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Global Health Security: Security for whom? Security from what?

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Introduction

Over recent years the concepts and language of health and security have become increasingly intertwined as a result of changes within both the health and the security policy communities. The public health community has become increasingly sensitive to the links between health and global political, social and economic structures and processes. This has included a clearer recognition of the threats posed by disease in a globalized world, not least through the rapid international spread of pathogens. In response to these concerns the public health community has increasingly sought to strategically utilise security language in an attempt to secure greater political attention (and resources) for tackling global health issues. For their part, foreign and security policy communities, particularly in the West, have vastly expanded their remit and range of interests in the post-Cold War era. Health has come onto their agendas, with significant implications for how 'security' is understood and practised (Elbe, 2010; Elbe in this issue). These two very different policy communities have become to some extent united behind the 'Health Security' banner, but many have worried that the shared language masks deep divisions in aims, methods and values. In particular some have pointed to a danger that public health will become subjugated to powerful security interests, with potentially negative consequences for the health of individuals and communities. Yet there is another divide which is becoming increasingly evident in debates around health security - a divide between the Global North and the Global South.

This article seeks to interrogate the concept of 'health security', and in particular the 'Global Health Security' variant which has become a major feature of the policy discourse in recent years. The discussion centres around two questions which have become extremely well-established within security studies: "Whose security?" and "Security from what?" the article is motivated by what appear to be the early signs of discontent from some developing states over the concept of Global Health Security and its political implications. The developing world is being asked to bear many of the costs of ensuring Global Health Security, but suspicions are evident in some quarters that these measures may in fact be primarily about the protection of the West. Commentators such as William Aldis (2008) have correctly argued that the concept of Global Health Security has been widely used but rarely adequately defined. There is, therefore, a clear need for greater scrutiny of the concept, but also of its political implications.

The article begins by examining the concept of health security and arguing that there is in fact a good deal more consensus on its core features than we are often led to believe. It is argued that the state is generally viewed as the referent object (although alternative conceptualisations drawing on human security approaches are in evidence in some places) and that there is also a high level of commonality in the dominant policy discourse over what the major threats to health security are. This, it is argued, centres around a relatively small number of health issues: rapidly spreading infectious diseases; HIV and AIDS; and biological weapons/bioterrorism. This limited range of widely-recognized 'health security threats', the paper argues, tells us a good deal about the political agendas which underpin the concept. These are a particular set of health risks which are primarily

seen as major threats by Western developed nations. Views from the Global South about the most pressing threats to health within their nations are often strikingly different. Indeed, many of the diseases which have been widely framed and officially accepted in the West as major health security risks are endemic in parts of the Global South. This is the first step in the argument that the discourse of health security has tended to be a relatively narrow one, focussing in practice (although this is rarely made explicit) on the protection of the West from threats emanating from the developing world. The nature of existing global health governance responses, which tend to be overwhelmingly characterised by a focus on containment rather than prevention (Aldis, 2008; Labonté and Gagnon, 2010, p.5), heightens unease about 'whose security' really counts.

The second part of the article builds upon this discussion of the politicized nature of health security and examines the currently popular concept of 'Global Health Security'.. Through an examination of some of the most high-profile uses of the Global Health Security concept I argue that the focus tends to be overwhelmingly (albeit implicitly) on securing states against the ingress of disease (and in particular rapidly spreading infectious diseases which worry the West). Global Health Security, therefore, seems to have much more in common with traditional ideas of national and international security (which Sara E. Davies (2010) has referred to as the "statist perspective" in global health) than concepts such as human security (or Davies' "globalist perspective") which might allow for the inclusion of a broader range of threats to human wellbeing.

In the concluding section I argue that much of the controversy around Global Health Security is the result of a feeling in some quarters that this discourse relates primarily to a Western conception of risk, and that the result has been the prioritization of measures designed to contain disease within the developing world rather than measures designed to address the root causes of disease. Importantly the argument is *not* that addressing the deficiencies in the Global Health Security regime is unimportant, nor that such activities should not be carried out. Clearly protecting populations from disease is a good in itself, and populations in the West have as much right as those elsewhere to benefit from such protection. Furthermore, Global Health Security measures might, as some claim, have 'trickle-down' benefits for developing countries in the long run. Nevertheless, there is the need for a far more explicit recognition of the primary beneficiaries from the system, and of who is bearing the costs. Only in the light of such a recognition can meaningful debates be carried out over the appropriate prioritization of such activities in relation to other global health challenges.

Health Security: Essentially contested or essentials agreed?

In *People, States and Fear* Barry Buzan (1991, p.7) famously described security as an 'essentially contested' concept, one of a number of such concepts which generate 'unsolvable debates about their meaning and application.' Although this idea has been widely repeated, others took Buzan to

task for his claim, arguing that security does not fulfil some of the criteria of true 'essentially contestedness' (Baldwin 1997, pp.10-12); that the debates which are taking place around security are in fact a relatively new phenomenon (McSweeney, 1999); and that in any case there is widespread agreement over the core elements of security (Booth, 2007, pp.99-100). Yet, notwithstanding this debate over whether the concept of security must necessarily *always* be contested, most would at least agree that security has been the subject of a wide variety of definitions, several proposals for redefinition (Tickner, 1995), and numerous attempts at either broadening its scope or defending its boundaries (Walt, 1991).

Given that, it should not be a surprise to find that the comparatively young concept of 'health security' is still some way away from a universally-agreed definition. It is certainly the case that the health security tag is being used in a variety of ways. It is often used alone, but equally often in conjunction with a variety of modifiers - 'national health security' (U.S. Department of Health and Human Services, 2009); 'international health security' (Chiu et al, 2009); 'global health security' (WHO, 2001) – or in conjunction with concepts such as that of 'human security'. Writing in *Health Policy & Planning* in 2008, William Aldis argued that the huge range of different definitions of 'health security' currently in circulation have created 'confusion and mistrust.' He outlined the recent debates which have erupted over whose interests are being served in health security and the growing concerns of some developing nations that the costs and benefits of 'Global Health Security' are not being equitably distributed. In response to these concerns Aldis (2008, p.370) argued that stakeholders need to find a definitional consensus. He concluded his article by stating that

Ambiguity and confusion surrounds the concept of 'health security'. This has caused damage to international relationships, and is likely to lead to more problems in the future. The global public health community must work toward a common understanding of the concept, starting with the acceptance that there is a problem. (Aldis, 2008, p.374)

Aldis is right that the tendency for health to be linked with security in the policy discourse is causing tensions and, as is discussed below, debate has recently been crystallizing around the relatively new (predominantly post-2000) concept of 'Global Health Security'. However, here I suggest that uncertainty about the *meaning* of health security is not really the root of the problem. Indeed, despite some dissenting voices, there is in fact a broad consensus over the core features of health security, namely the types of health issue which constitute a threat; the types of response which are necessary; and the referent object. The debate, I would argue, cannot be solved by definitional agreement but only by grappling with the political implications of this dominant conceptualisation.

