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Assessing the World Health Organization: What does the academic debate reveal and is it democratic?

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ABSTRACT

The World Health Organization (WHO), the leading global authority in public health, routinely attracts loud calls for reform. Although Member States negotiate reform internally, academic debate is more public, and can generate ideas and provide independent accountability. We investigate why authors advocate for WHO reform so commonly. We wondered if this literature had potentially useful themes for WHO, what methods and evidence were used, and we wanted to analyze the geography of participation.

We conducted a systematic review using four databases to identify 139 articles assessing WHO or advocating for reform. We discuss these using categories we derived from the management literature on organizational performance. We also analyzed evidence, country of origin, and topic.

The literature we reviewed contained 998 claims about WHO's performance or reform, although there were no standard methods for assessing WHO. We developed a framework to analyze WHO's performance and structure a synthesis of the claims, which find WHO imperiled. Its legitimacy and governance are weakened by disagreements about purpose, unequal Member State influence, and inadequate accountability. Contestation of goals and strategies constrain planning. Structure and workforce deficiencies limit coordination, agility, and competence. WHO has technical and normative authority, but insufficient independence and legal power to influence uncooperative states. WHO's identity claims transparency, independence, and courage, but these aspirations are betrayed in times of need. Most articles (88%) were commentaries without specified methods. More than three-quarters (76%) originated from the US, the UK, or Switzerland. A quarter of papers (25%) focused on international infectious disease outbreaks, and another 25% advocated for WHO reform generally.

Many criticisms cite wide-ranging performance problems, some of which may relate to obstructive behavior by Member States. This literature is incomplete in the geographic representation of authors, evidence, methods, and topics. We offer ideas for developing more rigorous and inclusive academic debate on WHO.

1. Introduction

The World Health Organization (WHO) is among the most important of all international institutions, and its performance attracts much commentary, especially during health crises such as the ongoing COVID-19 pandemic or the 2014–16 Ebola virus disease (EVD) outbreak in West Africa, when WHO was accused of costly failures. Although close attention to its performance is to be expected, it is nonetheless striking how frequently analysts advocate for reform. Calls for reform indicate dissatisfaction with institutional or structural aspects of WHO, rather than just transient deficiencies in performance. WHO has formal processes for its own evolution and reform, as via the annual World Health Assembly, regional committees, the Executive Board, the Independent Expert Oversight Advisory Committee (IEOAC), and the Working Group on Sustainable Financing, for example. These mechanisms allow Member States to express their preferences to one another and WHO leadership through deliberative processes legitimized by institutional governance structures.

Far more visible is a parallel academic debate, which is important for generating ideas, shaping public opinion, and providing some measure

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of independent accountability. This academic literature on WHO features voluminous critical commentary on WHO's performance and seemingly endless calls for reform. The large tide of such literature inspired us to ask whether it contained any common themes that might represent a consensus. As we began to investigate, we also wondered whose voices were included in this discussion and what evidence and standards were used to assess WHO. In this paper we present the results of our inquiry based on a systematic survey of literature on WHO performance and reform. We employ a framework for analysis that we developed for this purpose based on organizational theory and performance literatures from five disciplines: economics, sociology, political science, management, and psychology.

The World Health Organization holds a mandate from almost every country on earth to help safeguard the health of their populations and lead on international aspects of public health. In the aftermath of World War II nations founded WHO to sustain peace through international health cooperation (World Health Organization, 1946; United Nations, 2022), building on a post-World War I effort, the League of Nations Health Organization (McCarthy, 2002). As of March 2022, 194 nations are WHO members (World Health Organization, 2022a), supporting its objective—"the attainment by all peoples of the highest possible level of health" (World Health Organization, 1946). The WHO Secretariat consists of 150 country offices, five satellite offices (such as its office at the United Nations in New York), six regional offices, and a headquarters in Geneva. WHO creates international standards and legal frameworks on health issues, such as the International Classification of Diseases (ICD) and International Health Regulations (IHR). It responds to international infectious disease outbreaks. WHO advises Member States on public health policy and facilitates cooperation across borders. Important organizational successes include the eradication of smallpox in 1980 and a legally-binding international treaty for tobacco control that took effect in 2005 (Packard, 2016).

However, WHO's performance draws much critical scrutiny, too. A steady flow of commentary has been punctuated by particular attention during major infectious disease outbreaks. The 2002–3 SARS outbreak, the 2009–10 H1N1 influenza pandemic, the 2014–16 EVD outbreak, and the COVID-19 pandemic each provoked many analyses of WHO's role (Fidler, 2003; Fineberg, 2014; Moon et al., 2015; Flynn, 2010; Bloom, 2011; Chow, 2010; Mackey and Liang, 2013a; Lidén, 2014; Independent Panel, 2021; Kikwete et al., 2016; World Health Organization, 2015; World Health Organization, 2016; Sirleaf and Clark, 2021; World Health Organization, 2011; World Health Organization, 2021a; Gostin, 2020). A multitude of expert panels were commissioned to investigate perceived shortcomings (Moon et al., 2015; Independent Panel, 2021; Kikwete et al., 2016; World Health Organization, 2015; World Health Organization, 2016; Sirleaf and Clark, 2021; World Health Organization, 2011; World Health Organization, 2021a), and many analysts criticized WHO as lethargic and ineffective (Moon et al., 2015; Bloom, 2011; Chow, 2010; Mackey and Liang, 2013a; Lidén, 2014). Greater attention to WHO in times of greatest need is not surprising. Millions of lives were lost prematurely, and economic losses have been tremendous due to outbreaks in the past two decades alone.

A great deal of attention has centered on reform, suggesting that analysts are identifying structural problems rather than more straightforward performance issues (Bloom, 2011; Chow, 2010; Lee and Pang, 2014; Wibulpolprasert and Chowdhury, 2016; Van de Pas and van Schaik, 2014; Eccleston-Turner and McArdle, 2017; Milmo, 2016; Liu, 2017; Cassels et al., 2014a; Negin and Dhillon, 2016; Sridhar and Gostin, 2011; Gostin, 2015a; Cassels et al., 2014b; Hoffman and Røttingen, 2014; Nature, 2017; Kamal-Yanni and Saunders, 2012; Fee, 2016; Pang and Garrett, 2012; Kickbusch, 2013a; Collier, 2011; Sridhar et al., 2014; Yach, 2016). This sense is captured in sample titles such as "WHO: Retirement or Reinvention?" (Lee and Pang, 2014) or "World Health Organization: Overhaul or Dismantle?" (Wibulpolprasert and Chowdhury, 2016). Many articles signal profound dissatisfaction with WHO's organizational performance, distrust of its structures, and doubts about its institutional learning abilities.

A simple search on Google Scholar shows how commonly academic articles have mentioned WHO reform over the past two decades. As Fig. 1 illustrates, these articles have appeared with greater frequency since WHO Director-General Chan's reform efforts around 2010–11 and rose further during the 2014–16 EVD outbreak and the COVID-19 pandemic. A LexisNexis search of newspaper articles mentioning WHO reform similarly shows a close correspondence with these international infectious disease outbreaks. Policymakers frequently discuss the need to reform the WHO as well, up to the highest levels (German Federal Government, 2015; Paun, 2020; White House, 2021; Reuters, 2020; Laskar, 2020).

WHO has several institutional processes to self-assess and advance reforms. It carries out thematic, programmatic and office-specific evaluations through its Evaluation Office (World Health Organization, 2019). These are fed into its governance structures alongside broader organizational assessments produced by the United Nations Joint Inspection Unit (Joint Inspection Unit, 2012a, 2012b). WHO additionally employs specialized working groups of external advisors, such as the IHR Review Committee and the Expert Oversight Advisory Committee (IEOAC) to identify possible improvements. These may be proposed by the Secretariat to Member State delegates who negotiate reforms during WHO's Executive Board meetings and the annual World Health Assembly. For example, the World Health Assembly 2021 debated how WHO could be more effective and efficient in supporting countries (World Health Organization, 2021b). For certain issues, Member States use additional intergovernmental processes mandated by these governing bodies, such as the Working Group on Sustainable Financing and previously the Member States Consultative Process on governance reform (MSCP).

