The Regime Complex for Global Health: Is Bigger Worse?

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Global public health has emerged as a central concern of the international development effort. The ten-fold increase in international resources devoted to combating disease since 1974 has led to a potentially unwieldy "regime complex" that some have criticized for its inefficiency and overlap. In line with regime complex theory, the global health regime is decentralized with agencies nominally overlapping in mission, with no command hierarchy. In short, this is the type of regime that has generated increasing discussion—and lamentation—within the international relations literature. This essay revisits these prevailing understandings of how resources are allocated in the area of public health, identifying outcomes in global health's rise that we miss by applying the regime complex literature's narrative of overexpansion. The global public health regime is notable for increasingly specialized approaches among actors, a development that in the aggregate reduces inefficiencies and institutional overlap. Contrary to criticisms, the regime as a whole is distributing aid in a way that approximates the global burden of disease to a strong degree.

Nevertheless there is a conventional prediction that regimes grow more stilted and inefficient as they increase in size and overlapping mandates. A 2009 symposium in *Perspectives on Politics* on the consequences of greater regime complexity found this to be true across a variety of issue areas—ranging from trade, human rights, intellectual property, security and election monitoring.[1] We have much to worry about if the symposium's analysis amounts to a general rule about the consequences of the expansion of formal international cooperation in the 21st century. If greater complexity in the global health regime is unable to expand without minimizing attendant inefficiencies, then the immediate future looks bleak for those individuals

[1] Alter and Meunier 2009.

that the regime is intended to help. This also calls into question the current global agenda to expand development assistance channels toward other pressing global problems, most notably climate change, for which new North-South transfers figure centrally in the 2011 Durban plan.

If growth in resources, mandates and donors is a source of inefficiency, nowhere should this be more apparent than in the arena of global health. The global health regime has grown remarkably over the past two decades and is now composed of a vast network of states, multilateral institutions and non-governmental organizations. It has origins in the creation of the World Health Organization in 1948, a UN autonomous agency charged with monitoring epidemics, coordinating international responses to them, and broadly promoting health equality. Today, however, the regime encompasses a large number of donor states, bilateral and multilateral programs, non-governmental organizations, and amorphous "public-private partnerships." In addition to the "big-bang" of new agencies created in the late 1990s and 2000s, the regime's growth is apparent in the sheer volume of new financial resources devoted to combating disease around the world.

Much of this dramatic increase in financial resources has come in the form of Official Development Assistance (ODA) devoted to health, making health one of the fastest growing sectors of international aid. In 1974, aid to global health totaled only $1.9 billion. By 2006 aid to global health increased ten-fold to a record $19.6 billion. During the same period, aid to health expanded from five percent of all development assistance to a record 16.5 percent. The remarkable growth of new agencies that emerged to fight epidemics includes the creation of high profile agencies such as UNAIDS, the Global Fund, and the President's Emergency Program for AIDS Relief (PEPFAR). Just as significant has been the increased number of existing agencies that have prioritized health. The World Bank has arguably become the central multilateral player

in the global public health regime, and has altered the regime's fabric considerably.[2] Growing private institutions such as the Bill and Melinda Gates Foundation are adding further to this patchwork.

A large literature in the area of global health points toward increasingly disjointed global health activity as the regime has expanded. The new money the rich world has poured into global health coffers, it argues, does not mirror the actual patterns of disease in the developing world. Laurie Garrett's provocative article in *Foreign Affairs*, "The Challenge of Global Health," caused a stir in the development community by contending that funds for global health are misallocated. Garrett notes:

> [B]ecause the efforts this money is paying for are largely uncoordinated and directed mostly at specific high profile diseases—rather than at public health in general—there is a grave danger that the current age of generosity could not only fall short of expectations but actually make things worse on the ground.[3]

Just as much current thinking the IR literature would predict, Garrett's critique reflects a widespread perception that the global health regime has become dollar-for-dollar increasingly inefficient over time. This essay reaches a different conclusion. When viewed in its totality, the global health regime has successfully promoted efficiency in key ways. As the global public health regime has seen its bureaucracy expand, it has also seen high levels of specialization. As the bureaucracies within the regime complex have grown larger and allegedly more tangled, actors within the regime have shown a greater inclination toward reducing inefficiencies and better meeting the requirements of the global burden of disease through managed competition,

[2] For a discussion on the World Bank's usurpation of WHO influence, see Lee 2009, 111, and Abbassi 1999.

[3] Garrett 2007, 14.

and the development of niche activities. Specialization occurs according to issue area, as well as geography. One effect of this has been to reduce the overlapping tasks associated with regime complexity.

Moreover, data presented in this essay suggest donors are approximating the actual burden of disease in the developing world to a surprising degree. This approximation is not uniform with the burden of disease, but is unexpectedly close given the groundswell of scholarly arguments predicting the contrary. Underlying these patterns are individual actors within the regime, whose roles and priorities vary starkly. Even though donors have increased global health outlays, they have also narrowed their range of priority issues. Most choose to specialize in just one or two areas. Smaller actors, correspondingly, also adopt highly specialized roles such as advocacy, ground level partnerships, or resource coordination. To understand these important developments, factors hitherto under-explored in public health deserve greater attention, including emergent coordination between development and health agencies, specialization among these actors, and the emergence of a normative consensus on economic approaches to development.

This essay proceeds in two parts. The first section identifies both broader and more nuanced patterns in the development of the global health regime. This section illustrates two key findings that have thus far been under-explored: the high propensity for specialization in global health and the general proximity of global health resources with actual global need. The second section examines a system of managed competition that underlies specialization patterns. Through this system development agencies are effectively coordinating the distribution of resources toward global health. Conditions of increased regime density have resulted in a highly enmeshed de-facto cooperative division of labor with persistent specialization patterns among

donors. Donors seek to maintain their value-added, and potentially their bureaucratic relevance, by playing specialized, complementary roles. The system of managed competition emerges in the context of economism that pervades the global North-led international development effort. This illustrates a global consensus encouraging specialization as well as cost-effectiveness within the regime. Global health, moreover, has itself become a precondition for economic growth espoused by major figures such as the World Bank and WHO.

These developments portend a more optimistic outcome for regime complexes than the emergent regime complex school often predicts when it comes to the specific question of how the global public health regime allocates resources. They offer a critical empirical case for the new thinking in the IR literature that emphasizes overgrowth and inefficiency. The expansion of global governance in health did not insurmountably jeopardize resource maximization in all cases, and even encouraged efficiency.

Is Bigger Worse?

While the international relations discipline has long studied the vast increase in IOs since 1945, regime complex studies initiated a timely exploration of the unintended consequences of a multilateral architecture in seemingly terminal expansion by the 21st century. As the institutions and legal frameworks that constitute global governance have grown more complicated, scholars have increasingly devoted attention to the consequences of increased size and complexity. Karen Alter and Sophie Meunier's influential study sees "nesting" as a significant reason behind the unusual continuity of what should have been a relatively modest trade dispute involving the

banana industries of the EU and US.[4] Regional and bilateral commitments are "nested" when the parties to them are also bound by other, overarching legal agreements. The ensuing amalgamation of rules can potentially add complication to otherwise straightforward legal disputes. For Alter and Meunier, "institutions are imbricated one within another, like Russian dolls."[5] Their findings suggest that increasing additions of non-hierarchical frameworks—as states enter into bilateral agreements that may complicate existing multilateral ones, and vice versa—threaten an increase in suboptimal outcomes. By implication these changes are likely to increase the cost of international transactions.