Security from what?

Whilst, as Aldis, says there is no formally (let alone universally) accepted definition of health security, an analysis of the academic literature on the subject - the overwhelming majority of which is written in the West and focuses either upon Western policy communities or the major multilateral institutions – gives an extremely interesting insight into the types of health issues which are commonly being seen as threats to health security. The characteristic claims associated with health security in the literature can be boiled down to three common arguments (see Feldbaum and Lee, 2004, pp.22-4):¹

- i) That the fast-moving nature of infectious disease in a globalized world poses a threat to individuals, populations, or states.
- ii) That pathogens may be weaponized, either by terrorists or through state-sponsored biological weapons programmes, and used against military forces and/or civilian populations.
- iii) That a severe burden of disease (HIV/AIDS is by far the most commonly cited) can have social, political, economic and military impacts which threaten the stability of states and regions.²

In general, then, it seems fairly clear what types of health issue the literature sees as threats to health security: the threat emanates either from the spread of infectious diseases, whether naturally occurring, deliberate or accidental; or from the effect of major health crises on traditional problems of state stability and security.

This same list of health security threats also dominates the mainstream policy discourse. Some examples of these (the IHR-linked global health security discourse which has been in evidence at the WHO and the Global Health Security Initiative) are examined in greater detail below. There are, however, many other examples from both national and international policy contexts. The UN Security Council's Resolution 1308, which addressed the security dimensions of HIV/AIDS, has been widely noted. Rapidly-spreading infectious disease threats – especially pandemic influenza – have assumed a prominent position in many domestic security policy statements. The landmark US National Intelligence Estimate on the *Global Infectious Disease Threat and its Implications for the United States* was a classic example (National Intelligence Council. 2000). The US' subsequent National Health Security Strategy (U.S. Department of Health and Human Services, 2009) and the UK's new National Security Strategy (HM Government, 2010, p,27) are others.

¹ There is also the reverse hypothesis, which I pass over here: that insecurity and conflict lead to ill health both directly (e.g. that conflict causes death and injury and is a vector for the spread of disease) and indirectly (e.g. that conflict has a deleterious effect on health systems).

² Less commonly, but nevertheless importantly, a fourth is now being added by some scholars (e.g. Enemark, 2007; Enemark & Ramshaw, 2009): iv) That the risks associated with laboratory research (for example on pathogens or some types of nanotechnology) are a potential source of security threat.

Interestingly, Aldis (2008, p.372) comes to a very different conclusion about the level of agreement over the 'security from what?' question. He notes that

A search of the term [health security] using an internet search engine confirms an alarming lack of agreement on the meaning and scope of the concept. Of the first 100 citations found on the search, 44 referred only to bio-terrorism or trans-border spread of disease, 36 referred to effects of rising health care costs and health insurance in developed countries, 2 referred only to HIV/AIDS, 10 referred to unrelated matters (e.g. electronic home protection systems), and only 7 referred to health security in the sense intended by UNDP [i.e. as part of 'human security'].

Yet these results have the potential to be somewhat misleading. For one, we can easily discount the 10 "unrelated matters" as a product of search engine technology: putting almost any two words together in a search will produce some 'outlier' results which do not relate to the subject of the search. Similarly we should discount the 36 that relate to developed country health care costs: these results are the product of a separate (largely domestic US) political debate which has, admittedly, also employed the term 'health security'. But that debate is distinct from the one being addressed in this paper (and in Aldis'). It is hard to believe that the arguments of Oregonians for Health Security or the provisions of the Wisconsin Health Security Act 2007 are what is causing tensions between developed and developing countries. That leaves 46 which fit within the categories outlined above (bioterror, trans-border disease and AIDS), 7 which relate to human security (discussed below) and 46 which are irrelevant for our purposes.³ Thus, Aldis' search engine results actually confirm the relatively cohesive set of health security concerns argued for here, with biological weapons, AIDS and infectious disease being overwhelmingly dominant and human security-based approaches playing a smaller but not insignificant part. Tobacco-related diseases, although they threaten health on a massive scale, are seldom if ever discussed in 'health security' terms. Neither are road deaths. Nor diarrhoeal diseases. As Aldis' findings confirm, it is almost exclusively infectious diseases which have, to date, gained the necessary degree of immediacy and novelty to become widely understood as security risks (McInnes, 2005, pp.15-17).

Importantly for the argument here, the range of recognised health security threats is actually even more limited than this suggests since not all infectious diseases have come to be widely seen as threats to health security. Feldbaum and Lee (2004, p.24-5) make a persuasive case that those diseases which are most likely to be treated in such terms are those which impact on population rather than individual health; have high levels of morbidity/mortality; are acute rather than long-term in their impacts; and readily cross borders. This seems to be borne out in practice where the focus of attention in terms of naturally-occurring threats has overwhelmingly been on pandemic influenza, emerging and re-emerging infectious diseases (SARS is an oft-cited example) and

³ Aldis' figures only total 99.

HIV/AIDS. I am certainly not the first to note that this is not reflective of the overall global burden of disease (e.g. McInnes & Lee, 2006). Only one of the top ten causes of death worldwide (WHO, 2010a) – HIV/AIDS – is widely treated as a health security issue. Those diseases which are linked with security are those which have been constructed in major Western developed nations (most clearly in the US, but also in Canada, Europe and elsewhere) as security threats and have led to ‘epidemic-induced fear’ amongst governments and citizens (Labonte and Gagnon, 2010, p.4). Thus the dominant health security discourse captures only a very small proportion of the issues which threaten individual and population health worldwide – those which are of concern to the West (Labonte and Gagnon, 2010, p.5) - and at the same time threatens to obscure those causes of morbidity and mortality which have not been securitized. As Sarah Dry (2008, p.5) has noted, the health security discourse “privileges acute outbreak events that occur on a daily or weekly basis as opposed to chronic factors, such as changes in land use and host and vector population, which occur over years or decades, and which account for broader trends.” The health security agenda is a significantly skewed one, reflecting the concerns of the most powerful actors in the international system (see Abraham in this issue).

