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WHO: Past, Present and Future

The World Health Organization and Global Health Governance: post-1990



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ABSTRACT

This article takes a historical perspective on the changing position of WHO in the global health architecture over the past two decades.

From the early 1990s a number of weaknesses within the structure and governance of the World Health Organization were becoming apparent, as a rapidly changing post Cold War world placed more complex demands on the international organizations generally, but significantly so in the field of global health.

Towards the end of that decade and during the first half of the next, WHO revitalized and played a crucial role in setting global health priorities. However, over the past decade, the organization has to some extent been bypassed for funding, and it lost some of its authority and its ability to set a global health agenda. The reasons for this decline are complex and multifaceted. Some of the main factors include WHO's inability to reform its core structure, the growing influence of non-governmental actors, a lack of coherence in the positions, priorities and funding decisions between the health ministries and the ministries overseeing development assistance in several donor member states, and the lack of strong leadership of the organization.

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Introduction

Since 1990, fundamental changes have been seen in both the wider political and economic context that influences health outcomes and in the shape of the global health architecture. To better understand these changes, this article attempts to draw up a brief chronology of the period.

There are several ways of indicating changing levels of activity in global health. For the purpose of this article the author have chosen to make use of three: The amount of Official Development Assistance (ODA) going to global health; the amount of innovation in terms of new initiatives/

partnerships/institutions created to engender activity in global health; and global health outcomes.

It can be argued that these three indicators will emphasize the fight against infectious diseases and other poverty-related health problems at the expense of other vital functions of WHO, like non-communicable diseases, mental health, and global health policies, standards and regulations. However, as funding and health outcomes have become a central driver of global health priorities – and therefore also in shaping the views of WHO's successes and weaknesses – it is worth spending some time looking at the story these three indicators tell.

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Since 1990, these three indicators all show roughly similar trends. Together, they tell a story with three fairly distinct chapters: a period of relative stagnation or even deterioration in health outcomes, with stagnation in innovation and slow growth in funding from 1990 to 1997; a period of rapid expansion of funding, increasing complexity in health architecture and improving health outcomes from 1998 to 2009 and a period of uncertainty from 2010 onwards.

ODA and non-governmental funding for health increased by 49% from 1990 to 1997, from US\$5.74 billion to US\$8.54 billion. Most of this increase came in bilateral funding and in a significant increase in spending on health by the World Bank. This rate of growth pales in comparison with the funding during the following years. From 1998 to 2010, ODA and non-governmental funding for health grew 230%, to US\$28.2 billion.¹

Similarly, the period from 1990 to 1997 saw only a handful of new initiatives focused on global health. The period from 1998 to 2010, however, saw the birth of several dozen partnerships, initiatives, foundations and institutions dedicated to financing, coordinating or implementing global health programmes, or achieve global health goals.²

The 1990s was dominated by the rapid spread and acceleration of the HIV/AIDS pandemic from 8.9 million people living with HIV in 1990 to 23.1 million in 1997. AIDS deaths grew at a similarly rapid pace, from 380,000 in 1990 to 1.2 million seven years later.³ TB incidence grew slightly globally, but an alarming growth in TB-HIV co-infection gave cause for concern and the rates of detection and completed treatment were worryingly low. Figures for malaria – although uncertain – indicated an increase in drug resistance, a growth in deaths and a breakdown of control-efforts in many countries.⁴ Immunization rates of children stagnated at just over 70% coverage during these years⁵ and efforts to introduce additional vaccines to the routine immunizations largely failed.⁶ There was also substantial concern during this period about the reduction in research and development for new drugs and diagnostics for tropical diseases.⁷

These outcomes contrast with the positive results produced especially from 2004 onwards. Over the past ten years a reduction in new HIV infections and in AIDS mortality, a sharp decline in TB deaths, a significant reduction in malaria deaths, a steady increase in routine immunization coverage and the introduction of several additional vaccines as well as the arrival and widespread uptake of some important new drugs, vaccines and diagnostics for several diseases have been seen.

