

Philanthrocapitalism, past and present: The Rockefeller Foundation, the Gates Foundation, and the setting(s) of the international/global health agenda

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In recent years the Bill and Melinda Gates Foundation has emerged as this era's most renowned, and arguably its most influential, global health player. A century ago, the Rockefeller Foundation—likewise founded by the richest, most ruthless and innovative capitalist of his day—was an even more powerful international health actor.

This article reflects critically on the roots, exigencies, and reach of global health philanthropy, comparing the goals, paradigms, principles, modus operandi, and agenda-setting roles of the Rockefeller and Gates Foundations in their historical contexts. It proposes that the Rockefeller Foundation's early 20th century initiatives had a greater bearing on international health when the field was wide open—in a world order characterized by forceful European and ascendant U.S. imperialism—than do the Gates Foundation's current global health efforts amidst neoliberal globalization and fading U.S. hegemony. It concludes that the Gates Foundation's pervasive influence is nonetheless of grave concern both to democratic global health governance and to scientific independence—and urges scientists to play a role in contesting and identifying alternatives to global health philanthrocapitalism.

Introduction

International health philanthropy, American-style, is back. Almost exactly a century after the Rockefeller Foundation began to use John D. Rockefeller's colossal oil profits to stake a preeminent role in shaping the institutions, ideologies, and practices of international health (as well as medicine, education, social sciences, agriculture, and science), the Bill and Melinda Gates Foundation has emerged as the current era's most influential global health (and education, development, and agriculture) agenda-setter. The high profile of its eponymous software magnate founder and his wife, coupled with the Foundation's big-stakes approach to grant-making and "partnering," has made it a *de facto* leader in the global health field.

Each of these two über-powerful foundations emerged at a critical juncture in the history of international/global health. Each was started by the richest, most ruthless and innovative capitalist of his day (1,2). Rockefeller and Gates alike fended off public opprobrium for their cutthroat monopolistic business practices (3,4), and both have been subject to uneven doses of adulation (for example on the cover of *Time* magazine) and skepticism regarding their philanthropic motives (5-8). Both foundations have focused on generating and applying new knowledge. One appeared when the international health field was in gestation; the other as it faced midlife crisis. One sought to establish health cooperation as a legitimate sphere for (inter)governmental action, creating, largely from scratch, the principles, practices, and key institutions of the international health field (9); the other challenges the leadership and capacity of public multilateral agencies, pushing ahead an overlapping global health governance arrangement with a huge role allotted for the private sector (10). Both foundations (and their founders) were/are deeply political animals, all the while claiming the technical and purportedly neutral scientific bases of their efforts (11,12).

Given the confluence of largesse and leadership at distinct historical moments, various questions come to the fore: How and why have U.S. philanthropies played such an important role in the production and shaping of international/global health knowledge, organizations, and strategies? What are the ideological, institutional, and human welfare implications? Have these foundations marked a singular, unimpeachable path in this field or are there meaningful alternative approaches towards achieving global health equity? What are the continuities and what has changed in the philanthropists' prerogatives?

Such questions are particularly salient in an era in which "philanthrocapitalism" has been cited not as a venal endeavor—through which profits amassed via the exploitation of workers and natural resources are then harnessed through the very same exploitative business approaches in the name of improving human welfare—but hailed unabashedly as a means to "save the world" (13) according to "big business-style strategies" (14). Of note, over recent decades, business models have proliferated in the (global) public health field, with Gates Foundation efforts emblematic of an overall trend towards for-

profit style management, leadership training, and goal-setting, as well as the privatizing of public health activities.

At the outset it is crucial to stress that unlike government entities, which are subject to public scrutiny, private philanthropies are accountable only to their own self-selected boards, and decision making is usually in the hands of just a few executives. In North America and certain other settings, philanthropic foundations are exempt from paying most taxes, and contributions to philanthropies benefit from tax deductions (both individual and corporate donations are tax-deductible (15), a practice that itself removes billions from the public coffers). Up to a third or more, depending on the tax rate, of the endowment monies of private philanthropies are thus subsidized by the public, which has no role in how priorities are set or how monies are spent.

This article compares the goals, paradigms, principles, *modus operandi*, and agenda-setting roles of the Rockefeller and Gates Foundations in their historical contexts (albeit in the case of the Gates Foundation bound by events that are still unfolding). It proposes that the Rockefeller Foundation's early 20th century initiatives had a greater bearing on international health when the field was wide open—in a world order characterized by vigorous European and ascendant U.S. imperialism—than do the Gates Foundation's current global health efforts in today's age of neoliberal globalization and fading U.S. hegemony. And yet the pervasive influence of the Gates Foundation should be of grave concern both to democratic global health governance and to scientific independence. The ultimate aim of this comparison is to reflect critically on the roots, exigencies, and reach of contemporary global health philanthropy, as well as to identify its limits and the ways in which it might be contested.

The Birth of Modern International Health

The rise of modern international health is typically traced to the first International Sanitary Conference held in Paris in 1851, viewed as the beginning of steady progress in international surveillance and infectious disease reporting in the name of epidemic security (16,17). But the (mostly European) parties were so suspicious of one another that it took 11 conferences and over 50 years to set up a full-time agency—the Office International d'Hygiène Publique (OIHP)—established in Paris in 1907. The political and economic rivalries among the participants delayed the signing of accords, limited their enforcement, and resulted in a contentious “Britain versus France and everybody else” stance at most of the meetings (18).

Meanwhile, some countries, notably the United States and Mexico, developed their own systems of epidemic surveillance through sanitary consuls, paid informants, and, later on, public health officers stationed in key ports worldwide in order to inspect outgoing migrants and merchandise (19). Indeed, reaching agreement in Europe took so long that the Americas prefigured European efforts by founding an International Sanitary Bureau (later Pan American Sanitary Bureau [PASB]) in December 1902, based in Washington

D.C. under the aegis of the U.S. Public Health Service (20). In their early decades, both the OIHP and PASB remained focused on establishing and monitoring sanitary conventions and collecting disease statistics. Another early agency was the International Committee of the Red Cross, founded in Geneva in 1863 to provide aid to the victims of war. These organizations joined longstanding intra-imperial health activities carried out by colonial administrators, military forces, and missionaries, all with the aim of protecting troops, high-yielding colonial production and trade, and colonial settlers, at the same time as staving off unrest among the colonized (21).

Enter the Rockefeller Foundation

Just as these institutions were being created, a new player emerged on the scene, one that would go beyond political and economic self-interest, war relief, and information exchange to fundamentally transform the nascent international health field. The Rockefeller Foundation (RF) was established in 1913 by oil mogul-cum-philanthropist John D. Rockefeller “to promote the well-being of mankind throughout the world.” Not only did the RF virtually single-handedly popularize the concept of *international health*, it was the major influence upon the field’s 20th century agenda, approaches, and actions (22,23).

Rockefeller’s efforts were part of a new American movement—“scientific philanthropy.” Launched by Scottish-born, rags-to-riches steel magnate Andrew Carnegie in an 1889 essay, “The Gospel of Wealth,” published in *The North American Review*, this approach called for the wealthy to channel their fortunes to the societal good by supporting systematic social investments rather than haphazard forms of charity (24-26). The renowned Carnegie left a legacy of thousands of public libraries and bathhouses along with donations to higher education, the arts, and peace studies, an example heeded by various fellow millionaires.

Notwithstanding the benign fashion with which this early philanthropy is now regarded, the philanthropist-“robber barons” of the day were reviled for the provenance of their philanthro-profits: the exploitation and repression of workers. Philanthropy was regarded by many contemporaries as a cynical way to counter working class unrest, growing political radicalism, and claims on the state and as a means of tempering threats to business interests, and to capitalism itself, in the tumultuous late 19th and early 20th century Progressive Era (27). Domestically in this period, philanthropy played an ambiguous role in struggles around government-guaranteed social protections by promoting “voluntary” efforts in place of citizen entitlements; since then, compared to most European and many Latin American countries, the private and philanthropic sectors in the United States have played a large part in the provision of social services—both curbing the size and scope of the U.S. welfare state and giving private interests undemocratic purview over social welfare (28-32).

John D. Rockefeller (JDR) expanded on Carnegie's ideas—building from the former's initial eleemosynary donations to hospitals, churches, and universities to support public education, science, and medicine—funding both research and large-scale campaigns aimed at social melioration. Public health became the ideal vehicle through which Rockefeller philanthropy could apply expert findings to the public well-being. This was a prescient choice, for public health was a nascent field in the United States, beginning to professionalize but with a limited government foothold, giving Rockefeller interests considerable room to test out ideas and practices (33,34).

The question of which public health problem to tackle and where, amidst such need, was settled by a troika of Rockefeller advisors: Frederick T. Gates (a Baptist preacher and JDR's right-hand man [no relation to Bill Gates]), Charles Wardell Stiles (a medical zoologist), and Wickliffe Rose (a Southern educator), who perceived anemia-provoking hookworm disease to be a central factor underpinning the economic “backwardness” of the U.S. South and an important obstacle to its industrialization and economic growth (35). That hookworm could be diagnosed easily through observation of a fecal sample under a microscope and that it had a quick-fix treatment (initially thymol crystals coupled with a purgative) to reduce dramatically worm burden and anemia—techniques that had been used in campaigns in Costa Rica and U.S.-occupied Puerto Rico—sealed their decision. The fact that hookworm was not a leading cause of death, or that treatment occasionally provoked fatalities, was immaterial.

These three and other advisors helped orchestrate the Rockefeller Sanitary Commission for the Eradication of Hookworm Disease, an enormous, handsomely-funded campaign against hookworm that lasted from 1910 to 1914. Teams of physicians, sanitary inspectors, and laboratory technicians fanned out across 11 Southern U.S. states and worked with churches and agricultural clubs (though few health departments, given the reluctance of local doctors and the paucity of public health infrastructure) to eliminate the disease through: administration of an anti-helminthic drug; promotion of shoe-wearing and latrines; and dissemination of public health propaganda (in terms of both public health education *and* positive publicity for the Rockefeller effort—until the spread of a groundless yet widely believed rumor that the Rockefellers were trying to sell shoes, after which time the Rockefeller name remained mostly in the background) (35). Following the success—in terms of igniting popular interest in public health, not eradication per se—of the hookworm campaign, the RF swiftly created an International Health Board (IHB, reorganized as the International Health Division [IHD] in 1927).