Academics contribute to the debate on WHO's performance and reform as well. In general, academic contributions help generate ideas, identify problems and solutions, and help interpret or contextualize WHO's actions, all of which may be expected to influence public debate and political perceptions. Academic discourse can also influence representatives of Member States or the Secretariat directly when it

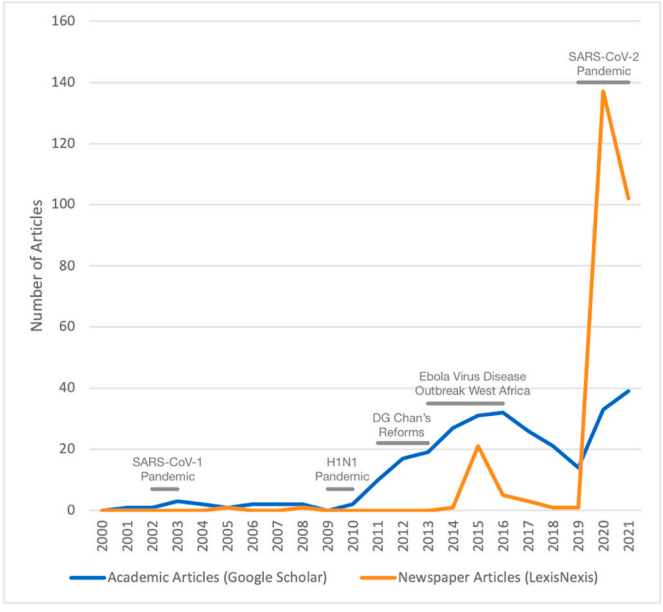

Fig. 1. Frequency of News and Academic Articles Mentioning World Health Organization Reform 2000–2021. On Google Scholar we searched for academic articles with "'world health organization reform" OR "reform of the world health organization" OR "reforming the world health organization"' and LexisNexis for newspaper articles with 'world health organization near/3 reform*'. (Results updated September 14, 2022.)

penetrates official deliberations in WHO offices or ministries. An additional advantage of academic debate is that, at least in theory, it can make visible the concerns of marginalized groups that may not be represented by their own governments.

We reasoned that dissatisfaction with organizational performance and calls for reform would have to reflect some expected or desired standard, even if only implied. When we surveyed academic articles, we found they almost never specified any basis for judging WHO, how improvements would be measured, or the detailed logic of how proposals would change WHO's performance. Additional investigation found no consensus standard for measuring organizational effectiveness more generally (Cameron, 2015; Martz, 2013). Hence it is unsurprising that there is no widely agreed framework for assessing a multilateral agency, either.

Many studies evaluate the effectiveness of private firms using very high-level criteria, such as shareholder value. But as WHO is not a private market competitor, these ideas were inapplicable to our objective. The field of international relations has produced a significant literature on international organizations and their role in grand strategy, but scholars in this area have noted that approaches to measure and explain the performance of international multilateral organizations have been scarce overall (Lall, 2017; Gutner and Thompson, 2010; Barnett and Finnemore, 1999). Some suggest that evaluations of bilateral aid agencies are the best standard for evaluating multilaterals (Lall, 2017). "Whilst taking into account members' bilateral assessments", a group of donor countries developed a joint method called MOPAN to evaluate multilaterals, including WHO (MOPAN, 2019). MOPAN is guided by representatives from participating donor governments who decide "what organizations to assess and how" (MOPAN, 2019). We chose not to use these evaluation methods because they reflect the preferences of a few rich countries. We wanted to approach the investigation from a more neutral perspective and developed our own framework for analysis, as discussed below in the methods section.

We decided to review the WHO reform literature because we were curious to know what evidence is engaged, and whether this body of work has any common themes. Additionally, we wanted to know what perspectives were represented and from where they might be coming. To answer these questions, we systematically investigated and classified a sample of academic and grey literature articles that analyze dimensions of WHO's performance and/or call for its reform. Our objectives partially overlap with those of a 2014 report by authors at the Graduate Institute in Geneva (Cassels et al., 2014a), which summarized proposals for WHO reform in the academic literature and provided some overview statistics. We deepen our analysis by developing a framework of organizational effectiveness, synthesizing the various claims that have been advanced, and expanding our scope to include contextual factors, types of evidence, and other considerations.

2. Methods and limitations

For our systematic review of global health literature related to WHO's performance, reform, or governance we used Pubmed, Google Scholar, Academic Search Premiere, and EBSCO Global Health. (Search conducted in November 2018.) Table 1 shows the search terms used in the Pubmed and Google Scholar searches. We removed duplicates and then screened the titles and abstracts of 1880 unique citations and selected those that analyzed WHO directly, or analyzed it secondarily as part of a focus on something else, such as the SARS pandemic or global non-communicable disease governance. Citations that only mentioned WHO for descriptive purposes were excl (e.g. for specifying the treatment protocol used in a study). This process with the two databases yielded 140 citations.

On Academic Search Premiere and EBSCO Global Health we used the terms *world health organization* and *reform* in a proximity search of three words and with truncation. Results without a focus on WHO reform were excluded. This search yielded 85 citations.

Table 1
Search terms used to identify literature for analysis.

'world health organization'	AND	
Search 1	'performance OR satisf* OR accomplish* OR achieve* OR respond OR response OR fulfil* OR effective* OR weak* OR fail*OR shortcoming OR defect* OR deficient OR deficiency OR dysfunction* OR reform*'	'legitimacy OR governance OR purpose OR accountability OR accountable OR participation OR goal OR strategy OR strategies OR mission OR learning OR innovation OR structure OR workforce OR identity OR culture OR norm OR values OR coherence OR coherent OR cooperation OR authority'
Search 2	'global health governance'	
Search 3	'reform*' *(in proximity of three words)*	

From the total of the three searches (n = 192), we restricted the citations to the years 2008–2018 to focus on recent performance and removed citations where a full text could not be found online. This paper reviews the resulting 139 publications (see Fig. 2).

Claims about WHO's effectiveness included descriptions and prescriptions, which we categorized according to our framework. Broad descriptive themes were then identified from these claims across all of the citations (Thomas and Harden, 2008). Also, we categorized publications in three groups based on their specified methods (if any): i) no explicit methods (commonly these were based on expert opinion); ii) literature search and synthesis strategy (mainly review articles); iii) observational or experimental data collection and analysis methods (observational and experimental studies). We further grouped publications by area of focus and also analyzed the city and country of the first author's institutional affiliation.

Our approach has three main limitations. Some relevant sources may have been excluded by our choice to consult only published sources, our English language restriction, and the four databases we chose. We believe the possible exclusions would be relatively insignificant to our aim of characterizing mainstream international academic debates about WHO since these at present are conducted mainly in published sources in English, even though we believe that more inclusive, more democratic debate would be far better. Second, there could be some reasonable disagreement about the framework we developed and our classification of themes from the literature. We employed our judgement and have attempted to disclose our process as completely as possible to mitigate this concern. Third, we synthesize a decade of evidence that could include views that some authors no longer support or conclusions that may no longer apply to WHO. We have included the dates of publication in our discussion and noted any instances where we suspect this could be the case. Given the relative constancy of complaints we believe it is appropriate to combine themes within our period of analysis.

Since the WHO reform literature included no standards for judging WHO's performance, we conducted a second literature search for papers on organizational effectiveness that could be inform categories or standards to support our analysis. However, we found no generally agreed and readily applicable standard in the wider academic literature, either. Accordingly, we reviewed the literature on organizational theory to identify elements of well-functioning organizations. We detail this exercise in Annex 1 and offer a brief synopsis here. We searched for organizational effectiveness across five disciplines: economics, sociology, political science, management, and psychology. We queried three databases (Academic Search Premier, JSTOR, Google Scholar), and reviewed citations in two books (Scott, 2013; Scott and Davis, 2015) and one review article (Martz, 2013). This yielded 68 publications focused on organizational effectiveness from either a theoretical perspective or empirically. In these works we identified 47 properties of organizational effectiveness, which we grouped into five categories, in all cases using language as close to the source literature as possible.