The term "regime complex" was introduced by Raustiala and Victor whose study of the international legal frameworks for plant genetic resources sought to conceptualize the expansion of global governance over time and the consequent emergence of increasingly dense, complex networks of regimes.[6] For Raustiala and Victor, singular, or "elemental," regimes overlap in relationship to a single issue area, with none assuming official hierarchical authority over existing actors. There is, in their estimation, a "growing concentration and interconnection of institutions."[7] Regime complexes, they contend, "will become much more common in coming decades as international institutions proliferate and inevitably bump against one another."[8] This has sparked considerable discussion in the IR field. While new institutions are being formed, and others expand into new territory, existing agencies and bureaucracies are unlikely to simply

[4] Alter and Meunier 2006.

[5] Alter and Meunier 2006, 363.

[6] Raustiala and Victor 2004, 279.

[7] Raustiala and Victor 2004, 296.

[8] Raustiala and Victor 2004, 306.

disappear. The logical increase in institutional density will undoubtedly affect how existing regimes operate.

These studies generally reflect a pessimistic view of regimes as they expand. Indeed, new institutions created within regimes are often not hierarchical, leaving significant procedural ambiguities. This is the case in global health, which has seen a tremendous proliferation of new agencies that often serve similar functions. A variety of existing development institutions adopted responsibilities toward public health, thus blurring the line between health and economic development functions. This is likely to have far reaching consequences according to the regime complex literature. With multiple, non-hierarchic forums, states strategically seek out those which are more favorable to their interests. The more channels that exist, the more costly navigating the regime will become for developing countries with scarce managerial resources. This has raised important strategic questions for recipient states: From which donors do they seek support? Do they solicit input from the World Bank, UNDP or WHO? Do prospective aid recipients apply to PEPFAR or the Global Fund for assistance? Moreover, coordinating tasks should become more difficult between donors, creating difficult choices over which tasks to pursue when most spheres of activity already have numerous participants.

The regime complex literature, as well as an array of critical analysis in global public health, predicts the regime to grow less effective as it expands. A nuanced analysis of aid data suggests a less pessimistic scenario in this regard. Increased complexity, volume and density within a regime complex do not necessarily lead to the increased misallocation of resources. The global public health regime has grown substantially in size and complexity since the early 1990s. The most obvious of these changes is the dramatic increase in overall resources dedicated to health. The OECD's Creditor Reporting System, the main source of data for this project, collects

data on aid to global health since 1974.[9] This data show that aid to health increased ten-fold during that time, accelerating in the 1990s and 2000s. In the period from 2002 to 2006, total world ODA to health approached $72 billion, up from $43.7 billion over the previous five year period. This amount is still less than what it would take to provide universally accessible care in the developing world, but has led to scaled-up responses on a variety of global health fronts.[10] Table 1 shows consistently rising levels of health assistance, and health's growing share of aid overall.

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[9] All the data on aid commitments in this article comes from the OECD's Creditor Reporting System (CRS) database, which tracks and categorizes aid commitments from all Development Assistance Committee (DAC) members and several major multilateral donors. The data were coded utilizing the following OECD categorizations for aid. "Maternal health and perinatal conditions" combines "reproductive health care" with "family planning." "Water sanitation" combines a variety of water systems categories, including "water resources policy and administrative management," "water resources protection," "water supply and sanitation: large systems," "basic drinking water supply and basic sanitation," "river development," "waste management and disposal," and "education and training in water supply and sanitation." "General health sector development," often cited in the text as "health infrastructure," combines "health policy and administration management," "medical education and training," "medical research," "medical services," "basic health care," "basic health infrastructure," "health education," and "health personnel development." Data on AIDS comes from "STD control including HIV/AIDS." Data on communicable diseases comes from the category labeled "infectious disease control." This coding system is similar—though not identical to—those employed in Bloom 2007, and Mackeller 2005. Information on the criteria for each OECD category can be explained, area by area, in Organization for Economic Cooperation and Development 2005, 6-8. Aggregate figures on commitments to global health were calculated by combining the health, population, and water sanitation categories (all subcategories under these headings are shown above in this footnote). The data were reported in 2005 dollars.

[10] See WHO Commission on Macroeconomics and Health 2001.

[Table 1]

These patterns defied the dominant trend of declining aid in the 1990s. Once the Cold War period ended, levels of development assistance dropped off considerably. By 2000 Jean-Philippe Therien and Carolyn Lloyd declared development assistance to be "on the brink."[11] Yet even as aid declined there were also evident changes in how it was being viewed by donors. Results-based aid became increasingly important in the 2000s. Africa's economic decline in the 1990s, combined with its exploding AIDS crisis, put this region at the center of attention in international development. Economists and, increasingly, policymakers began to see reversing Africa's decline as germane to donors' interests. Moreover, agencies such as the World Bank, the UNDP and the WHO began producing reports that placed health at the center of international development. These agencies argue that improved societal health contributes to economic growth by making the workforce more productive and lifting the economic costs associated with disease. Additionally, the development community faced withering criticism associated with the structural adjustment policies of the 80s and 90s. As Therien and Lloyd argue, "after a decade dominated by the objective of structural adjustment, the much less controversial one of sustainable development has taken over as the new mantra of aid policies."[12]

Global health nevertheless became more central to international development during this time—defying the overall post-Cold War trend, also evident in Table 1. While overall development assistance was "on the brink," global health funding actually increased dramatically. Indeed it was during early post-Cold War years that health financing grew in both

[11] Therien and Lloyd 2000.

[12] Therien and Lloyd 2000, 21.

absolute and relative terms. In 1991, as the Cold War receded, overall development assistance topped $65 billion. During that year the total global health outlay was $5.3 billion, roughly 8 percent of overall development assistance. By 1993 development assistance declined to below $50 billion overall, not eclipsing that level again until 1996. Health ODA by contrast rose to $6.7 billion by mid-decade, reaching $7.9 billion by the time the rest of the aid regime stabilized in 1996. By that year aid to health comprised a 15 percent share of world development assistance. By 2000 aid to health neared $11 billion, foreshadowing yet another surge in funding that happened later that decade.

This growth in funds sparked fierce expert debate over allocation. As Kates, Morrison and Lief argue, "investments in health seem to be uneven, raising cautionary notes about the global community's ability to meet, let alone sustain, financial needs over time."[13] New funds may be there, but priorities are awry. Science reporter Laurie Garrett—who sparked considerable debate over the issue in *Foreign Affairs*—states this position most forcefully. She contends that aid is "stovepiped" down to specific issue areas while ignoring broader health conditions. The new influx of funds, Garrett argues, does not correlate well with the global burden of disease. Instead of addressing in-country health issues holistically by boosting local health infrastructures, global donors rely too heavily on "vertical" disease-specific programs. This contention has been regularly reiterated in the global health literature. Shiffman's study of the effects of increased funding for HIV/AIDS found evidence of a "displacement effect" on other health issues, including general health infrastructure and population funding.[14] Mackellar's study of the CRS database's aid to health also noted disproportionate allocation toward

[13] Kates, Morrison and Leif 2006, 187.

[14] Shiffman 2008.

communicable diseases characterized as "poor," such as respiratory illness, HIV/AIDS and malaria. Drastically underemphasized by the global health regime, according to Mackellar, are non-communicable diseases like heart disease, cancer and stroke, which receive no directly assigned development assistance.[15]

Along with a greater volume of aid has come greater bureaucratic complexity. There has been a massive merger between public health and economic development. This syncretism combines what are arguably separate regimes toward a common purpose: fostering growth by reducing the global burden of disease. A variety of development agencies have prioritized global health, particularly the World Bank and United Nations Development Programme (UNDP), with both playing a central role in shaping global health's political agenda. There was also a proliferation of altogether new actors as global health gained traction as a central development issue. This includes the creation of new agencies narrow in scope with a great deal of overlap, such as PEPFAR and the Global Fund to fight AIDS, Tuberculosis and Malaria. Just as the regime complex theorists' overexpansion narrative predicts, the school of thought led by Garrett sees greater inefficiencies as the regime grows and agencies such as these pursue similar mandates, with no formal hierarchy between them. Such problems are worsening, they say, under conditions of increased size and bureaucracy.