The evolution of the World Health Organization is closely tied to these trends and WHO has to a large extent been a driver of them. However, the author will argue that the organization has also been adversely affected by the rapidly changing landscape in global health, and that its influence and authority over time have diminished, partly as a result of its own actions, but mainly as a consequence of forces beyond its control.

The 1990s: a decade of backsliding in global health

In 1988, Dr Hiroshi Nakajima took over as Director General of the World Health Organization as Dr Halfdan Mahler stepped down after 15 years in office.

During Nakajima's first five-year term, the post World War II order, which for 40 years had provided stability and predictability in world affairs, unravelled. Some health consequences of the collapse of the Post War world order quickly became apparent. The most visible was the dramatic increase in tuberculosis in former Soviet states, as well as a deterioration of a wide range of health indicators in countries facing political and economic turbulence following the collapse of the Soviet Union.

WHO was largely unprepared for dealing with the health fallout of events that were rooted in larger political and economic developments, in particular since at the time it had a near exclusive interaction with nation states; states which governments during the 1990s were often in continual transition and severely weakened.

The rapid spread of the global HIV pandemic added to the pressures on WHO. Dr Jonathan Mann, who had built up the General Program on AIDS within WHO from a one-man operation when it started in 1986 to a \$100 million program, resigned in 1990, citing 'major disagreements' with Nakajima.⁸ The creation of a UNAIDS Secretariat independently of WHO in 1996 contributed to a sense that WHO was not equipped to lead the fight against such a 'modern' disease with its need for a complex, multifaceted response to issues like discrimination, judicial reform, behavioural change, and prevention strategies that challenged cultural and religious norms.⁹

Nakajima's focus was instead on using WHO for tasks that had brought successes for Mahler. He hoped that WHO could repeat the achievement from the smallpox eradication of the 1970s by creating a global campaign to eradicate polio. Alarmed by the steep rise in TB cases, WHO from 1995 onwards also promoted the adoption of the directly observed treatment short-course (DOTS), and in doing so, initiated a wide-ranging reform of most countries' TB treatment. While ultimately successful, these efforts only bore significant fruits in the following decade, giving Nakajima little credit during his time in office.

Much attention has been paid to the controversies around Nakajima's person and leadership – such as the conflict with Mann in 1990, a challenge to his re-election in 1992 and the following accusations of bribery, and a call for his resignation in 1995 following perceived racist remarks – but significant structural weaknesses within WHO were threatening the effectiveness of the institution independently of these scandals and they became increasingly apparent during the 1990s. Nakajima's main mistake may have been to fail to address these weaknesses head-on.^{10,11}

In late 1994, a series of articles in the *British Medical Journal*,¹² listed the main weaknesses in WHO's existing structure and work, only putting into focus what had already been highlighted in several donor country and UN reports.¹³

1. WHO's country work was of greatly varying quality and impact, and saw little regional strategy and coordination;
2. its regional office structure fostered a lack of global coherence and coordination, added to bureaucracy, drove the politicization of health issues and promoted cronyism;
3. its extra-budgetary programmes were driven by donor priorities rather than reflecting global health priorities,

- which led to internal competition for resources within WHO and weakened the organization's less tangible or outcome oriented work, such as its normative-, research- or monitoring activities;
4. its inherent handicaps in addressing the increasingly complex social, economic and political determinants of health; and
 5. its inability to find constructive working arrangements with the increasing number of other institutions having a growing influence on global health policy or outcomes.

The decentralized structure was the result of a compromise at the creation of WHO in 1948, stemming from the need to integrate the regional health organizations that preceded WHO, and Nakajima had little power to change the dynamics of this arrangement.

At the Headquarters in Geneva, he – as his successors – found it exceedingly hard to unify and discipline his department and programme directors' competition for extra-budgetary funding and – like his successors – found it difficult to convince donor countries to provide untied funding.

