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Gridlock, Innovation and Resilience in Global Health Governance

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Research Article

Abstract

Global health governance is in many ways proving more innovative and resilient than other sectors in global governance. In order to understand the mechanisms that have made these developments possible, this article draws on the concept of gridlock, as well as on the additional theoretical strands of metagovernance and adaptive governance, to conceptualize how global health governance has been able to adapt despite increasingly difficult conditions in the multilateral order. The remarkable degree of innovation that characterizes global health governance is the result of two interrelated conditions. First, developments that are normally associated with gridlock in multilateral cooperation, such as institutional fragmentation and growing multipolarity, have transformed, rather than gridlocked, global health governance. Second, global health actors have often been able to harness the opportunities offered by three important pathways of change, namely: (1) a significant degree of organizational learning and active feedback loops between epistemic and practice communities; (2) a highly polycentric system of governance; and (3) the increased role of political leadership as a catalyst for governance innovation. These trends are discussed in the context of three case studies of significant political, social and health relevance, namely HIV/AIDS, the 2014 Ebola outbreak and antimicrobial resistance.

Policy Implications

- The WHO should not seek to separate its normative and technical function from its convening and leadership function in order to re-assert its authority as the core institution of global health governance.
- The use of effective interorganizational coordination mechanisms need to be expanded, with emphasis on areas such as environmental health and non-communicable diseases, or strengthened when already in place (such as in AMR), given that most current and emerging health challenges now require action beyond the health sector.
- Raising the political profile of health challenges requires the consideration of the conditions under which doing so might foster significant progress. It is necessary to form inclusive alliances which coalesce around common goals and norms and bring together different types of actors.
- The funding strategies of actors including multilateral development banks and private foundations must increasingly shift from vertical disease programmes to health system strengthening objectives, including universal health coverage and greater attention to the determinants of health.
- International efforts aimed at generating buy-in by developing country actors on global health initiatives will have to be complemented by a stronger emphasis on using political leadership to create ownership at the domestic level, filling the persistent implementation and capacity gap that many countries still face.

The complex interdependence and interconnected crises that characterize the current stage of globalization are often perceived to have outgrown the capacity of the international community to further engage in multilateral cooperation to supply global public goods including financial stability, climate change mitigation, security and the

integrity of the biosphere (Goldin, 2013; Hale et al., 2013a; Lamy and Goldin, 2014). Not only do the multilateral institutions established after World War II seem increasingly unable to address problems of collective action that cross national boundaries, this deficit is reinforced by a more systemic crisis (if not outright decline) of the international liberal order, punctuated by the parallel rise of nationalistic and protectionist tendencies in many countries (Ikenberry, 2018).

As recently discussed by Hale et al. (2017), however, the effectiveness of global governance presents stark variations across sectors and even at the level of single institutions or regimes within them. Global health governance, in particular, has undergone a radical transformation over the last three decades (Hoffman et al., 2015; Schaferhoff et al., 2015), while during the same period some other areas of global governance were suffering from severe instances of stalemate and inaction (Hale et al., 2013b).[1] Beginning in the 1990s, available funding for global health (IHME, 2018) and the number of global health actors (Hoffman et al., 2015) both started to increase exponentially, resulting in major shifts in the approach to global health, in the architecture of the global health system (Hoffman et al., 2015; Youde 2014) and in its mechanisms and objectives (Schaferhoff et al., 2015). One consequence was significant achievements across several regions and issue areas, such as the global fall of maternal and child mortality (UN, 2015), increased access to anti-retroviral therapy, scaled-up malaria interventions in Africa (UN, 2015) and continued progress towards the eradication of polyomielitis (WHO, 2015).

Moreover, this expansion of global health governance occurred at a time of significant changes in the global political landscape, effectively spelling a new age of global health. At present, we can see several trends at work. First, high-income countries remain the principal funders of the major global health organizations and initiatives (Dieleman et al., 2016), but political trends against foreign aid in many of these countries, and particularly in the United States, have resulted in a growing uncertainty about the future of global health financing (Donor Tracker, 2018; Kates et al., 2018; Van Hise, 2017). Second and in parallel, the political influence and global health expenditure of rising middle income powers including China, India, Brazil, South Africa and Russia have progressively grown (Gautier et al., 2014; Harmer and Buse, 2014; Jakovljevic et al., 2017), highlighting a gradual but steady shift in the distribution of powers in global health governance. Third, the adoption, in September 2015, of the Sustainable Development Goals (SDGs) has ushered in a vision of global health governance which moves away from a vertical focus on specific diseases and towards a broader emphasis on health systems and a more holistic vision of health and well-being (Buse and Hawkes, 2015). Lastly, the 2017 election of Tedros Adhanom Ghebreyesus as the World Health Organization's (WHO) new Director-General demonstrated a stronger emphasis, on the part of the organization, on the exercise of political leadership as a means of maintaining global health high on the political agenda of countries (Kickbusch, 2017).

The expansion and politicization of global health governance suggest that this sector has been more innovative and resilient than usually assumed for global governance as a whole. However, we still have an insufficient understanding of the specific features and causal mechanisms that have made it possible for the global health system to adapt, learn and respond to the changing conditions of the multilateral order. Improving such understanding would not only facilitate mutual learning and comparison of promising pathways of change across sectors, but also, prospectively, help identify the means through which global health governance can remain fit for purpose in an era of rapid economic, social, technological and environmental transformations. Doing so, in turn, would require situating global health governance debates in a broader historical and institutional context and particularly applying more solid foundations drawn from international relations theory to its study. As noted by Lee and Kamradt-Scott (2014), the extent to which theory and practice have been able to inform each other in global health governance literature has generally been limited. More recently, this has resulted in either: (1) a narrow focus on specific institutional arrangements, issue areas, population groups and geographic regions (Clinton and Sridhar, 2017; Crawford et al., 2017; Gostin et al., 2015; Nikogosian and Kickbusch, 2016); or (2) discussions with a strong conceptual and sometimes prescriptive focus (Bennett et al., 2017; Frenk and Moon, 2013; Mackey, 2016; Smith and Lee, 2017).

To bridge this gap, this article conducts a theoretically grounded analysis of the pathways to increasingly difficult cooperation and change that have characterized global health governance in the past three decades, as well as the interactions between them. First, the article draws on the concept of gridlock (Hale et al., 2013a, 2017) and investigates the dynamics of global health governance in order to understand how pathways to gridlock apply in this field. Second, the article considers additional strands of theory, particularly those of metagovernance (Holzscheiter, 2014; Meuleman, 2008) and adaptive governance (Dietz et al., 2003; : Chaffin et al., 2014) and evaluates how this sector of global governance has confronted underlying conditions of gridlock in the multilateral order. In order to do so, the article relies on three case studies of significant political, social and health relevance which also exemplify different types of health threats, namely HIV/AIDS, the 2014 Ebola outbreak in Guinea, Liberia and Sierra Leone and antimicrobial resistance (AMR).

The article is structured as follows: Section 1 describes the research approach and methodology, Sections 2 and 3 present and discuss the main findings, focusing on the main pathways to cooperation that we have uncovered in the recent evolution of global health governance (section 2) as well as on governance innovations and pathways of change (section 3).[2] Finally, section 4 concludes by highlighting the implications of our analysis for the future development of global health governance.
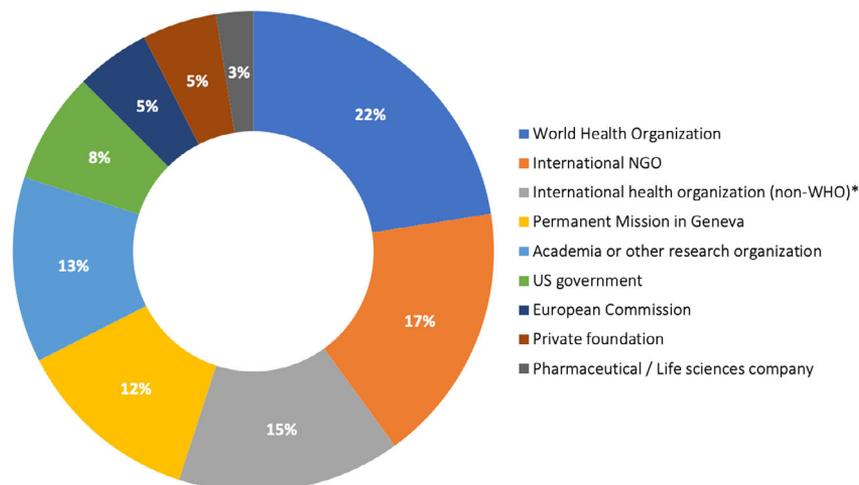
1. Research approach and methods

This research adopts a qualitative, mixed-method approach organized around the structured, focused comparison of three case studies (George and Bennet, 2005). The HIV/AIDS pandemic, in the light of its complex history, as well as due to its pivotal role in transforming public health into a truly global endeavor (Brandt, 2013; Gostin, 2014), was selected as the example of a protracted health threat. By contrast, the 2014 Ebola outbreak represents a contemporary acute health crisis, whose toll in terms of human lives and other social and economic impacts (Elston et al., 2017) is often taken as the clearest indication of a persisting lack of capacities for emergency preparedness and response in global health (Gostin and Friedman, 2014). Lastly, despite the fact that concerns about drug resistance can be traced back to the very advent of antibiotics, only in recent years have global health governance initiatives on AMRcome into greater prominence. As a consequence, AMR is chosen here as a case study for 'future' health threats, with the direct and indirect impacts associated with soaring rates of resistance projected to increase progressively over the next few decades (The Review on Antimicrobial Resistance, 2014).