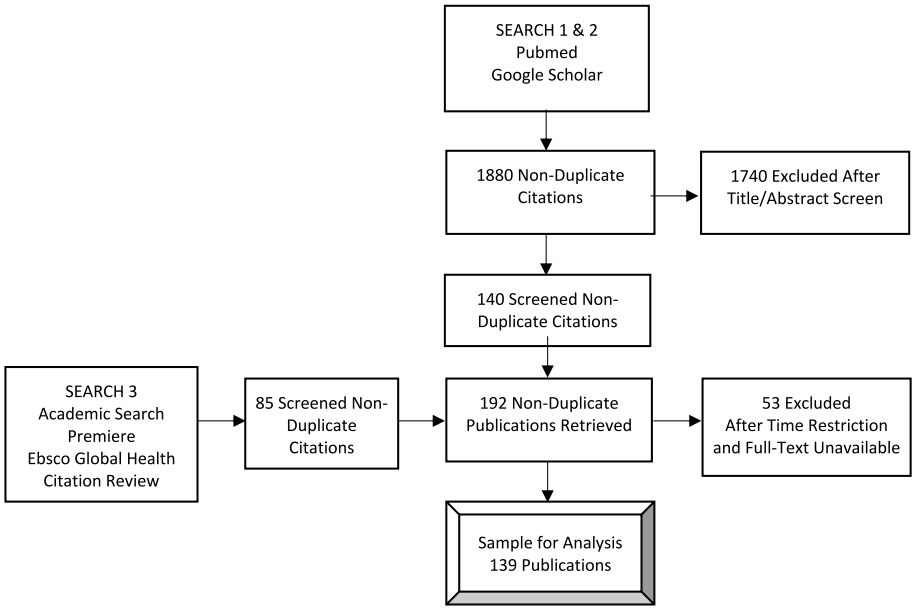

Fig. 2. Search process for identifying literature sample.

The five categories are 1) goals and strategy, as reflected in mission and supported by learning and innovation; 2) structure and performance, which are influenced by their fit with organizational purpose and the workforce; 3) authority to influence other actors and build relationships through cooperation; 4) legitimacy and governance, which is underpinned by purpose, participation, and accountability; and 5) Identity, as informed by culture, norms and values, which reflect internal coherence and form organizational identity. Fig. 3 shows these elements together with sample questions to illustrate how we applied it to assess WHO.

3. Findings and analysis

Our first major finding was that there was no agreement among authors in our sample about methods or standards for assessing WHO. In fact, this question of assessment methods was not prominent at all. As we described above, we sought an existing standard that could be applied to WHO before deciding to derive our own. In this section, we use our framework to organize claims identified though our review of WHO reform literature. We then turn to an analysis of the characteristics of the sample, including by methods, topics, and geography of origin.

3.1. Synthesis of themes

Across our complete sample of papers we identified 998 claims about WHO's effectiveness, which we classified according to our framework on organizational effectiveness. As Fig. 4 illustrates, almost two-fifths of the claims (368, or 37%) centered on WHO's goals and strategy, and more than a quarter on its mission (271, or 27%). Three other domains of organizational effectiveness accounted for roughly one-fifth each:

Fig. 3. Framework of organizational effectiveness and applied questions to assess WHO.

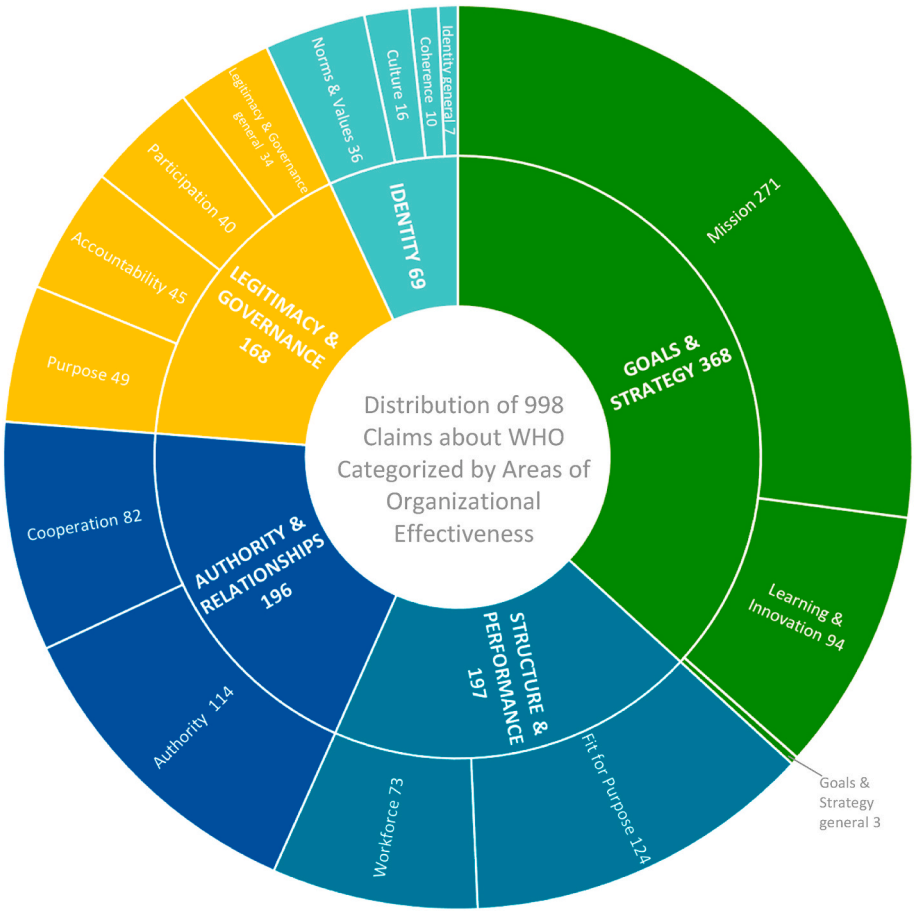

Fig. 4. Distribution of claims about WHO across organizational effectiveness areas. Some major claims were not well specified and are noted in the outermost ring as "general".

legitimacy and governance (168, or 17%), structure and performance (197, or 20%), and authority and relationships (196, or 20%). Within legitimacy and governance, the claims split in almost even numbers across purpose, accountability, participation, and more general issues. But under structure and performance, about 1.5 times more concerned fit for purpose as opposed to workforce, the other major component of that category. Few claims related to WHO's culture (16, or 2%), norms and values (36, or 4%), or coherence (10, or 1%), which jointly underpin its identity.

This initial assessment showed that analysts have focused their attention on WHO's goals and strategies more than any other area. Neither our framework nor the source literature on organizational effectiveness suggests any basis for gauging the relative importance of these categories. However, we note with concern the uneven distribution of attention in the published literature. We speculate that the category of identity is likely under-researched compared with goals and strategy, which was the subject of six-fold more papers. In the sections that follow we present each category, explaining its relationship to organizational effectiveness, and synthesizing the relevant portion of the 998 total claims made by papers in our sample. We accompany this assessment with a discussion of the implications for WHO in each category.

3.1.1. Goals and strategies

Goals and strategies are the mechanisms through which organizations translate their purpose into action. Goals and strategies refer to the larger targets and operational approaches needed to fulfill organizational objectives. Agreement in these areas enables action, as happens when states agree on what they want to do and how, e.g., the Millennium Development Goals or the Framework Convention on Tobacco Control. Setting goals and defining strategies requires negotiation, and may call for additional information or smaller pilot projects to reach agreement. Organizational learning and innovation support the design and implementation of strategies. Realizing intended strategies also requires contextualization, resources, authority, and aligned incentives.

Many publications questioned WHO's processes for setting goals and strategies. Generally, WHO has been assigned the purpose of promoting and protecting health worldwide (Markel, 2014), but several authors articulate concerns about its strategic vision. One stated "a strong feeling expressed in various forms and forums that WHO's actions are ad-hoc and derivative, that the initiatives are disparate, lack strategic direction and follow-up" (Lidén, 2014). Two comprehensive reports on WHO reform have observed widespread consensus that WHO is "overstretched" (Cassels et al., 2014a; Clift, 2014), which we interpret to mean having goals that are too numerous, too large, or too diffuse.

We found many articles claiming that WHO cannot establish its own goals because Member States do not agree with one another and seek to constrain WHO according to their own interests. By "making the vast majority of WHO's budget earmarked for specific purposes, WHO has by definition become a reflection of the specific and varied funding priorities of donors" (Lee and Pang, 2014). Often, WHO is constrained to doing what it can fund, meaning specific issues tied to certain donors (Sridhar and Gostin, 2011; Hoffman and Røttingen, 2014; Lidén, 2014; Clift, 2014; Gostin et al., 2015; Gostin, 2015b; Van de Pas et al., 2017) whose "preferences often change from year to year" (Gostin et al., 2015).

