided at the global level. Less clear is whether the right structures and institutions now exist at the global level to facilitate such a process. What is or is not in the public interest is the outcome of the public policy making process, which in any system governed by democratic principles must be participatory and transparent and reflect the view of the majority of those affected.²⁵⁶

Advances in communication, travel and technology in the last century have changed the global environment and public health in ways that I have only begun to describe. The gradual erosion of state sovereignty in the face of globalization has dramatically altered the way states interact. It is more frequently the economics that dictate inter-state interaction and as such the conventional approach taken by states toward protecting the public health of its citizens has changed. Interstate travel and commerce has increased to levels unseen on this planet have enhanced the ability of microbes to fill niches that would have otherwise taken centuries to fill. Changes in human behavior, such as the sexual revolution of the 1960s have led to proliferation of all kinds of sexually transmitted diseases and at levels never before described. The bottom line is there are more microbes out there, they are evolving more rapidly, can spread at rates that are almost indescribable and to top it off our ability to combat illness has become hindered by our own technological advancement. States are less able to control

²⁵⁶ Wolfgang Reinicke, Francis Deng, Critical Choices The United Nations, Networks and the future of Global Governance, International Development Research Centre, Ottawa, ON, Canada. 2000, p2

their borders, the elected officials of states are in many cases less in control than the industry leaders, and everyone has different yet competing interests.

The solution to these problems lies with more effective and integrated systems of coordination and communication. International institutions within GPP networks are most effectively able to meet the challenges posed by globalization and the emerging threat of infectious disease. At present the best way to stay ahead of the microbes is to curve the evolution of the interstate system into a more cooperative system that can approach these challenges in a more efficient way. GPP networks and institutions help to provide the underlying framework and flexibility that can push the international system in that direction.

International institutions can facilitate cooperation between all actors in a number of ways. Institutions in leadership positions can establish rules and regulations agreeable to all actors to help dispense with competing interests and realize more complimentary underlying interests. They can take advantage of the flexibility of soft law to give states the opportunity to try out an agreement without actually formally committing and set the groundwork for hard law agreements that formally commit actors and can help to reduce transaction costs, facilitate communication, increases the number of transactions and realize long term benefits. Given the described advantages of such cooperation actors are less likely to cheat on such agreements even in the face of relative gains.

Institutions with such leadership roles can spearhead efforts to get GPP networks off the ground. With the right leadership committed to its goals such networks can effectively pool together and maximize the effectiveness of all available resources. Further it can coordinate the interests of all the actors with a global public discourse to

develop a more comprehensive database of knowledge. It can facilitate the negotiation process and establish global standards. Such networks will be able to combine the voluntary efforts and ingenuity of business with the rule-making authority and coordination of international organizations.²⁵⁷

²⁵⁷ Wolfgang Reinicke, Francis Deng, *Critical Choices The United Nations, Networks and the future of Global Governance*, International Development Research Centre, Ottawa, ON, Canada. 2000, p29

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