In the 19 years since the BMJ series, these five areas have remained central to the critique of WHO. Despite several attempts at reform during the past two decades, WHO's organizational structure and its reliance on extra-budgetary funding for donor-prioritized programmes remain largely unchanged. The criticism today is strikingly similar to the one 19 years ago.¹⁴ In fact, the past two decades have shown that it is exceedingly difficult for a Director General to reform the structure of WHO, and while member states unite in their criticism of the perceived weaknesses of the organization, they rarely agree on finding solutions that can permanently alter the five areas of weakness outlined by Godlee and many others over the years.

1998–2003: growth and complexity

Dr Gro Harlem Brundtland, who was nominated as Director General to take over from Nakajima in 1998, had campaigned on a platform of reform and the need to set clear, strong priorities for global health.

Much faith was placed in Brundtland to revitalize WHO. She had several qualities that set her apart from Nakajima and the other candidates she competed with for the Director General position: She was an outsider and therefore not tied by debts and loyalties to WHO staff and member states; as a long-time prime minister of Norway and as the former head of the World Commission on Environment and Development she enjoyed a standing and a respect which ensured that she was listened to by presidents and prime ministers as well as health ministers; and she was known as a pragmatist who would never let principle stand in the way of a wanted outcome.

Brundtland's strategy to restore WHO's role as a leader in global health was to set a clear agenda and define global priorities. She believed that once WHO's thought-leadership was re-established, it would create a momentum that would attract resources and place WHO at the head of the table in discussions with the many new, emerging actors in the global health arena.¹⁵

From consultations with more than a dozen countries about their main health concerns, she chose one priority among the infectious diseases – malaria – and one among non-communicable diseases, tobacco control. However, her overarching goal was to place health at the centre of the global discussions about development. She knew that only if health was seen as a global political and economic issue rather than a humanitarian and local concern, would presidents or prime-, foreign- and finance ministers really get engaged.

She made no secret of this aim: it was stated in her first speech to the World Health Assembly, May 1998,¹⁶ and repeated regularly in her speeches throughout her time at WHO. Having already stated her political plan, she 'reverse engineered' the process to provide scientific backing for it by setting up a 'Commission on Macroeconomics and Health' in 1999. Her plan was nicely aligned with the 'zeitgeist' of her day; her vision fit very well with the work that soon would lead to the creation of the Millennium Declaration with its eight Millennium Development Goals (MDGs), and it positioned WHO to play a central role in the initial work to achieve the MDGs.

Rather than creating a leadership from within the ranks of WHO, Brundtland brought leading academic or policy figures in their fields to head what she named as 'clusters' of activity within WHO. Many of these individuals commanded much respect in the world of global health and immediately brought prestige to the organization – at the cost, however, of some resentment and non-cooperation among a few existing senior staff at WHO.

Brundtland quickly recognized that the implementation of a global health agenda depended on large sums of additional resources and that these resources lay outside the world of global health and also outside the remit of the health ministries that made up the governance structures of WHO. She did not see WHO as an implementing agency, but instead saw its role as providing direction, leadership, coordination and technical expertise to those implementing a new, ambitious health agenda. She therefore made WHO into a convener for partnerships and initiatives to harness the growing political support for action in global health.¹⁷

The first of these partnerships was Roll Back Malaria, which was initiated soon after she took office. Subsequently, Brundtland worked to create or support new initiatives where she felt there were gaps in the existing health architecture (Medicines for Malaria Venture, GAVI, the Global TB Drug Facility, the Global Fund), to bring parties together for dialogue where she felt there were obstacles (pharmaceutical industry round-tables) and to organize partnerships and alliances where she felt the many actors in a field needed direction and coordination (Tobacco-Free Initiative, Partnerships for Health Sector Development, Global Alliance To Eliminate Lymphatic Filariasis, Make Pregnancy Safer, Stop TB Partnership, etc.).