Another widely criticized area has been the limited effect of global strategies on national and sub-national affairs, a problem associated with an incomplete or disputed overarching strategy. Many find that

declared WHO strategies, such as the "global health security strategy" (Heymann et al., 2015), have not been fully realized (Moon et al., 2015; Chow, 2010; World Health Organization, 2015; Gostin, 2015b; Heymann et al., 2015; Wenham, 2017; Haynes et al., 2013; Worsnop, 2017; Wilson et al., 2010) often due to insufficient resources (Moon et al., 2015; Gostin, 2015b; Heymann et al., 2015; Wenham, 2017) but also because "when an outbreak occurs, conditions change for some states, leading them to forgo this longer-term collective good in favor of short-term incentives" (Worsnop, 2017). Further, WHO's strategies often do not stipulate functional mechanisms that would help states and other organizations work together. Scholars investigating pandemic preparedness found that there was no functional multilateral mechanism for building the capacities needed for the International Health Regulations (Heymann et al., 2015), — WHO's legally binding agreement to prevent the international spread of infectious disease across its Member States and a core motivation for founding WHO and previous multilateral health organizations. Analysts of WHO's non-binding legal instruments reached a similar conclusion about the WHO Set of Recommendations on the Marketing of Food and Non-alcoholic Beverages and the WHO Global Alcohol Strategy, which have been "criticized for failing to elaborate an effective framework for global cooperation and have had a limited impact on state practice" due to gaps in their legal structure and monitoring (Taylor et al., 2014a). These authors attributed the limited effect of another non-binding instrument—the WHO Global Code of Practice on the International Recruitment of Health Personnel—to insufficient implementation impetus from the WHO Secretariat (Taylor et al., 2014a).

Synthesizing these papers, we find wide acceptance of WHO's high-level aspiration to protect and promote health and well-being but the absence of agreement on more specific goals and strategies leads to ongoing, ad-hoc contestation of programmatic issues based on the interests of individual Member States and advocacy groups. This dynamic forces WHO into a series of short-term trade-offs and limits its ability to set objectives over longer timescales, which are needed for larger achievements. Constant litigation of programmatic issues is antagonistic to public health work, as well, which is often interdependent, complex, and/or uncertain—all qualities that require consensus for successful navigation.

3.1.2. *Institutional structure and workforce*

Institutional structure and workforce shape the capacity and quality of organizational productivity. This involves the way an organization categorizes its work into divisions of different workers, how it connects its workers within and between these areas, and the type and quality of its workforce. For example, WHO's headquarters structure includes the Director-General and a 19-member leadership team, including a "Chef de Cabinet", Deputy Director-General, three Executive Directors, and 14 Assistant Directors-General, plus 11 specialized departments organized around diseases, health determinants, specific technical tasks, and administrative functions such as "UHC/Communicable and Noncommunicable Diseases", "UHC/Healthier Populations", "Emergency Response", and "External Relations and Governance" (World Health Organization, 2022b). The structure also reflects geography with Geneva headquarters, regional offices, and country offices. Organizational structure can be evaluated against its fit for purpose, and by adaptability and efficiency. Workforce is defined by people, including their skills, roles, knowledge, and motivation. The workforce is affected by many policies and processes, as well, such as recruitment, assignment, promotion, and retention. An alignment of structure and workforce enables organizations to work efficiently and effectively.

Many publications identified shortcomings in WHO's institutional structure and workforce. Budgetary competition between departments was cited as an obstacle to coordination and cooperation (Lidén, 2014; Kluge et al., 2018; Gopinathan et al., 2015; Hawkes, 2011; Legge et al., 2017). This decreases the unity and motivation of the workforce (Hawkes, 2011) and hinders "a coherent and rational staffing structure" (Legge et al., 2017). The division of WHO around narrow subject areas has left it ill-equipped to deal with systemic problems that cross multiple subject areas (Gopinathan et al., 2015). Another commonly reported obstacle in WHO's interconnected and multifaceted work was a workforce with overly narrow skillsets and an insufficiently multidisciplinary orientation to deal well with broad issues such as global public goods, health financing, non-communicable diseases, and pandemic response (Hoffman and Røttingen, 2014; Clift, 2014; Gostin et al., 2015; Gopinathan et al., 2015; Burkle, 2015; Kickbusch, 2013b). WHO's work "would seem to demand a very different distribution of skills from that which exists currently" (Clift, 2014), and several analysts agree that in particular it would require more social scientists and lawyers (Gostin et al., 2015; Gopinathan et al., 2015; Burkle, 2015; Kickbusch, 2013b).

Staffing practices attracted frequent complaint, as well. Two publications suggest that political suitability has prevailed over competence in the appointment of staff (Chow, 2010; Mackey and Liang, 2013a). Additionally, staffing rules require "linguistic and geographic balance," (Chow, 2010) complicating the recruitment knowledgeable and skilled people (Chow, 2010; Dussault, 2016; Legge, 2012). Some claim that "WHO does not necessarily reward or promote based on merit, and staff performance management is constrained by the often short duration of staff contracts" (Checchi et al., 2016). Several assert that high-performing staff are likely to leave WHO because of its constraining bureaucratic work environment (Wibulpolprasert and Chowdhury, 2016; Hoffman and Røttingen, 2014).

Structure and workforce performance problems have also stemmed from inadequate cooperation between WHO's headquarters and its regional offices. WHO's regional offices are described as products of historical negotiations (Clift, 2014; Legge, 2012), a source of political tension (Lidén, 2014; Legge, 2012) and with uneven "infectious disease risk and health system capacity" (Burkle, 2015). Many analysts traced frictions in WHO's work to the regional offices, which are hampered by a double reporting relationship to the Director-General and to health ministers in their regions (Bloom, 2011; Dussault, 2016; Legge, 2012), difficulties getting information from other parts of WHO (Gostin, 2017a), tense relationships with headquarters (Burkle, 2015), and limited clarity or ambiguity in relative roles and responsibilities (Wenham, 2017) with headquarters. Compounding these issues is the budgetary autonomy of regional offices, which reduces incentives to cooperate with headquarters (Bloom, 2011; Chow, 2010; Sridhar and Gostin, 2011; Gostin et al., 2015).

The inexpediency and rigidity of WHO processes present other limitations. For example, when the Thai government asked WHO for support to use an essential medicines patent, only after several months "WHO headquarters responded by asking its regional office to provide the support—which the latter was unable to do. It took a few more months for the Geneva, Switzerland, office, after some further prodding, to dispatch a team of experts to Thailand" (Wibulpolprasert and Chowdhury, 2016). The UN Panel that evaluated WHO's 2014 EVD response found that "even when the organization recognized the escalating response needs, its internal administrative rules on human resources, procurement and finance did not facilitate the rapid deployments of staff or emergency response materials" (Kikwete et al., 2016). Others argue that an insufficient quantity (World Health Organization, 2016; World Health Organization, 2015) and quality (Moon et al., 2015) of country office staff initially underlaid WHO's inept handling of the crisis. More broadly, according to some analysts, the competencies of staff in WHO's country offices often do not align with country needs (Clift, 2014).

In conclusion, WHO's ability to coordinate internally is limited by problems in its organizational structure, including disconnected technical departments in budgetary competition, largely autonomous regional offices, and rigid operational processes. These problems are compounded by workforce issues such as non-meritocratic hiring and promotion, inadequate staffing in country offices, and limited expertise in social science and law. Overall institutional competence and agility

are compromised by these shortcomings. WHO's structures and people frequently interact with the organizational environment.

3.1.3. Institutional authority and working relationships

Institutional authority and working relationships refer to legitimate organizational power and the strength of cooperation with other actors in the same field. For WHO and other parts of the UN, legitimate powers are those conferred or otherwise agreed upon by Member States. For example, states conferred the UN Peacekeeping Mission with the power to intervene in certain conflicts. Working relationships refer to ways of working together with other organizations to achieve its goals. Cooperation can increase political and financial resources, help coordinate interests, enhance efficiency, help innovate new knowledge, products and services, and provide more stability to the environment. Authority and cooperation permit organizations to extend their power via other related groups to achieve their goals.

Many authors find significant limitations to WHO's institutional authority. One basis of WHO's authority is technical expertise, as provided through assistance "to various levels and sectors of government" (Magnusson, 2009), which has been a channel for influencing states (Magnusson, 2009; Gostin and Sridhar, 2014). Additionally, WHO "possesses the rare and enviable convening power to mobilize the best international experts on short notice" (Wibulpolprasert and Chowdhury, 2016). In addition, WHO influences states through recommendations, and binding and non-binding global rules (Gostin et al., 2015; Taylor et al., 2014a; Gostin and Sridhar, 2014; Hesselman and Toebes, 2018; Sridhar and Gostin, 2014). Some argue that WHO "principally exercises its normative authority through 'soft' power, either constitutionally authorized 'recommendations' or more informal action by the Assembly, Board, and/or Secretariat" (Gostin et al., 2015). WHO has adopted "only four binding international legal instruments," including the Framework Convention on Tobacco Control (FCTC) and International Health Regulations (IHR) (Taylor et al., 2014a). Although these are significant legal instruments, they rest largely on the consent of Member States, which is not always forthcoming and, when it is, may not be accompanied by any willingness to follow through.

