

# The WHO Secretariat, Norm Entrepreneurship, and Global Disease Outbreak Control

by Adam Kamradt-Scott,<sup>1</sup> London School of Hygiene & Tropical Medicine

*In this article, I explore how a small group of committed individuals within the World Health Organization (WHO) Secretariat introduced a new norm in global communicable disease control. Drawing on Finnemore and Sikkink's (1998) "norm life cycle" theory and Barnett and Finnemore's (2004) work on international-organizations-as-bureaucracies, I examine how the new practice of using unofficial sources of information to verify disease outbreaks was progressively advanced under the guise of revising the International Health Regulations (IHR). By demonstrating the effectiveness of this new norm and through a favorable convergence of events such as Gro Harlem Brundtland's appointment as Director-General and the 2003 SARS outbreak, this small group of individuals successfully managed to embed this norm at the heart of contemporary global disease outbreak control.*

Most international relations (IR) scholars today would agree that norms play a very important role in shaping contemporary politics. The divides between the "international" and the "domestic" are increasingly collapsing; ideas promoted at the international level can, and do, have a large impact on local populations, and vice versa. It is also fair to say that it is now generally accepted that international organizations (IOs) perform a vital role in promoting norms. Indeed, a variety of studies have been conducted over the past three decades that demonstrate how certain norms such as decolonization (Barkin and Cronin, 1994), anti-slavery (Ray, 1989), anti-apartheid (Klotz, 1997), anti-landmines (Wexler, 2003), and democratization (Rushton, 2008), have come to inform and shape the conduct of international politics. As any survey of these studies will reveal, IOs have often featured prominently in both producing and promoting these norms.

Norms are defined as "collective expectations about proper behaviour for a given identity" (Jepperson, Wendt and Katzenstein, 1996). Said another way, they are the "standards of behavior" that delineate a sense of "oughtness" in how actors should conduct themselves (Florini, 1996). While much has been written over the years about their influence, less attention has been paid to how norms have been constructed and how they have come to prominence. The challenge to develop a theory around norm change was first articulated by Ann Florini, but a small group of theorists, mostly from the constructivist school that includes

---

1. Acknowledgements: This research has been made possible in part through funding from the European Research Council under the European Community's Seventh Framework Programme—Ideas Grant 230489 GHG and funding from the SAIS Global Health and Foreign Policy Initiative. The author is grateful to Dr. Simon Rushton (Aberystwyth University), and the two anonymous reviewers, for comments on earlier drafts of this paper. All views expressed remain those of the author.

Martha Finnemore, Kathryn Sikkink, Michael Barnett, and Rodger Payne, have progressively added to this literature. Even so, the role IOs have played in constructing norms has been under-researched despite the fact that IOs have periodically demonstrated they “construct the social world in which cooperation and choice take place. They help define the interests that states and other actors come to hold” (Barnett and Finnemore, 2005:162).

In this article, I aim to accomplish two main tasks. The first of these is to build on Martha Finnemore and Kathryn Sikkink’s (1998) work on norm influence. Specifically, in the following pages, I unpack how a small group of committed individuals within the Secretariat of the World Health Organization (WHO) successfully ushered in a new norm in international communicable disease control—the utilization of nongovernment information sources for disease outbreak identification and verification—enshrining this new normative practice in the revised International Health Regulations (2005) (‘IHR 2005’). The second task I seek to undertake is to examine more fully how IOs exercise various forms of bureaucratic authority and how this authority can either serve to hinder or facilitate norm change. Michael Barnett and Martha Finnemore have noted that for far too long IOs have been treated as “structures of rules, principles, norms, and decision-making procedures through which others, usually states, act” (2004:2). They go on to make the rather compelling case that IOs are capable of wielding their bureaucratic authority to great effect, using knowledge and expertise as a basis to exert power as independent actors. Drawing on their theoretical insights and the case study described below, I argue that future contributions to IR theory must incorporate these actors as actors in their own right, as any analysis that seeks to explain international affairs while focusing solely on state-based conduct only presents one side of the story. In this sense, the article follows in the constructivist “barefoot empiricist” tradition that emphasizes conceptual analysis over a hard and fast theory of international relations (Ruggie, 1998).

The article proceeds in three parts. The first section briefly summarizes the theoretical elements, namely, Finnemore and Sikkink’s model of norm influence, and Barnett and Finnemore’s theory of IOs-as-bureaucracies. Taking these insights and applying them to primary source material gathered from policy documents, official reports, speeches, draft legislation, and key informant interviews, the second section describes how a small but committed group of individuals within the WHO Secretariat successfully brought about norm change. The third section then discusses the implications of these findings alongside some of the challenges encountered by this type of empirical research, before concluding with some ideas about future research directions.

### **The Norm “Life Cycle” and IO Power**

More than a decade ago Finnemore and Sikkink argued that norm research held the promise of opening up new insights and prompting new conversations within the discipline of IR. To facilitate this research, they proposed a model for how norm research could be conducted, which they coined the “norm ‘life cycle.’” According to this framework, norms come to prominence when certain milestones, or stages, are achieved. The first stage is that of *norm emergence*, and requires the involvement of *norm entrepreneurs* and *organizational platforms* to reach a *tipping point* whereby the new norm achieves a measure of acceptance. Norm entre-

preneurs are individuals, or groups of individuals, who set out to challenge the status quo by creating or highlighting a particular issue in need of change. The tools they use to accomplish this are language and “cognitive frames,” which seek to persuade target audiences that the new ideas being proposed directly corresponds with pre-existing ideas and social norms (Payne, 2001). In the international context, organizational platforms such as IOs are then often needed to launch their campaign(s) for change. In order for a new norm to gain traction within a wider context though, they must be adopted (and promoted) by certain “critical states” who become *norm leaders* (Finnemore and Sikkink, 1998:901). Where these factors converge, and the frames have persuaded a sufficient number of governments to adopt the norm, a tipping point occurs in which the norm gains a measure of acceptance.