Table 2 summarizes select major health agencies that emerged since the late 1980s, contributing to a more complex global regime. Table 2's partial display of an expanded regime suggests an element of truth to the case made by Garrett and other regime critics: There are a growing number of emergent actors whose activities are "vertical," or narrow in scope, avoiding

[15] Mackeller 2005.

holistic approaches to public health. The 1990s and 2000s have witnessed a "big bang" of new agencies not seen since the post-war period, and a large number of them were vertical. This is indicative of increased specialization—also reflective of the "stovepiped" channels of aid lamented by Garrett. Yet, as we will see below, the emergence of vertical programs has not necessarily meant that the overall aid picture is extremely skewed.

[Table 2]

Conformity with Disease Burden

The global distribution of resources, measured in terms of development assistance, generally reflects the burden of disease—and certainly does so to a greater extent than that suggested by the regime's critics. True, there are areas in which global funding allocations do not perfectly correlate with disease burden. The two areas where this is the case are child health and basic nutrition, which are two of the deadliest epidemics in the lesser developed world. Perinatal conditions are the leading cause of death among children under fifteen years of age, comprising 20 percent of all deaths in this age group.[16] They account for 6.4 percent of disease burden in low and middle income countries, more than HIV/AIDS (See table 3).[17] Maternal health and perinatal concerns have seen a marked decline in their share of health ODA, from a peak of 13.6 percent in the period from 1992-1996 to nine-percent between 2002 and 2006.

[16] The Disease Control Priorities Project (DCPP), sponsored by the World Bank and National Institutes of Health, is the most extensive assessment of global disease patterns. The most recent edition, published in 2006, compiled data for 2001. All disease burden statistics in this essay derive from this source unless noted otherwise. Lopez, Mathers, Ezzati, Jamison, and Murray 2006, 72.

[17] Lopez, Mathers, Ezzati, Jamison, and Murray 2006, 8.

Development assistance toward basic nutrition has undergone a similar, albeit less abrupt pattern. Aid in this category confronts arguably the most dangerous risk factors in the impoverished world, accounting for 14.2 percent of disease burden.[18] Yet aid to basic nutrition remains remarkably low, peaking at 1.7 percent in the period from 1997 to 2001 and dropping to 1.3 percent between 2002 and 2006.

Issues of general health infrastructure, thought to be under-prioritized, are actually a high priority for donors. Figure 1 shows the total world health ODA toward six major health issues addressed by the global public health regime. The graph shows the change over six five-year intervals reported by the OECD. These six health issues represent the majority of the disease burden in low and middle income countries (the combined recipients of all ODA), accounting for all health ODA during these periods. General health sector development and water sanitation have consistently been the regime's top priorities and both received significant gains in recent years despite the emergence of HIV/AIDS as a central priority. According to OECD calculations, aid to health infrastructure affects a variety of health emergencies. Just as importantly, it provides the only form of ODA within the CRS's categorization system that addresses non-communicable diseases (such as cancer, heart attack and stroke) which have become the largest sources of disease burden in low and middle income countries combined.[19]

[Table 3]

[18] Lopez, Mathers, Ezzati, Jamison, and Murray 2006, 10. This statistic counts only maternal and childhood nutrition, the main beneficiaries in this category. Overall disease burden according to nutritional related risk factors is 29.2 percent in low and middle income countries.

[19] As calculated in Mackeller 2005.

Similarly, water sanitation addresses one of the largest concerns in the global public health regime. Its place as a high priority is consistent with its position as a leading detriment to health. Several key realities threaten to spread waterborne disease: 884 million people lacking clean drinking water, while 2.6 billion lack access to basic sanitation, according to the UN.[20] After modest gains, however, HIV/AIDS was the largest overall beneficiary of new funding for global health during the last decade. During the period between 2002 and 2006 funding for HIV/AIDS exceeded $15 billion, up from $3.5 billion during the 1997-2001 cycle.[21] This makes it the third largest statistical category behind general health infrastructure and water sanitation. The second major category to see a sharp increase in funds in recent years is infectious disease control, which includes treatments for such major diseases as tuberculosis and malaria. Funding toward this category increased from $2.4 billion during the 1997-2001 cycle to more than $6 billion between 2002 and 2006. Despite broad criticism as an over-priority, the high prioritization of AIDS and other infectious diseases does in fact reflect their high impact, most particularly in areas that can be defined as "low" rather than "middle" income. This is especially the case in the priority regions of Africa where AIDS, tuberculosis and malaria are among the highest disease burdens.

[Figure 1]

[20] Figures reported in United Nations News Centre, 28 July 2010.

[21] Within this cycle, HIV/AIDS received most of these gains in later years, making its gains all the more impressive. Also, although the CRS database combines HIV/AIDS with "STD Control," it is believed that nearly 100 percent of the programs reported are actually for HIV/AIDS. See Shiffman 2008.

Critics contend that the public health regime has placed too great an emphasis on single issues, particularly AIDS, at the expense of the more holistic priority of global health development. However, as these figures show, general health sector development is the regime's second highest priority. This spending is substantially applied toward non-communicable diseases that comprise a growing share of disease burdens in low and middle income countries, as shown in figure 1. Water sanitation is also a leading risk factor in poor countries. Moreover, the emphasis on AIDS, tuberculosis and malaria reflects a growing focus on Africa in the 2000s, which has become the central priority region of international development efforts. Figure 4 shows the leading disease burdens in Sub-Saharan Africa. This pattern of disease burden is distinct from the "low and middle income countries" designation often used by scholars. The vast majority of this region is officially low income and has not made the epidemiological transition toward non-communicable and chronic illness to the extent that middle-income countries have.

[Table 4]

Figure 2 below puts into sharper relief the overall prioritization in global public health by share. This chart shows funding for the six major global health issues as a percentage of total world health ODA. When viewed in terms of overall share, only infectious disease control and HIV/AIDS show gains, while the other four major categories decline, reflecting the crowding-out largely lamented by scholars. Patterns of distribution by share in world health ODA do reflect an over-emphasis on HIV/AIDS as public health scholars often contend. Yet, as figure 1 presented above shows, absolute funding for most major health categories continued to rise steadily—and in much closer correspondence to the global burden of disease than the regime's intense critics

indicate. This finding casts doubt on the premise that greater resources to global health invite the potential for even greater misallocation. As the OECD data suggest, the global public health regime has allocated development assistance in a manner closer to disease burden in *low income countries* as the regime has expanded. Moreover, as the following subsection shows, these broad, well-remarked-upon trends obscure an equally important pattern, that of specialization.

[Figure 2]

Specialization

Specialization in global public health is a countervailing force against potential macro-inefficiencies due to regime expansion. It serves to decrease overlap and, in the case of global health, comes closer to addressing the global burden of disease than either global health critics or the regime complexity school would expect. Specialized patterns are evident in the development assistance patterns of major donors, many of whom prioritize one or a small handful of issues rather than attempting to address the entire spectrum of the global disease burden. While the US devotes considerable attention to other health issues, HIV/AIDS received half of all the ODA that the US distributed toward global health in 2006, and nearly triple the amount of the next largest category. Its pattern of aid distribution is particularly unique, because it specialized for decades in maternal health. Maternal health was the US's leading recipient of health aid in the 1980s and 1990s, despite being relatively neglected by the rest of the world. Today, the US with its emergent vertical President's Emergency Program for AIDS Relief (PEPFAR) is the single largest driver of the swift rise in development assistance toward AIDS. In fact, the US accounted

for nearly half of all development assistance to AIDS in the five-year cycle from 2002 to 2006, reaching nearly 55 percent as PEPFAR expanded in 2006.