The non-compliance with WHO rules may be considered as evidence of WHO's limited authority. Many found that, "while WHO can establish rules and supervise their implementation" (Kickbusch, 2013b), it has had no structure to enforce agreements, or to settle disputes between Member States (Wilson et al., 2010; Kickbusch, 2013b; Gostin and Sridhar, 2014; Moon, 2014; Mackey and Liang, 2013b). Some suggest that while WHO asserted authority during its response to the SARS pandemic, states "could have blocked or ignored WHO" had it "threatened their interests" (Marten and Smith, 2018). This indicates serious limitations in WHO's supranational influence. Indeed, several scholars investigating pandemic responses found that states ignore even the legally binding agreements (Heymann et al., 2015; Worsnop, 2017; Gostin, 2017a)—WHO's strongest authority—for national political reasons (Worsnop, 2017; Gostin, 2017a). While the costs associated with ignoring these agreements is not always high, the many examples of such behavior by Member States illustrates a WHO's lack of effective sanctioning powers (Van de Pas and van Schaik, 2014; Gostin, 2015b; Worsnop, 2017; Gostin and Friedman, 2014). For example, "WHO did not exercise its naming and shaming power during either the H1N1 pandemic or the [2014] Ebola outbreak" although in each case more than 40 countries "imposed excessive [trade and travel] barriers" (Worsnop, 2017).

Concerns about poor organizational performance have led several donors to "circumvent WHO's shortcomings" (Lee and Pang, 2014) by finding other places to carry out their priorities. Some analysts note that these donors "initially channeled a growing part of their financial and political support to other health-related UN organizations" and later established "new initiatives such as the UN Joint Programme on HIV/AIDS (UNAIDS), the Global Alliance on Vaccines and Immunization (GAVI) and the Global Fund to Fight HIV/AIDS, Tuberculosis and Malaria (GFATM)" (Lee and Pang, 2014). Other analysts indicate a "growing frustration over the noncompliance under the IHR" which led the US and others to install the "Global Health Security Agenda (GHSA)" (Burkle, 2015). Further, the response to the EVD outbreak in West Africa "battered WHO's credibility", and as a result the "UN stripped WHO of leadership in creating the UN Mission for Ebola Emergency Response" (Heymann et al., 2015). Over time WHO has lost influence to new global health organizations (Sridhar and Gostin, 2011; Heymann et al., 2015; Taylor et al., 2014a, 2014b; Checchi et al., 2016; Gostin and Friedman, 2014) who "often overshadow the agency" (Sridhar and Gostin, 2011). A vicious cycle of decline fueled by mutual distrust between donors and WHO has weakened the Organization and opened it up to side projects steered by individual donors, including non-state actors, rather than collective investment and direction.

Many publications suggest that WHO has had insufficient working relationships with non-state actors. Analysts broadly describe WHO as "distant and sometimes distrustful" of these actors (Gostin et al., 2015). Some argue that WHO has not yet resolved how it "can best function in a by now considerably more crowded and complex health architecture" (Lidén, 2014). Others suggest a tension between WHO's organizational core and "WHO-hosted partnerships" as the "governance of partnerships (which may be determined by funders and usually includes stakeholders) is often divorced from the governance structures of WHO" (Clift, 2014). Further, many indicate that WHO has not worked enough with civil society organizations (Kikwete et al., 2016; World Health Organization, 2015; Clift, 2014; Gostin et al., 2015; Checchi et al., 2016; Gostin, 2017b; Ooms et al., 2014), which are often sidelined because of the "broad exclusion of civil society from WHO governance" (Dussault, 2016; Gostin, 2017a). The UN's and WHO's evaluation panels of its response to the 2014 EVD outbreak in West Africa both found that it had operated without cooperating sufficiently with local communities (Kikwete et al., 2016; World Health Organization, 2015). Its mechanism to work with corporations also has shortcomings. Some argue that WHO's Framework for Engagement with Non-State Actors has been insufficient to protect consumers' health since it "focuses narrowly on the questions of risk assessment and management for WHO itself when engaging with the private sector" and does not propose a mechanism for oversight or governance (Buse and Hawkes, 2016).

Overall, we observe that WHO is endowed with technical and normative authorities, but in the absence of financial independence and effective legal powers, it is too weak to influence states unwilling or unable to cooperate, and faces difficulties in dealing with corporations and other non-state actors. People and organizations may distrust WHO and reduce their cooperation with it when they are unsure of its independence or legitimacy. This compromises both authority and working relationships, meaning that other actors may shift their posture from a presumption of authority and competence to ad hoc calculations of the expected benefits of cooperating.

3.1.4. Legitimacy and governance

Legitimacy and governance come from agreement between relevant parties on the authority of its organization and the high-level processes it has for decision-making. Legitimacy and governance in turn require an organizational purpose and objectives endorsed by its membership. States endorse international organizations to pursue objectives that cannot be addressed independently, as with WHO and the international dimensions of health and disease, for example. Legitimacy and governance also require that parties be able to participate in decision-making, enforce accountabilities, and have some ongoing ability to influence the organization as indicated by experience or circumstance.

The near-universal membership of states and a one-state-one-vote principle in the World Health Assembly indicate a form of democratic legitimacy (Sridhar et al., 2014; Gostin, 2017a; Sridhar and Gostin, 2014). However, many analysts discuss the unequal influence of Member States despite the seeming equality of votes. Some report that

inequalities "persist among states in global health decision-making at both the World Health Assembly and Executive Board" (Hoffman and Røttingen, 2014). Inequality of participation can be observed in the negotiating process, for example, African countries "could not engage in the negotiation [on the WHO Global Code of Practice on the International Recruitment of Health Personnel] until Norway and WHO EURO supported the Global Policy Advisory Council in ensuring their active participation" (Cooper and Farooq, 2015). Another example is the United States' influence in making corporate compliance voluntary with respect to codes of marketing junk food to children, which has constrained WHO against the wishes of many other Member States (Haynes et al., 2013). Furthermore, one paper found that over the past decades formal WHO governance during the annual World Health Assemblies has fractured into numerous informal parallel meetings (Eckl, 2017). States with small delegations have been unable to represent themselves in all of them simultaneously (Hoffman and Røttingen, 2014; Eckl, 2017), which "undermines the principle of Member State equality" (Eckl, 2017).

WHO's numerous roles and the prioritization among its many responsibilities drew wide scrutiny, but there was no consensus in these areas. Scholars have claimed that WHO should be a director and coordinator, especially during cross-border disease outbreaks (Moon et al., 2015; Kluge et al., 2018; Gostin, 2012; Kickbusch and Szabo, 2014); cultivate a legitimate decision space for cooperation, establish common rules, promote global public goods, and provide monitoring (Kickbusch, 2013a; Collier, 2011; Sridhar et al., 2014; Yach, 2016; Gostin and Sridhar, 2014; Taylor et al., 2014b; Kickbusch and Szabo, 2014; Yach and von Schirnding, 2014); create knowledge (Yach and von Schirnding, 2014; Abeysinghe, 2014); advocate for the health of neglected populations (Collier, 2012); and assist states with national health problems, especially when they pose a risk populations in other nations (Burkle, 2015; Abeysinghe, 2014). Three papers identified persistent disagreement around whether WHO should focus on global normative work or operational assistance to Member States (Kickbusch, 2013a; Yach, 2016; Clift, 2014).

Several publications identified inadequacies in WHO's accountability. Analysts found that the Executive Board "is not publicly accountable for many of its decisions", has problems with transparency (Bloom, 2011), and that the World Health Assembly has little sway over WHO's work plan (Legge, 2012). A comparative analysis of global health organizations indicates that WHO has lacked "regular independent evaluations or a public information policy" (Clinton and Sridhar, 2017). An investigation into WHO's accountability found that at the organizational level, its respective rules are operationalized only partially, and that "the focus appears to be not accountability of the organization but accountability to the organization" (Eccleston-Turner and McArdle, 2017).

We assessed these claims as evidence that WHO's legitimacy and the quality of its governance are weakened by disagreements about its purpose, inequality in the influence of Member States, and inadequate accountability. Additionally, the absence of consensus among authors limits the inferences that could be drawn. It seems safe to conclude that within the biases of the sample itself, which we discuss in our conclusion, there is agreement mainly on the problem of weak legitimacy and governance, but not on where those problems are most acute or how they should be addressed. These weaknesses are embedded in tacit forces affecting WHO's performance.