The second stage of the “life cycle” is what Finnemore and Sikkink have termed a *norm cascade*, which happens when governments adopt the norm in the absence of pressure from domestic populations (1998:902–04). In this sense, a norm cascade could equally be described as international socialization, a process whereby states conform to a type of “peer pressure” (Ramirez, Soysal and Shanahan, 1997), adopting the new norm as it is perceived to be in their interests to do so due to concerns over legitimacy or standing (Claude, 1966). As such, it has been theorized that esteem, both at the state level (collective esteem) and within the internal reasoning of the national leader (individual esteem) may have a significant role to play in encouraging norm compliance (Axelrod, 1996). Elster has noted, for instance, that social norms are often “sustained by feelings of embarrassment, anxiety, guilt and shame that a person suffers at the prospect of violating them” (1989:100). Finnemore and Sikkink posit that collective esteem and the desire to conform amongst states can be a powerful motivating factor in encouraging norm compliance (1998:903–04). Under this analysis, where norm cascades transpire, just as those countries who had already adopted the norm are viewed as *norm leaders*, those who later adopt the norm are classed as *norm followers* and those who continue to resist adopting the norm are categorized as *norm violators*.

The third and final stage of the norm “life cycle” is reached when the new norm is *internalized*. In essence, internalization has occurred when acceptance of the new norm has become so widespread that compliance has become an unconscious response rather than a considered decision. The new norm has attained a “taken-for-granted” status (*ibid.*, 1998:904). Defection can obviously still occur, but as Axelrod suggests, “violating an established norm is psychologically painful even if the direct material benefits are positive” (1986:1104). Arguably, this psychological damage may occur within a collective mindset as well—being labeled a climate change “denier,” for example, generated considerable internal domestic pressure for the United States’ government to adjust their external negotiating position on climate change (Evans and Steven, 2007; Brunnee, 2008). Thus, in circumstances where norms have been internalized by the majority, being perceived as a norm violator can potentially produce a strong motivation for change.

As noted earlier, IOs have historically performed a very important, and in many cases, leading role in advancing new norms and embedding them within the consciousness of the international community. In short, they have often served as “conveyor belts for the transmission of norms and models of good political behavior” (Barnett and Finnemore, 2004:33).

Key to this function has been the authority IOs wield. In their work, Barnett and Finnemore have hypothesized that much of the ability of IOs to influence contemporary international affairs derives from their nature as bureaucracies. As bureaucracies, these authors contend IOs possess several types of authority—rational-legal, delegated, moral, and expert, which they utilize to great effect to “induce others to defer to their judgment” (2004:20-29). Rational-legal authority, for example, emphasizes the importance of procedures and rules, which serve to impersonalize (and thereby legitimize) decision-making. In exercising this authority, IOs present themselves as impartial, technocratic, and value-neutral, devoid (in theory) from any external political manipulation or ideology. Delegated authority, by way of contrast, is the authority conferred on IOs by states, and sets the broad parameters for what tasks the IO is permitted (or prohibited) to undertake. This authority, in part, constitutes a third type—moral authority, which derives from the fact that IOs are often created “to embody, serve, or protect some widely shared set of principles” (*ibid.*, 2004:23). That is to say, by adhering to their *raison d’être*, IOs portray themselves as the guardians of shared values against partisan interests, thereby appearing above politics and garnering support for their activities. The fourth type of IO authority Barnett and Finnemore identify is that of expert authority. As these authors observe, “One reason we create bureaucracies is that we want important social tasks to be done by people with detailed, specialized knowledge about those tasks” (2004:24). It is that specialized knowledge that confers authority, which is valued principally because it is not available to everyone (Barnett and Finnemore, 1999). Thus, by its very nature, expert authority both resonates with and reinforces the rational-legal authority that bureaucracies embody, justifying at least in part the reason for their existence.

### **The Who Secretariat and International Norm Change**

The WHO was established as a UN-specialized agency in 1948. The allocated task of the organization remains “the attainment by all peoples of the highest possible level of health,” which is defined as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity” (WHO, 2005:1–2). It is comprised of six regional offices (Americas, South-East Asia, Western Pacific, Eastern Mediterranean, Europe, and Africa) and a central headquarters located in Geneva, Switzerland, with a total staff complement approximating 3,500 people (Burci and Vignes, 2004:51). The primary function of the intergovernmental organization is to act as a directing and coordinating agency in international health matters, but it is also expected to fulfill a strong normative role in creating health-related standards that promote cooperation (*ibid.*, 2004: 124).

Given its very broad technical mandate, the WHO Secretariat both exemplifies and encapsulates many of the types of authority Barnett and Finnemore (2004) argue are characteristic of IOs-as-bureaucracies. For example, the organization’s normative function to create health-related legal instruments such as conventions, agreements, regulations, and recommendations (Burci and Vignes, 2004:124) permit it to exercise rational-legal authority. Similarly, although Member States delegated a measure of authority when they established the intergovernmental organization in 1948, this authority is renewed on an annual basis by governments when the World Health Assembly convenes to endorse the IO’s program of work and assign

new tasks. Finally, the focus on improving the world's health grants the IO a measure of moral authority, while the strong preference for staffing the secretariat with medical professionals serves to reinforce the IO's expert authority to the extent that some external observers have referred to the organization as the "medical mafia" (Lee, 1998:7).

The adoption of the International Sanitary Regulations in 1951 (renamed the International Health Regulations in 1969) was one of the first examples of where the organization's core functions of directing international health work and norm formation coalesced. The purpose of the regulations were "to ensure maximum security against the international spread of diseases with a minimum interference with world traffic" (WHO, 1983:5) and once adopted, were automatically binding on every Member State unless they lodged an explicit reservation. Under the terms of the 1951 legislative framework, governments were obligated to report outbreaks of six "quarantinable" diseases—plague, cholera, yellow fever, smallpox, louse-borne relapsing fever, and louse-borne typhus—but compliance problems with governments' reporting practices were noted immediately after the regulations' adoption (Delon, 1975). Further, between 1951 and 1981, the scope of the regulations were progressively reduced to three reportable diseases—cholera, plague, and yellow fever (Fidler, 2005). By 1995, and in the face of mounting evidence that the IHR were not fit-for-purpose, the decision was taken to revise and update the legislative instrument (see below).

The revised IHR 2005 officially entered into force on 15 June 2007. For many in the international community, the passage of this treaty went largely unnoticed. To public health practitioners and policy-makers, 15 June was hailed as the start of a new era (Fidler, 2005; Baker and Fidler, 2006). In large part, much of this new-found sense of optimism arose from the fact that the revised IHR 2005 had been expanded well beyond their 1969 legislative predecessor. Indeed, whereas the former IHR (1969) treaty pertained to only three diseases, the revised IHR 2005 had been explicitly designed so as to apply to any public health event that has the capacity to spread beyond the borders of any one country. This notion has been encapsulated in the phrase "public health emergency of international concern" or PHEIC, and it is this concept that rests at the heart of the restyled framework (WHO, 2008).