While failing to raise the amount of mandatory budgetary contributions to WHO, Brundtland oversaw a significant increase in voluntary, extra-budgetary resources to the organization through her period in office. She formulated a strategy to align such resources more closely with the organization's priorities and needs.¹⁸

The Framework Convention on Tobacco Control, which was adopted by the World Health Assembly in May 2003, was the first treaty negotiated under Article 19 of WHO's

Constitution. There were great expectations that the Convention heralded a new era of global policies and treaties to assist countries in dealing with supranational health issues. Indeed, Brundtland was forging ahead with what promised to be a strong global policy on nutrition, but after her departure, the final policy fell victim to industry pressure and was weakened to a point where it has become only a shadow of the strong instrument Brundtland envisaged to help countries' efforts to control obesity, high blood pressure and other nutrition-related health issues.

During the last months of her first and only term, a global outbreak of a so far unknown virus – quickly termed SARS (Severe Acute Respiratory Syndrome) – tested WHO's ability to lead a global response to disease outbreaks. Brundtland's forceful response and insistence on immediate and accurate sharing of transmission data by all countries reaffirmed WHO as the global authority and coordinator in such global emergencies and forced through a faster and more accurate reporting system than in the past.¹⁹

There is a general consensus, therefore, that Brundtland was successful in re-establishing WHO's leadership in setting a global health agenda, in setting global priorities and in coordinating global efforts. She managed to confront complex health-related issues where both causes and solutions lay outside the medical field by engaging WHO in the political determinants, such as in the tobacco control issue and in getting acceptance for the close link between health and economic development.

However, she made little headway in improving the quality and uniformity of WHO's work in countries and was not able to bring the regional directors behind her efforts to reform the organization. She also faced persistent resistance among some WHO staff to Headquarters reforms and to some of the senior deputies she had brought in.²⁰

Personal health issues²¹ prevented Brundtland from seeking a second five-year term in office, and it is therefore impossible to say to what extent her internal reform efforts failed or whether they simply were not completed by the time she stepped down in July 2003.

2003–2012: WHO's diminishing role in global health

The Global Health landscape changed considerably between 1998 and 2003. Health had become a central theme on the international agenda – in particular for the G8. Funding increased, but this funding was largely channelled outside WHO. The U.S. President's Emergency Plan for AIDS Relief (PEPFAR) not only dwarfed all other sources of funding for any health intervention except the Global Fund, but it also engaged technical expertise other than WHO in countries. Universities like Harvard and Johns Hopkins, NGOs like Partners in Health, Catholic Relief Services and World Vision, and a raft of consultants, were financed through PEPFAR to provide strategic advice, technical support and also to large extent to implement large disease programmes in several development countries.

The Global Fund's grant model, which encouraged countries to procure technical assistance and to engage

NGOs as Principal and Sub Recipients for its grants, contributed to this boom in non-WHO technical and operational engagement in developing countries. Not only did WHO in many countries lose out in the 'competition' with NGOs and academic institutions for fast, relevant and high-quality advice; many countries were also reluctant to pay WHO for advice that they had come to expect for free by WHO Country Offices.

WHO (and to a lesser extent UNAIDS) thus increasingly voiced its concern that by being enlisted as a technical partner to the Global Fund, the Fund had imposed an 'unfunded mandate' on the organization.²²

Moreover, the Bill and Melinda Gates Foundation became the single largest non-governmental funder of health research in infectious and vaccine-preventable diseases (as well as a major funder of GAVI, the Global Fund and a raft of health advocacy initiatives and partnerships), and over time, its money and its growing self confidence and expertise in health matters made it a strong – if informal – authority in setting global health priorities and influencing policies.

Jong Wok Lee, who took over as Director General in 2003, reversed some of Brundtland's reforms (re-introducing the pre-Brundtland leadership structure with Assistant Director Generals, re-centralized some decision-making processes) and de-emphasized some of Brundtland's priorities (in particular an ambitious and aggressive push to improve global nutrition), while he emulated some practices, such as bringing outside authorities in certain fields into the senior leadership (in particular Jim Yong Kim, who was brought in to lead an ambitious push for expansion of AIDS treatment, the 'Three by Five Initiative').