Though critics have lamented that growth in assistance toward AIDS has outpaced other issues, individual donor patterns offer a much different picture. There is a distinct class of bilateral donors highly specialized in issues other than AIDS. Japan devotes 78 percent of its health ODA to water sanitation (and 23 percent of the world total in this category).[22] Forty-three percent of Swedish ODA to health goes to health sector development, which its development agency considers a pocket of strength given Sweden's own successful universal system. Similarly Norway devoted 57 percent of its health ODA to general health sector development. Switzerland devoted 96 percent of its health ODA to infrastructure and water sanitation together. These two issue families are common priorities among European donors. Like Switzerland, France devoted a combined 96 percent of health aid to these two issues. Italy devotes 89 percent of its health allocations to infrastructure and water sanitation, roughly the same percentages as Denmark. The Netherlands devotes three-quarters of its aid to these categories. Germany, for its part, devoted nearly 60 percent of its ODA to water sanitation alone.

Outside Europe, Australia is also highly specialized, devoting 62 percent of its aid to general health infrastructure while maintaining relatively low allocations in other categories. Among these donors we see an emphasis beyond the purported myopic focus on HIV/AIDS, which scholars have identified as the central force in driving up overall allocations.

[22] This data derives from the OECD's CRS database, from 2002-2006, as do all the other cases mentioned in this subsection. It is worth noting, in Japan's case, that Japan devoted virtually nothing directly to AIDS at this time, though it had made significant contributions to the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM).

Complicating this story is the fact that there are large numbers of DAC bilateral donors that have not taken part in the explosion of AIDS assistance, instead addressing water sanitation or general health development. Canada and the United Kingdom, by contrast, have to some extent joined the US in the AIDS cause, more closely reflecting the expected pattern. Both have devoted relatively less to other key issues while committing more to HIV/AIDS, obscuring any obvious specialization patterns in comparison with the class of donors mentioned above. Departing from continental European donors, overall aid levels toward water sanitation and health infrastructure declined in both countries while AIDS became central to both programs in the 2000s. Nevertheless general infrastructure remained the top priority for both donors between 2002 and 2006.

Similar distinctions are evident among multilateral donors, which persistently comprise large shares of the overall health picture, shown in figure 3. The European Union specializes in water sanitation and health infrastructure and has focused minimally on HIV/AIDS, a pattern similar to the bilateral European cases shown above.[23] The World Bank, for its part, maintained its historic focus on water infrastructure (46 percent of ODA), followed by health infrastructure (27 percent), with increasing funding for AIDS not greatly diminishing those priorities. The Bank, as we will see below, has been a central purveyor of an economic approach to global health that emphasizes specialization, efficiency, reduced overlap, the utilization of comparative advantages, and cost effective measures that target the global burden of disease. As for regional development banks, the African Development Bank specializes in infrastructure and water sanitation, devoting only small shares to HIV/AIDS. That HIV/AIDS is not a high priority is

[23] These aid commitments come directly from the EU itself, excluding individual state donations.

surprising given the devastation wrought by AIDS in Africa. It is less so when we consider the greatly increased influxes of aid coming from the US, Canada, the World Bank and other AIDS specialists. The Asian Development Bank by comparison committed 62 percent of its funding to water sanitation, consistent with the Japanese water-centric model.

[Figure 3]

Roll taking is an equally important qualitative form of specialization, defined by the general approach that actors take to address global health concerns. There have been remarkable role fluctuations in recent years, particularly with multilateral institutions and NGOs. Organizations usurp the positions of others, forcing the marginalized actors to adapt. Capital weak agencies such as UNAIDS, the UNDP, and the WHO seek to exert their influence by assuming coordinating roles. They assist recipient countries in dealing with the influxes of aid, and in navigating the multiple channels for aid that have cropped up as the regime expands—becoming central drivers of the system of managed competition discussed in the next section. They also use their public legitimacy as political capital, giving them the moral authority to impact the world development agenda through activism. These organizations have assumed important roles in negotiating down drug prices, pressuring states for aid, and highlighting under-funded diseases. They have also been central to global efforts to enhance efficiency. Meanwhile, organizations with deep pockets dominate aid outlays. The World Bank, for instance, has utilized its significant capitalization to become one of the world's largest purveyors of concessional loans. A similar pattern is becoming more evident among NGOs as well, with the Bill and Melinda Gates Foundation assuming a major role in global aid distribution and in global governance over development issues generally.

Managed Competition

An increased number of actors in the global health regime have not meant perfect competition, where a multiplicity of autonomous market entrants produces functionally indistinguishable goods. Rather, relationships between agencies entail high degrees of connectivity, both in terms of personnel and financial resources, in practice sidestepping principles of "creative destruction" under conditions of market competition. Moreover, IOs engaged in the global health regime persistently seek to provide unique inputs. Applying the words of Karl Polanyi, markets in the global health regime are planned. While the survival of long-existent organizations is not at stake due to the emergence of new actors (indeed, such actors routinely create, sponsor, or partner with new agencies), the WHO in particular has struggled for relevancy mainly for reasons including a lack of donor confidence. Mindful of these evident concerns affecting agency maneuvering amidst conditions of regime complexity, as well as the deeply embedded relationships between agencies new and old, the term "managed competition" is more appropriate as it refers to general interagency relationships rather than perfect competition in a pure market setting. Managed competition, unlike perfect competition, also entails coordination. Indeed the expanded health regime places a great deal of emphasis on partnership rather than replacement.

Competition within growing international regimes has received increasing attention in the scholarly literature, with case studies finding varying results on its role in creating inefficiencies. Stephanie Hofmann's study of the relationship between NATO and the European Security and Defense Policy—though not entirely competitive—suffers from having few incentives to cooperate, but considerable overlap in missions. This, she argues, has "clearly impeded the

development of an efficient division of labor between the two institutions."[24] Judith Kelley deals directly with the case of competition among increasing numbers of agencies in election monitoring. Increased density, she argues, has a series of beneficial effects. The existence of multiple institutions can overcome deadlock, offering alternative agencies for states who may feel that existing agencies are biased against them. Moreover, the presence of multiple election monitoring agencies may increase legitimacy by reinforcing election results. But added inefficiencies are a cost of increased density. Competition creates a disincentive for cooperation. A lack of information sharing between agencies, or unwillingness to pool resources, can lead to costly overlapping and sub-optimal outcomes. Or, as Kelley puts it, "redundancies, communication failures, and waste."[25] Differing organizational biases, methods, or standards may cause these organizations to contradict each other or otherwise work at cross purposes.

The patterns of resource distribution and roll taking illustrated above suggest a less pessimistic misallocation scenario than the regime's critics suggest. The global health regime is capable of allocating resources effectively. As it grows, the problem overlapping inefficiencies is mitigated by a division of labor amidst managed competition. Managed competition between agencies should theoretically increase as under conditions of regime complexity. Global health has seen existing development agencies become newly integral to its regime complex, and has seen new agencies created within it. This has generated optimism as well as concern within agencies. As former reformist UNDP head Mark Malloch Brown asked, "What do you do when you have done such a good job of persuading others that you have the right ideas that they are

[24] Hofmann 2009, 46.