Understandably, one of the first steps in trying to contain the spread of a new disease is to identify an outbreak is occurring. Under the 1969 IHR, a practice emerged whereby only Member States were permitted to notify the WHO Secretariat of an outbreak within their territory (WHO, 1983). Other reports, even if substantiated by multiple sources, were ignored. The one exception to this trend took place in 1970 when the Canadian-born Director-General, Dr. Marcolino Candau, reported an outbreak of cholera in Guinea in a WHO publication (WHO, 1970), but the condemnation that ensued from Member States cemented the practice that only official reports from government sources were to be utilized. Yet, even though the reporting burden was relatively small (i.e., three diseases), governments would still often go to considerable lengths to avoid declaring an outbreak, usually because neighboring countries would impose travel bans and trade restrictions resulting in economic losses (Cash and Narasimhan, 2000). In accordance with the terms of the revised IHR 2005, the WHO Secretariat is now permitted to receive notifications of disease outbreaks from nongovernment sources (WHO, 2008:12). While this may initially appear to be a superficial change, in practical terms

it represents a significant leap in global infectious disease control as it increases the likelihood WHO will be notified about disease outbreaks faster, thereby increasing the chances (in theory) of rapidly containing an outbreak before it becomes a global problem. The ability of the secretariat to now obtain reports from nongovernment sources is one of the key distinctions between the former and revised IHR treaties and represents a new norm in global disease outbreak control.

To understand how a small but committed group of individuals ushered in this new norm, we must first examine some of the history of how the IHR revision process came about. The impetus to update and refresh the IHR originated in 1995 following several serious outbreaks of infectious disease in the early to mid-1990s. These notably included the reappearance of cholera in 1991 in Latin America, a decade after it had been eradicated; the resurgence of tuberculosis, and the arrival of new strains that were resistant to all known forms of treatment; an outbreak of plague in the Indian city of Surat in 1994 that caused over US\$2 billion worth of economic damage to the national economy; and an outbreak of Ebola Hemorrhagic Fever (EHF) in Zaire in 1995 that proved to be one of the most lethal diseases to ever infect humankind. The latter two outbreaks, which occurred very close to the annual World Health Assembly (WHA) meeting where the IHR were to be discussed, very clearly revealed the framework and WHO's outbreak policies and procedures needed urgent revision. David Heymann, former Assistant Director-General of Health Security and Environment, has recalled:

The request from the Assembly came because there were two events that really impacted on WHO's ability to respond to the needs of countries. One of those was the Surat plague outbreak and the other was the Kikwit Ebola outbreak in the former Zaire. It was those two events. They jammed the switchboards at WHO and there was really no system to get the information out to where people could find it even though we were already in an electronic era (Heymann, 2009).

The EHF outbreak was particularly disconcerting, as the disease was not subject to the regulations—a point that Guénaël Rodier, who was part of the WHO team deployed to Surat and later director of the WHO Department of Communicable Diseases Surveillance and Response (CSR) has noted:

Following the plague outbreak in India it was very clear that the IHR were obsolete, and then when emerging infections that were not in the IHR like Ebola occurred in Kikwit, then it was even clearer that the IHR not only were obsolete but needed to be revised to be able to integrate emerging infections (Rodier, 2009).

Adding to concerns over ordinary disease outbreaks was also the discovery in 1991 of stockpiles of biological and chemical weapons in the first Iraq war, raising the specter that disease outbreaks may not always be naturally occurring (Tucker, 1999). The former Soviet Union's admission, a year later, that it had maintained an offensive biological weapons program throughout the entire duration of the cold war compounded anxieties even further. Aside from the risk that the weapons themselves might fall into enemy hands, concern also existed that the scientists who had developed these weapons would be recruited by terrorist organizations. This fear was given further weight when, in March 1995, the Aum Shinrikyo cult released a biological weapon on a Tokyo subway. Needless to say, these events were fresh in the minds

of government representatives as they met in Geneva in May 1995, and a new consensus emerged not only to revise the outdated and largely ineffective IHR but also to update WHO's disease outbreak control policies. WHA passed two resolutions to this effect: WHA48.7: Revision and updating of the International Health Regulations; and WHA48.13 Communicable disease prevention and control: new, emerging, and re-emerging infectious diseases.

As reflected in resolution WHA48.7, Member States came to the view that developing a new legal framework was not enough; it had to be a framework that reflected practical realities. In particular, it had to be a treaty capable of adjusting to changing circumstances and new threats. By passing the second resolution WHA48.13, Member States authorized the secretariat to develop new strategies that would more rapidly enable the containment of new disease outbreaks. In effect, this gave WHO scope to experiment with developing new disease outbreak alert and response methods to see what worked. If a new system, policy, or process did not work, it was to be discarded. But if it did, the regulations would be written around the new system, ensuring operational needs meshed with the legislative instrument. To give weight to the assembly's request, WHO Director-General, Dr. Hiroshi Nakajima, recognized he needed to find someone who understood both the politics and the practicalities of disease outbreaks. In October 1995, he appointed Dr. David Heymann to head up the newly created WHO Program on Emerging and other Communicable Diseases.

Heymann, a U.S. national, gained his reputation as a medical epidemiologist while working in India for two years on the WHO Smallpox Eradication Program and some thirteen years in sub-Saharan Africa with the U.S. Center for Disease Control and Prevention (CDC). After joining WHO in 1988 "on loan" from the CDC, he became chief of research activities in the WHO Program on AIDS—a position Heymann held until his appointment as director of the new emerging diseases program in 1995. Part of his remit as director of the new emerging diseases department was to oversee the IHR revision process, and he assembled a small project team headed up by Dr. Lindsay Martinez to commence that work. Martinez' background was in veterinary pathology and malaria, but her team, which consisted of the sum total of three people, was drawn together from a variety of WHO departments. Their appointed task: to coordinate the revision process across what was then approximately 185 Member States. Heymann spelled out his vision:

What we wanted to achieve was "a world on the alert and able to detect and respond to infectious disease events of international importance within 24 hours." That was the vision, understanding that it was very difficult for countries to report infectious diseases because they knew they could be stigmatized and suffer great economic loss as well as experience negative impacts on human health. And so the second part of the vision was changing the norms of reporting so that it became "expected and respected" to report outbreaks despite the economic consequences that could occur (Heymann, 2009).