The research took each case study as a starting point for analysis, tracking and tracing the governance of each area over time through a scoping and mapping of the policy and political landscape that constitute their respective governance environments. Following from this, the applicability of pathways to and beyond gridlock in relation to global health in general, and the selected case studies in particular, was explored through desk research (document review and content analysis) and interviews (semi-structured). The following data sources were used to develop the research findings:

- $N = 40$ in-depth (semi-structured) interviews with key stakeholders in global health governance were selected according to the seniority of their positions and direct involvement in the governance history of the three case studies. The sample was initially developed by extensive mapping of the key actors involved in each case study, trying to ensure a balanced representation between those headquartered in Geneva and those based elsewhere. Snowballing was then used to replace interviewees who became unavailable or to expand the sample whenever a specific individual was recommended during the course of an interview. The interviewees included current or former directors, assistant directors-general, deputy directors-general and members of the executive board of the WHO ($n = 9$); directors and senior representatives of international global health NGOs ($n = 7$); directors and senior representatives of international health organizations other than the WHO ($n = 6$); health attachés/counselors at the permanent missions of UN member States in Geneva ($n = 5$); directors or senior researchers at academic institutions and other global health research organizations ($n = 5$); senior US government officials ($n = 3$); senior European Commission officials ($n = 2$); members of the leadership team of health-focused private foundations ($n = 2$); and a senior manager for a pharmaceutical and life sciences company ($n = 1$) [see Figure 1]. Among the interviews, 11 focused generally on global health governance, 10 were concerned with HIV/AIDS, 12 with AMR and eight discussed the 2014 Ebola outbreak.[3] The interviews were conducted in person for health attachés and representatives of organizations headquartered in Geneva or via web conferencing software for interviewees based in other countries between October 2016 and July 2017.
- Primary documents produced by the governing bodies of selected institutions, including (but not limited to), the

Figure 1. Main institutional affiliation (current or former) of the interviewees. Only one institutional affiliation in considered for each interviewee, namely the most relevant to the case study about which the individual was interviewed.
*The category defined as 'International health organizations (non-WHO)' specifically includes GAVI Alliance, GFATM, UNAIDS, Unitaid.

- World Health Organization — 22%
- International NGO — 17%
- International health organization (non-WHO)* — 15%
- Permanent Mission in Geneva — 12%
- Academia or other research organization — 13%
- US government — 8%
- European Commission — 5%
- Private foundation — 5%
- Pharmaceutical / Life sciences company — 3%

World Health Organization (WHO), the United Nations Joint Programme on HIV/AIDS (UNAIDS), the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM), Unitaid, the UN General Assembly (UNGA) and the G7/G20. The documents were collected through a comprehensive search conducted in the resource databases of the respective institutions.

A qualitative content analysis of the interviews and primary texts was conducted, focusing on three main themes: (1) key governance challenges for each case study; (2) gridlock and nongridlock explanations for those challenges; and (3) pathways of innovation and learning, with a focus on the innovative and adaptive features of global health governance that might have facilitated the process of overcoming underlying conditions of gridlock. The primary data were coded with the aid of NVivo Software, using a mix of predetermined and emergent codes ($n = 34$ codes in total) to facilitate a systemic qualitative content analysis and develop a better understanding of the relevant insights, patterns and casual mechanisms. We identified a set of relevant codes for each research question and visualized coding density alongside these codes. We then explored the codes with the highest density to uncover overarching and repetitive themes in the responses and primary texts and accordingly developed a set of findings. Triangulation was conducted by exploring coding densities for the in-depth interviews and the primary texts side-by-side, in order to make sure that the relevant interview responses were not outliers. In addition, relevant responses from interviews focused on the case studies were compared with responses from general interviews on global health governance, to allow generalization of findings.

In the following sections, the occurrence of a certain theme across interviews related to a single case study is indicated as a percentage of responses, whereas the level of agreement among the interviewees overall is presented through the use of four summary terms, indicating the total number of interviews in which a theme is discussed: 'very strong' (30 to 40 interviews), 'strong' (20–30 interviews), 'medium' (10 to 20 interviews) and 'limited' (0 to 10 interviews). It should be noted that the findings presented here are concerned with the dynamics of global health governance as seen from the perspective of global stakeholders, rather than regional and local ones. This is important, because pathways to gridlock and change involve structural trends and their implications for global health governance may vary depending on the level at which these processes are observed and studied.

2. A changing structural context: pathways to gridlock and their implications for global health governance

In line with our analytical framework, the first major theme explored in this article concerns in the extent to which the pathways to gridlock described by Hale et al. (2013a, 2013b) apply to the recent governance history of our case

studies and of global health more generally. In developing their theory of gridlock, which problematizes the growing inability of countries to address transnational policy problems, Hale et al. have particularly pointed to four interacting trends: increasing multipolarity, more complex (harder) problems, institutional inertia and fragmentation. Kickbusch and Reddy (2015) and Brown and Held (2017) have recently made initial attempts at describing the presence of such trends in global health governance. According to these authors,

- increasing multipolarity can be associated with the rise of middle income countries as new powerful actors in global governance, which in global health has resulted in the decline of the traditional distinction between donor and aid-recipient countries and in the subsequent challenge of negotiating a consensus among a wider range of actors advancing different world views and political interests;
- the notion of harder problems captures the greater scope and complexity of health challenges in an era characterized by the accelerating forces of globalization and particularly by the transboundary flows of people and information, consumption and production of goods and services, as well as negative environmental externalities;
- institutional inertia refers in particular to the WHO and to the different forms of path-dependence that have led many to question its role in the global health system, including lack of decisive leadership, shifting interests of member states, progressive reduction of the proportion of assessed contributions within its budget and dysfunctional policy processes;
- fragmentation, finally, alludes to the negative effects of an increasingly dense institutional ecosystem that has for many years failed to create effective coordinating mechanisms, leading to increased transaction costs, greater competition for resources and the continuing influence of powerful countries and actors on the global health agenda.[4]

Prima facie, our findings confirm the idea that global health governance has been inevitably affected by the underlying forces of globalization and complex interdependence described in gridlock theory. In fact, even when not explicitly associating themselves with gridlock terminology, all interviewees identified pathways to increasingly difficult cooperation and stalemate in global health governance that could be described as pathways to gridlock. However, the findings also provide two important additional considerations. First, not all pathways to gridlock have played the same role in the evolution of global health governance. Of these, the interviewees put a relative emphasis on trends of growing multipolarity and fragmentation (see Table 1), highlighting a rapidly changing structural context of global health characterized by both: (1) a shifting distribution of power and (2) the rise of polycentric, networked forms of governance. Second, our findings suggest that these pathways have presented both challenges and opportunities for

global health governance and that under certain conditions they have led to the adaptive responses and innovations that will be discussed in Section 3. The present section particularly turns to the multifaced role played by growing multipolarity and fragmentation in changing the structural context of global health governance.

The challenges and opportunities of emerging multipolarity in global health

Throughout our interviews, it was often noted that shifting geopolitical rivalries and domestic political forces have always influenced consensus building within multilateral institutions (*strong agreement*) and even more so for organizations, like the WHO, that have remained strongly dependent on their particular federal design (Hanrieder, 2015). Similarly, the role of WHO member states in contributing to the organization's long-standing funding and prioritization problems is well accepted (*strong agreement*) and so is the fact that the emergence of powerful non-state actors, such as the Bill and Melinda Gates Foundation (BMGF), has created new forms of complex and ideational polarity that multilateral institutions now have to navigate (*medium agreement*).[5] What is particularly interesting, in this context, is that the rapidly shifting distribution of powers in global governance, described elsewhere as 'the rise of the rest' (Zakaria, 2008), is also altering fundamentally the political landscape and dynamics of global health. As will be explained below, this is particularly evident for the HIV/AIDS and AMR case studies, whereas less importance was attached to this theme in the interviews discussing the 2014 Ebola outbreak.[6]

On a more descriptive level, many instances of growing multipolarity are visible in global health, ranging from the emergence of strong pharmaceutical and other global health industries in middle income countries (Ross, 2013) to examples of South-South cooperation in the forms of strategic investments or development assistance for health (DAH)

(Cabral et al., 2014; Kickbusch, 2016). But what exactly is the significance of these trends?

On the one hand, the article finds that growing multipolarity can indeed have a negative impact on international cooperation in health by compounding the traditional difficulties of multilateral decision-making. As their political clout grows, middle income countries yield greater influence in governance processes, especially in terms of protecting their nascent industries or powerful sectors. This was especially visible in the AMR case study. Ninety-two percent of all AMR interviews, for example, highlighted Brazil's concerns with the protection of domestic agri-business in the negotiations of the WHO Global Action Plan on AMR and, more recently, of the WHO Global Stewardship and Development Framework, with 17% also emphasizing how the issue of production of, access to and patenting of antimicrobial medicines is being used by middle income countries including China and India as a leverage for defending or expanding flexibilities in the global intellectual property (IP) regime:

> Multilateral politics is a major limitation [on AMR] because there is a need to take care of the interests of your own emerging pharma sector [...] there is a danger of progress being locked down because it is tied to different multilateral political agendas from various countries in the South and to the access issue especially and patent issues (Health attaché/counselor 1, interview conducted on 7 November 2016).

On the other hand, growing multipolarity has also resulted in the emergence of new country champions (*medium agreement*), whose diverse range of interest has in turn led to more inclusive approaches to health issues and ultimately driven progress in many areas of global health. With respect to AMR, 42% of the interviewees pointed to the steps taken on the domestic front by countries including China, India and Thailand to promote the smart use of antimicrobials.[7] Even more important, however, has been

Table 1. Coding density in the qualitative interviews for the four pathways to gridlock identified by Hale et al. (2013a,b). Coding density is highest for the pathways of growing multipolarity and fragmentation, which were also discussed in the highest number of interviews, indicating very strong agreement on the influence that they have played in the evolution of global health governance.