The choice of international public health seemed safe given the larger environment, especially the harsh working conditions and militant activism surrounding Rockefeller's domestic business interests. Negative publicity for the Rockefeller family (which rose with the breakup of its oil monopoly, mandated by the Sherman Antitrust Act of 1890) reached a climax in the aftermath of the Ludlow Massacre of 1914, during which two dozen striking miners and their families were killed at a Colorado mine owned by a Rockefeller-controlled coal producer. Journalists, muckrakers, laborers, and the

population at large readily linked Rockefeller business and philanthropic interests, seeking to delegitimize the latter and motivating the Rockefeller family to pursue what it perceived as neutral, unobjectionable spheres of philanthropic action, such as health, medicine, and education (23).

As a result, over the course of some four decades, the RF was at the fulcrum of international health activity. From their perch in the heart of New York City's business district, the RF's professional executive staff, advised by an active board of trustees, oversaw a global enterprise of health cooperation organized through regional field offices in Paris, New Delhi, Cali (Colombia), and Mexico, and country-based public health work led by hundreds of RF officers stationed around the world (22). By the time of its disbandment in 1951, the IHB/D had spent the current day equivalent of billions of dollars to carry out scores of hookworm, yellow fever, and malaria campaigns (as well as more delimited programs to control yaws, rabies, influenza, schistosomiasis, malnutrition, and other health problems) in almost 100 countries and colonies (see Figure 1). It also founded 25 schools of public health in North America, Europe, Asia, and South America and sponsored 2,500 public health professionals to pursue graduate study, mostly in the U.S. (9,34,36).

Interestingly, the IHB/D itself identified its most significant international contribution to be "aid to official public health organizations in the development of administrative measures suited to local customs, needs, traditions, and conditions" (p743,37). Thus, while highly influential in shaping the enduring *modus operandi* of international health through technically-based disease campaigns and transnational public health training, the RF's self-defined gauge of success was its role in generating political and popular support for public health, creating national public health departments across the world, and advocating for and sustaining the institutionalization of international health. The associated local, national, and multilateral institutions came to embody the RF agenda in their very structures.



Administering hookworm treatment at Karapa (India)

Source: Rockefeller Foundation, 100 Years: The Rockefeller Foundation

RF International Health in an Age of Imperialism

Through its international health work, the RF courted politicians and civil servants across the globe, generated deep loyalty among health professionals (and connected local elites to prestigious international medical networks), instilled a belief in public health among local populations throughout the world, and helped to build and modernize dozens of public health institutions. Yet the RF's efforts went well beyond health, stabilizing colonies and emerging nation-states by helping them meet the social demands of their populations, encouraging the transfer and internationalization of scientific, bureaucratic, and cultural values, stimulating economic development and growth, expanding consumer markets, and preparing vast regions for foreign investment, increased productivity, and incorporation into the expanding system of global capitalism. Unlike international health's prior association with aggressive military and colonial power, RF international health sought to generate goodwill and promised social advancement in place of gunboat diplomacy and colonial repression (23,38-44).

All the same, RF international health emerged at the height of U.S. imperialism, enabling the IHB/D's influence even through a contrasting approach. Circa 1910 the U.S. was flexing its muscles as an emerging world power through regional economic penetration and commercial ascendance, intertwined with disease control and the safeguarding of trade. The U.S. invasion of Cuba in 1898 (and repeated subsequent military occupations), a clear expansionist move, had been justified as a means of stemming the annual threat of yellow fever outbreaks along the U.S.'s Eastern seaboard (45).

The U.S. Army's Cuban sanitary intervention was also the precursor for its massive ten-year mosquito-combating endeavor that ultimately enabled the long-awaited completion of the Panama Canal in 1914: starting in the late 19th century, tens of thousands of French and Caribbean canal construction workers had been felled by yellow fever and malaria. The RF stepped into the yellow fever fray in 1914, worried that the canal would hasten the spread of epidemics from and to Asia and the Pacific and convinced that Latin America (and businesses with ties to the region) could be rid of yellow fever's disruptive effects on trade and people (due to the ability of its vector, the *Aedes aegypti* mosquito, to survive shipboard for days on end and infect previously unexposed residents of receiving ports with the often lethal yellow fever virus).

Over three decades, the IHB/D conducted major campaigns across Latin America (and research in West Africa) to reduce the presence of *A. aegypti* mosquitoes through spraying of insecticides, swamp drainage, and distribution of larvicidal fish, and it funded and masterminded the decades-long development of the Nobel-prize winning 17D yellow fever vaccine (identified in 1936), all showcasing growing U.S. scientific expertise to European rivals. But while yellow fever control ended costly commercial interruptions, it, like hookworm, was of minor epidemiological concern to Latin

America, where even during epidemics it killed a relatively small number of people, primarily newcomers (23,46,47). Nonetheless, given the U.S.'s growing economic and political dominance of the region, the RF was able to score a health diplomacy coup, foreshadowing U.S. President Franklin Roosevelt's "good neighbor" policy towards Latin America in the 1930s.

In short, Rockefeller international health combined tropical medicine with geo-economic concerns. The former involved controlling so-called tropical diseases of the colonized, tropical band—so-called, because malaria and yellow fever historically affected other climatic regions, including those of Europe and North America. The latter considered diseases in terms of their role in emergent global capitalism: while the hearty yellow fever mosquito was a menace to commerce, hookworm drained worker productivity in profitable plantations and extractive industries, and malaria was considered a hindrance to economic development (48-51).

The RF's attention to malaria, then a major disease priority across much of the world, involved, for the most part, research on technical magic bullets, or, paradoxically, joint efforts in which technical strategies were accompanied by large-scale government policies to address social conditions. In the 1930s, the RF claimed credit for eliminating *Anopheles gambiae* from Brazil, responsible for an immense outbreak of malignant tertian malaria, with more than 100,000 cases and 14,000 deaths in 1938 alone. But this was an "introduced" African mosquito rather than an endemic problem, and RF involvement was backed by an extensive, years-long campaign under the nation-building administration of Brazilian strongman President Getulio Vargas (52).

The RF's DDT-based attempt to repeat species eradication on the island of Sardinia in the late 1940s was not successful, however; malaria had already been greatly reduced thanks to prior Italian public health efforts, and anti-malaria measures had to be continued for decades afterwards (53).

The RF was careful to avoid disease campaigns that might be costly (other than yellow fever control, which was regarded an indispensable investment for U.S. business interests and port dwellers), overly complex and time-consuming, or distracting to its technically-oriented public health model: most campaigns were narrowly construed and carried out one by one, ensuring that targets (for insecticide spraying, administration of medicines, etc.) would be met according to the quarterly reports employed by the RF's burgeoning bureaucracy (akin to those used by Rockefeller-controlled companies). This meant that even with spectacular efforts against yellow fever, the RF rarely addressed the most important causes of death, namely infantile diarrhea and tuberculosis (TB) (the RF campaign against TB in France during WWI being a notable exception), as at the time these ailments lacked readily available technical tools and required socially-oriented investments over long periods. Moreover, the RF approach precluded employing measures that might improve multiple diseases simultaneously, such as clean water and sanitation systems (23).

Despite the need for—and ample evidence of—local adaptation and negotiation (23,54), the RF drove the agenda of purportedly joint work with governments, masterfully transforming disease campaigns into permanent, national agencies and locally-supported public health offices. With its own field officers posted “on the ground” to guide activities and interact with politicians, health workers, and the public, the RF could rely on a committed staff to infuse its ideologies and practices into institutions and policies. It trained thousands of public health doctors, nurses, and engineers as fellows in North America, Europe, and at national training stations: molded as a cadre of leaders, fellows served as powerful interlocutors who were encouraged to bypass local healers and knowledge and affiliate with international colleagues (23,55). To be sure, these efforts met with resistance and reshaping (54). In Mexico, for example, venerated RF-trained public health physician Miguel Bustamante, who rose to become Mexico’s deputy health minister and Secretary-General of the PASB, worked with the RF but resented and withstood the imposition of U.S.-style technical public health models, instead framing the expansion of local health units in terms of broader societal health needs (23). The RF, for its part, was not a monolith: it changed over time, and had to deal with shifting political priorities at home and abroad.

In its early years, the RF—though legally separate from the Standard Oil companies and other Rockefeller firms—shared overlapping managers and trustees who reflected the interests of the “captains of industry.” The RF’s first president was JDR’s only son, JDR Junior, who in 1917 moved from the presidency to chair the RF Board of Trustees until 1940. The IHB/D’s board and advisors, in turn, included RF trustees as well as leading men from the worlds of medicine (such as William Welch, first Dean of the Johns Hopkins School of Medicine and founder of the RF-funded Johns Hopkins School of Hygiene and Public Health; various U.S. Surgeon-Generals, etc.), education (including the presidents of Harvard and the University of Chicago), and banking/finance (among others, the president of Chase National Bank) (22,34). Though accused of protecting and promoting Rockefeller oil interests in Mexico and elsewhere—certainly a controversial issue in the IHB’s yellow fever control activities in the Gulf of Mexico (56)—the productivity-related, market-opening, and quarantine-busting benefits accrued through RF international health efforts were for the most part not geared directly to growing and profiting Rockefeller businesses per se, but rather more broadly aimed at foreign, and some domestic, industries and investors.

The RF Approach and its Pervasive Influence

Modern international health, as pioneered by the RF, was neither narrowly self-interested nor passively diffusionist. Instead, the RF actively sought national partnerships to spread its public health gospel. The RF’s philanthropic status, its purported independence from both government and business interests, its autonomy, and its limited accountability enabled its success. Its work patterns included rapid demonstration of specific disease control methods based on proven techniques and a

missionary zeal in its own officers. To ensure the endurance of its approach, the RF marshaled national commitment to public health through hefty national co-financing obligations (budget “incentives”) that typically went from 20% of the cost of a campaign to 100% over just a few years.