Lee was, like Nakajima, someone who had a long career at WHO before he took the helm of the organization. He was by personality a consensus builder, focusing on technical aspects of global health rather than the political leadership style of Brundtland. He was somewhat hampered by having been elected with a weak mandate (an election stalemate had only been broken to secure him a 17/15 vote after three tied rounds of voting in the Executive Board).²³

Lee campaigned on providing additional resources to WHO country offices, but wanted to achieve this through increased overall funding rather than a large reallocation of funds from the Geneva Headquarters. This put significant fund-raising pressures on WHO and some concerns were voiced that it increased the 'cherry-picking' nature of donor priorities, diffusing a unified global agenda.

Lee's major focus would be on the 'Three by Five Initiative', and while it did not reach its goal of ensuring that three million people were receiving AIDS treatment by the end of 2005 (the three million mark was achieved in 2007), it has been credited with energizing the global effort to provide access to AIDS treatment and to the goal of achieving universal access to such treatment.

However, the 'Three by Five Initiative' illustrated the challenges WHO faced by operating in a much more crowded and complex global health environment. While WHO strengthened the technical capacity in Geneva, it struggled to do the same at a sufficient scale in the country offices. WHO, which had over the past year yielded the position of adviser to governments to UNAIDS, struggled to draw up the separation

of responsibilities between the two organizations, leading to confusion in many countries.

The Global Fund was designed to make funding decisions based on country applications and WHO therefore found that the organization was ill-equipped to adjust funding priorities based on requests and priorities from WHO's Headquarters. PEPFAR even less so. Moreover, Bill Gates was for several years sceptical to the entire argument that providing universal treatment access was a cost-efficient intervention. In short, with so much new money available for global health programmes outside WHO's sphere of influence, its voice became less one of unquestioned authority but increasingly only one of several opinions.

This tension has continued to evolve over the past years. UNITAID, which was created in 2006, although it is hosted by WHO, makes funding decision through its multistakeholder Board. The many issue-specific partnerships that have grown up – in particular Roll Back Malaria and Stop TB Partnership – provide advocacy and even technical advice independently of WHO, and are not always fully aligned with WHO's respective departments.

NGOs and activist organizations now wield a considerably larger influence than in the past, partly through their effective advocacy and partly by being admitted as formal stakeholders on the Global Fund, GAVI, UNITAID, UNAIDS and partnership boards.

Even WHO's leading position in providing health metrics has been challenged by the creation of the Seattle-based and partly Gates funded Institute for Health Metrics and Evaluation, set up by Christopher Murray after he left WHO shortly after Brundtland's term ended.

The SARS epidemic in 2003 re-established WHO as a global authority and coordinator on disease outbreaks, and Margaret Chan, who was elected Director General after Lee's untimely death in 2006, re-emphasized this role. Chan, who had led Hong Kong's health department through the 1997 avian influenza epidemic and the SARS episode in 2003, was expected to further strengthen WHO's role in this field. However, WHO's widely criticized reaction to the avian influenza outbreak in 2009 weakened the organization's authority also in this area.²⁴

While there have been some successes in getting international agreements on global health issues, WHO Director-Generals subsequent to Brundtland did not attempt bold global efforts similar to the Tobacco Convention or global policies or standards on controversial issues. However, a renewed version of the International Health Regulations was crafted after the scare provided by the SARS outbreak in 2003 and was approved in 2005.

Some significant initiatives have been undertaken over the past decade to somehow address important challenges in global health. The most noteworthy of these may be the Commission on Social Determinants of Health, the Global Code of Practice on the International Recruitment of Health Personnel and the work leading up to a UN General Assembly Special Session on non-communicable diseases in 2011. Most recently, WHO has promoted a goal of 'Universal Health Coverage' and has lobbied hard to make this the primary health goal of what will eventually become a 'Post 2015

Agenda' to replace the soon expired Millennium Development Goals.