Defending against Health Security threats: the need for a global response

The result of the dominance of this relatively limited view of ‘health security’ is that there follows a considerable commonality over the appropriate types of response. That doesn’t mean that these things are necessarily being done, but there is general agreement over what *needs* to be done. The types of response which are typically put forward as a means of defending against both trans-border infectious disease and biological weapon threats can be divided into two categories: surveillance and emergency response.⁴

Surveillance activities have traditionally rested primarily either on domestic national health infrastructure (i.e. local diagnosis; laboratory confirmation; notification to regional/national public health authorities; regional/national data gathering and analysis to detect unusual clusters etc) or on border controls (health declarations, temperature scanners, quarantine arrangements etc). But whilst the efficacy of surveillance activities rests largely upon the domestic health infrastructure of states there is a universal recognition that international cooperation on disease surveillance is required. The International Health Regulations (IHR, discussed below, and in more detail by Youde in this issue) set the overall framework for international infectious disease surveillance and reporting,

⁴ HIV/AIDS (which, although related, is in some ways also a slightly separate debate to that which has surrounded infectious disease and biological weapons) is a slightly different case. In that case both surveillance and response remain important but the long-wave nature of the threat calls for a longer-term and broader engagement with those states that are at risk from instability. Andrew Price-Smith (2002, p.15) makes a nice distinction between ‘outbreak events’ and ‘attrition processes’. HIV/AIDS is clearly one of the latter and as a result has attracted a somewhat broader range of responses, including an increasing emphasis on Health System Strengthening as a prerequisite for tackling HIV/AIDS.

requiring states to report to the WHO outbreaks which are of potential international significance. In order to make this achievable the IHR include details of the capacities and procedures which states are required to put in place in their national health systems and at ports and airports (WHO, 2005). Whether the disease threat is naturally occurring or man-made, early warning is the key. Although in the modern world outbreaks can rarely be contained completely, early identification and the putting in place of the appropriate public health measures can radically reduce the scale and scope of the risk.

Emergency response measures are similarly dependent on health system capabilities. Such systems (in the developed world at least) are typically designed with the aim of providing the capacity to respond to any health emergency (whether natural or deliberate), and are frequently part of broader disaster preparedness plans. Key techniques include training of emergency services/health professionals; public communication strategies; decontamination facilities; vaccine/antiviral stockpiles etc. But here too there is an international dimension, with the WHO having the authority to undertake a range of actions including providing assistance to a state during an outbreak, issuing travel advisories, or making other recommendations on appropriate measures and responses. Although it has been criticized in some quarters, the level of media attention devoted to WHO press conferences during the recent 'Swine flu' outbreak was a powerful demonstration of the global reach of its proclamations.

Notably, both of these types of activities are containment-focussed, and indeed with the 2005 revision of the IHR this became even more the case as the emphasis shifted away from border controls towards containment of outbreaks at source. The aim of these measures is to identify and then respond to outbreaks of disease with the aim of limiting their spread, either domestically or across borders. Whilst they rely for their effectiveness on a functioning public health infrastructure, they are generally treated separately to the type of public health provision (which includes everything from the provision of potable water to public health education) which play a vital role in the prevention of outbreaks. Thus containment and prevention have to a great extent become decoupled. The measures which are generally presented as being in pursuit of health security are far more commonly geared towards outbreak containment rather than disease prevention.

The global dimensions of health security have become increasingly prominent over time. There certainly seems to be a universal belief that a global-level response is required. With good reason, infectious disease has become inextricably linked with globalization in both the policy and academic discourses. Nobody seriously argues that states can unilaterally defend their borders against the ingress of disease. All agree that protecting health security requires international cooperation within a robust global regime. Major health-related security policy statements have commonly recognized this need, the US's National Health Security Strategy, for example noting that:

Given that many of the threats faced by the Nation do not recognize geographic boundaries, the interdependence of national public health communities around the world and the international organizations that support them must be acknowledged. Existing health security partnerships allow the Nation to access information about threats outside our borders, from the health, diplomatic, defense, intelligence, and law enforcement communities as well as from human and animal disease surveillance networks. These partnerships strengthen the Nation's health security by allowing for sharing and comparing of experiences and strategies for prevention, response, and recovery and for joint emergency response exercises. (U.S. Department of Health and Human Services, 2009)

The logic underlying this belief is clear. As international travel and trade have increased it has become abundantly evident that states cannot unilaterally defend their borders against disease, at least not without totally isolating themselves from the global economy. As the 2007 World Health Report noted (WHO, 2007, p.2), "an outbreak or epidemic in one part of the world is only a few hours way from becoming an imminent threat elsewhere." A 'Maginot Line' approach is destined to fail, at least in the case of naturally-occurring disease outbreaks. Thus states have generally come to see international cooperation on disease control as being within their interests. The failure of global efforts to identify and contain infectious disease outbreaks represents a very real threat to their national security.

Human security and health security

Yet such an infectious-disease focussed and state-centric version of health security is only one potential conceptualization. Sara E. Davies (2010) has drawn a distinction between a 'statist' perspective (which presents health issues "as being equivalent to national security threats") and a 'globalist' one (which focuses on health at the individual level, and on the extent to which the state is meeting health needs). This 'globalist' perspective is exemplified by the concept of human security. And, as Aldis found, the health security terminology has also been used to refer to one of the fundamental elements of human security. Human security originally rose to prominence through the UNDP's 1994 Human Development Report which claimed (p.22) that "[t]he idea of human security, though simple, is likely to revolutionize society in the 21st century." The report went on to say (p.23) that

Human security can be said to have two main aspects, It means, first, safety from such chronic disease threats as hunger, disease and repression. And second, it means protection from sudden and harmful disruptions in the patterns of daily life – whether in homes, in jobs or in communities.