Pathways to gridlock	Interviews coded for (HIV/AIDS)	Interviews coded for (Ebola)	Interviews coded for (AMR)	Interviews coded for (General)	Interviews coded for (TOTAL)*	Coding references (TOTAL)
Growing multipolarity	8/10	3/8	10/12	11/11	31/41	125
Fragmentation	10/10	8/8	10/12	11/11	39/41	137
Institutional inertia	7/10	5/8	4/12	6/11	24/41	78
Harder problems	6/10	5/8	9/12	7/11	27/41	74

*Note * As noted above, we formally conducted 40 interviews, but the number used here is 41, because one interviewee responded to questions relating to both Ebola and AMR. Despite being discussed in a substantial number of interviews, the pathways of harder problems and institutional inertia were more contested. On the one hand, the growing complexity of health problems was generally described as the background and underlying condition against which all global health governance processes should now be understood, rather than as an inevitable driver of gridlock across our case studies (strong agreement). On the other, institutional inertia was essentially attributed to certain aspects of the response of the WHO to the HIV/AIDS and Ebola case studies in particular (medium agreement), making it difficult to generalize it as an overarching pathway of global health governance.*

the role of Global South countries in the governance history of HIV/AIDS. In this context, two fundamental developments stand out. First, the leadership of countries including Brazil, India, South Africa and Thailand in the late 1990s, as well as that of civil society groups stemming from those countries, are widely considered to have acted as driving forces in shifting the emphasis of the response towards the development of generics and/or the establishment of access to medicines and treatment as priorities over prevention, prompting significant innovation on issues such as differential pricing and compulsory licensing (60% of HIV/AIDS interviews). Second and as a consequence, this leadership resulted in the emergence of instances of South-South cooperation (50% of interviews) in the manufacturing of and equitable access to anti-retrovirals (ARVs), although these projects played a variable role in actually meeting the need for generic drug supply for HIV/AIDS.[8] These trends, it should be noted, are certainly reflective of the wider shifts towards multipolarity which characterize global governance and there is little sign that they will slow down. As highlighted by two interviewees, the priorities of middle income countries are starting to be reflected in their role as aid donors in global health, not just as aid recipients.[9] In addition, from a broader perspective, there is ample evidence that South-South cooperation on health issues is going to increase, as demonstrated by China's announcement of a health cooperation plan for Africa (Sun, 2015), the creation of a new Chinese development agency, as well as by the recent pledge of US$60 billion in aid and loans to the continent (Spies, 2018). Overall, the notion of South-South cooperation itself might be losing its relevance, as the contribution of middle income countries becomes a comparatively larger part of global health financing and assumes the form of strategic investments with growing geopolitical implications (Uretsky et al., 2018).

Fragmentation of global health actors and venues: solution or problem?

Fragmentation as defined by Hale et al. (2013b) refers to the phenomenon of institutional density and complexity which can arise as a consequence of the exponential rise in the number of actors and venues engaging in a given sector of governance. According to these authors, institutional fragmentation results in increased transaction costs, redundancy, forms of forum shopping and a disaggregation of resources and political will. In global health, the proliferation of a new and diverse set of actors and venues over the last three decades is well documented (Cooper, 2013; Hoffman et al., 2015) and several parallel explanations are given for this trend in our interviews.

First, and consistent with an established theme in the literature,[10] the proliferation of global health institutions has often been considered a positive phenomenon and a way to mitigate what in the 1990s started to be widely perceived as inertia, lack of capacity or even complete gridlock within the WHO, particularly in the context of the HIV/AIDS case

studies (80% of the interviews). In HIV/AIDS, this is highlighted by the 1996 creation of the Joint UN Programme on HIV/AIDS, as well as of those of GAVI Alliance in 2000 and the GFATM in 2002. As put by one of the interviewees:

> One of the reasons that there has been an emergence of new governance structures, whether it's UNAIDS, whether it's the Global Fund, GAVI, or whether it's the product development partnership model, is that those are innovations to overcome the gridlock of original governance structures. The original governance structures of the global health community are becoming more and more obsolete (Member of the executive leadership team of a private foundation, 29 March 2017).

Second, with respect to global health governance more generally, a number of interviews noted the role played by the political preferences of WHO member states (*limited agreement*), describing proliferation as partly driven by a conscious strategy by traditional donor countries in the West to limit and weaken the mandate of the WHO, retain greater control of global health finance and build vertical, issue-focused 'alliances of the willing' (Kickbusch and Reddy, 2015, p. 839). Third, in all three case studies, interviewees pointed to a more neutral aspect of fragmentation, consisting in the growing awareness about the inherent multidimensionality of health challenges and the subsequent expansion of global health as a sector of governance (60% of the interviews for HIV/AIDS, 63% for Ebola, 75% for AMR). Fragmentation in HIV/AIDS governance, for example, was already visible from the late 1980s, as UN agencies and programmes with different mandates became involved in the international response[11] in recognition of an epidemic which did not just come from a virus, but also from 'patterns of development, poverty and gender' (Chan, 2015, p. 134). With respect to AMR, similarly, fragmentation involves inevitable overlaps between institutions including WHO, the Food and Agriculture Organization of the United Nations (FAO), the World Organization for Animal Health (OIE), the World Trade Organization (WTO), the World Bank and UNICEF, as well as high-level political fora (especially the UN General Assembly, the G7 and the G20) and non-state actors ranging from consumer groups, to product development partnerships (PDPs) and to private companies in different sectors. Finally, in the case of Ebola, the superimposition of the outbreak on complex humanitarian crises with political and security dimensions also created the challenge of mobilizing political commitment and resources through different venues (e.g. G7, G20 and the Global Health Security Agenda), leading to improved coordination between UN agencies, governments and other non-state actors and linking infectious disease responders with the broader humanitarian and development community.

As part of the governance history of our three case studies, fragmentation has sometimes led to increased competition and transaction costs,[12] created inconsistencies in governance processes,[13] favored vertical health silos against

a more holistic focus on health system strengthening,[14] and made inter-organizational coordination and convergence more difficult.[15] These critiques are in line with a vast literature on global health governance (see, inter alia, Gostin et al., 2010; Swanson et al., 2015 and Brown and Held, 2017). At the same time, however, fragmentation has arguably played a central role in the mainstreaming of health in the global political agenda over the last three decades and particularly since 2000 in response to the critical driver of the Millennium Development Goals (MDGs) (Marten, 2018). Moreover, as previously mentioned, fragmentation can in itself be seen as a response to challenges including inertia in the multilateral system and the harder nature of health problems.

First, the creation of new institutions and governance arrangements, including public-private partnerships, product development partnerships, funding mechanisms and bilateral initiatives, has been described as an example of governance innovation that can confront institutional path dependencies, shifting priorities of countries, rapid economic, social and political changes and donor complacency (*medium agreement*). Second, it was also emphasized (*medium agreement*) that having pluralistic responses to complex issues that no single institution can have the capacity or mandate to deal with is necessary to advance progress:

> Already at the conceptual level it's clear that AMR is not an issue you can solve within the UN system. The UN system can solve the normative side, but medicines have to be developed, regulatory systems have to be built, there has to be a commitment to them and then such commitment has to be monitored and followed up [. . .] it's a huge process and the UN can deliver the normative side, but they cannot deliver the financing and the political will that is going to require. And the industry has to be part of it' (Health attaché/counselor 1, 7 November 2016).

> The participation of civil society in HIV/AIDS governance has helped us work pragmatically on the basis of local conditions and needs. It has helped us address issues critical to an effective AIDS response but which are often deemed politically sensitive by many governments' (Senior representative of an international health organization, 12 July 2017).

Third, while sometimes criticized as a symptom of fragmentation, the proliferation of venues in which global health issues are prioritized, discussed and negotiated (e.g. UNGA, G8/G7 and, more recently, the G20 and BRICS fora) is also recognized as a catalyst for creating political momentum and facilitating the transition of a health issue to the highest level of political consideration, particularly when such venues lead groups of diverse actors to coalesce under a set of common goals or norms (*medium agreement*).[16] Here, inclusiveness with respect to civil society has been identified

in our interviews as a critical element for success, as shown in the governance history of HIV/AIDS with the large-scale mobilization of civil society movements focusing on equitable access to treatment (50% of the interviewees), in that of AMR through the emergence of CSOs and consumer unions advocating against the use of antibiotics as growth promoters in agriculture (25% of the interviewees) and in Ebola with respect to the catalytic role played by Médecins sans Frontières in pushing countries and the WHO to step up their response in the early phases of the outbreak (50% of the interviewees).

Lastly, precisely because it inevitably led to inefficiencies and lack of coordination in the first place, fragmentation itself acted as a driver of change, creating a constant demand and space for governance innovations, inter-organizational convergence, effective exercise of stewardship and stronger political leadership. As we argue in section 3, this dynamic is made possible in global health because of the highly self-reflexive nature of the global health community. Holzscheiter (2014) has highlighted the contested nature of the inter-organizational convergence narrative in global health, proposing that some of these efforts end up adding complexity, rather than reducing it ('hypercollective action'). Although this might possibly be true, our findings suggest that practitioners still tend to evaluate the effectiveness of global health governance in terms of improved health outcomes, rather than on a perfect internal coherence of the system that seems neither achievable nor necessarily desirable (*strong agreement*). As put by a senior representative of an international health organization in Geneva,

> governance starts and ends with the individual human person [. . .] This is why the process of governing must always aim at generating concrete results that benefit the people on the ground. If we are not generating meaningful change in people's lives, then we are failing (Senior representative of an international health organization, interviewed on 12 July 2017).

3. Innovation and pathways of change in global health governance

The changing structural context of global health, which we describe in the previous section, provides an essential gateway against which to understand the evolution of this sector of global governance. Growing multipolarity and institutional fragmentation are trends that would widely be considered as obstacles to effective collective action and yet they arguably play a role in stimulating governance innovation and building adaptive capacity in the global health system. In this section, we focus on the role of specific 'pathways of change' in counteracting the negative implications of pathways to gridlock and harnessing the opportunities arising from them. With this term, we broadly refer to features that are observable in the current phase of global health governance and that, according to

our findings, have contributed (and might potentially continue to contribute) to improved governance processes and outcomes across the three case studies. In a similar vein, Brown and Held (2017) have spoken of pathways through and beyond gridlock to highlight how the presence of underlying trends towards gridlock does not necessarily prevent (and, under certain conditions, might even promote) the emergence of more robust and effective global governance regimes.