3.1.5. Identity

Identity reflects institutional coherence, including cultural and normative characteristics that constitute a sense of what an organization represents. For example, WHO's workforce is expected to act in accordance with the organization's value charter, which portrays itself as an evidence-based, courageous, independent and collaborative servant of world health (World Health Organization, 2022). Identity is shaped by how employees and other stakeholders understand what an organization stands for and allows organizations to mesh distinct parts into an overarching frame.

Several publications questioned aspects of WHO's identity, such as its cultural characteristics during pandemic responses. Some argue that when facing "conflicting mandates of supporting governments, and coordinating and leading the health sector" WHO routinely acts based more on political than technical factors (Checchi et al., 2016). Others add that it is often reactive rather than proactive in its approach (World Health Organization, 2015). The UN's assessment of the 2014 EVD outbreak, suggested that WHO has defined itself as a normative leader, which does not equip it with technical capacities for pandemic responses (Kikwete et al., 2016). Some suggest that WHO has a "culture that rewards protocol over substance; caution over courage; hierarchy over competence; conservatism in estimating problems; and obfuscation of evidence that might challenge relations with governments or donors" (Checchi et al., 2016). For example, several comprehensive assessments—both independent and WHO commissioned—identified a culture of obscurity and risk-aversion in its response to the 2014 EVD outbreak in West Africa (Moon et al., 2015), most of which connected these traits to weaknesses in the response (Checchi et al., 2016; World Health Organization, 2015; Kupferschmidt, 2015).

WHO uses rights-based rhetoric frequently, but some find its operational commitment to rights-based approaches inconsistent. Several authors point to the importance of WHO's invocation of the right to health for all people, noting its normative authority, its constitutional responsibilities, and the centrality of rights to its work throughout history (Gostin et al., 2015; Meier, 2017; Meier and Onzivu, 2014). However, legal scholars note that although the right to health has been a topic in more than 60 resolutions on WHO programs, these articulations have varied widely according to organizational politics, the views of Directors-General, and the global political climate (Meier and Onzivu, 2014).

Independent and transparent decision-making at WHO has been affected by competition among Member States, and also between WHO and the private sector. Analysts indicate that, despite rules to the contrary, the "flow of people between the private and public sector, including secondment to WHO, raises questions of influence and impartiality" (Buse and Hawkes, 2016). Some found that many pledged "safeguards for public interest (…) had never been established or made effective", and others wrote that WHO has sometimes "refused to enforce its own transparency rules when faced with opposition from Member States" (Attaran et al., 2014). Many concur that WHO's funding model has given rise to conflicts of interests (Sridhar et al., 2014; Moon, 2014; Ooms et al., 2014; Kickbusch et al., 2010). Some suggest that states seek influence on behalf of private actors, citing the "power [pharmaceutical and food] industries exercise over the secretariat is partly mediated through the advocacy of the Member States who host large transnational corporations" (Legge, 2012). As suggested by a Chatham House working group on WHO reform, WHO decisions on tobacco control may have been delayed due to commercial interests mediated through states even through technical evidence was clear (Clift, 2014).

WHO claims an identity of transparency, independence, and organizational courage, but to many critics the Organization's actions have betrayed these aspirations during the times of greatest need. In the 2014 EVD outbreak in West Africa, WHO's performance was widely characterized as conservative, slow, overly deferential to certain national interests, and based on opaque processes. The discrepancy between formal self-description and other internal and external views weakens WHO's credibility by revealing disagreement about what the organization is or does. Furthermore, these discrepancies create space for conflicts of incentives, potentially compromising internal coherence and exposing the staff to undue influence from private industry and Member States.

In our synthesis of the 998 claims about WHO performance or reform we identified many causes for concern, which we consider more fully in our discussion section, below. Before turning to this interpretation we

examine the characteristics of this literature to understand where it originates, what evidence it uses, and on what subjects it is focused.

3.2. Assessing the reform literature's methods, geography, and topics

Of the 139 total publications in our sample, we categorized 122 (88%) as expert opinion articles, meaning they documented no methods in support of their findings. In many cases these were commentaries. We categorized 15 publications as observational studies (11%). These specified data collection methods. We categorized two publications as reviews (1%), meaning that they documented a search and synthesis strategy. We found no experimental studies. As shown graphically in Fig. 5, the discussion about WHO effectiveness (and reform) consists primarily of publications without stated methods, typically commentary based on expert opinion.

In the period 2008–2018, the highest number of publications appeared in 2014 (34, or 25% of our sample), reflecting keen interest in the EVD outbreak that year. More than three quarters (106) listed first authors affiliated to institutions in just five countries: the United States (50, or 36%), the United Kingdom (23, or 17%), Switzerland (17, or 12%), Canada (11, or 8%), and Australia (5, or 4%). No other country produced more than two publications. Three countries were the source of two papers and 11 produced just one. A closer look reveals that the institutions of first authors were further concentrated in certain cities, led by Geneva, Washington DC, and London and with 16, 15, and 10 papers, respectively. The largest regional concentration was from the East Coast of the United States; the 41 publications originating there exceeded the total from any nation other than the US itself. We show this city-level geographic distribution in Fig. 6.

The distribution by country of first author affiliation is shown on the left side of Fig. 7; the right side includes the most common focus areas for these complaints.

Two topics—international infectious disease outbreaks and control, and WHO reform—tied as the most common with 35 publications apiece, each accounting for 25% of the sample. Among the 35 international infectious disease publications 18 were on the 2014 Ebola outbreak, which was also the topic in four observational studies (World Health Organization, 2016; Worsnop, 2017; Abeysinghe, 2014; Blouin Genest, 2015). For example, one article observed how and why states reacted to WHO's declaration of Public Health Emergency of International Concern for the 2014–16 EVD outbreak in West Africa by relating trade and travel barriers, Ebola case fatalities, newspaper articles and government documents to the declaration (Worsnop, 2017). Another observed more broadly how the International Health Regulations functioned during the same outbreak with data collected through interviews and documents. Among the 35 papers on WHO reform, 6 were surveys of multiple organizational shortcomings, 12 were complaints about WHO governance, and 17 were broad commentaries on WHO reform, including on its plans and processes. Three were observational studies analyzing WHO reform (Eckl, 2017; Sikazwe et al., 2016; Gautier et al., 2014), including effects of governance (Eckl, 2017) and financing (Sikazwe et al., 2016) reforms. For instance, one of these studies observed participants at the World Health Assembly and reviewed documents to explain how the format of this body changed over time and which ramifications this had for WHO's governance (Eckl, 2017). There were also two observational studies that analyzed its guidelines (Burda et al., 2014) and its mental health policy (Shen, 2014). One of the two reviews surveyed WHO reform proposals broadly (Cassels et al., 2014a), the other WHO reform proposals for better pandemic preparedness and control following the 2014 Ebola outbreak (Moon et al., 2017). Twelve publications focused on global health governance more broadly (9%), twelve on legal instruments in global health (9%), eight on WHO financing (6%), six on NCDs (4%), five on WHO's relationship to foundations and companies (4%) and four on the human right to health (3%). Several other topics were the focus in only one publication each.

4. Discussion and conclusions

When we conceptualized this project, we hypothesized that the frequent, voluminous, and uncoordinated published academic criticism of WHO could be synthesized to reveal common themes that might be useful to the Organization's leadership and delegations from Member States. The absence of standards or methods in this literature led us to additional questions about how to categorize papers and how to approach the larger matter of organizational effectiveness.

Our categories for analyzing WHO were derived from the literature on organizational effectiveness, which is subject to some of the same biases that characterize the global health literature, namely that it is conducted in English and dominated by views from the global North. However, the business environment in which these ideas are developed is subject to intense market competition that helps to separate poor performing institutions from those that are more effective. As this literature has few areas of agreement even in the limited scope of the private sector, we would not claim that it applies easily to the public sector or the realm of multilateral institutions. However, we offer this framework as a more rigorously considered basis for judgement than opinion or speculation alone.

We find that despite its substantial gaps, the literature offers some tentative suggestions for further investigation, although in none of the categories we defined was there general positive agreement. WHO's goals and strategies were unclear and in dispute. Its legitimacy and governance were found lacking. Its authority and relationships appeared to be weak and susceptible to non-democratic interference. The structure and performance of WHO seemed to be antagonistic to its mission and its workforce appeared to be overly specialized and inadequately adaptable. Weaknesses in all these areas underpin questions of identity, which appears to be compromised by disagreements over norms and values, unresolved cultural differences, and various inconsistencies. We call on WHO leadership and Member States to seriously consider these issues and take immediate steps to redress them, for example to assert WHO's financial independence and legal authority in health areas. We

Fig. 5. Our sample of literature classified by type of evidence. Expert opinion/commentary article = No methods section in publication, or no specified methods. Observational study = Method section indicating observational data collection; Review = Method section indicating search and synthesis strategy.