Health security was explicitly identified as one of the components of human security from the outset (along with economic, food, environment, personal, community and political). And, in marked contrast with the narrow focus on infectious disease threats outlined above, health security was deliberately viewed in the widest sense, incorporating the full range of communicable and non-communicable diseases and explicitly linking health with poverty and inequality (UNDP, 1994, pp.27-8). The subsequent report of the Commission on Human Security (2003, p.96) echoed this broader notion of health security, noting that

Health security is at the vital core of human security – and illness, disability and avoidable death are “critically pervasive threats” to human security.

Undoubtedly this is a far broader understanding of security threats (and therefore a different answer to the ‘security from what?’ question), but it also provides a very different referent object. As the name suggests, human security attempts to make individuals rather than states the referent object of security (it is frequently described as a “people-centred approach” (e.g. Chen & Narasimhan, 2003, p.3)). The distinctive core of human security is thus encapsulated in two shifts: i) the recognition of a broader range of threats and ii) the re-specification of the primary referent object from the state to the individual/community. In principle, then, it seems to be a good candidate for a version of health security which is “better equipped to capture the importance of addressing illness for the lives of ordinary individuals” (Elbe, 2005, pp.415-6).

Interrogating ‘Global Health Security’

Here, then we have two radically different formulations of health security: a statist/national security one, which takes the state as its referent object and is focussed primarily on stopping diseases entering or otherwise destabilizing states and societies, and a globalist/human security one, which takes the individual as the referent object and is open to the consideration of a much broader range of issues which threaten individual health and wellbeing. Which is reflected in the contemporary Global Health Security discourse? Given the extent to which Global Health Security has defined the current global health policy zeitgeist, and given the lack of precision with which the term is used, this is an important issue and offers a window onto some of the controversies surrounding the concept. Here I examine some of the most prominent formulations of the Global Health Security concept in the policy world with the aim of uncovering both the types of security threats to which they identify, and their approach to the referent object question: are these human-centred or state-centric approaches to security?

Global Health Security and the International Health Regulations

For much of the last decade the WHO has been enthusiastically pushing the idea of Global (Public) Health Security. The concept has appeared in World Health Assembly Resolutions (WHA, 2001), in reports by the Secretariat (WHO, 2001), and in articles written by key WHO officials (Hardiman, 2003). Its most high-profile airing to date was the 2007 World Health Report which focussed on Global Public Health Security – and indeed did include some issues above and beyond the common menu of health security threats, including within the definition

acute public health events that endanger the collective health of populations living across geographical regions and international boundaries. As illustrated in this report, global health security, or lack of it, may also have an impact on economic or political stability, trade, tourism, access to goods and services and, if they occur repeatedly, on demographic stability. Global public health security embraces a wide range of complex and daunting issues, from the international stage to the individual household, including the health consequences of human behaviour, weather-related events and infectious diseases, and natural catastrophes and man-made disasters, all of which are discussed in this report. (WHO, 2007, p.1)

Yet where Global Health Security has most frequently occurred within WHO discourse (and indeed the occasion for the World Health Report's focus on that issue in 2007) is in relation to the revised IHR which were adopted by the World Health Assembly in 2005 and came into force in 2007. Although the Global Health Security terminology does not appear in the IHR, it has become inextricably linked with them.

The IHR are explicitly concerned with preventing the international spread of disease, and in Annex 2 of the 2005 Regulations (WHO, 2005, p.43) a 'decision instrument' flow chart is provided which allows for a determination of whether or not a disease outbreak occurring within a state falls under the regulations. If it does the WHO must be notified. Although unspecified events of potential international public health concern are catered for in the decision instrument, the diseases which are specifically listed all have relatively high levels of morbidity/mortality; are acute in their impacts; and have the potential to rapidly cross borders. (c.f. Feldbaum and Lee, 2004, p.24-5). Some diseases (Smallpox, Poliomyelitis due to wild-type poliovirus; new sub-types of human influenza, and SARS) are automatically notifiable. Others (such as cholera, pneumonic plague and yellow fever) require public health authorities to determine whether or not the WHO should be notified under the IHR. Clearly, then, the answer to the 'security from what?' question is relatively clear in this case: Global Health Security via the IHR is about the containment of potentially serious and rapidly-spreading infectious disease threats, whether natural or man-made.

In terms of the referent object – the ‘security for whom?’ question - it is certainly true that the WHO has attempted to look beyond the state in order to enhance the ability of the international community to respond to the threats posed by disease in a globalized world. In security terms it has not, however, brought about a change in referent object. David Fidler, who has written widely on the Westphalian to post-Westphalian transition (e.g. Fidler, 2004), has been perhaps the most vocal in proclaiming the significance of the WHO’s embrace of Global Health Security (which he explicitly contrasts with “international health security”) as a new “governance strategy” (Fidler, 2005, pp.347-8). In a lengthy examination of the revision of the IHR and the successful promotion of the concept of Global Health Security Fidler notes (2005, p.392) that

The revised IHR perceive a new world forming, in which global health security is a fundamental governance challenge for all humanity from the local to the global level. The world of global health security is one in which governments, intergovernmental organizations and non-State actors collaborate in a “new way of working” by contributing toward a common goal through science, technology and law rather than through anarchical competition for power.

He concludes by noting that

Global health security’s premise is that diseases will keep threatening human health. Global health security’s promise is that governance of disease threats can remove the dead hand of the classical regime and wield effectively the new way of working through the new IHR.

Fidler does not go so far as to claim that Global Health Security has completely abandoned the state as the referent object. He does, however, see the new IHR-based Global Health Security regime as significantly different from the ‘classical regime’ which preceded it. In particular he points to the importance of two changes. The first is that the IHR draw together threats which were previously dealt with under separate regimes (for example the regulations apply to infectious disease but also biological, chemical and radiological agents, whether deliberately or accidentally released) under a single “comprehensive governance strategy” (Fidler, 2005, p.363). The second is that the WHO is no longer limited to receiving information on outbreaks from state sources: it can now also actively seek information from a range of non-governmental sources (Fidler, 2005, p.348). The explicit authorization for WHO to gather information from non-state sources (although this was actually agreed by the World Health Assembly in 2001) is a genuine advance towards a more effective global system of disease control. Fidler’s (2005, p.376) argument is that this “changes the surveillance dynamic between WHO and member states in ways that favour global health security over national sovereignty.” This may well be correct (although I would caution that we have yet to see a real ‘crunch case’). Indeed I concur with Adam Kamradt-Scott’s view (Kamradt-Scott, 2010) that this

change in WHO's mandate can be considered the emergence of a new international norm. But whilst Fidler (2005, p.365) highlights the fact that "global health security differs from the state-centric approach of international health security found in the classical regime", in effect what we now have under the IHR 2005 is not a system in which state-centrism has been abandoned entirely, but rather 'states+' – a safety-net which helps to deal with situations in which a state is either unable or unwilling to report a Public Health Emergency of International Concern. Both the IHR and the concept of Global Health Security which has been so closely linked with it remain, in security terms, stubbornly state-centric: the referent object remains the state. This is still very much a statist rather than a globalist vision of global health.