In particular, we emphasize three characteristics that are well known in adaptive governance scholarship, but still relatively unexplored in the context of global health governance (see, however, Hill, 2011): (1) the presence of learning processes and feedback loops between epistemic and practice communities; (2) the capacity to reap the benefits of highly polycentric system of governance; and (3) the increased role of political leadership as a catalyst for governance innovation.

The role of learning processes in governance innovation

The transformation of global health governance over the past three decades demonstrates that governance innovations in this sector are by no means simply the result of poorly thought through reactions to failing cooperation or health crises. As noted by Van Assche et al. (2015), innovation originates from successful instances of self-reflexive change and is the direct by-product of governance systems that create space for learning and experimentation. More specifically, knowledge generation and organizational learning are widely considered to be criteria that are necessary for adaptive governance to emerge and they are usually described as a function of social capital (Dietz et al., 2003; Folke et al., 2005).

Generally speaking, instances of governance innovation in global health can be mostly grouped into four categories: (1) creation of new institutions and governance arrangements, such as PPPs, coordination mechanisms, hybrid governance coalitions and bilateral initiatives, as a response to the perceived incoherence and inertia of the UN system (*medium agreement*); (2) intra-institutional innovation within both existing and new institutions to confront path dependencies, donor complacency, competition for funding, shifting priorities of countries, lack of legitimacy and accountability and sudden health crises (*medium agreement*); (3) ideational innovation providing overarching frames, goals or concepts around which global health actors can coalesce (*medium agreement*); and (4) public sector innovation at the country level fostered by global health actors with the goal of building capacity and streamlining actions towards more effective responses (*limited agreement*). A non-exhaustive set of examples for these forms of governance innovation, based on our findings from interviews and primary texts, are provided in Table 2.[17]

While the two trends are not always mutually dependent, many of the innovations can be linked in different ways to self-reflexive learning processes that are continuously occurring within and across the institutions of global health

governance, including through the career mobility of global health experts and practitioners. While not exclusive to global health, these processes have been particularly intense in this sector, with epistemic communities – often disease-based – playing a large role in shaping global health debates and very active feedbacks loops being created between epistemic and practice communities (see Hill, 2011). On the one hand, intra-institutional innovation and creation of new institutions have often been the result of formal learning processes across our three case studies. This is shown by, inter alia, the proliferation of high-level commissions, review committees and assessment panels that are now common in the work of the WHO (e.g. the 1989–1992 External Review of the WHO Global Programme on AIDS, the Commission on the Social Determinants of Health, the IHR Review Committees codified in Article 50 of the IHRs, the Ebola Interim Assessment Panel and more recently the WHO Independent High-level Commission on NCDs), as well as in other global health actors (e.g. the UN Secretary-General's High-level Panel on Access to Medicines; the High-level Independent Review Panel that provided recommendations to the GFATM prior to its 2011 governance reform, the Global Preparedness Monitoring Board unveiled in 2018 by the WHO and the World Bank Group). On the other hand, global health governance is more broadly characterized by constant knowledge creation and network learning at multiple levels, with expert discourses that have been particularly influential in the development of shared understandings and metagovernance norms emphasizing the importance of inter-organizational convergence and hybrid coalition-building (see for example, Holzscheiter et al., 2016). A striking example of such forms of network learning is represented by the continuity of discourses and approaches provided by the system of health attachés participating in global health negotiations in Geneva and beyond, a theme that has received little attention in the literature but was particularly evident in the consistence of the responses of the five attachés who were interviewed.

That the global health system as a whole appears particularly adaptive does not mean, of course, that all innovations in global health governance are the results of adaptive governance processes. Several interviewees, for example, noted that windows of opportunity triggered by health crises such as the rapid spread of HIV/AIDS or the 2014 Ebola outbreak (*limited agreement*) played an essential role in bringing the international community together and prompting governance reforms (Kickbusch and Reddy, 2015). In turn, these crises were arguably exacerbated by previous failures in the translation of learning processes into practice (*limited agreement*),[18] highlighting how different institutions and their governing bodies can suffer from different degrees of resistance to change and risk-aversion.[19] What this indicates is that learning rarely occurs through technocratic processes insulated from the politics of global health (see Kickbusch, 2016). As discussed below, political leadership, including when exercised by private citizens and CSOs, is central to these dynamics. The perception of what reforms are feasible, given the political context, plays a fundamental role in

Table 2. Examples of different types of governance innovations mentioned in the qualitative interviews, divided by the case study to which they most closely refer.

Type of governance innovation	HIV/AIDS	Ebola	AMR	General/Other
Creation of new institutions and governance arrangements	*New institutions and partnerships*: UNAIDS, GFATM, Unitaid *PDPs*: International AIDS Vaccine Initiative (IAVI) *Bilateral initiatives*: PEPFAR; joint ventures for the production of ARVs	*New governance arrangements*: creation of UNMEER *Coordination mechanisms*: L3 Activation Procedures for Infectious Disease Events; Global Ebola Response Coalition (GERC) *Legal and soft-law instruments*: IHR Monitoring and Evaluation Framework and its Joint External Evaluation tool	*Coordination mechanisms*: UN Inter-agency coordination group on antimicrobial resistance *PDPs*: Global Antibiotic Research & Development Partnership (GARDP) *Innovative funding mechanisms*: Fleming Fund, UK-China GAMRIF Fund, CARB-X Accelerator *Legal and soft-law instruments*: Global Action Plan on AMR	*New institutions and partnerships*: BMGF, GAVI Alliance, TB Alliance, Roll Back Malaria; Global Health Security Agenda (GHSA) *PDPs*: Coalition for Epidemic Preparedness Innovations (CEPI); Drugs for Neglected Diseases Initiative (DNDi) *Legal and soft-law instruments*: UN Framework Convention on Tobacco Control
Intra-institutional innovation	*Governance reforms*: GFATM's 2011 governance reform	*Governance reforms*: WHO's post-Ebola reforms (creation of the Health Emergencies Programme, Contingency Fund for Emergencies etc.); WB's Pandemic Emergency Facility (PEF)	*Governance reforms*: creation of AMR Secretariat (2015)	*Governance reforms*: GAVI's 2008 governance reform
Ideational innovation	*Frames*: socio-economic and human rights framing of HIV/AIDS *Goals*: goal-setting as a governance strategy in HIV/AIDS (3by5 initiative, UNAIDS/PEPFAR Global Plan to reduce new HIV infections among children by 2015; targets established by UNGA Political Declarations on HIV/AIDS).	*Frames*: health security framing of Ebola through creation of UNMEER, involvement of the security sector and increasing number of resolutions on health security adopted by the UN Security Council.	*Frames*: health security framing of AMR as part of the GHSA's 'Prevent' Action Packages; economic framing about costs of AMR	*Concepts*: universal health coverage (UHC) and Health in all policies (HiAP) *Frames*: health security framing of infectious disease outbreaks *Goals*: goal-based development through the MDGs and SDGs
Country-level innovation fostered by global health actors	Country coordinating mechanisms (CCMs) used by the GFATM; Three Ones Principles (initiated by UNAIDS in cooperation with WB and GFATM)		Support to AMR national action plans through the Global Antibiotic Resistance Partnership (GARP)	

the choice of governance instruments,[20] and the growing politicization of health highlights the myriad ways in which technical expertise and political ideas interact and shape the evolution of global health governance in the 21st century.

Harnessing the benefits of polycentricity

A second important pathway of change in global health governance concerns the extent to which institutions, markets and networks do not operate in isolation, but rather as part of a highly polycentric governance regime. Polycentricity, as described by, inter alia, Dietz et al. (2003) and Folke et al. (2005), refers to a multilevel governance system characterized by multiple centres of power that are formally independent, often redundant in function and connected through formal and informal networks. Polycentricity is another key feature of adaptive governance systems, which some authors have already tried to associate with global health governance (Tosun, 2018). On the one hand, the challenges of complexity and interdependence require institutional diversity, partially overlapping jurisdictions and functional redundancy in order to buffer against failures and external shocks. On the other, they also require a set of shared understandings, goals and norms that can steer actors and networks towards desired societal outcomes. We find that global health governance exhibits polycentricity in relation to both of these dimensions, albeit to different extents.

With respect to the first aspect, it is clearly possible to identify a plurality of centres of power and authority which go beyond traditional donor countries and conventional multilateral institutions and which are also increasingly connected with other another through various forms of networked governance (see for example Shiffmanm et al., 2016), with no particular distinction between case studies. These centres of power include rising middle income countries (*strong agreement*) but also philanthropic organizations capable of exerting influence and mobilizing significant resources (*medium agreement* – e.g. BMGF, Rockefeller Foundation, Wellcome Trust), global CSOs and transnational networks and movements (*strong agreement* – e.g. Médecins sans Frontières, Treatment Action Campaign, Global Network of People Living with HIV/AIDS, Antibiotic Resistance Coalition), as well as a broad range of partnerships and coalitions with different degrees of formalization. As we note in Section 2, such a highly polycentric governance system can possess weaknesses, as it increases transaction costs and leads to lack of coordination or even conflict among actors (Jordan et al., 2015). Interestingly, polycentricity was not framed in our interviews as necessarily negative. Rather, several interviewees emphasized that the attention to effectiveness and health outcomes has often overshadowed considerations of efficiency and coherence (*strong agreement*), contrary to a well-established concern in global health governance scholarship (Holzscheiter, 2014). In other words, global health actors seem to have embraced diversity and redundancy as inevitable, if not ideal, means of providing global public goods in the 21st century:

You called it a fragmentation. I would call it a diversification, a multiplication of actors [. . .]. A bigger world with more players is fantastic. I mean, we live in such a fantastic era of being able to tackle big health problems [. . .]. The organizations have reached the limit of what they can do, [and] the health problems are getting more complex (Former WHO senior official 1, 28 November 2016).