Despite what initially appeared to be an enthusiastic start, it soon became apparent the IHR team was fighting an uphill battle. Indeed, some two years passed before Martinez' team had obtained sufficient resources and interest to trial a new "syndromic" reporting system. Heymann recalls:

I believe that delays came because of a lack of feeling the urgency of the revision process among the Member States. And I don't think they felt urgency until the SARS outbreak

occurred. We were working with Member States trying to increase attention to the revision, publishing occasional documents in the *Weekly Epidemiological Record* and discussing it at the World Health Assembly. But they really never engaged in earnest until after the SARS outbreak (Heymann, 2009).

As a result of this disinterest, the IHR team was starved of financial resources and Heymann was forced to seek external funding from the Canadian government and the United Kingdom's Department for International Development (Heymann, 2009). Johan Giesecke, who took over as the IHR revision project manager between 1999 and 2000, has confirmed this view, noting:

I think that was a project that really did not receive enough resources, funding, or impetus. It was quite interesting. Most of the pilot studies they tried to do in different Member States never went through and they were never fully completed (Giesecke, 2009).

Not surprisingly, the syndromic reporting trial failed to meet expectations and it was prematurely terminated in March 1999 after running for only eighteen months.

While Member States' disinterest may have been one cause of the trial's failure, several internal developments within the organization arguably contributed to delays as well. Nakajima's announcement in early 1997 that he would not be seeking re-election to a third term, for instance, diverted attention to finding and appointing his successor. To many, Nakajima's imminent departure was a very welcome development as the organization's reputation as an effective and competent IO had suffered greatly under his watch (Godlee, 1994). Although the announcement did not directly impede Heymann's team in their day-to-day work, it did mean major policy decisions had to be postponed (Ryan, 2009). Then, following Dr. Gro Harlem Brundtland's appointment as Director-General in 1998, the IHR revision process was further hampered by an extensive internal review of the organization's programs. The outcomes from this review process were not made public until early the following year, but it was immediately apparent to some within the secretariat that Brundtland had arrived with a very clear agenda of what the organization should (and should not) be doing. The IHR revision process was not especially high on her list of priorities, as Johan Giesecke has observed:

I felt that the interest in the Secretariat, high up, was very mild, and the resources were almost non-existent . . . the Tobacco Convention was the big thing at the time, which got all the resources . . . so there was very little interest in the technical bits of the IHR (Giesecke, 2009).

Mike Ryan, who was brought in to head up the operational side of WHO's outbreak alert and response operations, also concurs with this view, noting:

I think the Organization didn't really see the value of what we were doing in political terms. Within global outbreak and alert and response we could see it, and we did feel our partners appreciated it, but when I started running global alert and response our core budget was about \$20,000. All of our staff were on short term contracts that were between 3 and 11 months duration. The Organization was increasingly becoming orientated towards global policy, normative function, and health systems development (Ryan, 2009).

Thus, although a provisional draft of the regulations incorporating the proposed syndromic reporting had been circulated in February 1998, by 2000, following the trial's collapse and Brundtland's appointment, the IHR Revision Project Team were effectively back to square one.

In early 2000, Heymann appointed Dr. Guénaél Rodier to replace Lindsay Martinez as director of the CSR department. Rodier, who had trained as a medical doctor, had joined WHO in 1994 and was one of the first staff members sent to Surat to assist the Indian authorities in containing the plague outbreak there. Upon his return, Heymann had appointed Rodier to head up the Integrated Surveillance and Response Unit within CSR, and between 1994 and 2000, they had come to know and respect each other's work. When Martinez announced her departure, Heymann elevated Rodier to head up CSR with responsibility to coordinate both the IHR revision and global outbreak response operations. One of Rodier's first tasks as director was to institute a shake-up of the division. This was aided, in part, by the fact that Johan Giesecke, who had been coordinating the IHR revision process over the previous year, had returned to his position at the Karolinska Institute in Sweden, after his contract expired in early 2000. As a result, Rodier appointed Dr. Max Hardiman as the IHR Revision Project Team Leader and merged the IHR and operations teams. Rodier recalls:

We ended up in a little bit of a dead end when it came to IHR. As the Director I realized the reason for that was there was a disconnect between the earlier drafts of the IHR—the rough revisions—and what we were actually doing. As a result, I asked the IHR team which was led by Max Hardiman to join another team led by Mike Ryan who was dealing with the operations, because I think by early 2001–02 we had a good sense of what the operations were in terms of epidemic intelligence, verification, control, and so on. So I merged the IHR team within Mike Ryan's group in the hope of achieving some kind of cross-fertilization to make sure they forgot about the previous text in a way. In effect, we started from scratch (Rodier, 2009).

In fact, in contrast to the IHR revision process that had come to a virtual standstill, the creation and expansion of the WHO's disease outbreak alert and response systems under Mike Ryan continued to grow and were yielding some very good results. Building on the work of the Global Public Health Intelligence Network (GPHIN) that had been established in 1998 between the Canadian health department and WHO, Rodier instituted a series of new policies and procedures to rapidly identify and respond to new and emerging disease outbreaks. Two core elements were at the heart of this new way of working that corresponded with Heymann's vision: the ability to identify outbreaks of disease that were specifically of "international concern," and secondly, the ability to identify these outbreaks as soon as they began.

The GPHIN network essentially functioned as a web-based search engine, which by early 2000 was continuously scanning some 600 electronic media sources for reports of disease outbreaks (Grein, et al., 2000). By July 1999, some 246 outbreak reports of "international concern" had been flagged and investigated using this new system. Of these, approximately 71 percent of the reports had been obtained through nongovernmental sources (*ibid.*). Although explicit approval of this outbreak verification strategy had yet to be obtained from WHA, Ro-

dier demonstrated the WHO Secretariat could use the nongovernmental information sources prudently and proficiently. In fact, it seems the only resistance to the new system actually arose from within the WHO Secretariat itself. Rodier recalls:

When I started looking at information outside data formally reported by countries it was not very well received within WHO because it was clearly against tradition. But once I came to appreciate that it was only our tradition, I realized there was no formal requirement to analyze or deal with only officially reported information. And I think it is important to point out that we never had a problem with countries saying ‘this is not WHO business’ or trying to stop us. The only problem we had at one point was actually our colleagues in one of the regional offices, but outside the WHO we never had problems (Rodier, 2009).