[25] Kelley 2009, 62.

doing them as well now, and on a much bigger scale with a lot more resources?"[26] Even the World Bank, which has emerged as the largest multilateral financial arm in global health, has been forced to confront the question of increased competition.[27] And nowhere have competitive pressures been more evident than in the case of the WHO, which was the central multilateral forum for global health in the post-war era. With the rise of rival agencies it has drastically redesigned its role according to what it sees as its comparative advantages relative to emergent actors including the Bank. This passage from former WHO Director General Gro Harlem Brundtland, from a speech to the executive board, is indicative of the WHO's new direction:

> What is our comparative advantage? Given our mandate and our human and financial resources, what are the functions that WHO is best placed to carry out more effectively than others? How can we shift the balance of our work to focus even more forcefully in areas where our comparative advantage lies? And most importantly, how can we increase the impact of our contribution by engaging a variety of partners who can supplement and compliment that contribution?[28]

This reflects the WHO's position in an increasingly dense regime. Where it was previously the primary global public health organization, it must now define its position (and bureaucratic turf) in relation to other actors.

Other development institutions heavily involved in public health have felt similar pressures, and initiated reforms in the direction of specialization. Lacking the deep pockets necessary to function as a major donor, the UNDP has asserted a ground-level coordinating role. It has embedded itself deeply, as with other UN actors, into the system of managed competition.

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[26] Murphy 2006, 300.

[27] See World Bank 2007, 11.

[28] Cited in Lee 2009, 108.

The UNDP assists governments in navigating an increasingly dense public health network.[29] Despite the vast resources at the disposal of the International Development Authority (IDA), the World Bank's concessional lending arm, the Bank has also expressed concern over similar pressures. While the World Bank enjoys a leading position, it too has confronted issues of harmonization and overlap. A 2007 report on Health, Nutrition and Population (HNP) priorities lamented that "[t]en years ago, the Bank was the main financier of HNP. Today, in addition to the Bank, new multilateral organizations, initiatives, and foundations have assumed a prominent role in financing HNP, among them the Global Fund, GAVI, GAIN, and the Bill and Melinda Gates Foundation."[30] The report noted that the number of vertical bilateral programs had also increased greatly, threatening to crowd out other issues such as nutrition.

The Bank's most recent IDA replenishment report stresses the reduction of overlap amidst increasing regime density.[31] The report contended that, amidst the influx of vertical aid, "the IDA can support the integration of horizontal and vertical aid by providing a 'horizontal platform' upon which the vertical funds…can operate effectively and mitigate the risks associated with vertical aid."[32] IDA 13 (which signified the thirteenth cycle of replenishment, in 2002) was significant because it called for a consolidation of the IDA's activities, emphasizing specialization. The report, which reflects the debates and agreements among donor members, contended that the "IDA needs to identify more precisely what it can (and cannot) commit to do,

[29] United Nations Development Program 2007, 10.

[30] GAVI is the Global Alliance for Vaccines and Immunization, GAIN is the Global Alliance for Improved Nutrition. World Bank 2007, 11.

[31] These reports are intended to outline the fund's priorities over three year periods.

[32] World Bank 2008, 16.

based on countries' needs and absorptive capacity and on IDA's comparative advantage."[33] During this period the IDA narrowed its mandate more closely around its areas of expertise in development capacity and infrastructure building. Specialization under conditions of managed competition offers a significant byproduct: the resultant division of labor acts as a countervailing force against bureaucratic inefficiency. A strong semblance of coordination leads to the surprisingly rational patterns of specialization illustrated above.

Economism

The international commitment to increase development assistance in the 2000s was—for both political and practical reasons—coupled with equally forceful discussions about efficiency. New aid channels raised an inevitable question: Would it be possible to expand international aid channels effectively? "Cost effectiveness" became a standard mantra in the development discourse, emphasized most prominently through major development agreements such as 2005's Paris Declaration on Aid Effectiveness and its follow-up, 2008's Accra Agenda for Action.[34] Not only must the global donors commit greater volumes of funding (a consensus at least until the global recession cast a pall over agreed-upon targets), they must produce benchmark results intended to prove these funds are applied effectively.

The growing role of economism in the multilateral health effort has been influenced greatly by the emergence of the World Bank as a central ideational force in the global health

[33] World Bank 2002, 5.

[34] These landmark agreements greatly emphasize the principles of "donor harmonization," particularly under the banners of "alignment" and "harmonization" among donors.

arena.[35] The economization of health provides broader context for the system of specialization that has coalesced around an expanding health regime. Economism has been central to this emergent ideology. First, the economic approach emphasizes liberal principles of division of labor and comparative advantage in the allocation of resources. Donors take effective measures to narrow their sphere of activities (hence the proliferation of vertical agencies), thereby offsetting the problem of overlapping tasks. Second, health's role by this perspective becomes embedded in larger notions of the global economy. The state of the former becomes a precondition for the performance of the latter. Health, according to this view, is a paramount economic issue, both because healthy communities boost productivity, and because high disease burdens undermine it.

During the 1990s the international development community fully acknowledged health as a critical component of economic development in poor countries. Its rise represents changing views by many in the international development community in favor of human development indicators and away from the sole focus on traditional monitors like GDP, exports, and inflation. The World Bank embodied this change by embracing human-centered aspects of development like health and nutrition. Such ideational factors produce behavior that appears surprisingly similar among diverse sets of actors. In this context, global health ideologies cut across actors, even those that are traditionally adversarial. Diverse sets of actors appear to promote the same strategies because they share a discourse of health values that permeates the entire regime. Global health is held as a human right. It is central to creating growth. Global health strategies should be viewed in an economic context—i.e. what is the most cost effective way to reduce the

[35] Kelley Lee's groundbreaking work explores the role of the World Bank in promoting economism, and influencing other organizations including the WHO. See, especially, Lee 2009.

economic burdens of poor health? These hegemonic ideas create conformity across actors, both in what they say and do. Many approaches espoused by the WHO, for instance, sound similar to actors as varied as the World Bank, the government of Sweden, and the Gates Foundation. The economization movement—articulated most prominently by the Paris Declaration—has called for aid optimization on a grand scale, and has been influenced by an "epistemic community" of development experts.[36] It calls for economizing aid according to individual comparative advantages, forging a global division of labor that conforms to the burden of disease. This approach, to use the influential language of Jeffrey Sachs, will help lift the poorest countries out of "poverty traps," spurring virtuous cycles of growth.[37]

The watershed document that signified economism's centrality to public health was the World Bank's 1993 development report, *Investing in Health*. The document relied heavily on recent innovations calculating the global burden of disease in order to identify cost-effective interventions. Poor countries, the Bank argued, should focus on low cost interventions measured in terms of dollars per DALY saved. The document called for more funding for public health, but also called for narrowing the scope of interventions toward those that are most cost-effective and are directed at the poorest populations. The report called for trimming down priorities to a narrow focus on issues that meet these criteria. "Only by reducing or eliminating spending on clinical services that are outside the nationally defined essential package," the Bank argued, "can governments concentrate on ensuring essential clinical care for the poor."[38] This precludes universal health care, because such a system effectively subsidizes middle and upper income

[36] Haas 1989.

[37] See Sachs 2008.

[38] World Bank 1993, 108.

groups who could pay for their own services. In any event, the report argued, "government run health systems in many developing countries are overextended and need to be scaled back."[39] The report calls for drastic increases in donor funding to health, and cost effective reprioritization. There is particular emphasis on resource effectiveness, which can be improved through "increased investment in basic public health measures," while spending for costly measures such as the specialization of medical personnel and tertiary care hospitals should be "reduced or eliminated."[40]

Investing in Health prefigures many of the main components of the public health consensus in the 2000s. Consistent with the emergent consensus, it establishes public health and economic growth as codependent. This represents a break from the Bank's previous ideology which saw economic growth as a precondition for other development goals such as health. The report also calls for a drastically expanded global response in terms of development assistance levels. It argued that funding for global health did not come close to what was needed to address pressing needs, including the HIV/AIDS crisis which expanded rapidly during this period. Yet even as it called for an expanded response, it also called for a narrowed approach to public health in which governments limit their focus to a reduced number of priority issues. "Difficult choices have to be made about the best use of public money," argued the report.[41] This was true, according the Bank's design, for both donor organizations and recipient states. Moreover, governments can "avoid the explosive increases" in health expenditures "by encouraging

[39] World Bank 1993, 108.