From this perspective, two interweaving causal mechanisms stand out. First, polycentricity has meant that instances of inertia within the WHO or in other parts of the multilateral system could be partly mitigated by institutional diversity, as evident from Médecins Sans Frontières' leading role in the first response to the 2014 Ebola outbreak (62% of Ebola interviewees), from the regional coordination efforts directed by the African Union during the same epidemic (37.5% of Ebola interviewees), or from the combination of innovative financing mechanisms, bilateral programmes and philanthropic foundations' engagement that helped scale up access to HIV/AIDS treatment since the 2000s (80% of HIV/AIDS interviews). Second, polycentricity is arguably making global health governance more inclusive, allowing new voices and perspectives to influence the agenda of countries and multilateral institutions, but also the way in which challenges are framed (*strong agreement*).[21]

In relation to the uptake of shared understandings about what health is and how it ought to be governed, the evidence from our case studies is mixed. On the one hand, competing discourses have strongly shaped the response to issues such as HIV/AIDS and the 2014 Ebola outbreak, leading to instances of lack of trust between different global health constituencies (50% of Ebola interviews and 20% of HIV/AIDS interviews), tensions in the choice of solutions (38% of Ebola interviews),[22] and ultimately contributing to a proliferation of vertical approaches that have often neglected the dimension of health system strengthening (50% of Ebola interviews and 40% of HIV/AIDS interviews). The most glaring case, in this context, is represented by the persistent failure of country actors to embrace the human rights-based approach to HIV/AIDS governance that is enshrined in the work of global health organizations, a theme which featured prominently in our interviews (70% of HIV/AIDS interviews). On the other hand, the diffusion of common narratives, goals and norms within the global health system is arguably more dynamic than in the past, ranging from the concepts of universal health coverage (*medium agreement*) to the place of Goal 3 on health and well-being in the SDG framework (*limited agreement*) (Kickbusch et al., 2016; Brown and Held, 2017) and including the emergence of widely accepted metagovernance norms about the importance of inter-organizational convergence and stewardship (*strong agreement*, consistent with Holzscheiter et al., 2016). More generally, the progressive uptake of an understanding of health that cannot be removed from economic, security, environmental and humanitarian considerations has increased the presence of health in other policy arenas (and vice versa) and created a

fertile ground for the emergence of shared approaches that takes these interactions into account (*medium agreement*).

Political leadership

As noted by one of the authors of this article (Kickbusch, 2016, p. 201), the centrality of health to economics and security, coupled with its 'growing role in relation to the legitimacy of the state and the values and expectations of citizens', has strongly placed health on the agendas of heads of government. Significantly, such a trend towards the policitization of health has not only concerned international political fora such as the UN Security Council (UNSC), the UNGA, the G8/G7, the G20 and the BRICS, or the foreign and security policies of many countries, but there has also been a growing realization that all actors engaging in global health governance, including international organizations, private foundations, think tanks, CSOs and even experts and scholars, are involved in processes that are deeply political. As a result, the successful exercise of leadership and political agency is becoming essential to the construction of legitimacy. Leadership is, in fact, considered an additional key requirement for adaptive governance systems, providing key functions including building trust, linking actors, initiating partnerships and mobilizing support for change (Chaffin et al., 2014; Folke et al., 2005).

Across our case studies, we not only find that the pathways to overcoming governance challenges can often be understood in relation to the increased politicization of health problems, but also that political leadership is frequently a catalyst in the transition of a health issue to the highest level of politics, a notion that was already vocally supported at the turn of the century by former WHO DG Gro Harlem Bruntland (Brundtland, 2001; WHO, 1998). From this perspective, politicization and political leadership are increasingly considered to be prerequisites for overcoming instances of gridlock in global health governance, particularly by: (1) catalysing tipping points in which the international community is able to come together in support of governance innovations (*medium agreement*); (2) sustaining political momentum in the face of competing priorities, shifting agendas and donor fatigue (*medium agreement*); and (3) shining a light on neglected dimensions of health crises and bringing attention to marginalized groups, power imbalances and injustices (*limited agreement*). Table 3 below summarizes the most common references to such instances of politicization and exercise of political leadership in our case studies.

What are the implications for global health governance of such a seismic shift away from the traditional understanding that political decision-making and technical expertise could (and should) be insulated from one another? Our findings suggest three important considerations. First, as noted above, political leadership is a concept that does not apply to countries and heads of government alone. Multilateral institutions and their senior management have in many cases played a driving role in the transition of health challenges to high-politics and so have NGOs, CSOs, philantrophic foundations and even high-profile experts, practitioners and advocates (consistent with Fidler, 2010;

Kickbusch, 2015; and Lencucha et al., 2010). Second, political leadership, as well as the purpose of its exercise (e.g. channeling funding, pushing for accountability, supporting governance innovations, raising momentum beyond the health sector), are inevitably shaped by the different interests of leaders (Brown and Held, 2017; National Academies of Sciences, Engineering and Medicine, 2017; Wang and Sun, 2014), thus emphasizing the importance of plurality and inclusiveness in the global health debates and negotiations of the 21st century. Finally and perhaps most importantly, the growing importance of political leadership in a polycentric global health system appears to be associated with renewed expectations of the stewardship function of the WHO as the world's main arena for convening, priority-setting, negotiation and rule-making on health matters (*medium agreement*, a finding that is consistent with Frenk and Moon, 2013). As solutions to health challenges become both multifaceted and multisectoral, the WHO is increasingly asked to direct, coordinate and galvanize the global health community (Van Belle et al., 2017), including by strengthening its ability to position health interests within the wider global political landscape. While skepticism was expressed by several interviewees (*limited agreement*) as to WHO's effective capacity to do so, interestingly this appears to be the way in which the organization's new DG has decided to interpret his mandate:

> I know from my own experience in politics that with buy-in from the highest levels, anything is possible. Without it, progress is difficult. That is why I have made a priority of engaging with leaders all over the world, to advocate for political action on health (Address by Dr Tedros Adhanom Ghebreyesus at the WHO's 71st World Health Assembly, 21 May 2018).

In addition, a recent initiative by the heads of government of three countries – Germany, Norway and Ghana – has led to the cooperation of 11 global health institutions (coordinated by the WHO) in the development of the Global Action Plan for Health and Well-being for All, a joint action plan for the implementation of SDG3.[23] The framework for the plan was ultimately launched in October 2018 at the World Health Summit in Berlin.[24]

4. Conclusion

This article has shown that the last three decades have brought a remarkable degree of innovation in global health governance within a wider geopolitical context characterized by increasing complexity and interdependence. More specifically, we have argued that these developments were made possible by two interrelated conditions. First, dynamics that are usually associated with gridlock and stalemate in multilateral cooperation, such as institutional fragmentation and growing multipolarity, have effectively transformed, rather than gridlocked, global health governance, changing the structural context in which the rules are formed and the solutions deployed and, in some cases, providing an

Table 3. Milestones in the transition to high-level politics and main actors involved in the exercise of political leadership for each of the three case studies, based on the responses received during the qualitative interviews.

Case Study	Instances of politicisation (i.e. transition to high-level politics)	Main instances of political leadership
HIV/AIDS	• Adoption of the MDGs (2000) • UNSC Resolution 1308 (17 July 2000) and 1983 (7 June 2011) • UNGA Special Session on HIV/AIDS (25–27 June 2001) • Abuja Declaration on HIV/AIDS, Tuberculosis and Other Related Infectious Diseases (27 April 2001) and • High-level meeting on AIDS (8–10 June 2011) • High-level meeting on ending AIDS (8–10 June 2016) • UNAIDS' five-year strategies (2011–2015 and 2016–2021) to eradicate AIDS	• *IOs*: UNAIDS, World Bank • *Countries:* United States and donor countries in the West, Brazil, Thailand, South Africa (after Thabo Mbeki presidency), India • *Philantropic foundations:* BMGF, Clinton Foundation, Ford Foundation • *NGOs and Civil society:* GNP+, TAC, International AIDS Society etc. • *Individuals:* Jonathan Mann, Peter Piot, Kofi Annan, Festus Mogae, Yoweri Museweni, Olusegun Obasanjo, George W. Bush, Jacques Chirac, Michel Sidibé etc.
Ebola	• Announcement of Ebola as a Public Health Emergency of International Concern (8 August 2014) • UNSC Resolution 2177(2014) (15 September 2014) • High-level Meeting on Ebola Response (23 September 2014) and UNGA Resolution 69/1 (19 September 2014) • G7 Germany 2015 and Foreign Ministers' declaration 'Beyond Ebola: a G7 agenda to help prevent future crises and enhance security in Africa (15 April 2015) • Continued engagement in 2016 and 2017 at the G20	• *NGOs*: Médecins Sans Frontières • *Regional organizations*: African Union, ECOWAS, Mano River Union • *Countries*: South Africa, United States, Germany, Ghana, Norway, the affected countries • *Individuals*: David Nabarro, Bruce Aylward, Margaret Chan, Joanne Liu
AMR	• Adoption of the WHO Global Action Plan on AMR (May 2015) • High-level Meeting on AMR (21 September 2016) • AMR as a priority for G7 (2015 Berlin Declaration on AMR, 2016 Ise-Shima Vision for Global Health) and G20 (at G20 Germany 2017)	• *IOs*: World Health Organisation • *Countries*: Germany, Japan, Sweden, Denmark, Netherlands, United Kingdom • *Civil society*: Antibiotic Resistance Coalition (ARC), ReAct • *Individuals*: Sally Davies, Jim O'Neill, Margaret Chan

impetus for meaningful governance innovations. Second, global health actors have often been able to harness the opportunities offered by three important pathways of change, namely: (1) the existence of a significant degree of organizational learning and active feedback loops between epistemic and practice communities; (2) a highly polycentric system of governance, whereby the formation of hybrid coalitions, the establishment of new bodies and programmes and the creation of more effective coordinating mechanisms can act as mitigating factors against the risks of institutional inertia; and (3) the increased role of political leadership as a catalyst for governance innovation. Overall, these findings are consistent with the key argument, raised in *Beyond Gridlock* by Hale et al. (2017), that widespread gridlock conditions in the multilateral order have not prevented significant innovations from emerging in many sectors, including global health governance, that have faced counteracting casual mechanisms 'through' or 'beyond' gridlock.