Ryan has also observed that there was some initial cause for hesitation:

We effectively had no framework. The IHR was essentially defunct. I would say quite frankly that by challenging governments with informal data that was coming in we were operating way beyond what was generally considered to be standard operating procedure in those days . . . we were effectively operating as a non-government organization inside the WHO, implementing processes that to many seemed to lack a firm regulatory base (Ryan, 2009).

In spite of these internal misgivings, the CSR team persisted. In selling their message, Heymann, Rodier, and Ryan emphasized that rumors about disease outbreaks could be just as economically damaging in a global environment as actual disease outbreaks themselves. By approaching Member States with this information as soon as it came to light, governments were in a position to verify the accuracy of the rumors. Where they proved correct, governments could take immediate remedial action (and request WHO assistance in the process). Where the information was shown to be inaccurate though, WHO could use its position as an independent technical body to denounce the rumors, thereby curtailing further economic damage. Ultimately, this proved to be a message that resonated strongly with the majority of governments around the world; through the outbreak operations arm of CSR under Mike Ryan’s leadership, the secretariat backed up its words with actions by sending teams of independent experts to verify disease outbreaks and offer assistance wherever and whenever it was needed. Thus, through the prudent and sensitive handling of unofficial information, Heymann, Rodier, and Ryan quelled lingering concerns regarding this new practice.

Somewhat fortuitously, the CSR team’s efforts coincided with broader reforms being implemented by Director-General Brundtland, and collectively they served to reinvigorate WHO in the eyes of its Member States. On her arrival, Brundtland had implemented a major restructuring program, appointed new senior managers, and had intentionally sought to recruit scientists of notable international reputation to strengthen the technical base of the organization and imbue it with greater legitimacy (Lerer and Matzopoulos, 2001). Member States had rewarded Brundtland’s reforms by increasing their extrabudgetary funds to support new programs and initiatives. By 2001, as a direct consequence of Brundtland’s reforms, extrabudgetary funds to WHO headquarters increased by over 25 percent compared to 1998, and the overall WHO budget had increased by over 16 percent (*ibid.*).

By mid-2000, external support for WHO's outbreak operations had grown to such an extent amongst Member States that the decision was taken to formalize and consolidate these developments. The Global Outbreak Alert and Response Network (GOARN) was then officially established in April 2000 under the management of Mike Ryan (WHO, 2000a; WHO, 2010), and its operation was endorsed by the assembly following the adoption of resolution WHA54.14: Global Health Security: Epidemic Alert and Response in May 2001. In terms of the Organization's IHR revision process, the assembly's ratification of WHA54.14 was a defining moment. As Rodier explains:

The World Health Assembly resolution on global health security, epidemic alert and response, was a milestone firstly because we introduced the concept of global health security for the first time. It was also a milestone because the World Health Assembly, or Member States, formally endorsed what we were doing (Rodier, 2009).

Indeed, in passing this one resolution, Member States (with the exception of the People's Republic of China) expressed their unreserved support for GOARN and the Organization's newfound approach to controlling and halting infectious disease outbreaks (WHO, 2001). It was a tipping point that sanctioned, among other things, the specific authority to utilize non-governmental sources of information to identify disease outbreaks (WHO, 2000b).

Between April 2000 and November 2004, when the final phase of the IHR revision process began, WHO's reputation for effectively managing disease outbreaks continued to grow and intensify under Heymann, Ryan, and Rodier's careful management. The successful operation of GOARN attracted strong support among not only low-income countries habitually affected by disease outbreaks, but following the September 2001 anthrax attacks in the U.S., the "network of networks" gained widespread support amongst high and middle-income countries concerned about bioterrorist attacks as well (Heymann, 2002). With virtually unfettered access to almost every country worldwide and a wealth of international technical expertise to draw upon, GOARN confirmed that the WHO Secretariat was in a unique position to coordinate what was now being widely described as "global health security" (Davies, 2008). This was no more clearly demonstrated than in the context of the 2003 SARS outbreak where, in response to a highly unusual convergence of events, WHO responded swiftly and decisively using their newly developed policies and procedures to contain the novel pathogen even though the IHR revision process was far from complete (Kamradt-Scott, 2011).

If the passage of resolution WHA54.14 was a defining moment for WHO, the 2003 SARS outbreak was a watershed event for the entire international community. Indeed, this one event mobilized the international effort to conclude the IHR revision process like no other. For the CSR Department (and especially Heymann, Rodier and Ryan), SARS provided a very timely opportunity to field test their new disease outbreak verification and response strategies in the context of a real-time global emergency, embedding them in contemporary disease outbreak practices. Contained within their new arsenal of tools was the ability to use unofficial sources of information. This new ability helped identify that a new disease had emerged, but the usefulness of this particular measure was most clearly demonstrated early on in the outbreak when a retired Chinese doctor publicly refuted his government's repeated claims that everything was under control (Benitez, 2003). Using this information, Director-General Brundtland

forced concessions out of the Chinese government for greater transparency and cooperation (Parry, 2003). Subsequently, it proved a turning point in international efforts to contain SARS and arguably contributed to how the disease was able to be contained so rapidly.

At the same time, the disease's swift international spread also enabled Member States to evaluate the WHO Secretariat and its new way of working. As a result, even as early as May 2003, while SARS transmissions were still ongoing, the secretariat produced a report that outlined the "lessons learned" from SARS, indicating how WHO's response to the disease would be incorporated into the IHR revision process (WHO, 2003a; 2003b). Likewise, as reflected in the text of resolution WHA56.28 that was passed at the height of the outbreak, Member States articulated their view that SARS had given "concrete expression" of the need to revise the IHR and develop disease eradication procedures all governments could agree upon (WHO, 2003c). To that effect, the assembly authorized the creation of the Intergovernmental Working Group on Revised International Health Regulations (IGWG) to finalize the framework ahead of the 58th WHA due to be held in May 2005. Mary Whelan, who was appointed chair of the IGWG, later recalled:

It took the SARS outbreak in 2003 to impart a sense of urgency to the revision process. SARS provided a graphic illustration that an international public health emergency could affect not only human and animal health in countries at great distances apart, but it could also seriously impact on the economic life and development of their economies. One SARS case in any city was enough to deal a major blow to its commerce as well as its health (Whelan, 2007).