Given that WHO is a multilateral international organization composed of member states this should probably come as no surprise, but the extent to which the IHR remain rooted in a statist approach to global health helps to drive the point home.⁵ The regulations apply only to Public Health Emergencies of *International* Concern. With the exception of the small number of diseases specified as automatically notifiable, where there is no risk of international spread, nor a risk of international restrictions on travel or trade, then the outbreak is not classed as notifiable under the IHR (and presumably is not considered a risk to Global Health Security). It may be argued that the logic of globalization dictates that significant disease events rarely have absolutely no potential international impact, but it remains the case that purely domestic public health events do not fall under the regulations. The IHR, then, are concerned primarily with pathogens crossing state boundaries, and so have a rather traditional aim: the defence of the borders of the nation-state from exogenous disease threats (as well as the protection of the state in which the outbreak occurs from the imposition by others of disproportionate travel and trade restrictions). Those who attended the 1851 International Sanitary Convention (who were seeking to protect their countries from cholera) would have readily recognised the underlying purposes of the 2005 IHR. In those terms the IHR do not represent a radical change in the conceptualisation of who is being secured, or from what, under the Global Health Security system.

Even if it was not the way in which the regulations were intended, there does at least seem to be a logic to the suspicion that the vision of Global Health Security which underpins the IHR is really about the protection of Western states from exogenous disease threats. This may in itself be a laudable aim, but it leads to important questions about the apportionment of rights and responsibilities. The obligations placed on states by the 2005 revision of the IHR are significant. Far more is required of national health authorities than was the case under the previous regime. The necessity for many states, and particularly those in the developing world, to make significant investments in their domestic disease surveillance infrastructure was well-known during the negotiation of the IHR revisions and is recognised in the regulations: Annex 1 of the IHR includes details of 'core capacity requirements for surveillance and response'. But whilst such investments may well be essential to the effective functioning of the Global Health Security regime, they may not reflect domestic health priorities. The potential for tensions to arise over these issues is clear.

⁵ This point is developed further in Rushton, 2009.

The Global Health Security Initiative: WMD and pandemic influenza

The Global Health Security Initiative (GHSI) is far more explicitly about the protection of developed Western states from exogenous disease threats. Initially formed to deal with bioterror concerns in the wake of the 9/11 attacks, the GHSI has subsequently broadened its remit to address naturally-occurring outbreaks via an engagement in recent years with pandemic influenza. It is interesting to see how the GHSI's agenda has broadened over time, as evidenced in the ministerial communiqués. The ministerial statement released after the first meeting in 2001 reported that

The meeting provided an opportunity to discuss a more coordinated approach to improving the health security of citizens, and to better prepare for and respond to acts of terrorism, in the aftermath of September 11, 2001. Following the meeting, the participants issued a statement calling for concerted global action to strengthen the public health response to the threat of international biological, chemical and radio-nuclear terrorism. (Global Health Security Initiative, 2001)

The 2003 ministerial statement heralded the start of the shift, noting toward the end that

Furthermore, we recognize that preparedness for and response to bioterrorism have much in common with preparedness for and response to naturally occurring global health threats such as pandemic influenza. Much work needs to be done to enhance preparedness by member countries and globally by addressing critical issues for an effective pandemic response. To this end we have agreed to the Terms of Reference for the Technical Working Group on Pandemic Influenza Preparedness. (Global Health Security Initiative, 2003)

Move forward to the statement released following the meeting held in London in December 2009 and we find the (arguably slightly disingenuous) claim that

Our initiative has progressed considerably since its establishment in 2001, and our common purpose remains the same: to enhance our respective capacities to prepare for and respond to health threats posed by chemical, biological and radiological and nuclear terrorism and pandemic influenza; and to undertake concerted action to strengthen health security globally. (Global Health Security Initiative, 2009)

The answer to the ‘security from what?’ question is clear in the case of the GHSI, although that answer has changed over time. Beginning with a set of very traditional national security concerns, its remit has widened as pandemic influenza has been increasingly recognised by Western security communities as a national security threat. But nevertheless this still fits well within – indeed is a part of – the consensus position on health security threats outlined above. The same is true of the types of response measure that the GHSI has developed. One of the GHSI’s key *raison d’être* is improving information-sharing between the countries involved in terms of policy and best practice and also crisis management during a major disease event. The GHSI’s ‘Global Health Security Action Group’ (GHSAG) is the primary vehicle for achieving this.

This leads us on to the ‘security for whom?’ question. The GHSI is explicitly a cooperative international security arrangement designed to enhance the national security of its members from bioterrorist attack (and latterly pandemic influenza). Yet it is open to the criticism that it is aimed at enhancing security for some, not for all. The GHSI is a (globally unrepresentative) group of ‘like-minded countries’ which comprises Canada, France, Germany, Italy, Japan, Mexico, the United Kingdom, the United States and the European Commission. With the possible exception of Mexico, then, it is a club of wealthy developed nations, closely mirroring the G8.⁶ Despite the rhetoric about strengthening health security globally, and the rhetorical support for the WHO’s efforts on Global Health Security, it would be no surprise to find people who believe that the main purpose of the GHSI is to advance the security only of its own members.