How far these innovations imply effective change in terms of health risks or outcomes remains to be seen and should be the subject of further research. What is certain, however, is that contrary to a notable strand of literature which laments the lack of successful institutional innovation and networked governance solutions in global health

governance (Fidler, 2010; Lee, 2017; Smith and Lee, 2017), such mechanisms have been experienced and supported by the interviewees and are observable across the three case studies. In fact, the governance trajectories of HIV/AIDS, Ebola and AMR bear great significance in terms of the emergence of the adaptive features of global health governance discussed in this article. As the disease which effectively 'invented global health' (Brandt, 2013), the HIV/AIDS case study demonstrated the catalytic function of political leadership in both donor and affected countries, as well as the importance of polycentric systems of governance in which civil society, non-state actors and emerging powers are all able to mobilize commitments and encourage the adoption of innovative governance arrangements. The humanitarian and health security crises triggered by the 2014 Ebola outbreak underlined the urgency of global health actors and world leaders investing more political capital in support of governance innovation for infectious diseases, whereas the subsequent reform process illustrated how the outcomes of learning dynamics in global health governance can ultimately determine the success or failure of international responses to health challenges. Lastly, the rising threat of AMR has shed further light on the urgency of bringing diverse coalitions of health and non-health actors together under common goals and norms, coupled with another

demonstration that the transition of a health issue to the highest level of politics can serve as a tipping point for collective action.

The processes exemplified in the three case studies have arguably played a central role in the expansion and politicization of global health in the face of developments pushing in the opposite direction (e.g. increasingly fragmented global health development aid, pressure exercised by member states on the WHO, competition from other global challenges). It should be noted that these trends risk accelerating in the new era of multilevel and multiactor global health governance, due to the rising health impacts associated with an increasingly globalized economy (e.g. facilitated spread of infectious diseases, trade in processed foods and substandard medicines), rapid demographic changes leading to a shifting burden of disease in many countries and growing awareness of the causes of ill health originating in other areas of global governance such as the environment, trade, intellectual property and investment. This is why, notwithstanding the significant developments analyzed in this article, our findings also acknowledge that major uncertainties remain.

We arguably stand at the onset of a 'new world health era' (Pablos-Mendez and Raviglione, 2018) characterized not by linear trends towards gridlock or health improvements, but rather by abrupt changes and growing insecurities. First, the fact that pathways to gridlock in global health governance have often yielded opportunities for governance innovations and adaptations does not mean that they have not also caused challenges in the response to the three health threats discussed here. In addition to what has been noted in Section 2 for growing multipolarity and fragmentation, instances of institutional inertia within the WHO are still seen as major obstacles for effective global health governance (Kickbusch and Reddy, 2015; Schaferhoff et al., 2015), while at the same time the combined impacts of rapid demographic, environmental, economic, social and technological changes will arguably continue to make health-related problems harder in the future (OECD 2016; Whitmee et al., 2015; WHO 2018). Second, many of our interviewees emphasized the importance of pathways that are only partially captured by gridlock theory, particularly in terms of: (1) ensuring a smooth but effective transition from DAH to greater country ownership and mobilization of domestic finance for health; and (2) continuing the shift away from vertical, disease-specific governance to an approach focused on UHC and global public goods.

From this perspective, the processes of adaptation and innovation highlighted in this article might be entering a new phase, in which their limits are further stretched and called into question. First, continuing governance innovation among traditional global health actors and networks will not, in itself, be able to deal with increasingly complex multisectoral challenges (e.g. AMR, NCDs, climate change) which require systemic changes beyond the health sector. As shown by the case of AMR, for example, the engagement of non-health actors is often seen as being in its infancy and the results of calls for integration made at high-level political fora such as the G7, G20 and UNGA are yet to be explored.

Second, for the global health system to be able to exercise its stewardship function on emerging health issues, efforts at generating buy-in by country actors will have to be complemented by a stronger emphasis on using political leadership to create ownership at the domestic level, filling the persistent implementation and capacity gap that many countries still face (e.g. pushing for the effective implementation of the IHRs in vulnerable countries, promoting domestic legislation on prudent use of antibiotics, advocating for sustainable health systems). Finally, the clear emergence of trends towards greater inclusiveness of governance processes and diffusion of shared goals and norms will have to be evaluated against the parallel rise of new nationalist tendencies, the perceived retreat of liberalism and a rapidly shifting distribution of powers. Three years after the adoption of the *2030 Agenda for Sustainable Development*, not only does the multilateral context appear dramatically different, it will arguably continue to undergo phases of major disruption and interconnected crisis, putting global health governance's adaptive capacity to its most challenging test yet.

Notes

1. Global health governance has been broadly defined as 'the use of formal and informal institutions, rules and processes by states, intergovernmental organizations and nonstate actors to deal with challenges to health that require cross-border collective action' (Fidler, 2010). Within this wider space, Kickbusch and Cassar Szabo (2014) use the notion of 'global health governance' in a more restrictive sense, referring to those institutions and process of global governance that have an explicit health mandate.
2. Bourgeois (2018) recently described the idea of governance innovation as the 'continuous search for new paradigms to [...] achieve better policy decisions in an era characterized by complexity and a holistic understanding of well-being'. Throughout this article, by 'governance innovation' we will specifically refer to both intra-institutional innovations and what Moore and Hartley (2008: 4–5) define as 'innovations in governance', that is, innovations that occur above the organizational level and 'involve networks of organizations, or the transformation of complex social production systems'.
3. The final number is 41, because one interviewee was interviewed about his direct involvement with both the governance of the 2014 Ebola outbreak and that of AMR.
4. In fact, it could be argued that state influence, which has itself been an original driver of fragmentation in global health governance, is becoming stronger as such fragmentation intensifies, giving a disproportionate voice over certain health issues to the countries that have contributed the most resources towards the related response.
5. This is shown, inter alia, by the 2016 agreement on the WHO Framework of Engagement with Non-State Actors (FENSA), which represented an unprecedented effort by a multilateral institution to detail the modalities of engagement with the growing plethora of civil society organizations, foundations, private companies and academic institutions in the global health space.
6. References to growing multipolarity in the context of the 2014 Ebola outbreak did not concern the governance of the Ebola response itself. Rather, they mostly focused on the influence of rising middle income

countries (e.g. Brazil, India, Russia) in the post-Ebola reform process and particularly on their skepticism towards the relationship between the WHO and the Global Health Security Agenda (GHSA) in the context of the joint external evaluation of the International Health Regulations (IHRs) core capacities (37.5% of the Ebola interviews).

7. One project that was specifically mentioned was Thailand's Antibiotic Smart Use project, in the interview with the senior representative of an international NGO 2 (15 March 2017). See also ReAct's case study on Antibiotic Smart Use: https://www.reactgroup.org/wp-content/uploads/2016/10/Antibiotic-Smart-Use-project-case-study.pdf (accessed 22 June 2018).

8. Examples include the joint venture set up in 2005 between Indian pharmaceutical company Cipla, Quality Chemicals limited and the Government of Uganda; Ghana's Danadams, a joint venture between Adams Pharmaceuticals (a Chinese company) and Danpong Pharmaceuticals; and the cooperation between Brazil and Mozambique on the construction of the African country's first ARV factory under the two governments' *Protocolo de Intenções* on international technical cooperation in health.

9. Senior advisor for an international health organization (13 March 2017); senior representative of an international NGO 3 (12 March 2017).

10. See for example Godlee (1997) and Szlezak (2012).

11. Already in 1987, the UN Department of International Economic and Social Affairs created a Steering Committee on AIDS which included agencies and programme tasked with responding to different aspects of the epidemic, such as UNICEF, the UN Population Fund (UNPFA), the UN Development Programme and WHO. The WHO Global Programme on AIDS (GPA) and the WHO/UNDP Alliance to Combat AIDS were also set up in the same year.

12. On HIV/AIDS, 20% of the interviewees for example pointed to the confusion created at the country level about the different priorities, accountability mechanisms and reporting requirements of the institutions disbursing funding in the affected countries, especially before the 2003 launch of the Three Ones Principles, the 2011 UNAIDS Strategic Investment Framework and the 2014 partnership agreement between the WHO and the GFATM.

13. On AMR, for example, one interviewee referred to the common discrepancies and mistrust that exists among institutions focusing on AMR data gathering and surveillance (director of a research organization 1, 25 March 2017), while another lamented the risk of 'separate tracks' being created between AMR stewardship and R&D on new antimicrobials, with 'the former remaining under the WHO through the Global Action Plan and the latter becoming part of member-state-driven funding mechanisms or PDPs' (director of a research organization 2, 20 January 2017).

14. *Medium agreement* across all interviews.

15. On HIV/AIDS, according to one interviewee, 'programmes like the GFATM or the President's Emergency Plan for AIDS Relief (PEPFAR) became vast programmes that do not easily take directions from other organizations' (former WHO senior official 1, 6 January 2017).

16. On AMR, such common goals and norms are for example represented by the endorsement, on the part of UNGA, G7 and G20, of a one health approach to AMR and of the WHO Global Action Plan; in the Ebola response and aftermath, they consisted in, inter alia, the support to developing countries in the implementation of the International Health Regulations (IHRs) and to the reform of the WHO emergency work. More generally, there is evidence that universal health coverage (UHC) and the SDGs have also become 'master concepts and norms' adopted by the key institutions and venues for global health (Brown and Held, 2017).

17. It should be noted that more recent governance innovations, including the Global Preparedness Monitoring Board jointly created by the WHO and the World Bank, are not included in the Table because they were created after the interview phase for this article was concluded. This, in itself, highlights the extremely dynamic and constantly changing nature of global health governance.