[40] World Bank 1993, 156.

[41] World Bank 1993, 72.

competition."[42] The World Bank's ascendance in public health has meant a heightened influence for its neoliberal ideals of resource rationalization and market competition.

While partially addressing the human development elements of the consensus, *Investing in Health* put a greater emphasis on economism and cost-effective prioritization. The report also reflects both the displacement of the WHO as the preeminent agenda setter in public health and the growing influence of economists in the formulation of public health approaches. While the WHO had partnered with the World Bank in producing *Investing in Health*, the report is a departure from its more universal, far reaching "primary care" ideas in favor of the Bank's economics-based approach.[43] Additionally, the economic consensus emphasizes the economization of resources.

In sum, the consensus emphasizes narrowing institutional focus in order to reduce overlapping tasks within the global health regime. Central to this consensus is the regime-wide move toward specialization. This broad pattern, with many donors increasingly specialized, illustrates a paradox in the rise of global health as a major development priority. As donors have devoted increased funds to world health, their individual priorities have generally diminished. Donors are allocating more toward health, but scaling back programs and narrowing their focuses. This was abundantly clear during the WHO's reform period under Brundtland. Reform at the WHO meant the adoption of a leaner, more specialized approach to global health. These moves reflect a debate ongoing since the WHO's founding. Should the organization attempt to

[42] The World Bank 1993, 108.

[43] The report gave tepid support for the World Health Assembly's 1978 call for "health for all" by 2000 at the Alma Ata conference, while backing away from Alma Ata declaration's calls for systemic change and universal village-based care.

address the broadest possible array of health challenges, or should it considerably narrow its goals, devoting stretched resources to fewer areas?[44] The WHO has taken the narrow path in recent decades. Brundtland initiated a sharp reduction in high level appointments, and a streamlining of WHO bureaucracy. Fifty programs were reduced to 35, and grouped into nine "clusters."[45] "Given the magnitude of the global health agenda," as Brundtland succinctly put it, "it is evident that WHO cannot do everything."[46] Moreover the WHO's strained core budget—essentially frozen through much of the 1990s and 2000s—meant that it did not have the predictable flow of resources necessary for the broad focus that its constitution mandates. During that period the WHO had played a diminished role in a more crowded regime under conditions of managed completion, and was pressured to enact a series of reforms that closely reflected the economism of the regime consensus.

Conclusion

The continual expansion of multilateral infrastructure in the 21st century has become a focal point of study within the international relations discipline. This development gives rise to an elemental normative question in political science: Can governance expand effectively, or does its expansion inevitably create the conditions for grossly suboptimal outcomes? The regime complex literature makes an important contribution by applying this question to global

[44] The latter approach arguably undermines the spirit of the WHO constitution, which mandates the organization to promote, broadly, "the attainment by all peoples of the highest possible level of health."

[45] These were communicable and non-communicable diseases, sustainable development, health systems, health information, health technology, mental health, external relations, and management reform.

[46] World Health Organization 2000, 2.

governance. It has advanced institutional theory at a time when the world's multilateral architecture appears to be in a state of terminal expansion, creating new layers of rules and agencies that overlap with existent ones. While efficiency must be understood as a means rather than an end of good governance, the study of regime complexes has raised the timely possibility of unintended consequences resulting from expanded global governance. It has also confronted the political reality that stakeholders investing in new transnational infrastructure are seldom willing to subordinate their activities to existent agencies or central authorities, regardless of the broader efficiencies this self-sacrificing approach may yield. Raustiala and Victor are likely correct to suggest regime complexes are the wave of the future—but is this future so bleak? International cooperation is in great demand in an unprecedented variety of policy arenas. Even many critics conclude that transnational problems such as public health cannot be successfully addressed without it.

Developments in global health offer grounds to rethink the prevailing pessimism in regime complex studies. This essay informs the growing body of regime complex literature by identifying a case in which a highly complex regime expansion surprisingly catalyzed measures that improved cooperation, encouraged the complementary uses of resources, and mitigated overlap. This happened as new agencies proliferated with no obvious authority over existent actors, as few obvious formal incentives for cooperation existed, and as a proliferation of new funding venues threatened to immobilize donors and recipients alike in a fragmented sea of overlapping tasks. Conditions for self-undermining competition gave way to managed competition. Regime complex studies have comprehensively identified the unintended negative consequences of scaled-up global governance as regime complexes inevitably proliferate. Further research in the area of regime complexes should seek to identify processes such as

managed competition that offset inefficiencies as multilateral arenas broaden in scope, scale, and reach.

While the current thinking on regimes has persuasively indentified the costs associated with regime complexes, in some cases it may well be overly pessimistic on the prospects for governmental expansion on a transnational level—even under the less-than-desirable conditions of regime complexity. By doing so the study of regime complexes, however necessary, risks inadvertent hostility toward modern global governance at a time when the need for transnational problem solving has never been greater. The discipline should also be careful not to mischaracterize the size and scope of multilateral governance, which does not remotely approach that of domestic bureaucracies. Indeed, essential elements of global governance remain largely neglected by the advanced industrialized countries that lead it, commanding relatively small outlays from states. As the data presented above shows, one such policy area where this has historically been the case is global health, which until only recently lacked the resource commitments from donors to significantly impact health conditions in impoverished regions.

The global public health regime is a soft case for the narrative of overexpansion. It is historically impacted, with no *tabula rasa* upon which to design hierarchical institutions from scratch. Emergent agencies must share political space with existent ones. Conversely, existent institutions must alter their agendas in response to emergent organizations with similar capabilities. The global public health regime has nevertheless expanded dramatically in the 1990s and 2000s, allocating resources in ways that are surprisingly close to aggregate need in terms of addressing the global burden of disease. The process of regime expansion in global health generated efficiencies to offset the attendant challenges facing regime complexes. The global public health regime displayed the key characteristics of a regime complex that threaten to

stifle efficient allocations; especially an absence of any hierarchical coordinating mechanisms, multiple and competing forums, nominally overlapping mandates, competition, and the persistent creation of new agencies and sub-agencies on top of existent structures. Additionally the line between development and public health blurred as economists began assuming greater responsibility for formulating health policy. Managed competition served to generate efficiency under these conditions. This occurred as emergent and existent organizations developed narrowed, complementary roles, often in direct coordination. Increasing specialization offset the expectant bureaucratic overlap amidst conditions of regime complexity.

Disaggregated data presented above suggest a managed division of labor that is surprisingly efficient given widespread misgivings over the expansion of international aid to health. Through an existent albeit informal system of coordination the global public health regime has been able to resolve considerable questions of inefficiency and overlap as it has expanded. Specialization has offset many of the problems the regime complex literature predicts. As regimes grow larger and denser, new actors in public health have sought unique spaces in public health through specialization. By finding a unique niche by way of coordination, actors in the regime complex minimize overlap thereby retaining relevance. In the process of pursuing unique forms of specialization, they are likely to develop value-added strengths over time.

Patterns of global aid distribution hew closer to the burden of disease in the low-income priority areas of South Asia and sub-Saharan Africa. This presents a more optimistic picture of aid distribution. Despite the increasing complexity of the regime and the predicted inefficiencies that may arise, the diverse sets of actors that address global public health have generally managed to produce a pattern of resource distribution that reflects need. This finding is

surprising given the level of criticism levied against the regime for misallocating resources. Moreover, much of the crowding-out effects of AIDS funding, largely lamented by scholars, is mitigated if we exclude specialized funding from the US. Most OECD donors tend to prioritize either water sanitation or general health infrastructure.