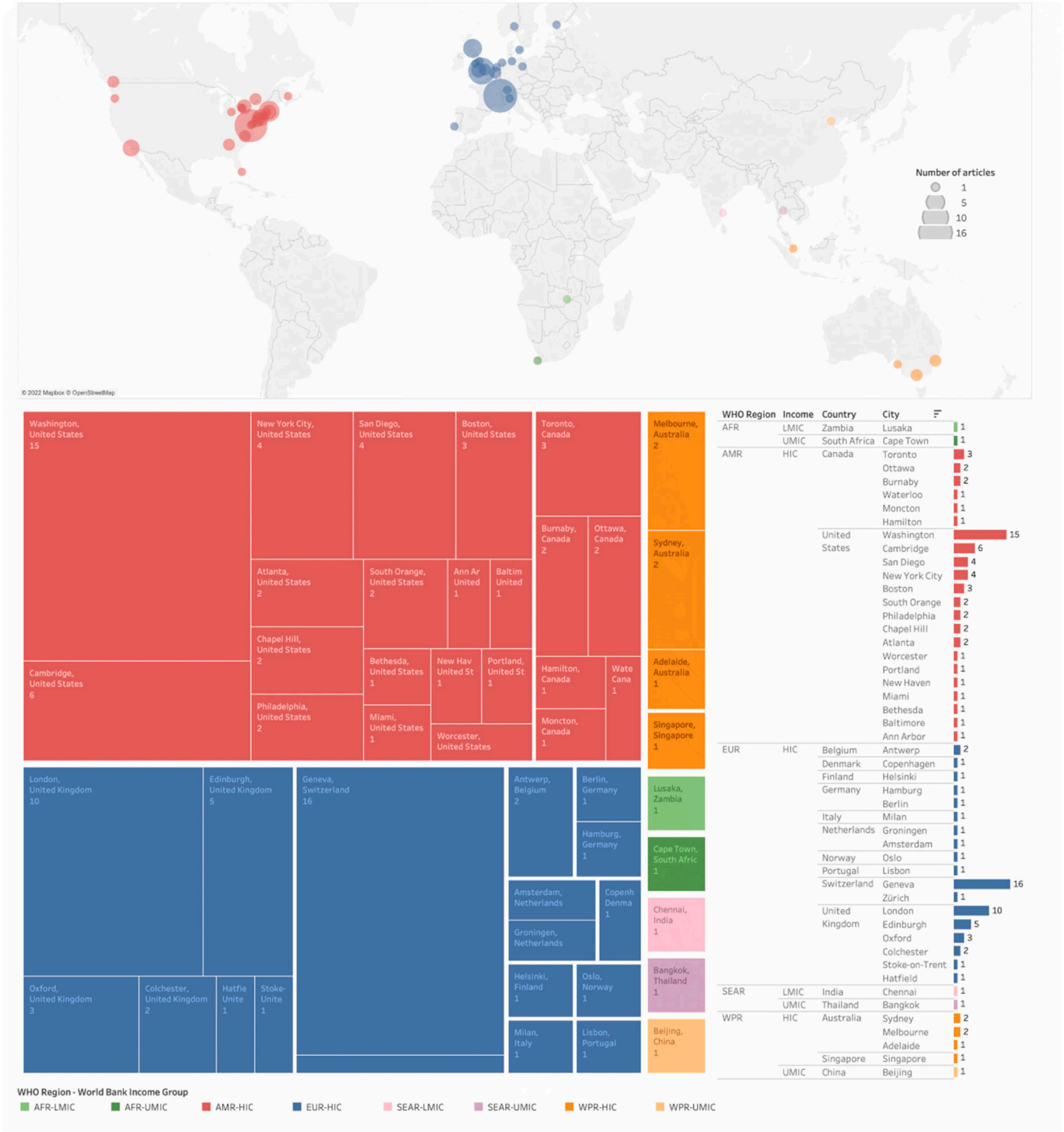

Fig. 6. Cities in first authors affiliation addresses in WHO reform and performance literature shown in proportion to their frequency in circles, rectangles, and bars. Colors code for WHO region and World Bank income group. (For interpretation of the references to colour in this figure legend, the reader is referred to the Web version of this article.)

believe that systematic investigation with defined standards and more complete representation in the process is indicated.

We found broad testimony that obstructive Member State behavior underlies many of WHO's performance problems. The literature revealed this for each of the categories we defined. Member States' ongoing disagreement about WHO's purpose and unequal exercise of influence in its decision-making processes weaken WHO's legitimacy and governance. Member States capture WHO for short-term pet projects and distract or constrain it from long-term goals, undermine its broad strategies, and deny it the authorities needed to establish accountabilities. These manipulations trickle down into WHO's structure, favoring technical units that must compete for resources and are too narrow to address WHO's many interdependent objectives. Politically motivated appointments often weaken WHO's workforce and state-mediated influence often promote private sector interests that run counter to public health. Member States undercut their own road to

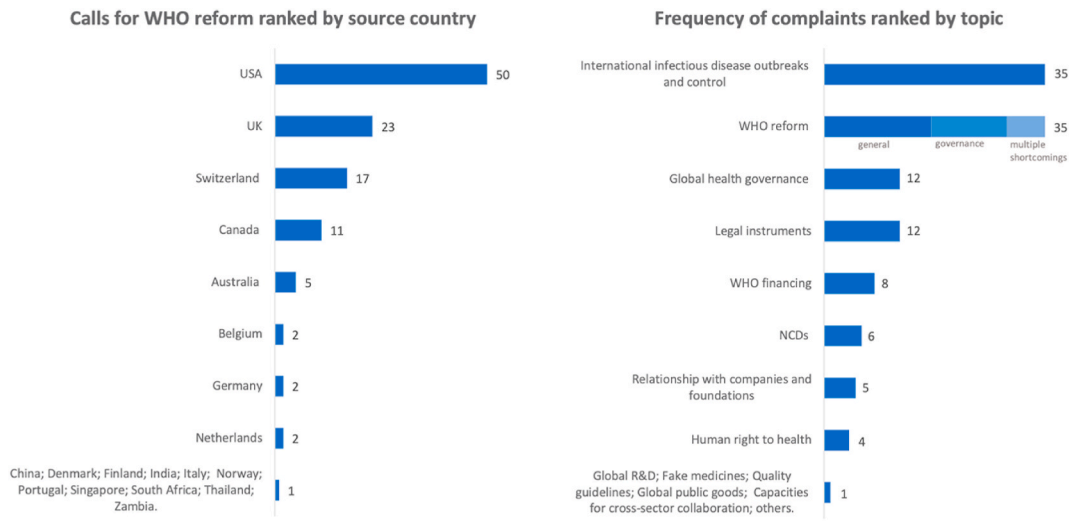

Fig. 7. Number of articles on WHO complaints and reform categorized by country of first author affiliation and area of focus.

collective success by breaking legally-binding international health rules, failing to curtail trade in unhealthy products, obstructing scrutiny of harmful industries, and weakening WHO such that it cannot enforce regulation or sanction violators. These observations underscore the centrality of Member States for WHO's success. We call upon Member States to agree on a clear purpose for WHO and set up checks and balances to counter actions made in national self-interest, for example as via a state dispute settlement mechanism for health at WHO akin to the World Trade Organization's mediation and adjudication functions in trade. We think that more studies on Member States' behavior in WHO are warranted, as are systematic and inclusive surveys of their views on the Organization's performance and reform. This is an ideal focus for academic authors, whose independence can facilitate analysis and accountability that Member States may seek to evade.

The literature on WHO performance and reform is incomplete in several respects. It is narrow in the geographic representation of authors, considers only a small range of topics, and in most cases does not clearly specify the evidence and standards used to advance its conclusions. We believe it is important to situate our findings in a more detailed discussion of these caveats.