At the same time that the RF was involved in country-by-country activities, it was also mapping, directly and indirectly, international health’s institutional framework. Its activities and organization provided the groundwork for a new, legitimate international health system featuring its own bureaucracy and mode of conduct. The League of Nations Health Organisation (LNHO), founded after WWI, was partially modeled on the RF’s International Health Board and shared many of its values, experts, and know-how in disease control, institution-building, and educational and research work, even as it challenged narrow, medicalized understandings of health. In spite of the capable direction of leftwing Polish hygienist Ludwik Rajchman, the LNHO was mired in League of Nations politics, and budgetary constraints meant that it could realize only part of its ambitious agenda. Rather than being supplanted by the LNHO, the IHB/D became its major patron and lifeline, funding study tours, projects, and eventually much of its operating budget (44,57). The IHD also took over some of the LNHO’s key activities during WWII.

The institutionalization of international and national public health presupposed various political rationales, including left-wing versions that emerged in the interwar years. The RF was thus compelled, in this era of anti-fascist, labor, socialist and other leftist activism, to draw on, listen to, and even bankroll progressive political perspectives, including those of often vocal, avowed socialist and other leftwing researchers and public health experts, such as Rajchman, who constituted an important contingent of health leaders and prestigious scientists of the day (58).

Although support for leftist approaches was always subordinate to the dominant RF model, IHD funding of prominent health leftists, most notably famed Johns Hopkins historian of medicine and national health insurance advocate Henry Sigerist and socialist Yugoslav public health leader Andrija Stampar, reveals the RF’s ideological flexibility at certain conjunctures (59). Indeed, the RF remained tolerant and even intellectually open to alternatives to its techno-medical focus and afforded long-time RF officers the leeway and independence to pursue these interests, albeit under financial, time-horizon, and other constraints. As well, the RF was involved in large-scale intelligence gathering around science and public health developments; what was going on in leftwing efforts was germane to these activities.

The political economy-oriented social medicine approach advocated by Sigerist, Stampar, and other figures was not new, having emerged in the 19th century, when famed father of cellular pathology Rudolf Virchow called for “full and unlimited democracy,” not medical intervention, to address Upper Silesia’s 1848 typhus outbreak (to the surprise of the Prussian authorities who had commissioned his investigation).

Social medicine in the 20th century likewise aimed to integrate attention to the socio-political conditions underlying health with overall public health efforts (59). The RF was curious about, for example, how the Soviet Union's experiment in social medicine was working in the 1930s, funding Sigerist's research—though not that of his Soviet counterparts—in this area (60).

The RF also helped build the U.S.'s "international health as foreign policy" proficiency. When in the mid 1930s Germany started to use medical aid to befriend Mexico, Brazil, and other countries in the region as it sought allies and essential resources including oil, rubber, and minerals—and these countries began to play off the Angloamerican-German rivalry—the RF redoubled its public health efforts in Latin America. This heightened RF involvement, requested by the U.S. State Department (which was enlisting philanthropic foundations to stem German intrusion in the region), was instrumental in convincing Latin Americans to side with the Allies (23,61-66).

In a nutshell, what enabled this scope of influence over agenda-setting and institution-building was the RF's powerful presence at the international level, combined with its tentacles reaching into virtually every kind of public health activity. The RF's public presence was bolstered by behind-the-scenes involvement in setting health priorities via its senior staff, trained fellows, and the engagement of IHB/D officers—not only with politicians and leading physicians, but also with traditional healers, townsfolk, and others—as well as the RF's requirement that public health campaigns be increasingly funded at the national (and regional) level. But this was not a purely one-sided endeavor. The RF's activities entailed extensive give and take, and were marked by moments of negotiation, cooptation, imposition, resentment, and outright rejection, as well as productive cooperation, and the RF responded dynamically to shifting political, scientific, economic, cultural, and professional terrains. Uniquely for the era, it operated not only as a philanthropy but also as, at one and the same time, a national, bilateral, multilateral, international, and transnational agency (23).

After the World Health Organization (WHO) was established in 1948, the IHD was closed down, with some of its functions absorbed by the RF's new Division of Medicine and Public Health (67). Even after the RF drew back from its lead role in international health, it kept a hand in various activities related to health and international development—through funding the "Green Revolution" (involving crop hybridization and other technological and agri-business approaches to increasing agricultural output), the Population Council (aimed at curbing population growth in "Third World" countries), and smaller-scale social science and medical research (55).

In the 1970s the RF re-materialized in the international health sphere under John Knowles, its first physician-president, who was (in)famous both for decrying medical profiteering and for touting the notion of individual responsibility for health. Still guided by trustees from industry and academia, now joined by (mostly) men from the worlds of politics and civil society, the RF confined itself to a few key international

health pursuits: in the late 1970s it inaugurated the Great Neglected Diseases of Mankind Program and sought to circumscribe the WHO's shift to primary health care (see ahead); in the 1980s the RF established the International Clinical Epidemiology Network and helped launch the Task Force for Child Survival; and in the 1990s it established the Public Health Schools Without Walls, started a Health Equity Initiative, and was a co-founder of the Children's Vaccine Initiative and International AIDS Vaccine Initiative. Around this time, the RF, which also changed under Cold War pressures and with the rise of neoliberal ideology, shifted from its traditional support for the public sector towards subsidizing the private sector—amidst considerable internal debate. In particular, the RF helped to innovate a new international health funding modality—the public-private partnership—to fund its vaccine initiatives (68). And yet even the RF's role in this development would be eclipsed by other players, and the RF would not regain the international health pull it had in the first half of the 20th century.

The RF Legacy

In a very tangible sense, the IHD's dismantling served as a self-fulfilling prophecy of success: thanks to its own efforts, it was no longer needed. But Rockefeller international health did not disappear. The principles that were largely invented by the RF and that permeated the IHB/D's country dealings, as well as the international health field as a whole, have left behind a powerful, if problematic, legacy for global health. These include: **1.** Agenda-setting from above: international health initiatives are donor-driven, with the agenda of cooperation formulated and overseen by the international agency, whether through direct in-country activities or the awarding of grants; **2.** Budget incentives: activities are only partially funded by donor agencies; matching fund mechanisms require recipient entities to commit substantial financial, human, and material resources to the cooperative endeavor; **3.** A technobiological paradigm: activities are structured in disease control terms based upon: a) biological and individual behavioral understandings of disease etiology; and b) technical tools applied to a wide range of settings; **4.** A priori parameters of success: activities are bound geographically, through time constraints, by disease and intervention, and/or according to clear exit strategies, in order to demonstrate efficiency and ensure visible, positive outcomes; **5.** Consensus via transnational professionals: activities depend on professionals trained abroad (often alongside donor agency staff) who are involved in international networks, easing the domestic translation of donor initiatives and approaches; and **6.** Adaptation to local conditions: activities are afforded limited flexibility, based on the local cultural and moral economy and political context (23,51).

While these principles evolved generically, rather than as part of a master scheme—and they certainly fed on alignments between the RF and a variety of national interests—their durability reflects the “marked asymmetries in political and medical power” (p215,54) that characterize most international and global health interactions, then and now.

The RF at times seemed to part with its own principles, for example, as discussed, by funding studies of national health insurance and backing leftwing scientific activists who advocated for broad social medicine efforts rather than the RF's narrower take. Moreover, some of the national and international public health institutions supported and influenced by the RF transcended the principles outlined above to engage in politically and socially grounded understandings and practices of public health. But these were accompaniments to, rather than at the heart of, the RF's international health approach.

The RF's legacy would bear heavily on the WHO (67). As Lewis Hackett, who oversaw IHD programs in South America and Italy for over thirty years, noted, "To a greater or lesser degree, all the international organizations have adopted the policies and activities in which the IHD has pioneered," through inheritance of personnel, fellows, practices, and equipment (69). The RF's most direct imprint on the WHO took place through Dr. Fred Soper, who had spent almost two decades at the helm of the IHD's large-scale campaigns against malaria and yellow fever in Brazil before becoming head from 1947 to 1958 of the PASB (as of 1949, WHO's regional office for the Americas, changing its name to Pan American Health Organization [PAHO] in 1958). According to RF President Chester Barnard, the PASB was designed to "cover most of the purposes which the IHD pursued in Latin America. Under [Soper] IHD policies and philosophies have been adopted. The PASB will eventually take over our functions" (69).

The IHD model of international health cooperation was further entrenched in the WHO with the 1953 election of Dr. Marcolino Candau as its Director-General, a post he held until 1973. Candau, who had worked with Soper in the IHD's campaigns in Brazil, oversaw the establishment of WHO's global malaria and smallpox eradication campaigns, among others, as well as a massive effort to provide public health training fellowships to over 50,000 health personnel from across the world (68,70).

The longevity of the RF's interlocking principles of international health was, however, more than a matter of braggadocio and personal networks of influence. As we shall see, each of the RF principles has continued ideological salience and bureaucratic convenience, as witnessed in the structure, strategies, and tenets of the global health field today.

The Cold War and the Rise of Neo-liberalism

In the decades following WWII, a dizzying array of organizations connected to international health were founded or revamped, from bilateral aid and development agencies, to the World Bank and International Monetary Fund (IMF), to United Nations (UN) agencies including UNICEF, the Food and Agriculture Organization and the United Nations Development Program, to numerous international and local nongovernmental organizations (NGOs), humanitarian and advocacy movements, research institutes, private foundations, business groups, and so on. The postwar

liberation movements in Asia, Africa, and (later) the Caribbean transformed the prior purview of imperial powers over their colonial holdings into a more complex geopolitical dynamic, in which multiple actors operated in multiple settings, and dozens of newly independent nations gained a voice, at least nominally, at the international policy-making table (51).

From 1946 through the early 1990s, these actors—and the international health field writ large—were shaped by two main factors: the Cold War and the political and ideological rivalry between American (Western bloc) capitalism and Soviet (Eastern bloc) communism; and, corollary to this, the paradigm of economic development and modernization, perceived by Western powers as the sole path to progress for the decolonized Third World (71). In this context, Eastern and Western blocs deployed international health initiatives—the former providing big ticket infrastructure including hospitals, pharmaceutical plants, and clinics; the latter, offering some of the same plus RF-style disease campaigns; and both sponsoring huge numbers of fellowships for advanced training in the respective blocs—as a means of forging alliances with (and seeking to politically dominate) low-income countries.

By the 1950s it was clear that the reconfiguration of world power brought few benefits to the former colonies, and in 1964 the G-77 movement of non-aligned (with either the Soviets or the Americans) countries was founded to confront neocolonialism in development aid, demand respect for sovereignty in decision making, and denounce unfair international trade arrangements and the lack of democracy in UN agencies.