For all the good work that has gone into these initiatives, there is a strong feeling expressed in various forms and forums²⁵ that WHO's actions are ad-hoc and derivative, that the initiatives are disparate, lack strategic direction and follow-up. In short, WHO, according to these critics, has lost its way and is simply staggering around in the dark, devoid of ideas and clarity of purpose.

While extra-budgetary funding for WHO continued to increase significantly during the years following Brundtland's departure (voluntary contributions increased from US\$1.5 billion in the 2002–2003 biennium to US\$3.6 billion in the 2010–2011 biennium), concern has been raised that there has not been a proportional 'return' on this donor investment in terms of WHO technical assistance, agenda-setting and leadership.²⁵

The rise of global health institutions outside the UN system and an increasing influence of non-governmental actors, such as foundations and activists, have often been used to explain WHO's relative decline.

However, from the standpoint of the WHO HQ leadership, the often disparate and sometimes conflicting priorities within WHO member countries themselves, is perceived to pose a major challenge to the organization's ability to reform and to get support and funding for a clear future direction.²⁶ There is a perceived disconnect between the priorities of health ministries, which govern WHO through its Executive Board and the World Health Assembly on the one hand, and Ministries of Foreign Affairs and Departments of Development Assistance, which provide the bulk of financing for global health through overseas development assistance, on the other.

This latter funding is not only channelled through bilateral aid initiatives, such as PEPFAR; they finance the plethora of new institutions and initiatives that now to a large extent drive the global health agenda. They also, crucially for WHO, provide the bulk of the extra-budgetary funding for the organization.²⁷

WHO may therefore fall victim to countries which may have one set of priorities expressed in WHO's own governing forums, while their funding to WHO and other institutions may reflect a different set of priorities.

Too little is known, however, about the correlation or possible disconnect between individual countries' voting record and recorded positions on strategic issues in the Executive Board and the World Health Assembly and their funding record for WHO's extra-budgetary activities to draw any conclusions about the validity of such concerns at this stage.

Over the past few years, stagnating contributions combined with an acute financial crisis at WHO Headquarters in Geneva triggered by the strong Swiss franc, forced significant staff lay-offs and led to renewed demands for drastic reforms of the organization.

Over the past two years, the WHO leadership has struggled to align its governing organs' priorities with its funding realities. Yet, for its wide scope and considerable detail, the reform efforts do little in terms of prioritizing the use of the organization's limited resources and focusing on its comparative strengths.²⁰

Nor does it address the key structural weaknesses identified back in the early 1990s, in particular the regional structure and the varying quality of country offices. While discussions at this year's World Health Assembly focused on WHO's interaction with non-state actors, the discussion did not find a formula for how WHO can best function in a by now considerably more crowded and complex health architecture, where non-governmental organizations play a significant role.

WHO and its defenders describe the organization's current weak state as a reflection of its Members States' diverse and sometime contradictory needs, opinions and demands. However, for outside observers, the ongoing, overly technical reform effort more than anything masks the fact that WHO over the past decade has lacked a decisive leadership and visionary ideas to set a clear direction for the global health agenda and to lead the world towards it.

Conclusion

The growing number of actors with political or economic power over the past fifteen years, the lack of coherence in the positions and priorities between health and development ministries within member states, the unresolved weaknesses of WHO's regional structure, and the lack of a visionary leader of the organization, together pose significant challenges for WHO as it is seeking to reform itself to a global environment very different from 20 years ago.