The geographic concentration of this literature is high. The primary sources are the United Kingdom and its settler colonies, the US, Canada, and Australia, which together accounted for about two-thirds of all papers. The only other significant source is Switzerland, home of WHO, contributing about 12%, meaning that these five countries accounted for 77% of the papers we identified advocating for WHO reform. Of the 193 United Nations Member States, 174 were absent from the discussion, as captured by our sample and using the first-author location. Five countries, or 2.6% of Member States were the source of five or more papers. Member States debate and determine WHO's functioning and reform in its official governance bodies and processes, of course, but as the reviewed literature shows, their influence in these organs is unequal. Single papers typically had multiple authors, often from different institutions and countries, meaning that there are some limitations to our classification strategy based on the institution of the lead author. Yet it becomes clear that some countries with high influence over WHO via its formal governance mechanisms are disproportionately represented through scholarship, as well. This geographic concentration of authors, even on the city level, risks producing a narrow academic conversation unable to capture or represent the rich diversity of ideas that surely exist on this topic around the world. In expectation, authors from rich countries would have the least familiarity with the consequences of the phenomena they seek to criticize. By logic, authors from Sierra Leone, Nigeria, the Democratic Republic of the Congo, Nepal, Laos, Egypt, Peru, Kiribati, or other low- or middle-income countries (LMICs), would have greater familiarity with WHO's work and be more affected by its policies. Both factors would increase the authority and legitimacy of authors based in these countries, but the academic WHO reform literature does not include a single such paper over the decade covered by our review.

We conclude that the WHO reform literature should be qualified for systematic geographic biases, which risk problems for the scope and quality of its ideas, and for the representativeness and legitimacy of debate. Similarly, the underlying biases in academic publishing indicate flaws in the ability of prestigious journals—mainly based in the US and the UK—to attract and amplify the diversity of voices needed to inform a global consensus. Democratizing access to these journals could be one aspect of a solution, but in our judgement, it is more important to support scholarship and publishers in other places as a longer-term, more fair, and more permanent solution that would generate a more robust academic debate in more places.

The dependence on expert opinion is another limitation in the WHO reform literature. In the sample detected in our search, we found that the vast majority of papers—88%—were perspective articles or commentaries without explicit empirical methods or formalized presentation of evidence. We do not view the lack of explicit methods as disqualifying, but it is difficult to interpret opinion without knowledge about the experience and position on which it is based. We propose that opinion articles on WHO reform include a positionality paragraph for this reason. Given the centrality of positionality to research we argue that this requirement should extend to all global health publications. In keeping with our own recommendation for a positionality paragraph, at the end of this section we include biographical information to help readers better assess our training, perspectives, and limitations.

We note also that logical arguments may not require an explicit statement of methods, either. We chose to include publications without stated methods in our review despite the difficulties of interpreting their possible biases. They comprised a major component of the academic debate we wanted to characterize and synthesize. Additionally, our synthetic analysis of these publications allows for empirical observations about the literature and permits some additional confidence in its themes beyond what may be warranted for single papers.

We note that for multiple-author papers, expert opinion may be treated as the consensus of a small, identified group. Nonetheless, we were surprised that so many papers did not bring evidence or formal methods to bear on a topic as complex and important as WHO reform. None offered a framework of organizational effectiveness as a basis to assess WHO and to propose reforms. The lack of clarity and agreement on the concept of organizational effectiveness, its elements, and its measurement are serious limitations that we have attempted to address

here. As a unique organization with no directly comparable peers, WHO is challenging to study with many observational and experimental methods. Also, analyzing WHO's organizational effectiveness or reform calls for social science methods that are uncommon in the biomedical scientific community surrounding WHO.

Our analysis of topics in the reform literature found a limited range of attention. International infectious disease outbreaks was tied as the most frequent specific motivation along with WHO reform more generally, including surveys of its shortcomings in several areas, criticisms of its governance, and broad commentary on its plans and processes. The balance of papers had more specific foci reflecting an array of concerns common in the international literature, such as global health governance; legal instruments, such as advocating for new powers for WHO or specific accountability mechanisms for Member States; and financing for WHO. A few papers discussed non-communicable diseases (NCDs), the right to health, or WHO's relationship with foundations and the private sector. Not prominent in these papers were major determinants of health that reflect poorly on the world's most powerful nations, such as the sequelae of slavery, colonialism, and imperialism, or trade policies that underpin the commercial determinants of health. WHO's ability to address these inequalities would seem to be important. Similarly absent were perspectives on bedrock public health issues such as water, sanitation, or other environmental underpinnings of well-being. In most cases, it was not clear whether or why the chosen topics might have been more significant than others.

The asymmetries in authorship that we found in the academic study of WHO mirror limitations in the intellectual ecology and practice of global health. The dominant language of international discourse is English, and most of the highest prestige journals are based in English-speaking countries, primarily the US and the UK. These considerations bias academic discussion on WHO reform toward the elites of the Anglophone world and away from those most affected by the policies and actions of the world's foremost international authority in health. It is possible in theory, yet in our view simply not plausible, that WHO is not sufficiently important enough to draw the attention of people and institutions from the majority of its Member States. We hypothesize instead that commentary and analysis from LMIC authors are discouraged, denied, or otherwise hidden from international prominence by linguistic barriers (Montenegro et al., 2020), cultural conventions common only in metropolitan countries, or differences in perspective that are disagreeable or not intuitive to Northern editors and reviewers. It is also possible that people in other countries prefer to act within their own states and try to influence their delegations as opposed to exercising normative, epistemic, or other forms of power in the international press.

The patterns of participation observed in our sample are similar to those found more generally in global health. First and last authors based in rich countries are 19 times as frequent in leading medical and global health journals than people affiliated to institutions in LMICs (Merriman et al., 2021). About 70% of global health journals are headquartered and edited in rich countries (Bhaumik and Jagnoor, 2019) and some charge high publication fees, as well. These imbalances can produce a literature that "reads like a conversation to which the primary participants were not invited" (Abimbola, 2021). Stark "power asymmetries in the global health architecture" persist as global health organizations are highly concentrated in a few countries, with two thirds located in the US, the UK, and Switzerland (Global Health 50/50, 2020). These asymmetries also pervade global health education (Svadzian et al., 2020) which further imbalances opportunities to voice concerns and proposals about WHO's functioning. Global health is still shaped by a colonial bias that knowledge flows from north to south (Svadzian et al., 2020; Abimbola and Pai, 2020), "much too centered on individuals and agencies in high-income countries [HIC]" (Abimbola and Pai, 2020) and creates unfair inequalities "when a greater value is placed on research by HIC or distant experts than the knowledge of those with lived experience" (Abimbola and Pai, 2020). Taken together, these barriers are deeply influential and could help explain the geographic bias we observe in our review of academic WHO reform literature.

Overall, our observations about the academic literature on WHO reform demonstrate its incompleteness: the literature contains limited perspectives mainly from a few cities and countries that are likely to have more influence over WHO and less experience with the consequences of its policies than many other places. These findings do not invalidate the claims of the literature we surveyed, but we offer them as a warning of its limitations and a call for efforts to build a more robust, more international discussion, including by funding authors and publishers in places now excluded from the discussion.

A topic so critical for global performance such as WHO performance and reform deserves a discussion clear in its legitimacy, rich with evidence, diverse in participation, and democratic in representation. Based on our analysis, and aware of the incompleteness of the academic literature and our own limitations as authors, we conclude this paper by offering initial ideas how WHO might be better assessed. We recommend that WHO leadership and Member States add regular independent external assessments of WHO's organizational performance to the evaluation mechanisms already in place; establish an authoritative standing council on WHO performance and reform that is led by LMIC representatives, in light of their likely limited voice in existing arrangements; monitor the academic debate; support research from less represented places to contribute in assessing WHO and developing reform suggestions and proactively seek out their ideas.

We further propose some ground rules that would be useful in developing a more thorough, inclusive, and legitimate WHO reform agenda. First, we call on authors to make explicit statements about evidence, methods, position, and experience as needed to clarify the basis for their claims on WHO. Second, we call on journal editors to enforce appropriate standards of evidence and to seek representation from the countries most affected by WHO. Third, we call on international research funders to support the participation of citizens and researchers in LMICs. Fourth, we call on all stakeholders to use their knowledge and resources to strengthen WHO and help illuminate and enforce collective accountability for Member States, whose misdeeds often betray their purported commitments to global health.

4.1. Positionality

FM is a junior physician, public health worker, and researcher from Germany. He received his MD and Doctorate of Medicine (expected Nov. 2022) degrees from Charité Universitätsmedizin Berlin. He is now a resident physician in neurology. This paper began as part of his dissertation, for which JBB was an advisor. JBB is a US national with training and experience in epistemology, including a PhD in the history of science, medicine, and technology (Johns Hopkins). He has worked in global health for two decades; his teaching and research have been based at the Harvard TH Chan School of Public Health since 2015. Both authors are Caucasian men, fluent in English, and experienced mainly in northern institutions.

Declaration of competing interest

None.

Data availability

All data are present in the manuscript and available as cited.

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Appendix A. Supplementary data

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