As international health became a pawn in the Soviet-American competition for power and influence (the Soviet bloc pulled out of the WHO in 1949, returning only in the mid 1950s), many countries also learned to play the rivals against one another, sometimes stimulating improved social conditions, other times exacerbating unequal power and control over resources (72-74). Under Indira Gandhi, for example, India received as much or more aid from Washington as from Moscow, with both superpowers eager to accede to New Delhi's requests for foreign development assistance (75).

The WHO (largely controlled by Western bloc interests) continued to operate in the RF vein, characterized by professionalization and bureaucratic growth and flagship technically-oriented global disease campaigns: first against yaws (with penicillin) and TB (with BCG), then, fatefully and unsuccessfully, against malaria (based on the insecticide DDT, following its extensive use during World War II); and culminating with an ambitious—if divisive in some locales—technically feasible, vaccine-based smallpox campaign that resulted in a declaration of smallpox eradication in 1980 (74,76-81).

But in the 1970s, the WHO's disease-focused, donor-driven approach began to be challenged both by member countries—especially G-77 countries, which were seeking cooperative efforts that addressed health in an intersectoral fashion—and from within

headquarters, under the visionary leadership of its Danish Director-General Halfdan Mahler (first elected in 1973, holding this office until 1988). The primary health care movement, as enshrined in the seminal 1978 WHO-UNICEF Conference and *Declaration of Alma-Ata* (82) and WHO's accompanying "Health for All" policy, called for health to be addressed as a fundamental human right—through integrated social and public health measures that recognize the economic, political, and social context of health, rather than through top-down, techno-biological campaigns (83,84).

Social medicine's resurrection in the 1970s in the guise of primary health care created bitter divisions within and between WHO and UNICEF (70). The RF resurfaced to play a small but instrumental role in promoting *selective* primary health care—a reduced, technical (and highly contested) counterpart to Alma-Ata's broad social justice agenda for primary health care. Selective primary health care's emphasis on "cost-effective" approaches, for example immunizations and oral rehydration therapy, became the main driver of UNICEF's child survival campaigns of the 1980s, under its director James Grant, the son of an eminent IHD man (85).

Just as WHO was trying to escape the yoke of the RF's international health principles, it became mired in a set of political, financial, and bureaucratic crises that tested both its legitimacy and its budget. The oil shocks and economic crises of the late 1970s and 1980s impeded many member countries from paying their dues. As well, member countries accused WHO of having too many personnel at headquarters and not enough in the field.

Around the same time, the rise of neoliberal political ideology lauding the "free" market while denigrating the role of government in redistributing wealth, providing for social welfare, and regulating industrial and economic activity resulted in a parting with the RF's interwar model of strong, publicly-supported international health institutions. The administration of conservative U.S. President Ronald Reagan froze the U.S.'s financial contribution in order to reprimand WHO for its essential drugs program (which had established a generic drug formulary) and for the 1981 International Code of Marketing of Breast Milk Substitutes, both perceived by U.S. business interests as deliberate anti-corporate strategies (86). By the early 1990s less than half of WHO's budget came from annual dues subject to "democratic" World Health Assembly decisions. Instead donors, who by now included a variety of private entities in addition to member countries, increasingly shifted WHO's budget away from dues-funded activities to *a priori* assignment of funds to particular programs and approaches (87). Today almost 80% of WHO's budget is earmarked, whereby donors designate how their "voluntary" contributions are to be spent (88).

Once the Cold War ended, the anti-Communist rationale for Western bloc support for WHO disappeared (WHO faced unprecedented invective in a 1994 *BMJ* series penned by its now editor-in-chief) (89-91), leaving in its wake the promotion of trade, the commodification of health, disease surveillance, and health security as justifications for

international health (92,93). By this time, apart from its *health security* role addressing surveillance, notification, and control of resurgent infectious diseases (such as TB), and, especially, pandemics (for example influenza), WHO was no longer at the heart of international health activities, as had been stipulated in its 1946 Constitution. In this period, the World Bank—pushing for efficiency reforms and privatization of health care services—had a far larger health budget than WHO, and many bilateral agencies simply bypassed WHO in their international health activities (94). The WHO hobbled along thanks to public-private partnerships (95) (PPPs, discussed ahead), which have provided business interests, such as pharmaceutical corporations, a major, arguably unjustified, role in international public health policymaking (96). Throughout the 1990s international health spending was stagnating, and the future of WHO and the entire field seemed to be in question.

As these events were unfolding, international health was renamed global health. This new term has been adopted broadly over the past two decades and is meant to transcend past ideological uses of international health as a “handmaiden” of colonialism or a pawn of Cold War rivalries and development politics. Global health “impl[ies] a shared global susceptibility to, experience of, and responsibility for health. . . . In its more collective guise, global health refers to health and disease patterns in terms of the interaction of global, national, and local forces, processes, and conditions in political, economic, social, and epidemiologic domains” (p6,51). Notwithstanding the invoked distinctions—there is a muddled understanding of the “global” in global health (97,98) and considerable conflation between international and global health—the “new” definition of global health bears many similarities to its international health predecessor (99).

In sum, during the Cold War the RF was far overshadowed by bigger players in the ideological war of West vs. East, and international health philanthropy (in a new guise) would return in a significant way only after the huge infusion of resources seen as necessary to win the Cold War began to dry up. The fact that this reemergence coincided with the rise of neoliberalism was pivotal: international philanthropy would now operate in a context attacking the role of the state and favoring private sector, for-profit approaches.

Enter the Gates Foundation

In 2000, into this crisis of authority, and almost a century after the Rockefeller Foundation filled the previous era’s vacuum, a new entity appeared that would once again mold the international/global health agenda. The Bill and Melinda Gates Foundation (BMGF), established by Bill Gates (Microsoft founder and its first, longtime, CEO and the world’s richest person from 1995–2007, and again in 2009 and 2013) (100) together with his wife Melinda (and chaired by the couple plus Bill Gates Senior), is by far the largest philanthropic organization involved in global health. The

September 2013 endowment stood at US\$40.2 billion, including 7 installments (ranging from US\$1.25 to 2.0 billion) of a US\$31 billion donation made in 2006 by U.S. mega-investor Warren Buffett (also a BMGF Trustee and advisor to the foundation) (101). With total grants of US\$28.3 billion through 2013 and recent annual spending around US\$3 billion (2012 grants totaled US\$3.4 billion) (101)—approximately 60% of which has gone to global health efforts (the remainder to development, agriculture, global advocacy, education, libraries, and local initiatives in the U.S. Pacific Northwest) (102,103)—the BMGF’s global health budget has surpassed the budget of the WHO in several recent years (104-106). Its sheer size—and the celebrity and active engagement of its founders—turned the Gates Foundation into a leading global health player virtually overnight.

Publicly accessible sources of information about the Seattle, Washington-based BMGF are limited to its Web site, which does not cover documents related to internal decision-making and operating practices, such as meeting minutes, memos, and correspondence. According to its global health division, the BMGF’s primary aim in this area is “harnessing advances in science and technology to reduce health inequities” (107) through the innovation and application of health technologies, encompassing both treatment (via diagnostic tools and drug development partnerships) and prevention (through, for example, vaccines and microbicides). Initially, the foundation sought to avoid expanding its portfolio too quickly, focusing on a few disease-control programs mostly as a grant-making agency. This has changed over the past few years, with efforts reaching over 100 countries, the establishment of offices in the United Kingdom, China, and India, and the growth of its staff to more than 1,100 people (101).

The BMGF, like the RF before it (noting here that the RF’s pioneering international health role is not acknowledged by the BMGF, though the BMGF Web site does cite the RF’s past expertise in upping agricultural productivity through its role in the Green Revolution), operates according to co-financing incentives. Echoing the RF, the BMGF follows a technically-oriented approach—with programs designed to achieve positive evaluations through narrowly-defined goals—and adheres to a business model emphasizing short term achievements.

Many global health agencies are keen to join with the BMGF: indeed, it has an extraordinary capacity to marshal other donors to its efforts, including bilateral donors, which collectively contribute ten times more resources to global health each year than does the BMGF itself (104,108) but with considerably less recognition. This extends to some organizations that in the past took on social justice approaches, for instance Norway’s NORAD development agency (109). Associations with successful, high-profile activities that show a “big bang for the buck”, potentially within a single political cycle, are pursued even if in the long term the technical bang may turn out to be far smaller than it could have been through combined social, political, and public health measures, such as improving neighborhood and working conditions, abolishing the military, or building redistributive welfare states (110).

Money and the ability to mobilize it, grow it, and showcase its effectiveness—validated by BMGF-funded research based on the dominant technoscientific biomedical model (111)—together with founders Bill and Melinda Gates’s high-visibility protagonism, are not the only factors enabling the reach of the BMGF. Its emergence on the scene precisely at the apex of neoliberal globalization—a moment when overall spending for global health (counting WHO and other multilateral as well as bilateral organizations) was stagnant, when suspicion by political and economic elites (and, via a hegemonic media, by voters in many countries) of public and overseas development assistance was at a near all-time high, when many low- and middle-income countries were floundering under the multiple burdens of HIV/AIDS, re-emerging infectious diseases, and soaring chronic ailments, compounded by decades of World Bank and IMF-imposed social expenditure cuts—has exaggerated the BMGF’s renown as a savior for global health (112-114).

Without a doubt, the Gates Foundation has been widely lauded for infusing cash and life into the global health field and encouraging participation of other players (see Figure 2) (13,115,116). But even those who recognize this role decry the Foundation’s lack of accountability and real-time transparency (over what are, after all, taxpayer-subsidized dollars) and the undue power of the BMGF and other private actors, including those encouraged under the Gates Foundation’s favored PPP model, over the public good (117-119).



Bill Gates speaks about the European investments in global health and development (here showing a slide of measures supported by the Global Fund) that are saving lives at Living Proof campaign event at the Museum Dapper. Paris, France. April 4, 2011.