18. With respect to Ebola, for example, 50% of the interviewees pointed to the failure, on the part of the WHO, to implement the recommendations of the IHR Review Committee set up after the H1N1 influenza outbreak of 2009 as one of the main reasons behind the organization's lack of capacity and preparedness during the 2014 outbreak.

19. The nature of WHO as a member-state organization was frequently brought up by the interviewees as the main limiting factor preventing it from implementing lessons drawn from learning processes. However, even institutions that have been created in response to the perceived inertia of the WHO, including GAVI, UNAIDS and the GFATM, have been described in the interviews as not immune from the same risks (*medium agreement*).

20. For example, the creation of new institutions *vis-à-vis* the establishment of coordination mechanisms, or the negotiations of binding legal instruments as opposed to political strategies or action plans.

21. This is the case, mentioned above, of the critical role played by mass-scale movements in the Global South in bringing the issue of access to treatment to the fore of the HIV/AIDS response; of the presence (and influence) of civil society in the governing boards of institutions such as UNAIDS and the GFATM; and of the increasing dialogue between WHO and consumer groups advocating for a stronger response to antibiotic use in agriculture and husbandry.

22. These interviewees have for example referred to the health security framing of the Ebola epidemic and how it might have eroded trust in local communities and led countries to take decisions that were ultimately negative for an effective response, such as refusing to share medicine stockpiles or restricting travel from the affected countries.

23. The original letter calling for the Action Plan, addressed to Dr Tedros Adhanom by German Chancellor Angela Merkel, Ghanaian President Nana Kufo-Addo and Norwegian Prime Minister Erna Solberg, is available from: https://www.bundesregierung.de/Content/DE/_Anlagen/2018/04/2018-04-19-brief-who-englisch.pdf;jsessionid=5F7A69A3EB21994778144B354C2826C6.s5t1?__blob=publicationFile&v=1 (accessed 17 September 2018).

24. See for example: http://health.bmz.de/events/Events_2018/reporting_from_world_health_summit_2018/global_action_plan/index.html (accessed 2 November 2018).

References

Bennett, B., Glenn Cohen, I., Davies, S. E., Gostin, L. O., Hill, P. S. and Phelan, A. L. (2017) 'Future-proofing Global Health: Governance of Priorities', *Global Public Health*, 13(5), pp. 519–527.

Bourgeois, R. (2018) The Futures of Governance and the Governance of the Future: Using the Future as a Governance Innovation. Centre for the Study of Governance Innovation (mimeo).

Brandt, A. M. (2013) 'How AIDS Invented Global Health', *New England Journal of Medicine*, 368 (23), 2149–2152.

Brown, G. W., and Held, D. (2017) 'Health: New Leadership for Devastating Challenges', in Hale, T., Held, D., et al. (eds.), *Beyond Gridlock*. Cambridge: Polity Press.

Brundtland, G. H. (2001) Statement by Dr Gro Harlem Brundtland, Director General WHO, to the Fifth Global Conference on Health Promotion, Mexico City, 5 June 2000. *Health Promotion International* 16 (1), pp. 95–98.

Buse, K. and Hawkes, S. (2015) 'Health in the Sustainable Development Goals: Ready for a Paradigm Shift?', *Globalization and Health*, 11, 13. https://doi.org/10.1186/s12992-015-0098-8

Cabral, L., Russo, G. and Weinstock, J. (2014) 'Brazil and the Shifting Consensus on Development Co-operation: Salutary Diversions from the 'Aid-effectiveness' Trail?', *Development Policy Review*, 32 (2), 179–202.

Chaffin, B. C., Gosnell, H. and Cosens, B. A. (2014) 'A Decade of Adaptive Governance: Synthesis and Future Directions', *Ecology and Society*, 19(3), 56. https://doi.org/10.5751/ES-06824-190356

Chan, J. (2015) *Politics in the corridor of dying: AIDS activism and global health governance*. Baltimore, MD: John Hopkins University Press.

Clinton, C. and Sridhar, D. (2017) 'Who Pays for Cooperation in Global Health? A Comparative Analysis of the WHO, the World Bank, the Global Fund to Fight HIV/AIDS, Tuberculosis and Malaria, and Gavi, the Vaccine Alliance', *Health Policy*, 390 (10091), 324–332.

Cooper, A. F. (2013) 'The G8/G20 and Global Health Governance: Extended Fragmentation or a New Hub of Coordination', in I. Kickbusch, G. Lister, M. Told and N. Drager (eds.) *Global Health Diplomacy. Concepts, Issues, Actors, Instruments, Fora and Cases*. New York: Springer.

Crawford, R., Rutz, D. C. and Evans, D. P. (2016) 'Between Combat Boots and Birkenstocks - Lessons from HIV/AIDS, SARS, H1N1 and Ebola', *Public Health*, 141, 186–191.

Dieleman, J. L., Templin, T., Sadat, N., Reidy, P., Chapin, A., Foreman, K., et al. (2016) 'National Spending on Health by Source for 184 Countries between 2013 and 2040', *The Lancet*, 387 (10037), 2536–2534.

Dietz, T., Ostrom, E. and Stern, C. E. (2003) 'The Struggle to Govern the Commons', *Science*, 302 (5652), 1907–1912.

Donor Tracker (2018) The US's Global Health ODA [online]. Available from: https://donortracker.org/united-states/globalhealth [accessed 10 September 2018].

Elston, J. W. T., Cartwright, C., Ndumbi, P. and Wright, G. (2017) 'The Health Impact of the 2014–2015 Ebola outbreak', *Public Health*, 143, 60–70.

Fidler, D. P. (2010) *The Challenges of Global Health Governance*. New York: Council on Foreign Relations. Available from: https://cfrd8-files.cfr.org/sites/default/files/pdf/2010/05/IIGG_WorkingPaper4_GlobalHealth.pdf [accessed 13 June 2018].

Folke, C., Hahn, T., Olsson, P. and Norberg, J. (2005) 'Adaptive Governance of Social-ecological Systems', *Annual Review of Environment and Resources*, 30, 441–473.

Frenk, J. and Moon, S. (2013) 'Governance Challenges in Global Health', *New England Journal of Medicine*, 368, 936–942.

Gautier, L., Harmer, A., Tediosi, F. and Missoni, E. (2014) 'Reforming the World Health Organization: What Influence Do the BRICS Wield?', *Contemporary Politics*, 20 (2), 163–181.

George, A. L. and Bennet, A. (2005) *Case Studies and Theory Development in the Social Sciences*. Cambridge, MA: MIT Press.

Godlee, F. (1997) 'WHO Reform and Global Health', *British Medical Journal*, 314 (7091), 1359–1360.

Goldin, I. (2013) *Divided Nations: Why Global Governance is Failing, and What We Can Do about It*. Oxford: Oxford University Press.

Gostin, L. O. (2014) *Global Health Law*. Cambridge, MA: Harvard University Press.

Gostin, L. O., DeBartolo, M. C. and Friedman, E. A. (2015) 'International Health Regulations 10 Years On: The Governing Framework for Global Health Security', *The Lancet*, 386 (10009), 2222–2226.

Gostin, L. O. and Friedman, E. A. (2014) 'Ebola: A Crisis in Global Health Leadership', *The Lancet*, 384 (9951), 1323–1325.

Gostin, L. O., Ooms, G., Heywood, M., Haffeld, J., Møgedal, S., Røttingen, J. et al. (2010) *The Joint Action and Learning Initiative on National and Global Responsibilities for Health*. World Health Report Background Paper 53. Available from: http://www.who.int/healthsystems/topics/financing/healthreport/JALI_No53.pdf [accessed 23 June 2018].

Hale, T., Held, D. and Young, K. (2013a) *Gridlock: Why Global Cooperation is Failing When We Need It Most*. Cambridge: Polity Press.

Hale, T., Held, D. and Young, K. (2013b) 'Gridlock: From Self-reinforcing Interdependence to Second-order Cooperation Problems', *Global Policy*, 4 (3), 223–235.

Hale, T., Held, D., et al. (2017) *Beyond Gridlock*. Cambridge: Polity Press.

Hanrieder, T. (2015) 'The Path-dependent Design of International Organizations: Federalism in the World Health Organization', *European Journal of International Relations*, 21 (1), 215–239.

Harmer, A. and Buse, K. (2014) 'The BRICS: A Paradigm Shift in Global Health?', *Contemporary Politics*, 20 (2), 127–145.

Hill, P. S. (2011) 'Understanding Global Health Governance as a Complex Adaptive System', *Global Public Health*, 6 (6), 593–605.

Hoffman, S. J., Cole, C. B. and Pearcey, M. (2015) *Mapping the Global Health Architecture to Inform the Future*. London: Chatham House (Royal Institute of International Affairs, UK). Available from: http://www.chathamhouse.org/sites/default/files/field/field_document/20150120GlobalHealthArchitectureHoffmanColePearcey.pdf [accessed 13 June 2018].

Holzscheiter, A. (2014) *Restoring Order in Global Health Governance: Do Metagovernance Norms Affect Interorganizational Conference? CES Papers – Open Forum #23*. Harvard, MA: The Minda de Gunzburg Center for European Studies.

Holzscheiter, A., Bahr, T. and Pantzerhielm, L. (2016) 'Emerging Governance Architectures in Global Health: Do Metagovernance Norms Explain Inter-organisational Convergence?', *Politics and Governance*, 4 (3), 5–19.

IHME (2018). *Financing Global Health 2017: Funding Universal Health Coverage and the unfinished HIV/AIDS agenda*. Seattle: IHME. Available from: http://www.healthdata.org/sites/default/files/files/policy_report/FGH/2018/IHME_FGH_2017_fullreport_online.pdf [accessed 13 June 2018].

Ikenberry, G. J. (2018) 'The End of Liberal International Order?', *International Affairs*, 94 (1), 7–23.

Jakovljevic, M., Potapchik, E., Popovich, L., Barik, D. and Getzen, T. E. (2017) 'Evolving Health Expenditure Landscape of the BRICS Nations and Projections to 2025', *Health Economics*, 26 (7), 844–852.