Alternative views of Global Health Security

In recent years we have seen challenges emerging to the concept of Global Health Security, particularly from the Global South. Many of these debates were identified by Aldis. These challenges have been framed in various ways. In some instances the use of the Global Health Security terminology has been directly challenged. Brazil, for example, argued in the WHO Executive Board in January 2008 that there “was no clear meaning of the term and that it enjoyed no consensus among members of the World Health Assembly”, and objected the WHO Secretariat’s use of such language in relation to the IHR (which do not use the “security” term) in the 2007 World Health Report (Tayob, 2008). In November of the previous year there had again been controversy over the term in the intergovernmental working group on influenza virus sharing, when the EU proposed including Global Health Security language in the statement then being negotiated. Tayob (2008) reports that

⁶ Although it is not exactly the same, Russia being absent and Mexico being included.

The EU proposal was strongly objected to by several developing countries, including Indonesia, India, Brazil and Thailand. Brazil had then said there is no reference in the resolution WHA 60.28 (on avian flu) to "global health security" and that it was not committed to working under the security concept. Eventually, the term "global health security" was dropped from the statement of the November meeting. (see also Shashikant, 2007)

Contra Aldis, I would argue that these arguments are not the result of the lack of agreement on how Global Health Security is defined, but rather on the political implications of the concept. I am less confident than Aldis that the difficulties can be overcome through attempting to achieve a "common understanding of the concept" (Aldis, 2008, p.374). Indeed, Global Health Security has effectively been (and will continue to be) defined through practice, not some separate process of definitional negotiation. Such practice is inevitably fundamentally affected by the distribution of power in the international system. It should be no surprise that a global system designed to protect states from disease privileges the protection of the most powerful states in the international system. Much of the debate is in fact around the apportionment of the costs and benefits of global health security, a debate which was vividly illustrated by the dispute between Indonesia and the WHO over the sharing of influenza virus samples (e.g. Elbe, 2010b; Fidler 2008; Holbrooke & Garrett, 2008; Kamradt-Scott and Lee in this issue).

Yet the currently dominant version of Global Health Security is only one possible conceptualization. It is certainly possible to conceptualise a more globalist vision of Global Health Security in which the referent object is the individual and the types of threats which need to be defended against are framed much more broadly, capturing the wide range of factors which negatively impact on health and wellbeing in both the developing and developed worlds. Davies (2010) found evidence of just such a globalist vision in a number of areas of the global health discourse. The Oslo Ministerial Declaration of 2007 (Minister of Foreign Affairs of Brazil et al, 2007) is an intriguing case in this regard as it brought together countries from both the Global North and the Global South (specifically Brazil, France, Indonesia, Norway, Senegal, South Africa and Thailand) and did indeed indicate that there are a broader range of shared health-related concerns amongst these countries that could be addressed under the banner of 'Global Health Security' (the Oslo Ministerial Declaration, indeed, uses that terminology) but which lie outside the scope of the dominant conceptualization. The Oslo Declaration certainly discusses the traditional menu of issues – pandemic influenza, and HIV/AIDS, for example – but it also discusses environmental challenges, broader development issues and international trade policies. Although the Oslo Declaration is in many ways statist – it certainly sees states as the actors primarily responsible for ensuring Global Health Security - it does offer a glimpse of a broader answer to the 'security from what?' question.

The human security approach, discussed above, is perhaps the best attempt to date to provide a radically different answer to the 'security for whom?' question, and is certainly a more genuinely globalist conception of security. This begs the question of why a human security-derived version of

Global Health Security has not gained more policy traction. Davies (2010: 1189) notes that “in practice, little progress has been made without calling upon traditional statist concerns and without representing health problems as potential threats to state stability, the economy and the ‘rich’ world as much as the ‘poor’”, and this would certainly chime with what International Relations as a discipline has to tell us about global political prioritization. But this also seems to be part of a bigger story about the decline of the wider human security agenda. Although it has been used rhetorically as a critical tool and a justification for certain policy directions, human security has in fact had only a marginal policy impact. Victories have been claimed for it – the international ban on landmines is the most commonly-cited – and a number of organizations have adopted the human security brand in their titles. But as a distinctive concept it now seems to occur far less frequently in policy statements than it did a decade ago. Shahrbanou Tadjbakhsh of *Sciences Po* has suggested a number of reasons why human security “has not been adopted and mainstreamed” and “has, ultimately, not been operationalized as it should have been” (Tadjbakhsh, 2005). Whilst agreeing with much of that analysis I here propose one additional explanation which relates directly to important shifts in global health governance, and indeed in the wider global aid architecture, over the last 10-15 years. That explanation is this: that human security has found itself caught in a pincer movement by two other paradigms of global health, namely (inter)national security (which, as discussed above, has increasingly seen health as being within its remit) and a resurgent international development. One of human security’s two claims to distinctiveness (the recognition of a broader range of threats) no longer seems as distinctive as it did in 1994. These were the immediate post-Cold War years in which security establishments were dominated by traditionalist security concerns. It is hard nowadays to find a national security official who thinks only in terms of traditional military threats to the state. Indeed, as David Chandler (2008) has argued, what once seemed a radical approach to security has been comfortably integrated into the mainstream of security policy. In specifically health terms, many of the health threats to human security which are identified in the literature are equally well captured in contemporary (inter)national security thinking. Those that aren’t (e.g. non-communicable disease threats) continue to be marginalized in Global Health Governance and are rarely if ever discussed in security language, suggesting that the progress which has been made in forwarding a broader vision of health security threats has been limited to say the least. The other distinctive claim of human security (its focus on individuals and communities) suffers from the fact that it is both difficult to implement in practice in a global governance system dominated by states, and that it shares so much with ideas of international development (and, for that matter, human rights). It was in the Human Development Report that human security was first highlighted in a major way, and it is often remarked that much of the content of human security is equally well captured in the concept of human development (e.g. Stewart, 2006). As development has moved up policy agendas markedly in recent years – a move most dramatically expressed in the adoption of the Millennium Development Goals which have motivated a massive increase in health spending in certain specific areas – human security rhetoric has tended to play a subservient role to that of international development.