The final stage of the IHR revision process in the form of IGWG took place between November 2004 and May 2005. Three sessions of IGWG were required in order for Member States to resolve their differences and agree on a final text for the revised legislative instrument. Interestingly, while there were several contentious areas of the treaty that required extensive negotiation—such as the definition of "disease," the application of "additional measures," and the use of the term "public health threat" as opposed to "public health risk"—the new practice of using nongovernmental sources of information was accepted virtually without question (Kamradt-Scott, 2011). As such, the practice of receiving other reports and using them to verify disease outbreaks was written into the new framework (see Article 9 and 10 of IHR 2005), and following the adoption of resolution WHA58.3 Revision of the International Health Regulations on 23 May 2005, this new norm became enshrined in international law.

### **Findings, Challenges, and Future Directions**

So what can we learn from the above? Certainly, the first lesson we can take away is that normative change is not a rapid process but one that takes considerable time. Moreover, this seems to be the case even when the process is relatively straightforward and builds on existing practices. For example, it is worth recalling that Member States authorized the WHO Secretariat to experiment with new disease outbreak alert and control strategies as early as 1995. It was not until 2001 that a tipping point occurred whereby the new practice of using nongovernmental sources of information to identify and verify disease outbreaks began to take hold, and it took a global emergency in the form of the 2003 SARS outbreak before the practice became

more widely accepted and collective expectations about what were considered appropriate standards of behavior coalesced. While temporal restrictions on normative change are arguably a positive development, it serves as a warning to those aiming to introduce new norms that they need to appreciate that shifting international consensus—even where an existing framework is shown to be unfit-for-purpose—will take a prolonged period of time.

A second finding is that normative change may also often be contingent upon a particular set of circumstances. It is debatable, for instance, whether the small group of norm entrepreneurs would have obtained such a favorable hearing had not several factors converged in a specific time and place. For example, Brundtland's appointment and the reforms she introduced served to reinvigorate WHO's reputation thereby enhancing the prospects for members of its staff to promote normative change. Similarly, the 2003 SARS outbreak provided the CSR Department with a very unique opportunity to demonstrate the effectiveness of their new policies and procedures. Questions can also be asked that had China not attempted to cover-up the extent of their outbreak, reinforcing their position as a norm violator, whether the benefits of using unofficial sources of information would have been demonstrated quite so effectively.

It is in this regard that the autonomy granted to the CSR Department by resolutions WHA48.7 and WHA48.13 additionally contributed to their ability to persuade the international community. Mike Ryan has succinctly summarized this view, noting:

Frankly speaking, I believe if we had gone to the international community in the absence of having already set up the intelligence verification, GPHIN and GOARN networks, and asked for permission to do that, I seriously doubt we would have ever got it. I am just not certain that the IHR could have been negotiated in its current form unless we, as an organization, had already built the systems along with our technical partners and key countries. No way. I also doubt that we would have witnessed 194 countries sanctioning the idea that a UN body could use informal, unofficial sources of information to challenge governments, and especially that we could, in certain circumstances, share that information with other state parties if we were not confident of full disclosure (Ryan, 2009).

Consequently, it may be surmised that even where a coherent, rational argument to adopt a new international norm exists, other indirect factors may also have a large impact on whether the norm entrepreneurs are ultimately successful in bringing about change.

A third inference that can be drawn from the research is that the bureaucratic nature of IOs makes them ideal candidates to effect norm change. The above case study illustrates, for instance, how a small group of norm entrepreneurs utilized the organizational platform of an IO to bring about significant reforms at the global level. Moreover, they accomplished this change in an environment where they initially lacked widespread support and were facing considerable financial constraints. As I will discuss below, obviously there are questions to be asked about the role other actors played in bringing about this change. Arguably, the bureaucratic nature of WHO aided and abetted the norm entrepreneurs in accomplishing their mission as they drew on at least two forms of the IO's authority—rational-legal and expert—to advance their cause. Rational-legal authority came to the fore, for example, by the fact that even though it contravened contemporary collective expectations, the new norm was being considered in the context of revising an existing legal instrument: the IHR. Similarly, expert authority was

conceivably drawn upon by the fact that it was WHO staff (and certain respected identities within the CSR Department) who were promoting the new norm. Said another way, given the fact that the WHO Secretariat is largely comprised of medical doctors and other health-related professionals, it is likely that additional latitude was extended to the norm entrepreneurs, giving them scope to substantiate their claims on the basis that as medical professionals they are socially regarded to be holders of specialized knowledge. In turn, this reinforced the rational-legal authority of both the IO and the norm entrepreneurs as they were “just doing their job.”

Of course, on the converse side, it can be argued that I have overplayed the role of certain actors while ignoring others (principally, the Member States) thereby skewing the findings. This is a reasonable criticism and one deserving of a response for undoubtedly Member States had a very large impact on the IHR revision process as evidenced by the IGWG (Kamradt-Scott, 2011). While surveying the entire 194 Member States to ascertain which individuals influenced events is understandably beyond the scope of one paper, it is also the case that the process to revise the IHR took over ten years complete. Accordingly, it is likely that isolating specific individuals within Member States to identify and discuss their influence on the revision process would be highly problematic due to logistical challenges such as staff turnover. Even within the context of the WHO Secretariat, for instance, it was discovered that several other notable individuals, such as Sandy Cocksedge, Johan Giesecke, Obifor Anginam, and David Fidler, contributed to developing the revised IHR. Due to staff turnover, their contributions, while significant, were nonetheless limited.

A further argument that could be made is the staff of the CSR Department were merely following orders to adjust existing policies and procedures, which arguably does not equate to norm change. This claim is substantiated to an extent in that Member States clearly authorized the secretariat to explore new disease outbreak prevention and control processes in passing resolutions WHA48.7 and WHA48.13. At the same time, this suggestion ignores the fact that Heymann, Rodier, and Ryan—by their own admission—pursued a very specific objective to change collective expectations about appropriate behavior in reporting disease outbreaks. Although couched within the broad parameters of revising the IHR, these individuals also successfully introduced a practice that openly challenged the status quo surrounding the utilization of nongovernment information sources. Accordingly, it is only reasonable to conclude these individuals, along with their team in the CSR Department, brought about norm change.