Jordan, A. J., Huitema, D., Hildén, M., van Asselt, H., Rayner, T. J., Schoenefeld, J. J., et al. (2015) 'Emergence of Polycentric Climate Governance and its Future Prospects', *Nature Climate Change*, 5 (11), 977–982. .

Kates, J., Michaud, J., Kirzinger, A. and Munana, C. (2018) A Check up on US Global Health Policy, after One Year of the Trump Administration. The Henry J. Kaiser Family Foundation Issue Brief. Available from: http://files.kff.org/attachment/Issue-Brief-A-Check-Up-on-US-Global-Health-Policy-After-One-Year-of-the-Trump-Administration [accessed 20 June 2018].

Kickbusch, I. (2015) 'Politics or Technocracy – What Next for Global Health?', *International Journal of Health Policy and Management*, 5 (3), 201–204.

Kickbusch, I. (2016) 'Global Health Governance Challenges 2016 – Are We Ready?', *International Journal of Health Policy and Management*, 5 (6), 349–353.

Kickbusch, I. (2017) 'The New Director General of WHO and the Politics of Global Health', *BMJ Opinion*, 31 May [online]. Available from: http://blogs.bmj.com/bmj/2017/05/31/ilona-kickbusch-the-new-director-general-of-who-and-the-politics-of-global-health/ [accessed 20 June 2018].

Kickbusch, I. and Cassar Szabo, M. M. (2014) 'A New Governance Space for Health', *Global Health Action*, 7, 23507. https://doi.org/10.3402/gha.v7.23507.

Kickbusch, I., Cassels, A. and Liu, A. (2016) New Directions in Governing the Global Health Domain – Leadership Challenges for WHO. Global Health Centre Working Paper no.13 [online]. Available from http://repository.graduateinstitute.ch/record/294882/files/GHPWP_13_Ilona_2016.pdf [accessed 26 June 2018].

Kickbusch, I. and Reddy, S. (2015) 'Global Health Governance – the Next Political Revolution', *Public Health*, 129 (7), 838–842.

Lamy, P. and Goldin, I. (2014) 'Addressing the Global Governance Deficit', *The Huffington Post* [online], 22 January. Available from: http://www.huffingtonpost.com/pascal-lamy/addressing-the-global-gov_b_4646573.html [accessed 18 June 2018].

Lee, K. (2017) 'Business as Usual: A Lack of Institutional Innovation in Global Health Governance', *International Journal of Health Policy and Management*, 6 (3), 165–168.

Lee, K. and Kamradt-Scott, A. (2014) 'The Multiple Meanings of Global Health Governance: A Call for Conceptual Clarity', *Globalization and Health*, 10, 28. https://doi.org/10.1186/1744-8603-10-28

Lencucha, R., Kothari, A. and Labonté, R. (2010) 'The Role of Non-governmental Organizations in Global Health Diplomacy: Negotiating the Framework Convention on Tobacco Control', *Health Policy and Planning*, 26 (5), 405–412.

Mackey, T. K. (2016) 'The Ebola Outbreak: Catalyzing a Shift in Global Health Governance?', *BMC Infectious Diseases*, 16, 699. https://doi.org/10.1186/s12879-016-2016-y

Marten, R. (2018) 'How States Exerted Power to Create the Millennium Development Goals and How This Shaped the Global Health Agenda: Lessons for the Sustainable Development Goals and the Future of Global Health', *Global Public Health*. https://doi.org/10.1080/17441692.2018.1468474.

Meuleman, L. (2008) *Public Management and the Metagovernance of Hierarchies, Networks and Markets*. Heidelberg: Springer.

Moore, M. and Hartley, J. (2008) 'Innovations in Governance', *Public Management Review*, 10 (1), 3–20.

National Academies of Sciences, Engineering, and Medicine. (2017) *Global Health and the Future Role of the United States*. Washington, DC: The National Academies Press. .

Nikogosian, H. and Kickbusch, I. (2016) 'The Legal Strength of International Health Instruments: What It Brings to Global Health Governance?', *International Journal of Health Policy and Management*, 5 (12), 683–685.

OECD (2016) *Antimicrobial Resistance. Policy Insights*. Paris: OECD [online]. Available from: https://www.oecd.org/health/health-systems/AMR-Policy-Insights-November2016.pdf [accessed 13 June 2018].

Pablos-Mendez, A. and Raviglione, M. C. (2018) 'A New World Health Era', *Global Health Science and Practice*, 6 (1), 8–16.

Ross, C. (2013) 'Building BRICs: Pharma's Key Emerging Markets are Becoming Giants', *Pharmaceutical Market Europe*, 20 June [online]. Available from: http://www.pmlive.com/pharma_intelligence/building_brics_pharmas_key_emerging_markets_are_becoming_giants_483972 [accessed 22 June 2018].

Schaferhoff, M., Schrade, C. and Suzuki, E. (2015) *Analysing Proposals for Reform of the Global Health Architecture* [online]. London: Chatham House (Royal Institute of International Affairs, UK). Available from: http://www.chathamhouse.org/sites/default/files/field/field_document/20150803GlobalHealthArchitectureSchaferhoffSchradeSuzuki.pdf [accessed 13 June 2018].

Shiffmann, J., Schmitz, H. P., Berlan, D., Smith, S. L., Quissell, K., Gneiting, U., et al. (2016) 'The Emergence and Effectiveness of Global Health Networks: Findings and Future Research', *Health Policy and Planning.*, 31(Suppl 1), i110–i123.

Smith, R. and Lee, K. (2017) 'Global Health Governance: We Need Innovation, Not Renovation', *BMJ Global Health*, 2, e000275. https://doi.org/10.1136/bmjgh-2016-000275.

Spies, J. (2018) 'China Pledges $60 billions in Financing to Increasingly Debt-distressed Africa', *Council on Foreign Relations*, 21 September [online]. Available from: https://www.cfr.org/blog/china-pledges-60-billion-financing-increasingly-debt-distressed-africa [accessed 29 October 2018].

Sun, Y. (2015) 'Xi and the 6th Forum on China-Africa Cooperation: Major Commitments, But With Questions', *Brookings*, 7 December [online]. Available from: https://www.brookings.edu/blog/africa-in-focus/2015/12/07/xi-and-the-6th-forum-on-china-africa-cooperation-major-commitments-but-with-questions/ [accessed 22 June 2018].

Swanson, R. C., Atun, R., Best, A., Betigeri, A., de Campos, F., Chunharas, S., et al. (2015) 'Strengthening Health Systems in Low-income Countries by Enhancing Organizational Capacities and Improving Institutions', *Globalization and Health*, 11, 5. https://doi.org/10.1186/s12992-015-0090-3.

Szlezak, N. A. (2012) *The Making of Global Health Governance: China and the Global Fund to Fight AIDS, Tuberculosis and Malaria*. New York: Palgrave Macmillan.

The Review on Antimicrobial Resistance (2014) Tackling drug-resistant infections globally: final report and recommendations [online].

Available from https://amr-review.org/sites/default/files/160525_Final%20paper_with%20cover.pdf [accessed 20 June 2018].

Tosun, J. (2018) 'Polycentrism in Global Health Governance Scholarship', *International Journal of Health Policy and Management*, 7 (1), 78–80.

UN (2015) *The Millennium Development Goals Report 2015*. New York: United Nations.

Uretsky, E., Bouey, J. and Katz, R. (2018) 'China's Emerging Role in Global Health', *Health Affairs Blog*, 17 January [online]. Available from: https://www.healthaffairs.org/do/10.1377/hblog20180109.759800/full/ [accessed 17 September 2018].

Van Assche, K., Beunen, R., Barba Lata, I. and Duineveld, M. (2015) 'Innovation in Governance', in R. Beunen, K., Van Assche, and M. Duineveld, (eds.), *Evolutionary Governance Theory: Theory and Applications*. Cham: Springer.

Van Belle, S., devan Pas, R. and Marchal, B. (2017) 'Queen Bee in a Beehive: WHO as Meta-governor in Global Health Governance', *BMJ Global Health*, 3:e000448. https://doi.org/10.1136/bmjgh-2017-000448.

Van Hise, C. (2017) 'Global Health: Still Hope for It Yet', *International Health Policies*, 22 September [online]. Available from: http://www.internationalhealthpolicies.org/global-health-still-hope-for-it-yet/ [accessed 14 August 2018].

Youde, J. (2014) 'Global Health Partnerships: the Emerging Agenda', in Brown, G. W., Yamey, G. and Wamala, S. (eds.), *The Handbook of Global Health Policy*. Hoboken, NJ: John Wiley and Sons Ltd.

Wang, X. and Sun, T. (2014) 'China's Engagement in Global Health Governance: A Critical Analysis of China's Assistance to the Health Sector of Africa', *Journal of Global Health*, 4 (1), 010301. https://doi.org/10.7189/jogh.04.010301

Whitmee, S., Haines, A., Beyrer, C., Boltz, F., Capon, A., De Souza Dias, B. F. et al. (2015) 'Safeguarding Human Health in the Anthropocene Epoch: Report of The Rockefeller Foundation-Lancet Commission on Planetary Health', *The Lancet*, 386 (10007), 1973–2028.

WHO (1998). *Dr Gro Harlem Brundtland, Diretor-General Elect. The World Health Organization. Speech to the Fifty-first World Health Assembly. Geneva, 13 May 1998. A51/DIV/6*. Geneva: World Health Organization.

WHO (2015) *Health in 2015: From MDGs, Millennium Development Goals, to SDGs, Sustainable Development Goals*. Geneva: World Health Organization.

WHO (2018) *World Health Statistics 2018: Monitoring Health for the SDGs*. Geneva: World Health Organization.

Zakaria, F. (2008) 'The Rise of the Rest', 12 May [online]. Available from: https://fareedzakaria.com/columns/2008/05/12/the-rise-of-the-rest [accessed 22 June 2018].

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