Conclusion: Global Health Security and global discontent

It is no wonder that some fear that the real agenda behind the promotion of the concept of Global Health Security – at least as that concept seems to be used in the policy discourse – is to protect the developed world from diseases which, epidemiologically speaking, tend to emerge from the developing world. Furthermore, (whilst there are good public health reasons for it) the emphasis on containing outbreaks of those diseases within the developing world heightens the suspicion that Global Health Security is really about protecting ‘us’ from ‘them’. Alternative conceptualisations exist at the margins – and it is clear that there is a concerted effort from parts of the Global South to forward a much broader view of the health challenges which they face – but to date the narrow conceptualisation dominates the mainstream policy agenda. Alongside the tension over who benefits from the Global Health Security system there has been disagreement over the distribution of costs. As a number of critics have noted, it is the developing world which is being asked to bear many of the costs of Global Health Security. These result both from the requirement that they invest in biosecurity measures in order to meet the core capacity requirements under the IHR and the expectation that, in the event of emergency, they will undertake economically damaging emergency measures such as the culling of animal populations or the purchase of expensive pharmaceuticals (Ingram, 2008).

Again it is worth re-stating that there is nothing inherently wrong in the aim of limiting the international spread of infectious diseases. Indeed it is an important task for Global Health Governance. The political problem, however, is the widespread feeling that costs and benefits are not being equitably shared, and that the opportunity to engage in an open debate about the appropriate prioritization of different activities is being denied. In the absence of the resources required to adequately address all global health problems choices inevitably have to be made. At their most stark these choices may come down to funding one priority at the expense of others (Hoffman, 2010, p.516). This, it is argued here, is the heart of the current debate. Although the objections of some developing countries to Global Health Security have been made on the basis that there is no clear definition of the term this doesn’t seem to be the heart of the problem. The problem does not in reality seem to be about confusion over the meaning of health security. In fact the opposite: there is a feeling that “we all know what’s going on here”, and that what is going on is weighted towards the protection of the West rather than undertaking other measures (such as investing in strengthening health systems) which may do more to benefit the rest. Many developing states lack the basic health infrastructure necessary to deal with everyday threats let alone respond to global health emergencies and some of them are coming to resent the emphasis being placed on a small number of diseases which worry the West. As Abraham notes in his paper in this issue (p.21), “countries lower down in the global economic and political pecking order are compelled to securitize issues which might not pose a great threat to them.” There is a pressing need for a far more explicit recognition of the primary beneficiaries from the Global Health Security system, and of who is bearing the costs. Only in the light of such a recognition can meaningful debates be carried out over the appropriate prioritization of such activities in relation to other global health challenges.

Bibliography

Aldis, W. (2008) 'Health security as a public health concept: a critical analysis', *Health Policy and Planning*, 23(6), 369-75.

Baldwin, D.A. (1997) 'The Concept of Security', *Review of International Studies*, 23(1), 10-12.

Booth, K. (2007) *Theory of World Security*. Cambridge: Cambridge University Press.

Brown, T.M., Cueto, M. & Fee, E. (2006), 'The World Health Organization and the Transition from 'International' to 'Global' Health' in A. Bashford (ed.), *Medicine at the Border: Disease, Globalization and Security, 1850 to the Present*. Houndmills, Basingstoke: Palgrave Macmillan.

Buzan, B. (1991) *People, States and Fear* (2nd edn.) Hemel Hempstead: Harvester Wheatsheaf.

Buzan B., Wæver, O. & de Wilde, J. (1998) *Security: A New Framework for Analysis*. London: Lynne Rienner.

Chandler, D. (2008) 'Human Security: The Dog That Didn't Bark', *Security Dialogue*, 39(4), 427-38.

Check, E. (2005). 'Global health agency split over potential anti-terrorism duties', *Nature*, 434 (7 April), 686.

Chen, L. and Narasimhan, V. (2003) 'A Human Security Agenda for Global Health' in L. Chen, J. Leaning & V. Narasimhan (eds.), *Global Health Challenges for Human Security*. Cambridge, Mass: Harvard University Press.

Chiu, Y.W., Weng Y.H., Su Y.Y., Huang C.Y, Chang Y.C., Kuo K.N. (2009) 'The nature of international health security', *Asia Pac J Clin Nutr*, 18(4), 679-83.

Collins, A. (ed) (2006) *Contemporary Security Studies*. Oxford: Oxford University Press.

Commission on Human Security (2003) *Human Security Now*. New York: Commission on Human Security.

Davies, S. E. (2010) 'What contribution can International Relations make to the evolving global health agenda?', *International Affairs*, 86(5), 1167-1190.

Dry, S. (2008) 'Epidemics for All? Governing Health in a Global Age?', STEPS Centre Working Paper 9. Brighton: STEPS Centre. Available at <http://www.steps-centre.org/PDFs/Epidemics.pdf>

Elbe, S. (2005) 'AIDS, Security, Biopolitics', *International Relations* vol.19(4), pp.403-19.

Elbe, S. (2006) 'Should HIV/AIDS be Securitized? The Ethical Dilemmas of Linking HIV/AIDS and Security', *International Studies Quarterly*, 50(1), 119-144.

Elbe, S. (2010) *Security and Global Health*. Cambridge: Polity Press.

Elbe, S. (2010b) 'Haggling over viruses: the downside risks of securitizing infectious disease', *Health Policy and Planning*, 25(6), 476-85.

Enemark, C. (2007) *Disease and Security: Natural Plagues and Biological Weapons in East Asia*. Abingdon: Routledge.

Enemark, C. & Ramshaw, I. (2009) 'Gene Technology, Biological Weapons, and the Security of Science', *Security Studies*, 18(3), 624-641.

Feldbaum, H. & Lee, K. (2004) 'Public Health and Security' in A. Ingram (ed.), *Health, Foreign policy and Security: Towards a Conceptual Framework for Research and Policy*. London: Nuffield Trust.

Fidler, D.P. (2004) *SARS, Governance and the Globalization of Disease*. Basingstoke: Palgrave Macmillan.

Fidler, D.P. (2005) 'From International Sanitary Conventions to Global Health Security: The New International Health Regulations', *Chinese Journal of International Law*, 4(2), pp.325-92.

Fidler, D.P. (2008) 'Influenza Virus Samples, International Law, and Global Health Diplomacy', *Emerging Infectious Diseases*. 14(1), 88-94.

Global Health Security Initiative. 2001. Ministerial Statement, Ottawa, November 2001, Available at <http://www.ghsi.ca/english/statementottawanov2001.asp> [Accessed 30 August 2010].

Global Health Security Initiative. 2003. Ministerial Statement, Berlin, November 2003, Available at <http://www.ghsi.ca/english/statementberlinnov2003.asp> [Accessed 30 August 2010].