It is in this context that this case study goes some way in substantiating Barnett and Finnemore’s (2004) hypothesis that IOs-as-bureaucracies are compelling actors, and yet IOs-as-actors continue to be largely overlooked by the discipline of IR. Since the late 1990s, there has been a renewal of sorts in IR whereby the role and function of IOs has once again begun to be more comprehensively explored. Of particular benefit has been the expansion of IO-related theory with some of the more notable contributions arising from such authors as Daniel L. Nielson and Michael J. Tierney (2003), Catherine Weaver and Ralf Leiteritz (2005, Weaver, 2007), and as previously mentioned, Michael Barnett and Martha Finnemore. With few notable exceptions, empirical research of the nature presented in this paper has been largely absent (Rushton, 2008; Hooghe, 2005). If this brief study demonstrates anything, it is that the tendency to see IOs as de-politicized, technocratic automatons that simply fulfil the requests

of Member States is inherently flawed. Barnett and Finnemore have been more explicit in their argument, noting

IOs exercise power as they use their knowledge and authority not only to regulate what currently exists but also to constitute the world, creating new interest, actors, and social activities. This can be understood as “social construction power” because IOs use their knowledge to help create social reality (2004:7).

More research exploring how this “social construction power” is deployed by IOs (and their respective secretariats) is ultimately required to inform and enrich contemporary IR theory. Indeed, this study has only explored the actions of certain individuals who work within one very specialized IO, and it has only been in relation to a very specific context. Further empirical studies, especially of a comparative nature, are undoubtedly needed if IR theory is to advance.

### **Conclusion**

International organizations play a key role in shaping our social world. We value them precisely because they are created to pursue specific goals that are beyond the means of individual states to achieve. In many senses, they function as the international community’s conscience, protecting and promoting standards of behavior that are collectively viewed as appropriate and beneficial. As this study has sought to demonstrate, it is also a mistake to believe they are passive actors. Rather, IOs, or more precisely, their secretariats, can and actively do seek to change our world from time to time by introducing new norms and structuring patterns of acceptable conduct. At times, the norm entrepreneurs behind these moves do not succeed, and the norms they propose fail to gain purchase. In a rare number of cases though, events combine to bring about normative change.

The challenges norm entrepreneurs face are often, and perhaps understandably should be, significant. Indeed, when located within IOs, norm entrepreneurs not only have to persuade and cajole their constituents (namely, Member States) but they also have to compete to be heard within the broader secretariat. This can take time and, as this case study has shown, sometimes it is within the secretariat where norm entrepreneurs encounter the strongest resistance to change. In such instances, the bureaucratic nature of IOs may serve to hinder the adoption and promotion of new norms precisely due to the fact that they question the status quo and the existing organizational culture. Where intractable resistance is encountered, norm entrepreneurs may decide to approach their constituents directly for support; but this is an inherently risky strategy that exposes the secretariat to claims of mission creep and, if deemed serious enough, may lead to new constraints on the IO’s power being imposed. It could also conceivably lead to staff dismissal. Those who propose norm change face a difficult decision that can have very serious consequences not only for their organization in terms of its mandate and activities but also on a personal level in terms of their professional careers.

On the converse side, where resistance is not found within the secretariat, the bureaucratic nature of IOs can operate as a legitimizing force, swathing the norm entrepreneurs in a technocratic, apolitical guise that affords them a measure of protection and facilitates access to key decision-makers. In these instances, the norm entrepreneurs may face less internal conflict but will potentially encounter greater resistance from Member States tradi-

tionally suspicious of IOs exceeding their authority. Tact and diplomatic skill are essential in such cases; otherwise, the norm entrepreneurs again run the risk that new checks and balances will be placed on the IO, constraining their activities and adversely affecting their legitimacy. As such, while the personal danger (i.e., unemployment) may be somewhat less, proposing norm change can still have significant repercussions at the organizational level, necessitating norm entrepreneurs to remain watchful of the political environment as they progress their case for change.

In this paper, I have sought to delve under the surface of one international organization to reveal how a small group of norm entrepreneurs successfully brought about norm change. These individuals are not nameless faces but accomplished professionals with a well-developed sense of duty or principle that compelled them to act to better our world. As noted earlier, empirical research of this nature is currently sparse, making the ability to draw wider conclusions and conduct comparative analyses difficult. Further research examining both the bureaucratic authority of IOs, as well how their secretariats wield this authority to affect norm change, is needed. Without this, IR theory (and the countless scholars who utilize this body of work) will continue to ignore a vital group of actors who have the ability to shape our world through the power of ideas.

## REFERENCES

- Axelrod, Robert (1986): "An Evolutionary Approach to Norms," *American Political Science Review* 80 (4): 1095–1111.
- Baker, Michael G. and David P. Fidler (2006): "Global Public Health Surveillance under New International Health Regulations," *Emerging Infectious Diseases* 12 (7): 1058–065.
- Barkin, Samuel J. and Bruce Cronin (1994): "The State and the Nation: Changing Norms and the Rules of Sovereignty in International Relations," *International Organization* 48 (1): 107–30.
- Barnett, Michael N. and Martha Finnemore (1999): "The Politics, Power, and Pathologies of International Organizations," *International Organization* 53 (4): 699–732.
- Barnett, Michael N. and Martha Finnemore (2004): *Rules for the World: International Organizations in Global Politics*. London: Cornell University Press.
- Barnett, Michael N. and Martha Finnemore (2005): "The power of liberal international organizations," in Michael N. Barnett, and Raymond Duvall (eds.) *Power in Global Governance*. Cambridge: Cambridge University Press.
- Benitez, Mary Ann (2003): "Beijing doctor alleges SARS cases cover-up in China," *The Lancet* 361 (9366): 1357.
- Brunnee, Jutta (2008): "Europe, the United States, and the Global Climate Regime: All Together Now?" *Journal of Land Use* 24 (1): 1–43.
- Burci, Gian L. and Claude-Henri Vignes (2004): *World Health Organization*. The Hague: Kluwer Law International.
- Cash, Richard A. and Vasant Narasimhan (2000): "Impediments to global surveillance of infectious diseases: consequences of open reporting in a global economy," *Bulletin of the World Health Organization* 78 (11): 1358–367.
- Claude, Inis L. (1966): "Collective Legitimization as a Political Function of the United Nations," *International Organization* 20 (3): 367–79.
- Davies, Sara (2008): "Securitizing infectious disease," *International Affairs* 84 (2): 295–313.
- Delon, P.J. (1975): *The International Health Regulations: A Practical Guide*. Geneva: World Health Organization.
- Elster, Jon (1989): "Social Norms and Economic Theory," *Journal of Economic Perspectives* 3 (4): 99–117.
- Evans, Alex and David Steven (2007): *Climate change: the state of the debate*. New York: Centre on International Cooperation, available at <http://www.cic.nyu.edu/internationalsecurity/docs/LondonAccordclimatepaper.pdf>, accessed 12 January 2010.