The BMGF Approach, its Reach and Limits

As the “pied piper” of global health, the BMGF collaborates with and supports a range of PPPs, the U.S. National Institutes of Health, the World Bank, the WHO, and other multilateral agencies, as well as universities, private businesses, advocacy groups, and NGOs. As in the case of the RF in the past, the vast majority of BMGF global health monies go to (or via) entities in high-income countries (120). As of early 2014, almost three quarters of the total funds granted by the BMGF Global Health Program went to 50 organizations, 90% of which are located in the United States, United Kingdom, and Switzerland (120,121). For example, since 1998, Seattle-based PATH (Program for Appropriate Technology in Health), PATH Drug Solutions, and PATH Vaccine Solutions have together received over US\$1.6 billion in grants from the BMGF Global Health Program, approximately 15% of global health grants disbursed to date, including close to US\$614 million in grants for malaria research; over US\$177 million in grants for neglected and infectious diseases; and over US\$305 million in grants for enteric diseases and diarrhea (121,122).

Overall, the BMGF’s Global Health Program supports research on and development of diagnostics, preventives, treatments, and disease campaigns addressing HIV/AIDS, malaria, TB, pneumonia, diarrheal diseases, and “neglected diseases” (all of which have existing technical tools for control, from medicines to vaccines and oral rehydration salts to insecticide-impregnated bed nets), in addition to financing translational sciences. The BMGF also provides funding for research on cervical cancer screening methods, recently generating significant ethical criticism for the studies it supports in India (123).

In a shift since 2011, the BMGF’s Global Development Program now oversees a number of global health-related activities in the areas of: family planning; “integrated delivery”; maternal, neonatal, and child health; nutrition; polio; vaccine delivery; and water, sanitation, and hygiene (the latter was already part of the Global Development Program). As in the global health arena, these efforts focus on innovating and delivering tools, procedures, and other targeted interventions, often with private enterprise partners. The BMGF’s growing attention to sanitation, for example, supports “development of radically new sanitation technologies as well as markets for new sanitation products and services” (124).

Leading BMGF grants in the global health arena have included US\$1.5 billion to the GAVI Alliance (which the BMGF was instrumental in launching, and still has a heavy hand in overseeing) (101,125) to increase access to childhood and other vaccines; US\$456 million to the PATH Malaria Vaccine Initiative (101); over US\$500 million in grants to the Aeras Global TB Vaccine Foundation (126); and US\$355 million to Rotary International for polio eradication, augmented in 2013 with a pledge for matching funds of up to US\$35 million per year through 2018 (127). The BMGF has also provided

approximately US\$3 billion for HIV/AIDS control (also covering topical microbicides and vaccine development) (101,120,121).

The BMGF's most prominent global health efforts involve support for vaccine development—in 2010 it committed US\$10 billion over 10 years to vaccine research, development, and delivery. To be sure, vaccines are important and effective public health tools, but it is essential to consider the nature of the BMGF's vaccine investments, as well as what is neglected by this approach, such as, most fundamentally, adequate living and working conditions. The BMGF's approach is (as was the RF's) reductionist, perhaps best exemplified in Bill Gates's keynote speech at the 58th World Health Assembly in May 2005. Having a private sector orator address this annual gathering, at which WHO member countries set policy and vote on key matters, was unprecedented; his bravura in invoking the model of smallpox eradication based on vaccination (sidestepping its non-patented status) to set the course of WHO into the future was astounding: "Some point to the better health in the developed world and say that we can only improve health when we eliminate poverty. And eliminating poverty is an important goal. But the world didn't have to eliminate poverty in order to eliminate smallpox—and we don't have to eliminate poverty before we reduce malaria. We do need to produce and deliver a vaccine" (128).

Strikingly, Gates appealed to his audience with a deceptively simple technological solution to an enormously complex problem just two months after WHO launched its Commission on Social Determinants of Health, established precisely to counter overly biomedicalized understandings of health and to investigate and advocate for addressing the range of fundamental structural and political factors that influence health. Further, Gates's assertion directly contradicts an abundance of public health and demographic research that demonstrates that the modern mortality decline since the 19th century has been the consequence of, first, improved living and working conditions, followed by a combination of these socio-political approaches with medico-technologies that emerged since WWII (81,129-136). Unlike the early 20th century RF, which was open to social medicine research that showed the importance of both anti-poverty, redistributive efforts and technical interventions, Gates's stance now suggests that (he sees that) there is a sufficient critical mass of pro-business politicians and scientists that leftist alternatives can be ignored or summarily rejected.

In a similar vein, the BMGF's Grand Challenges in Global Health initiative, created in 2003 and enhanced in 2008 through Grand Challenges Explorations, funds scientists in several dozen countries to carry out "bold", "unorthodox" research projects (137), but only if they view health in circumscribed, technological terms, not through integrated technical and socio-political understandings (11,138). While the approximately one billion dollars spent on the Grand Challenges in its first decade is hardly the BMGF's largest initiative, it offers a valuable means for publicizing and validating its approach in the scientific community, with serious consequences. Even Challenge 16, to "Discover New Ways to Achieve Healthy Birth, Growth, and Development"—a

question inherently linked to an array of social factors—identifies “molecular pathways” as the primary roadblock to understanding what underlies poor infant health, without reference to the living conditions of newborns and their families (139).

Disavowing the messy and complicated politics of addressing health in the context of social conditions is certainly seductive for those promoting technical and managerial solutions for ill health. Yet whether or not one is interested in addressing the underlying causes of premature death and disease, there is no scientifically sound quick fix.

According to Bill Gates himself, many of the Grand Challenges are not expected to yield results until 15 or more years out, far longer than he originally envisioned (140), a time frame in which large-scale social and political investments in, for example, comprehensive primary health care-based systems and health equity—had they been supported—could have paid off, and on a far grander scale.

In the space of less than a decade, Venezuela’s “Barrio Adentro” program (“Inside/Within the Neighborhood,” founded in 2003)—to provide just one illustration from the recent social policies of leftwing governments across Latin America—doubled access to primary health care (reaching near universality), with 3200 health clinics built in the country’s poorest neighborhoods, places that had never before enjoyed such local infrastructure or attention to human need. According to WHO figures and other appraisals, in the first decade of Venezuela’s Bolivarian Revolution, infant mortality experienced an accelerated decline, going from 19 to 13.9 deaths/1000 live births, with under five mortality dropping from 26.5 to 16.7 deaths/1000 births (141).

This initiative drew from Venezuela’s 1999 Constitution, which declared health to be a human right guaranteed by the state, coupled with “bottom-up” political demands for health and social services, nutrition, housing, education, and improved employment (142,143). Undoubtedly the likely billions of dollars (including the exchange of Venezuelan oil for the service of thousands of Cuban doctors) invested in this effort are far greater than what the BMGF or even all overseas development aid put together might spend on primary health care in a single country, and one would never expect or desire such a role for donors. Yet the lack of interest on the part of the BMGF and most mainstream donors (whose ideological agendas reject these kinds of redistributive measures) in supporting, highlighting, or even considering Venezuela’s integrated approaches as a legitimate and effective (though not flawless) route to global health equity speaks volumes. (In the 1980s, by contrast, though most mainstream bilateral aid agencies and development banks pulled out of revolutionary Nicaragua, a handful, notably the Scandinavians, stayed on, eager to assist the country in its implementation of primary health care and universal education (51).)

Of course, societies fighting for social justice do not offer a politically palatable pathway in a neoliberal environment marked by extreme concentration of wealth and power. The BMGF, emblematic of elite interests in contemporary society, disregards the underlying causes of ill health in the first place, overlooks what role the

unprecedented accumulation of wealth in the hands of a few has played therein, and remains fiercely proud (staking a moral high ground) of its generosity and technical savoir-faire, all the while remaining underscrutinized by scientists and the wider public alike.

Admittedly, the BMGF has also engaged in smaller-scale patronage of certain initiatives that are not narrowly techno-biomedical and that provide support to some governments aiming to ensure publicly-funded national health care systems. In 2006, for example, the BMGF gave a US\$20 million startup grant to launch the International Association of National Public Health Institutes (144,145) (based at the Emory University Global Health Institute [USA], the Mexican National Institute of Public Health, and France's Institute for Public Health Surveillance), which helps support numerous public health institutes in low- and middle-income countries, including Cuba. In 2007 the BMGF provided US\$5 million to the WHO-based Global Health Workforce Alliance (GHWA) (121), which seeks to address the health personnel shortage across low-income regions. Yet these grants are at the margins of the BMGF's efforts, both in monetary and publicity terms, and do not in and of themselves represent an alternative to the BMGF *modus operandi*.

Indeed, despite the manifold shortcomings of a technology-focused, disease-by-disease approach to global health, this model prevails at present, abetted by the BMGF's prime sway at formal global health decision-making bodies. The BMGF's role has been magnified by the formation of the "H8"—WHO, UNICEF, UNFPA, UNAIDS, the World Bank, the Gates Foundation, the GAVI Alliance, and the Global Fund to Fight AIDS, Tuberculosis and Malaria—the world's leading global health institutions. The H8 holds meetings, like the G8, at which the mainstream global health agenda is shaped behind closed doors (146), and organizations considerably influenced by Gates and the BMGF constitute a plurality.

The BMGF and the Rise of PPPs in a Neoliberal Environment

Among the key levers of BMGF influence are PPPs (147-149), a global health funding and operations modality enabled by the massive entry of private capital into the health and development arena at the end of the Cold War. Philanthropic and business interests have long been involved in international health, but it was not until the 1990s that PPPs were formalized as a central element of global health, one that, following the prescription of privatizing public goods put forth by the World Bank and IMF, consciously draws on profit-making principles as a driver of policies, product development, and other activities (150-152). (It was actually the RF that had successfully pushed this approach in the mid 1990s (153); however the catalytic part it played was soon upstaged by Gates philanthropy, which by this time had far more resources than the RF (68)).

There are now dozens of major global health PPPs in existence, with budgets ranging from a few million to billions of dollars. These include Stop TB, Roll Back Malaria, the International AIDS Vaccine Initiative, and the Global Alliance for Improved Nutrition, many of which were launched by the BMGF or receive(d) funding from it (152). While portrayed as an opportunity to expand funding and visibility, these “collaborations” between the private sector and public agencies (both multilateral and national)—which extend far beyond the BMGF to include a range of business interests such as pharmaceutical companies and their philanthropic spinoffs—have granted the business sector and profit-oriented approaches an enormous and unprecedented role in international public health policymaking without quid pro quo accountability (154). They also show a marked difference from the RF’s early and mid 20th century goal of pushing for public health, at both national and international levels, to be in the realm of public sector responsibility—and accountability.