As the world's wealthiest countries engage in drastic austerity measures, it is important that the aid-is-futile message does not further condemn the entire project of redistribution through aid before it has fully matured. Health remains at the forefront of the global agenda, reiterated as a priority in 2012 as UN Secretary General Ban Kyi Moon enters his second term. Foreign aid budgets are nevertheless in jeopardy as global North governments pursue austerity. The Global Fund, a key agency in global health's expansion, now struggles to meet ongoing commitments, relying on a $750 million grant from the Bill and Melinda Gates Foundation in 2012 to maintain current grants. In all, international aid targets are likely to remain unreached in the coming years. This comes as the policy tool of development assistance remains essential to the global agenda, figuring centrally in 2009 and 2011 international agreements on climate change. Effective resource management in global health supports the case that these essential areas of global governance can be successfully undertaken, including necessary expansions of global governance into vital areas such as public health.

The narrative of overexpansion also informs critics of the global health regime's expansion, led by Garrett, who report widespread misallocation, waste, and skewed priorities. If this is the case, a faulty allocation of resources could indeed "make things worse."[47]

[47] Garrett 2007, 14.

Into this debate have also emerged critics of aid itself, led by the popularity of William Easterly's *White Man's Burden* and Dambisa Moyo's *Dead Aid*. By this school of thought, aid is beyond reform—inevitably inviting waste, corruption, or dependency in developing countries.[48] The logical policy implication in that case would be to abolish rather than reform the project of global redistribution through public financing. In its place Moyo calls for a centrality of market principles far beyond that currently espoused by the development consensus. Recipient states should forego aid and instead engage the vicissitudes of creditors in capital markets, which Moyo argues would incentivize reform through market discipline.[49] Together these schools of thought conform to the general political narrative that government-led bureaucratic and financial expansions are doomed to failure.

These critics offer important reminders of aid's potential problems, but this school of thought overlooks aid's prospects. While acknowledging the inherent risk of failure in expanding funds for global health projects, Paul Farmer, co-founder of the NGO Partners in Health, notes the potential advantages of new funding, arguing "aid is not bad in itself, and if managed appropriately it can achieve impressive results. The end of the funding drought has been a tremendous boon, especially for the destitute and sick (and those who provide care to them)."[50] While publically backed projects entail varying degrees of risk, it is important to acknowledge that aid can be distributed and implemented effectively. Regime complexes

[48] Easterly 2007 and Moyo 2010.

[49] This despite the rather undisciplined nature of capital markets in the late 2000s.

[50] This was part of a web-based roundtable in response to Garrett's critical piece "The Challenge of Global Health" in foreign affairs, available at http://www.foreignaffairs.com/discussions/roundtables/how-to-promote-global-health

themselves are more than merely the sum of suboptimal institutional development. Indeed, the interconnectedness of global development challenges—from health, to environment, to family planning, to education—often necessitate the blurring of traditional agency roles and require interagency expertise. Elemental regimes may be ill equipped to address these concerns if operating in programmatic isolation, regardless of how efficient they may be. However potentially suboptimal their cross pollinations, regime complexes may be required to meet 21st century challenges.

Appendix

Table 1: Health's Share as a Percentage of World Aid by Five-Year Intervals

Year	Health ODA	Share
1977-1981	$13.5 billion	6.8%
1982-1986	$20b	8.4
1987-1991	$24b	8.3
1992-1996	$32.8b	12.7
1997-2001	$43.7b	13.5
2002-2006	$71.6b	13.7

Source: CRS Database, in millions of 2005 dollars.

Table 2: Select Emergent Global Health Agencies[51]

Agency	Launched	Headquarters	Type	Purpose	Issue Breadth	Operating Budget
President's Emergency Program for AIDS Relief (PEPFAR)	2003	Washington DC	Bilateral	HIV/AIDS prevention and treatment, with particular emphasis on Africa.	Vertical	$6.9b
The Global Fund to Fight AIDS, TB, and Malaria (GFATM)	2002	Geneva	Multilateral, Public-private partnership	Addressing prevention and treatment, for HIV/AIDS, Malaria and Tuberculosis.	Vertical	$3.1b
Global Alliance for Improved Nutrition (GAIN)	2002	Geneva	Public-private partnership	Global support and advocacy for nutrition programs.	Vertical	$28.2m
Stop TB	2001	Geneva	Multilateral	Coordinating response to tuberculosis crisis, improving resource environment.	Vertical	$46.9m

[51] Financial figures based on expenditures, including operating costs and grants. For the most recent figures available, see President's Emergency Program for AIDS Relief 2011. The reported figure for PEPFAR includes a $1 billion contribution to the Global Fund, and excludes malaria funding. For the Global Fund figure, see The Global Fund to Fight AIDS Tuberculosis and Malaria 2010, 50. The figure above includes the fund's entire grant portfolio for 2010. Data for GAIN based on expenditures for 2010. See The Global Alliance for Improved Nutrition 2010, 2. Financial data on Stop TB can be found at World Health Organization and Stop TB Partnership 2009, 56. Financial data on the Clinton Foundation available at William J. Clinton Foundation 2011, 62. Data on the GAVI alliance found at The GAVI Alliance 2009, 4. Reports on the Roll Back Malaria initiative can be found at Roll Back Malaria 2011, 14. Unlike the other emergent agencies, I make this approximation of the basis of revenue. Information on IAVI reported in International AIDS Vaccine Initiative, Inc. 2009, 5. A general overview of the Gates Foundation budget can be found at Bill and Melinda Gates Foundation 2011. Partners in Health publishes its financial data in Partners in Health 2011. The figure above reports their total expenditures for the fiscal year ending June 30, 2010.

Clinton Foundation	2001	New York	NGO	Broadly addresses public health, in addition to other development and diplomacy issues.	Broad	$297.5m
GAVI Alliance	1999	Geneva	Public-private partnership	Global immunization initiative.	Broad	$1b
Roll Back Malaria	1998	Geneva	Multilateral (WHO sub-agency)	Anti-malarial activities.	Vertical	$17.2m
International AIDS Vaccine Initiative (IAVI)	1996	New York	Public-private partnership	AIDS vaccine development.	Vertical	$97.9m
Joint United Nations Programme on HIV/AIDS (UNAIDS)	1996	Geneva	Multilateral UN agency with some NGO governance	Coordinating AIDS response, improving resource environment.	Vertical	$182.4m
Bill and Melinda Gates Foundation	1994	Seattle	NGO	Development agency seeking high-tech market-based solutions with special emphasis on global health.	Broad	$2.6b
Partners in Health	1987	Boston	NGO	Promotes equality in health, clinic and hospital development, including treatment of communicable and non-communicable conditions in select poor countries.	Broad	$91.9m

Table 3: Leading Disease Burdens in Low and Middle Income Countries (2001)

Health Issue	Share of Disease Burden
Perinatal Conditions	6.4 percent
Lower Respiratory Infections	6.0
Heart Disease	5.2
HIV/AIDS	5.1
Cerebrovascular Disease	4.5
Diarrheal Diseases	4.2
Unipolar Depressive Disorders	3.1
Malaria	2.9
Tuberculosis	2.6
Chronic Obstructive Pulmonary Disease	2.4