- Fidler, David P. (2005): "From International Sanitary Conventions to Global Health Security: The New International Health Regulations," *Chinese Journal of International Law* 4 (2): 325–92.
- Finnemore, Martha and Kathryn Sikkink (1998): "International Norm Dynamics and Political Change," *International Organization* 52 (4): 887–917.
- Florini, Ann (1996): "The Evolution of International Norms," *International Studies Quarterly* 40 (3): 363–89.
- Giesecke, Johan (2009): Interview via phone, 8 May 2009, Karolinska Institutet, Stockholm, Sweden.
- Grein, Thomas W., Kande-Bure O. Kamara, Guénaél Rodier, Aileen J. Plant, Patrick Bovier, Michael J. Ryan, Takaaki Ohyama and David L. Heymann (2000): "Rumours of Disease in the Global Village: Outbreak Verification," *Emerging Infectious Diseases* 6 (2): 97–102.
- Heymann, David L. (2002): "The microbial threat in fragile times: balancing known and unknown risks," *Bulletin of the World Health Organization* 80 (3): 179.
- Heymann, David L. (2009): Personal interview, 10 June 2009, UK Health Protection Agency, London.
- Hooghe, Liesbet (2005): "Several Roads Lead to International Norms, but Few via International Socialization: A Case Study of the European Commission," *International Organization* 59 (4): 861–98.
- Jepperson, Ronald L., Alexander Wendt and Peter J. Katzenstein (1996): "Norms, Identity, and Culture in National Security," in Peter J. Katzenstein (ed) *The Culture of National Security*. New York: Columbia University Press.
- Kamradt-Scott, Adam (2011): "The International Health Regulations 2005: A Case Study in Global Health Diplomacy," in Feldbaum, H. [ed] *Case studies in health diplomacy: At the intersection of global health and politics*. John Hopkins University Press, Maryland. (forthcoming)
- Klotz, Audie. (1997): "Norms reconstituting interests: global racial equality and U.S. sanctions against South Africa," *International Organization* 49 (3): 451–78.
- Lee, Kelley (1998): *Historical Dictionary of the World Health Organization*. London: Scarecrow Press.
- Lerer, Leonard and Richard Matzopoulos (2001): "'The Worst of Both Worlds': The Management Reform of the World Health Organization," *International Journal of Health Services* 31 (2): 415–38.
- Nielson, Daniel L. and Michael J. Tierney (2003): "Delegation to International Organizations: Agency Theory and World Bank Environmental Reform," *International Organization* 57 (2): 241–76.
- Parry, Jane (2003): "China joins global effort over pneumonia virus," *British Medical Journal* 326 (7393): 781.
- Payne, Rodger (2001): "Persuasion, Frames and Norm Construction," *European Journal of International Relations* 7 (1): 37–61.
- Ramirez, Francisco O., Yasemin Soysal and Suzanne Shanahan (1997): "The Changing Logic of Political Citizenship: Cross-National Acquisition of Women's Suffrage Rights, 1890 to 1990," *American Sociological Review* 62 (5): 735–45.
- Ray, James L. (1989): "The Abolition of Slavery and the End of International War," *International Organization* 43 (3): 405–39.
- Rodier, Guénaél (2009): Interview via phone, 16 June 2009, World Health Organization, Geneva, Switzerland.
- Ruggie, John G. (1998): "What Makes the World Hang Together? Neo-Utilitarianism and the Social Constructivist Challenge," *International Organization* 52 (4): 855–885.
- Rushton, Simon (2008): "The UN Secretary-General and Norm Entrepreneurship," *Global Governance* 14 (1): 95–110.
- Ryan, Mike (2009): Interview via phone, 24 June 2009, World Health Organization, Geneva, Switzerland.
- Tucker, Jonathan B. (1999): "From Arms Race to Abolition: The Evolving Norm Against Biological and Chemical Warfare," in Sidney D. Drell, Abraham D. Sofaer and George D. Wilson (eds) *The New Terror: Facing the Threat of Biological and Chemical Weapons*. Stanford: Hoover Institution Press.
- Weaver, Catherine (2007): "The World's Bank and the Bank's World," *Global Governance* 13 (4): 493–512.
- Weaver, Catherine and Ralf J. Leiteritz (2005): "'Our Poverty is a World Full of Dreams': Reforming the World Bank," *Global Governance* 11 (3): 369–88.
- Wexler, Lesley (2003): "The International Deployment of Shame, Second-best Responses, and Norm Entrepreneurship: The Campaign to Ban Landmines and the Landmine Ban Treaty," *Arizona Journal of International and Comparative Law* 20 (3): 561–606.
- Whelan, Mary (2007): "Negotiating the International Health Regulations," speech delivered to the Graduate Institute, Geneva, 22 March 2007.
- World Health Organization (1970): "Cholera," *Weekly Epidemiological Record* 45(36): 377.

- World Health Organization (1983): *International Health Regulations (1969)*. 3rd annotated edition. Geneva: World Health Organization.
- World Health Organization (2000a): *Global Outbreak Alert and Response. Report of a WHO meeting*. UN doc. WHO/CDS/CSR/2000/3.
- World Health Organization (2000b): *A framework for global outbreak alert and response*. UN doc. WHO/CDS/CSR/2000/2.
- World Health Organization (2001): *Provisional Summary Record of the Eighth Meeting, Committee A, Fifty-Fourth World Health Assembly*. UN doc. A54/A/SR/8.
- World Health Organization (2003a): *Severe acute respiratory syndrome (SARS): Status of the outbreak and lessons for the immediate future. Unmasking a new disease*. Geneva: World Health Organization.
- World Health Organization (2003b): *Revision of the International Health Regulations: Severe acute respiratory syndrome (SARS). Report by the Secretariat*. UN doc. A56/48.
- World Health Organization (2003c): "The Revision of the International Health Regulations," World Health Assembly Resolution WHA56.28. UN doc. WHO/2003/REC/1.
- World Health Organization (2005): *Basic Documents*. 45th edition. Geneva: World Health Organization.
- World Health Organization (2008): *International Health Regulations (2005)*. 2nd edition. Geneva: World Health Organization.
- World Health Organization (2010): "Global Outbreak Alert and Response Network—GOARN: Partnership in Outbreak Response," available at <http://www.who.int/csr/outbreaknetwork/en/>, accessed 18 January 2010.