By no means is the BMGF the only player in the PPP sphere (and PPPs are not exclusive to the health arena), but the prominent part it has played in the two most influential PPPs, the Global Fund and the GAVI Alliance, both H8 members, underscores the primacy of the BMGF in shaping and enhancing the power of the PPP model.

The Global Fund to Fight AIDS, Tuberculosis and Malaria—inaugurated as a Swiss foundation in 2002 with a US\$100 million grant from the BMGF—is the largest PPP. Aimed at bypassing the perceived bureaucratic encumbrances of the UN (155-157) (which could alternatively be read as “independent and accountable decision-making bodies and processes”) in funding services and therapies to combat these three diseases, the Global Fund has further debilitated the WHO and any semblance of democratic global health governance.

The establishment of the Global Fund also served to weaken an important transnational movement for intellectual property (IP) reform that surged in the late 1990s to address the grossly immoral profiteering of pharmaceutical companies that impeded access to HIV/AIDS drugs in low- and middle-income countries, particularly in Africa. For example, a case filed by the AIDS Law Project (a human rights advocacy organization) in South Africa in 2002 against excessive pricing by foreign pharmaceutical companies found a sympathetic ear with the country’s Competition Tribunal. Settling out of court, the companies agreed to issue voluntary generic licenses for AIDS drugs, an outcome that inspired activists in other countries to follow suit (158). However, once the flow of philanthropic and bilateral donations made medicines more accessible in the absence of IP reform, the deep tensions between egregious pharmaceutical profits and the health of the global poor was, at least in a limited fashion, attenuated (159).

The voting members of the Global Fund’s governing board are split 50/50 between representatives of donor governments (8 members), private philanthropy (1), and the private sector (1) on one hand; and, on the other, representatives of low- and middle-

income countries (7), “communities” (1), and NGOs from “developed” (1) and “developing” (1) countries. The Global Fund raises money, reviews proposals, and disburses grants and contracts, rather than implementing programs directly. As of 2013, the Global Fund had distributed upwards of US\$22.9 billion to some 1,000 programs in over 140 countries, and in December 2013 donors pledged an unprecedented additional US\$12 billion for the next 3 years. Incredibly, WHO and UNAIDS have no vote on the board of the Global Fund, but the private sector, represented by pharmaceutical Merck/MSD, and private foundations, represented by the BMGF (160), which has given close to US\$1.5 billion (161) to the Global Fund, do. The Global Fund, like many PPPs, offers “business opportunities” (162)—lucrative contracts—as a prime feature of its work, illustrating how global health is being captured by business interests in a way that was not part of the original RF strategy, which saw international health in the public, not the profiteering, domain, even if ultimately benefiting the private sector.

Similarly, the GAVI Alliance has been critiqued for placing too much emphasis on new and novel vaccines (often developed by its pharmaceutical partners) rather than ensuring that known effective basic vaccination is universally carried out (163) and for being largely “top-down”, paying scant attention to local needs and conditions (164). Critics have also faulted the GAVI Alliance for the heavy representation of industry on its board (165) and for directly subsidizing the profits of already mega-profitable Big Pharma through dubious contracts and incentives, all in the name of “saving children’s lives” (165).

WHO’s work has also become tethered to the activities of PPPs. In recent years, activities with multiple PPPs have constituted between US\$700 million and US\$864 million of WHO’s biennial budgets of over US\$4 billion (approximately 20–25% of the total), likely an underestimate given that several major partnerships, including Roll Back Malaria, are not captured in this figure (166,167). PPPs have undermined WHO’s authority and ability to function: the WHO’s Executive Board only belatedly (in 2007) recognized the numerous problems posed by PPPs, such as fragmentation of global health efforts and policy, low cost-effectiveness, and insufficient accountability (168,169).

Yet WHO has not attempted to present systematically data about its participation in PPPs (152) and since 2012–13 has stopped issuing a section on PPPs in the biennial budget, admitting it “did not always have full control of the results and deliverables” (170). Further evidence of WHO’s tergiversation regarding the problems of PPP and private sector involvement in its work is a 2010 World Health Assembly resolution that calls on countries to “constructively engage the private sector in providing essential health-care services” (171).

Certainly some global health PPPs have helped spur research and development and enabled better diffusion of pharmaceuticals. Product Development Partnerships in particular have raised hundreds of millions of dollars for medicines for “neglected

diseases” (172). But on the whole, as I have noted elsewhere, “they bring most of the same problems as mainstream health donors writ large: imposition of outside agendas, poor harmonization with stakeholders and national governments, underfunding, and vilification of the public sector” (p106,51)—insidious effects indeed. Ultimately, “narrowly targeted PPPs entrench vertical, [top-down, single disease-focused] programs ... [there is no PPP for social justice in health!], jeopardizing health systems and impeding integrated approaches” (p106,51) to health.

These concerns are aggravated by the incongruity between the profit-making mandates of corporations and WHO’s commitment to health as a human right. PPPs have marshaled billions of dollars to global health (104,173) , at the same time as opening the door to extensive commercialization (174-176) and private sector influence in policymaking (for instance UNITAID’s promise of a “market for health commodities” and the University of Toronto’s McLaughlin-Rotman Centre for Global Health’s “commercialization pillar”), making global health a bigger business opportunity than ever before (99). According to one ex-pharmaceutical executive, public-private “partnerships may provide incentive for academic researchers to do work of value to industry partners” (p4,177), suggesting an underhanded way for private industry to influence global health research and the way scientific results are reported. As well, bilateral donors have become increasingly invested in PPP activity (154). When PPP benefits such as direct grant monies, tax subsidies, reduced market risk, reputation enhancement, expanded markets, and IP rights are taken into account (178), the net result is that most PPPs channel public money into the private sector, not the other way around (96,179).

In sum, PPPs—heavily shaped by the BMGF—allow private interests to compromise the public health agenda, provide legitimacy to corporations’ activities through association with UN agencies, conflate corporate and public objectives, and raise a host of conflicts of interest, whereby private partners seek to commercialize their own products through PPP involvement (180). Moreover, most global health PPPs favor RF-style, short term, vertical approaches to disease control, compounded by profit-making imperatives (181). In contrast to the RF of the past, however, PPPs promote profit-making at the front end of global health work, as opposed to strategic public health activities (against yellow fever, for example) that benefited capitalist interests once the public health work was carried out.

The BMGF and Conflicts of Interest

In recent years the BMGF has been accused of investing its endowment in profiteering pharmaceutical companies and polluting industries—including ExxonMobil (whose forerunner was founded by John D. Rockefeller) and Chevron, which have been linked to environmental and health crises in the Niger Delta and other oil-rich regions (182-185)—as well as in “private corporations that stand to gain from the Foundation’s philanthropic support of particular global health initiatives” (p269,183).

While the Gates Foundation, perhaps responding to criticism, pulled out of many of its direct pharmaceutical holdings in 2009 (185), its vested interest in the pharmaceutical industry remains through BMGF mega-donor Warren Buffett's Berkshire Hathaway holdings (in which 50% of the Gates Foundation endowment is invested) in Johnson & Johnson, Sanofi-Aventis, and other pharmaceutical companies (184). The immediate past president of the BMGF's global health program, Dr. Tachi Yamada, was formerly an executive and board member of pharmaceutical giant GlaxoSmithKline (186), and his successor, Dr. Trevor Mundel, was a senior executive at Novartis AG from 2003 until 2011 (187). Several other senior BMGF executives hail from GlaxoSmithKline and Merck (188,189). Gates Foundation initiatives (in health, agriculture, and other areas) may well benefit these corporations in addition to Coca-Cola, McDonald's, Monsanto, Nestlé, Procter & Gamble, and other companies in which the Gates Foundation, Berkshire Hathaway, and Gates family members are major shareholders (184,190).

The conflict of interest between the pharmaceutical industry (including their own corporate global health foundations, often barely disguised marketing and public relations endeavors) and the BMGF is palpable (125). Yet conflicts of interest are downplayed by these actors and rarely articulated publicly, since most observers (and grant recipients) fear offending the powerful foundation (191,192) (a few investigative journalists and Web sites serving as courageous exceptions (193–195)). One example of such conflicts, regarding the questionable dealings of the BMGF's India office, highlights that “Gates lobbied with the health ministry for the introduction of Merck's rotavirus vaccine” (190). The BMGF has also funded controversial studies in India (carried out by its largest global health grantee, PATH) of Merck's and GlaxoSmithKline's vaccines against the human papillomavirus (associated with some forms of cervical cancer) among girls of low-income backgrounds. The Indian parliament has alleged that the trials violated ethical standards because the girls' consent was not fully informed and adverse events were not adequately monitored or reported, while PATH claims that since this was an observational study of an already approved vaccine, not a clinical trial, these provisions were not “necessary” (196–199).

As noted by advocates for affordable life-saving medicines, the Gates Foundation's stance on IP raises serious questions. Bill Gates himself admits that his foundation “derives revenues from patenting of pharmaceuticals” (200). A crucial issue has to do with the extent of coordination between the IP approaches of Microsoft and the BMGF. While the two entities are legally separate, there are troubling shared interests, including the BMGF's 2011 hiring of a Microsoft patent attorney into its global health program (200). Microsoft, infamously, has been charged and fined for a range of monopolistic practices and has been a strong supporter of IP protections as a (legal) means of cornering markets (4). Microsoft played a leading part in assuring the passage of the World Trade Organization's (WTO) TRIPS agreement protecting IP and continues its lobbying efforts with other corporations to expand IP rights (119). As critics pointedly

note, the BMGF's endowment "was amassed through labour practices and monopolistic intellectual property strategies [not to mention militarism (201,202)] that are contrary to the stated health aims of the Gates Foundation" (p268,183).