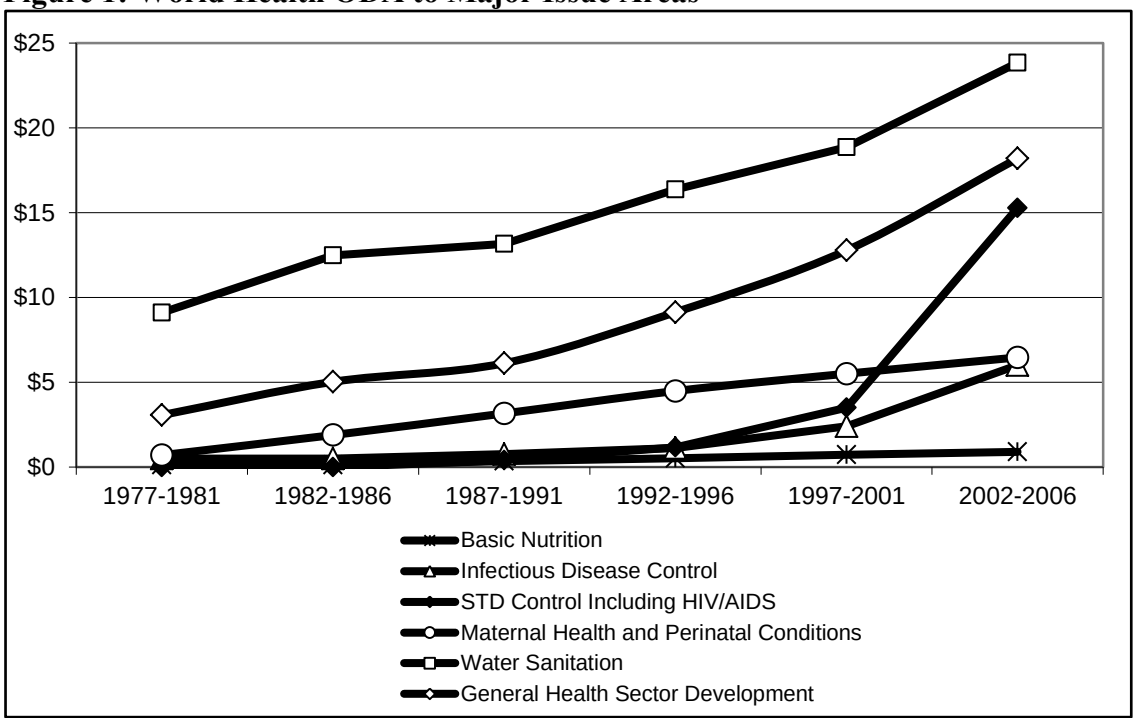
Source: Disease Control Priorities Project

Table 4: Leading Disease Burdens in Sub-Saharan Africa (2001)

Health Issue	Share of Disease Burden
HIV/AIDS	16.5 percent
Malaria	10.3
Lower Respiratory Infections	8.8
Diarrheal Diseases	6.4
Perinatal Conditions	5.8
Measles	3.9
Tuberculosis	2.3
Road Traffic Accidents	1.8
Pertussis	1.8
Protean Energy Malnutrition	1.5

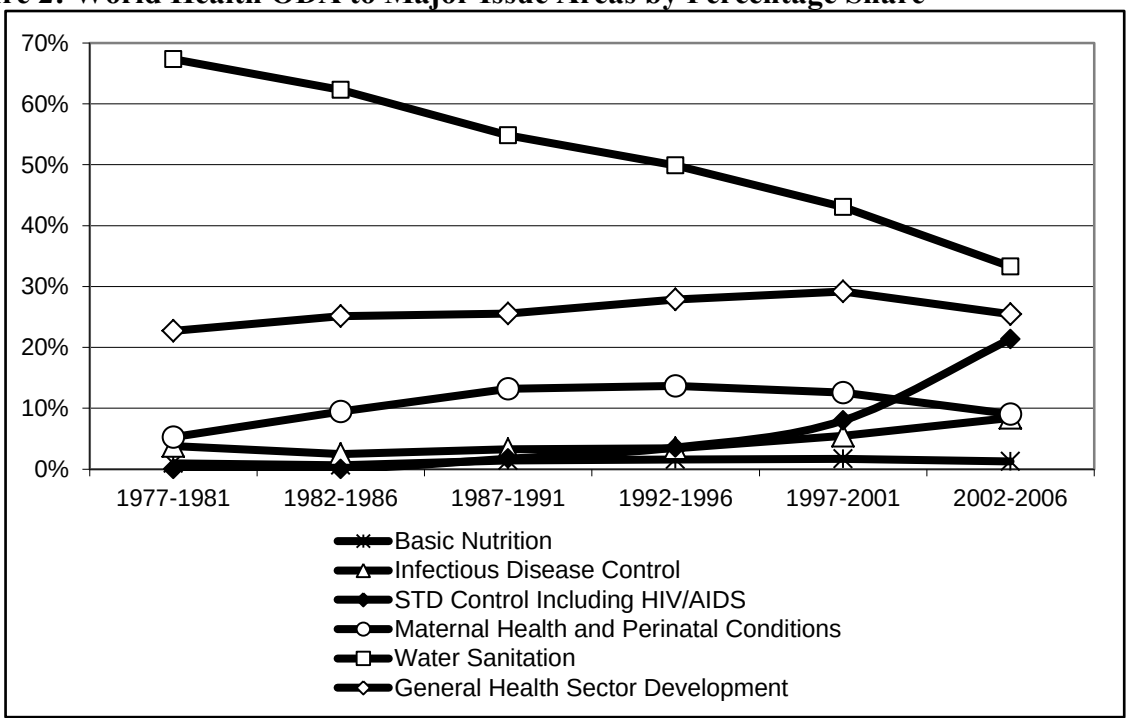
Source: Disease Control Priorities Project.

Figure 1: World Health ODA to Major Issue Areas



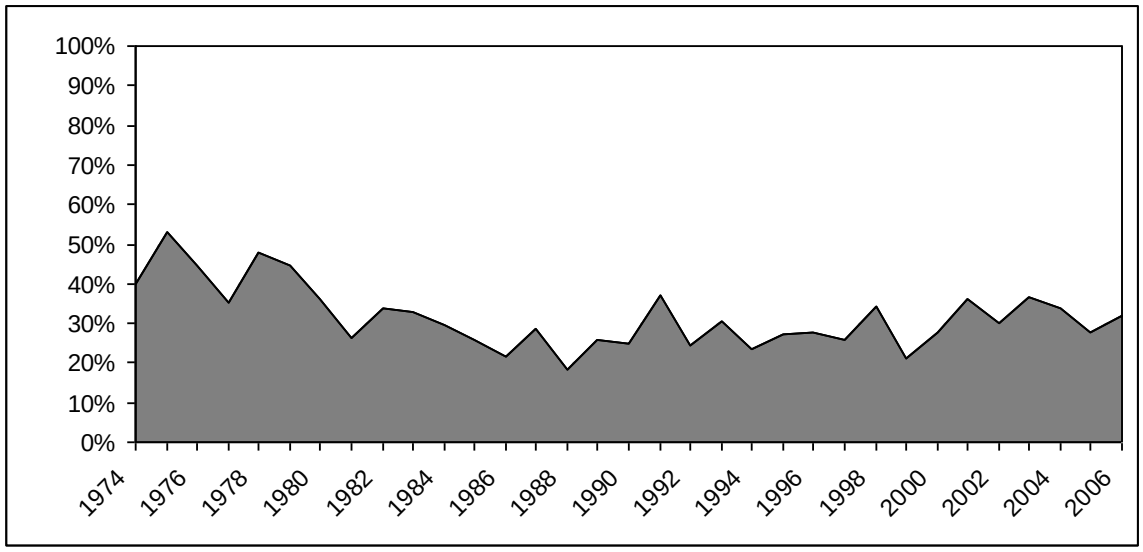
Source: CRS database. In billions of 2005 US dollars.

Figure 2: World Health ODA to Major Issue Areas by Percentage Share



Source: CRS Database.

Figure 3: Multilateral Aid's Share of Total World ODA



Shaded figures constitute multilateral aid. Source: CRS database.

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