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REFERENCES

1. Institute for Health Metrics and Evaluation. *Financing global health in 2012: the end of the Golden Age?*. Seattle, WA; 2012.
2. Lidén J. *The grand decade for global health, 1998–2008*. Chatham House; 2013.
3. UNAIDS. *Global report: UNAIDS report on the global AIDS epidemic*. Geneva; 2012.
4. The World Bank. *Roll back malaria FY 99 status report*. Washington D.C; 1999.
5. WHO/UNICEF. *Coverage estimates 2010, revision*; July 2011.
6. Muraskin W. *The politics of international health: the children's vaccine initiative and the struggle to develop vaccines for the third world*. New York; 1998.
7. Trouiller P. Recherche et développement pharmaceutiques en matière de maladies transmissibles dans la zone intertropicale. *Santé* 1996;6:299–307; Pecoul B, Chirac P, Trouiller P, Pinel J. Access to essential drugs in poor countries: a lost battle? *J Am Med Assoc* January 27, 1999;281(4).
8. *New York times*; March 17, 1990.
9. Merson MH. The HIV–AIDS pandemic at 25 – the global response. *N Engl J Med* 2006;354(23).
10. Peabody J. An organizational analysis of the World Health Organization: narrowing the gap between promise and performance. *Soc Sci Med* 1995;40:731–42.
11. Reddy S. 50 years of the World Health Organization: looking back and moving forward. *Natl Med J India* 1998 May–Jun;11(3):107–9.
12. Godlee F. The World Health Organization: WHO in crisis. *BMJ* 1994;309:1424; Godlee F. WHO in retreat: is it losing its influence? *BMJ* 1994;309:1491; Godlee F. The World Health Organization: the regions – too much power, too little effect. *BMJ* 1994;309:1566; Godlee F. The World Health Organization: WHO at country level – a little impact, no strategy. *BMJ* 1994;309:1636. Godlee F. The World Health Organization: WHO's special programmes: undermining from above. *BMJ* 1995;310:178–82.
13. Edgren G, Moller B. The agencies at a crossroads: the role of United Nations specialized agencies. In: *The United Nations: issues and options, Nordic UN Project Stockholm*; 1991. Cowiconsult, Effectiveness of Multilateral Agencies at Country Level, DANIDA, 1991; UN Joint Inspection Unit: Decentralization of Organizations within the United Nations System. Part III: The World Health Organization, Geneva, 1993, discussed in: Clift, C: *The Role of the World Health Organization in the International System Working Paper*, Chatham House 2013.
14. Chow J. Is the WHO becoming irrelevant? *Foreign Policy*; 8 December, 2010; Legge D. Future of WHO hangs in the balance. *BMJ* 2012;345:e6877.
15. The description of Dr Brundtland's intentions and philosophy is based on numerous conversations between the author and Dr Brundtland and her key advisers.
16. Brundtland GH. *Speech to the fifty-first world health assembly*. Geneva; 13 May 1998.
17. WHO: Executive Board EB107/7; 2000.
18. WHO: Executive Board EB104/3 1999.
19. Heymann D. SARS legacy: outbreak reporting is expected and respected. *Lancet* 2013;381:779–81.
20. Clift C. *The role of the World Health Organization in the international system working paper*. Chatham House; 2013.
21. Much speculation has been done on the motives for Dr Brundtland's unexpected decision to step down after only one term. Dr Brundtland has in later years revealed to former colleagues that two specific and potential life-threatening health conditions convinced her that it would be irresponsible to continue with the work load and travel schedule the Director General position demanded.
22. *Global Task Team on improving AIDS coordination among multilateral institutions and international donors: final report*; June 2005:17; GF/B18/15 *The Global Fund to fight AIDS, tuberculosis and malaria: report of The Global Fund Board Retreat on Partnerships*; 2008.
23. Avery D. *Lee Jong-Wook: a life in health and politics*. WHO; 2012.
24. Council of Europe. *The handling of the H1N1 pandemic: more transparency needed*. Doc 12283; 2010; Doshi P. The elusive definition of pandemic influenza. *Bull World Health Organ* 2011;89:532–8.

-
25. Bloom B. WHO needs change. *Nature* 2011;473; Legge D. Future of WHO hangs in the balance. *BMJ* 2012;345:e6877; Chow J. Is WHO becoming irrelevant? *Foreign Policy*; December 8, 2010.
 26. This perception has been described by WHO senior leadership in conversations with the author.
 27. Sridhar D. Who sets the global health research agenda? The challenge of multi-bi financing. *PLoS Med* 2012;9(9).