The BMGF, for its part, was a major sponsor of WHO's Commission on Macroeconomics and Health, which concluded that IP rights are a critical incentive to research and development of drugs (203), a position: historically disputed by the experience of, to name but one example, the development of the Salk polio vaccine (165); shown to be incorrect for low-income countries that have joined TRIPS in the last 15 years (204); and increasingly challenged by advocates today (205,206). Another indicator of the BMGF's troubling corporate allegiances has been its refusal to take a stance in the case of Novartis's lawsuit against the Indian government (for denying a new patent to Novartis for a cancer drug that it deemed was an instance of evergreening—making only minor chemical changes to an existing medication to extend the life of its patent) on the issue of access to life-saving medicines. Many advocates believe that the BMGF—with its extensive IP expertise, its aim to improve the health of the poor, its role in numerous PPPs, and its close connection to Novartis now that Mundel heads global health at the BMGF—should address the dilemma of profit motive versus access to medicines head on, even if this is unpalatable (207). (On April 1, 2013 the Indian Supreme Court ruled against Novartis (208)).

The BMGF's involvement in the Alliance for a Green Revolution in Africa (AGRA), (including US\$264.5 million in BMGF grants as of 2013) (101), like its global health efforts, illustrates the profound contradiction between the aims of philanthropy (or philanthrocapitalism, see ahead) and the needs of poor populations (209). AGRA, like the RF's Green Revolution programs before it, focuses on technological and market models for increased agricultural output. This emphasis comes at the expense of equitable, democratic, and sustainable approaches based on securing land rights for small producers (all the more pressing in a context of large-scale foreign land grabs in countries facing dire hunger and malnutrition problems) and supporting local and regional food distribution networks (210).

While AGRA promises help for small farmers (at least the most prosperous among them), its food security efforts—which ultimately aim to integrate African food consumption and agricultural production into the (corporate cartel-controlled) global food chain—are neither publicly accountable nor regulated (211). In addition to profound concerns about AGRA's role in the research and promotion of genetically-modified organisms (GMOs) and the development of privately patented seeds (in this regard, AGRA differs from the earlier RF-sponsored efforts, which kept hybridized seeds in the public domain, given that this was before gene patenting was legalized in 1980 (212)), local watchdogs have also linked AGRA to the fostering of private ownership and corporate control of Africa's genetic wealth without the sharing of credit or benefits with the cultivators (213).

As we saw, the RF was suspected of selling shoes in the case of the U.S. hookworm campaign and of seeking to enhance the profits of Rockefeller oil interests in Latin America (and certainly located its campaigns in settings that were to its long-term business advantage, such as the oil-rich state of Veracruz, Mexico), but the press and populace in the early 20th century were sufficiently vigilant that the RF was unable to directly mix its business and philanthropic ends. The ideological metamorphosis under contemporary neoliberalism is such that whereas in the past public health activities directly linked to profit-making were denounced for being self-serving and a violation of the principle of separation of public and private interests, today they are viewed by private capital—and rationalized by a disquietingly quiet public—as desirable outcomes that ought to be encouraged rather than eschewed as problematic and unethical.

Philanthrocapitalism redux: Comparing the RF and the BMGF

The mounting trend of business-foundation collaboration has crystallized in the term “philanthrocapitalism”, which touts the philanthropic largesse and social-entrepreneurial mission of the new 1990s billionaires as unprecedented and capable of “saving the world.” While the US\$2 billion plus annual spending of U.S. philanthropy has indeed made a second entrée into the international health and development arena, the philanthrocapitalist approach, past and present, merits questioning on a number of grounds (14,214-216).

First, just as late 19th and early 20th century philanthropy derived from the profits of exploitative industries of the day (oil, steel, railroads, manufacturing), the colossal profits earned during the 1990s and 2000s by a small number of people in the information-technology, insurance, real estate, and finance industries (and related speculation), as well as industries linked to the military, and mining, oil, and other commodity sectors, were built on rising inequality (217). That is, these profits were made thanks to: the depression of wages and worsening of labor conditions for the vast majority of workers worldwide; tacit or explicit support of militarism and civil conflicts to ensure access to valuable commodities; trade and foreign investment practices that flout protective regulations; and the externalizing (transferring from private, corporate responsibility to the public and future generations) of the social and environmental costs of doing business, including toxic exposures and contamination of the air, soil, and waterways, deforestation, and the effects of climate change (218-220).

Second, the tenet that business models can (re-)solve social problems—and are superior to redistributive, collectively deliberated policies and actions employed by elected governments—masks the reality that private enterprise approaches have been accompanied, facilitated, and made inevitable by neoliberal deregulation, privatization, government downsizing, and emphasis on short-term results over long-term

sustainability. These models rest on the belief that the market is infallible, despite ample evidence to the contrary. All the financial incentives in the world will not create a vaccine against poverty, racial and gender discrimination, and inequality.

Here, we see a contrast to the old RF, which, although implementing and evaluating its public health activities according to a business model, explicitly called for public health to be just that: in the public sphere. Because Rockefeller himself was a fiercely competitive capitalist bent on maximizing private profits from his own investments and companies, the issue that comes to the fore now is how the current context of philanthrocapitalism has led to such a distinct configuration under the BMGF.

Third, the very tax-exempt status of foundations and tax-deductibility of philanthropic and charitable donations is an affront to democracy. The faith that giving can “change the world” is in many ways a preposterous manifestation of the notion that “the rich know best,” as though autonomous, donor decisions should replace representative and accountable welfare states and systems of redistribution (119,221). As former U.S. Secretary of Labor Robert Reich has noted, “governments used to collect billions from tycoons and then decide democratically what to do with it” (222). Ceding decision-making power over social priorities to the class that already wields undue economic (and political) power is decidedly undemocratic.

Over the past century and a quarter, philanthropy has frequently served, directly or indirectly, to enhance donors’ business and investment interests, many of which are linked to industries that are highly exploitative and damaging to the environment. Celebrating and encouraging the munificence of elites is counterproductive to the goal of creating equitable, sustainable societies. If anything, people living on working class and modest incomes—who rarely receive recognition (or tax breaks, for that matter) for their donations—are proportionately far more generous than the rich, and their giving, unlike that of the wealthy, may entail considerable personal sacrifice (223). In the early 20th century, as we have seen, the millions involved in social and political struggles for decent, more equitable societies were savvier and far more skeptical than much of the public today about the supposed generosity of those responsible for sustaining—and gaining from—these very societal injustices.

Certainly many of the accusations leveled against contemporary philanthrocapitalism were also leveled at the RF. Yet the current infusion of profit making for philanthropic ends—on the backs and lives of the 2.5 billion people living on less than US\$2 per day—has reached entirely new dimensions and should draw concerted attention from all believers in health as a social justice imperative. In the early 20th century, the RF allowed a variety of voices into its international health enterprise, even as it privileged a reductionist approach. Today, even the RF—though now a much smaller global health player compared to the BMGF—has been narrowed to a “global health as business” mentality, as per the larger philanthrocapitalist trend.

For instance, after equivocating for almost a century on whether or not to support universal health insurance in the United States, the RF has finally endorsed this goal, internationally, recommending “models that harness the private health sector in the financing and provision of health services for poor people” (224). Echoing the World Bank and the BMGF-supported WHO Commission on Macroeconomics and Health’s “investing in health” approach (225-227), through which “investing in health” is justified both as good for the economy *and* a profitable and legitimate private-sector activity, the RF is also promoting “impact investing”, inducing venture capitalists to “address social and/or environmental problems while also turning a profit” (228).

The consuming public has been drawn into such “marketized philanthropy”, whereby consumer purchases, for example through Product RED, both generate profits for (philanthro-) capitalists *and* finance global health projects and agencies driven by philanthrocapitalist interests (229). Yet “despite ... pretensions to ‘activism’” these are “fundamentally depoliticizing” approaches, cheered and channeled by celebrity philanthro-humanitarians who, along with philanthrocapitalists, are marketing their own “brands,” while “legitimat[ing], and indeed promot[ing], neoliberal capitalism and global inequality” (230).

Philanthropists, past and present, typically rationalize their actions as necessary to address “market failures” (231). Of course, (global) public health, like many other social goods and services, by definition resides in the market failure realm because it is externalized from the costs of doing business (51). That philanthropy (and, more pointedly, philanthrocapitalism) steps in to promote capitalist approaches as superior to the public sector in regulating and delivering services is self-serving and unsubstantiated. In the early 20th century, as we saw, philanthropists were effective at staving off, then limiting, a full-fledged welfare state in the United States, with repercussions still vividly evident today.

In the global health arena of more recent decades, the argument that the public sector is incapable of addressing societal needs contemptuously disregards the full-fledged assault on public spending and infrastructure on the part of international financial institutions’ conditionalities and structural adjustment programs in the 1980s and 1990s, not to mention the wave of predatory private bank lending, unfair trade practices, and hegemonic leverage over the WTO by powerful countries (and influential industries therein, including the U.S. tobacco industry and food conglomerates) since the mid 1990s (51,119,232). For example, the governments of Sub-Saharan African countries were pressured to cut public education, health, and other social spending in order to meet the terms of loans made necessary because of falling export prices related to global trade and financial forces beyond their borders, then blamed for inadequately addressing infant mortality, AIDS and other health crises, in turn leading these countries to become “clients” of the Global Fund (233).

In part to fend off such critiques, the BMGF, as did the RF, has adopted progressive, value-based rhetoric: respect for partners, being “humble”, fair and focused priority-setting, “ethical” comportment, and a lofty goal of “increas[ing] opportunity and equity for those most in need” (234). The BMGF’s high-minded, self-defined mission, like the RF’s grand motto of the past, does not, however, exempt it from scrutiny and accountability.

But the similarities do not end there. Like the RF of yore, the Gates Foundation’s sway and dominance over the global health agenda stems in part from the magnitude of its donations, its ability to mobilize resources quickly and allocate substantial sums to large or innovative efforts, the renown of its patron, its technology-driven and cost-effective emphases, as well as the clout and leverage it garners from the extraordinary range of organizations which it partners with or funds (138,140).

As did the RF in the past, the BMGF has also populated important policymaking roles at key agencies. Most prominently, USAID’s director, Dr. Rajiv Shah, formerly held several Gates Foundation leadership positions before joining the Obama administration. Under Shah, USAID, with an annual budget of over US\$20 billion in recent years, considers itself a “business-focused development agency focused on results” (235).

The Gates Foundation has pursued most of the RF’s international health principles—though not its institutionalization practices—almost to the letter: through technobiological and cost-effective approaches, the use of budget incentives, a priori success measures, and priority-setting from above, with a nod to local adaptation. Even the BMGF’s reluctance to address non-communicable diseases (140)—with their long-term, politically complex, and costly implications and lack of a technical quick-fix—is reminiscent of the RF distancing itself in the early 20th century from TB, diarrhea, and other diseases requiring major social and political investments (TB and rotaviruses are now addressed by the BMGF, through technical tools, such as vaccines and therapies, that were not available in the early 20th century, though as under the RF, these efforts are divorced from living and working conditions).