Global Health Security Initiative. 2009. Ministerial Statement, London, December 2009, Available at <http://www.ghsi.ca/english/statementlondon2009.asp> [Accessed 30 August 2010].

Hardiman, M. (2003) 'The revised International Health Regulations: a framework for global health security', *International Journal of Antimicrobial Agents*, 21, pp.207-211.

HM Government (2008), *Health is Global: A UK Government Strategy 2008-13*. London: Department of Health.

HM Government (2010), *A Strong Britain in an Age of Uncertainty: The National Security Strategy*. London: HMSO.

Holbrooke, R. & Garrett, L. (2008) 'Sovereignty' That Risks Global Health' *Washington Post* (10 April 2008).

Hoffman, S. (2010) 'The evolution, etiology and eventualities of the global health security regime', *Health Policy and Planning* vol.25(6), pp.510-522.

Hough, P. (2004) *Understanding Global Security*. London & New York: Routledge.

Ingram, A. (2008) 'Pandemic Anxiety and Global Health Security' in R. Pain & S.J. Smith (eds.), *Fear: Critical Geopolitics and Everyday Life*. Aldershot: Ashgate.

Kamradt-Scott, A. (2010) 'The WHO Secretariat, Norm Entrepreneurship & Global Disease Control', *Journal of International Organization Studies*, 1(1).

King, G. & Murray, C.J.L. (2001/2) 'Rethinking Human Security', *Political Science Quarterly*, 116(4), pp.585-610.

Labonté, R. & Gagnon, M. (2010). 'Framing health and foreign policy: lessons for global health diplomacy', *Globalization and Health* vol.6:14.

McInnes, C. (2004) 'Health and Security Studies' in A. Ingram (ed.). *Health, Foreign Policy & Security: Towards a Conceptual Framework for Research and Policy*. London: Nuffield Trust.

McInnes, C. (2005) *Health, Security and the Risk Society*. London: Nuffield Trust.

McInnes, C. & Lee, K. (2006) 'Health, security and foreign policy', *Review of International Studies*, 32(1), pp.5-23.

McSweeney, B. (1999) *Security, Identity and Interests: A Sociology of International Relations*. Cambridge: Cambridge University Press.

Ministers of Foreign Affairs of Brazil, France, Indonesia, Norway, Senegal, South Africa and Thailand (2007) 'Oslo Ministerial Declaration – global health: a pressing foreign policy issue of our time', *The Lancet*, 369(9570), 1373-1378

National Intelligence Council (2000) *The Global Infectious Disease Threat and Its Implications for the United States*. NIE 99-17D, January.

National Intelligence Council (2009) *The Strategic Implications of Global Health*. ICA 2008-10D

Paris, R. (2001) 'Human Security: Paradigm Shift or Hot Air?', *International Security*, 26(2), pp.87-102.

Price-Smith, A.T. (2002) *The Health of Nations: Infectious Disease, Environmental Change, and the Effects on National Security and Development*. Cambridge, Mass.: MIT Press.

Price-Smith, A.T. (2009) *Contagion and Chaos: Disease, Ecology, and National Security in the Era of Globalization*. Cambridge, Mass.: MIT Press.

Rushton, S. (2009) 'Global Governance Capacities in Health: WHO and Infectious Diseases' in A. Kay & O. D. Williams (eds), *Global Health Governance: Crisis, Institutions and Political Economy*. Houndmills, Basingstoke: Palgrave Macmillan.

Shashikant, S. (2007) 'WHO meeting on avian flu virus ends with draft documents', TWN, 24 November. Available at <http://www.twinside.org.sg/title2/avian.flu/news.stories/afns.014.htm>

Smith, M.E. (2010) *International Security: Politics, Policy, Prospects*. Basingstoke: Palgrave Macmillan.

Stewart, F. (2006) 'Development and Security' in R. Picciotto & R. Weaving (eds.), *Security and development: investing in peace and prosperity*. Abingdon: Routledge.

Tadjbakhsh, S. (2005) 'Human Security : The Seven Challenges of Operationalizing the Concept'. Paper for "Human Security: 60 minutes to Convince", organized by UNESCO, Section of SHS/FPH/PHS, September 13 2005, Paris. Available at http://www.peacecenter.sciences-po.fr/pdf/unesco_13-09-05.pdf [Accessed 30 August 2010].

Tayob, R.K. (2008), 'WHO Board debates "global health security", climate, IPRs', SUNS #6399 24 January. Available at http://www.twinside.org.sg/title2/intellectual_property/info.service/2008/twn.ipr.info.080101.htm

Tickner, J.A. (1995) 'Re-Visioning Security' in Ken Booth & Steve Smith (eds.), *International Relations Theory Today*. Cambridge: Polity Press.

UNDP (1994) *Human Development Report 1994*. New York: UNDP.

U.S. Department of Health and Human Services (2009), *National Health Security Strategy of the United States of America*. Washington, DC: Department of Health and Human Services. Available from <http://www.phe.gov/Preparedness/planning/authority/nhss/strategy/Documents/nhss-final.pdf> [Accessed 31 August 2010]

Walt, S.M. (1991) 'The Renaissance of Security Studies', *International Studies Quarterly*, 35(2), 211-239.

WHA (2001) Resolution 54.14.

WHO (2001) 'Global Health Security – epidemic alert and response', Report by the Secretariat, Fifty-Fourth World Health Assembly, A54/9, 2 April 2001.

WHO (2005) *International Health Regulations 2005*. Geneva: WHO.

WHO (2007) *World Health Report 2007. A Safer Future: Global Public Health Security in the 21st Century*. Geneva: WHO.

WHO (2010a) 'The top 10 causes of death'. Available at <http://www.who.int/mediacentre/factsheets/fs310/en/index.html> [Accessed 31 August 2010].

WHO (2010b). *IHR News: The WHO quarterly bulletin on IHR implementation*. Available at <http://www.who.int/ihr/ihrnews/en/> [Accessed 30 August 2010].

Wilson, K. & Brownstein, J.S., 'Early detection of disease outbreaks using the Internet' *CMAJ*, 180(8), pp.829-31.

Woodall, J.P. (2005) 'WHO and biological weapons investigations', *The Lancet*, 365 (February 19), 651.