For the BMGF, transnational consensus is generated through: advisory boards that include low- and middle-income country public health and scientific leaders; the reach of its research funding (and the validation provided by the funded research generated); the myriad partnerships it has incubated; as well as the associated media coverage (see ahead) (140). The BMGF shapes the composition of the boards of key PPPs, including the GAVI Alliance and the Global Fund, and its executives and staff members are often members of, or even chair, these boards—particularly interim boards of new organizations that set broad policy directions.

But the BMGF has far less interest in institutionalization, health care systems and infrastructure, and does not tolerate, as did the RF in the early 20th century, social

medicine approaches. While its influence as a “global citizen” (236) (as distinct from the RF’s closer alignment with U.S. foreign policy objectives in the first half of the 20th century) is both hailed and feared (214,237), the BMGF’s role is arguably more contestable than that of the RF in the past. This is because, ironically, whereas in the interwar years the RF was closely linked to just one international health agency (the LNHO), the BMGF has ties to multiple organizations in a now highly fragmented global health world (in part due to the BMGF itself). Thus, the field is home to extensive, diverse, and dynamic constituencies that have various routes to shaping global health, extending to vibrant global public interest civil society movements, and the emergent global health diplomacy of BRIC countries and other South-South cooperation (238).

In an interesting twist, in late 2013, the BMGF announced a grant to Fiocruz, Brazil’s national health institute, to fund the production of childhood vaccines for distribution within Latin America (a departure from its backing of the GAVI Alliance’s model of funding private pharmaceutical firms). Brazil, which has remained largely outside the BMGF orbit, has attracted widespread attention in recent decades for its unified, publicly-run universal health care system (SUS)—established under its post-dictatorship 1988 Constitution—and its South-South cooperation efforts that emphasize primary health care and human resources training. But Brazil’s health system is presently under enormous pressure to increase the involvement of the private sector (239). Perhaps the BMGF’s newfound support for Fiocruz means that it needs the credibility of Brazil’s public sector and infrastructure policies more than Brazil needs the BMGF. More likely, the entry of the BMGF to Brazil signals, whether intentionally or not, a far greater role for the private sector in SUS than was envisioned by the constitution.

Overall, the BMGF’s averseness to engaging with individuals and institutions wielding contrasting viewpoints and approaches (and apparent vindictiveness, against those at WHO and elsewhere who have stood in its way) has led to growing resentment of its current global health power (240). Though most global health researchers have remained silent, a brave few have spoken out regarding the extent to which the Gates Foundation’s directive style and dominance over funding avenues have squeezed out legitimate alternative scientific approaches. For example in late 2007, the then head of WHO’s malaria program decried the BMGF’s attempts to influence WHO’s malaria policies in a highly critical memo (he was moved to another position after his memo came to light (241)), possibly portending further outcry into the future (115).

The Gates Foundation’s technological focus is perhaps inevitable given the expertise and provenance of its founder. As in the case of the RF in the 1910s, it is filling a gap which it perceives is not being addressed by existing players (including WHO, USAID, Wellcome Trust, European Union, U.S. National Institutes of Health, and other major development and research funders): the Gates Foundation has become a salve to the

collective concerns of capitalist interests that global health is too important to leave to a purportedly democratic entity (namely, the WHO).

The tide may be turning, slowly, away from the BMGF's technological and business-oriented approaches to global health. As recently as 2010, former BMGF global health director Yamada stated that the Foundation was refocusing "on technologies with the biggest health payoffs and near-term applications" (242), narrowing ever further the techno-biological model honed by the RF. Yet a quarter century into the US\$10 billion vertical polio campaign, and despite the recently declared elimination of polio from India (243), this endeavor is undergoing deep re-evaluation (244-246), following the resurgence of polio in Syria and Somalia and the appearance of wild poliovirus in Tajikistan, Nigeria, and persistent endemic polio in Pakistan and Afghanistan in contexts of entrenched poverty (247,248), inadequate health care coverage, and cultural and religious resistance to targeted vaccination. Even Bill Gates, one of the campaign's greatest proponents and donors, seems to have belatedly begun to understand that targeted eradication needs to be integrated with broader approaches, most notably strong health care systems (242,249). It remains to be seen whether this sentiment is translated into practice.

A Rich Man's World, Must it Be? (with apologies to ABBA)

As the premier international health organization of the first half of the 20th century, the RF had an overarching purview and leadership role. It was instrumental in establishing the centrality of international health activities to the realms of economic development, state-building, diplomacy, and scientific diffusion, and it institutionalized patterns of health cooperation that remain in place to the present day.

By comparison, though its short-term effects are of great consequence and, according to critics, highly disconcerting, the Gates Foundation tracks a path established by the RF (albeit modified by the exigencies of the Cold War and the ideological context of neoliberalism). Still, the BMGF presently looms large in the press, in the imagination, and at the agenda-setting table, boosted by the likes of singer-humanitarian Bono and other practitioners of celebrity philanthropy (230). Even though "quite consciously the Gates Foundation has ... become the alternative to the World Health Organization" (250), it cannot dismiss existing agencies wholesale. After all, a global health architecture (precarious and disjointed as it may be) already exists, with countless public, private, bilateral, multinational, regional, not-for-profit, humanitarian, and socially-oriented agencies in operation, numerous advocacy groups fighting for legitimacy, and some asserting independence from BMGF efforts.

The BMGF's active enlistment of both public and private partners to support its initiatives has enabled its sweeping influence on the global health agenda in the space of just a few years. Yet while many researchers and small and sizeable organizations of all stripes have readily adapted themselves to the Gates Foundation's priorities, this 800-

pound gorilla is not the only animal in the global health jungle. Often forgotten is that BMGF and overall global health philanthropy hovers at less than 10% of development assistance for health, which has grown from under 11 billion to 30.6 billion dollars between 2000 and 2011, with approximately one-third coming from the U.S. government alone (104).

Undoubtedly the array of global health actors actually or potentially being funded by, or partnering with, the BMGF amplifies its impact on the field. However, the BMGF has tended to leave few institutional footprints in the settings in which it operates (115,241). The RF in the 20th century, by contrast, shaped the international health panorama—as well as country-by-country public health agencies—almost singlehandedly. Moreover, unlike the BMGF, the RF itself did not seek to profit directly from its activities, though Rockefeller family business interests surely benefited from the reduction of epidemic threats to international commerce and the increase in productivity, stability, and markets enabled by public health improvements.

In a sense, the IHB/D was a massive demonstration project, with its agenda reflected in scores of national and local health agencies across the world, and institutionalized in the WHO. That the BMGF may cast a smaller shadow than the RF in the long run cannot quell concern about the current dominance and power of the Gates Foundation, which has emerged hand in hand with: neoliberal globalization; a unipolar post Cold War scenario; a huge rise in the power of transnational corporations, which often block policies in the public interest and benefit from institutionalized corruption; and PPPs—the handmaiden of the Gates approach.

A potential indicator that the BMGF is more fragile than it appears, paradoxically, is its aggressive self-promotion campaign that far exceeds the early 20th century RF in such efforts. Particularly troubling are the more than one billion dollars spent on “policy and advocacy” activities, including direct funding for global health and development coverage to British newspaper *The Guardian*, Spain’s *El País*, the African Media Initiative, and in the United States to the Public Broadcasting Service, National Public Radio, and other broadcasting outlets, and through the Kaiser Family Foundation, which runs a leading global health portal that has been accused of soft-pedaling its postings on the Gates Foundation (251-253). All of this coverage directly or indirectly generates positive publicity for the BMGF’s approach to global health and development as well as for the foundation itself, publicity which it clearly believes is necessary to justify its omnipresent involvement.

By contrast, historically the RF was content to underplay its role, except at the highest political levels and behind closed doors. This resulted from the hard-hitting investigative journalism of the early 20th century, and the savviness and skepticism of the working class, who rebuked, for example, Rockefeller interests in the case of the Ludlow Massacre. Even in its public health work, the RF learned to employ its name in

a subdued fashion. Because a principal aim of RF international health was institutionalizing public health through strong government agencies and services, moreover, minimizing public attention to itself ultimately advanced its goals.

The BMGF, for its part, while reliant on the public sector to help deliver many of its technologies and programs (often provoking an internal public-to-private sector ‘brain drain’) (108), appears largely indifferent to the survival of the “public” in public health. Recently the BMGF has taken some tentative steps to explore the prospect of investing in primary health care (254), possibly in relation to its unit for Integrated Health Solutions Development (also referred to as Integrated Delivery and Integrated Development), established in 2007 but about which little is publicly known. Perhaps the BMGF aims to change (or, more ominously, maybe it seeks to coopt the primary health care approach); but for now its approach as a whole seems to counter the relevance of an accountable welfare state. Having its own efforts at the forefront is not a detractor, but rather a boon, to its larger aims of “creative capitalism” and a public-private technology-driven model.

Yet, given the growing traction of a human rights-based approach to health and well-being (255), and the collective clarion cry of accelerating numbers (hundreds each year) of large- and smaller-scale protests across the globe in the wake of the 2008 global financial and economic crises that “enough is enough” in terms of austerity, economic and global injustice, violation of people’s rights, and lack of true democracy (256), we may be at a turning point. It is an opportune moment for specialists and the broad public alike to become more attuned and resistant to the BMGF’s presuppositions and aims.

Philanthrocapitalism and the Global Health Agenda: What Role for Scientists?

Clearly, as these many examples demonstrate, capitalism trumps the love of humankind (the dictionary definition of philanthropy, from its Greek, via late Latin, origins), making philanthrocapitalism an oxymoronic enterprise indeed. The pivotal, even nefarious, role it has come to play in international/global health in different eras draws from a series of nested factors: gargantuan resources enabled by profiteering of titanic proportions—amidst relentless ideological assaults on democratically-driven redistributive approaches—all contextualized by a pro-corporate geopolitical climate within still dominant (if declining) U.S. global capitalism. And recall that the very essence of (U.S.) philanthropy is a brazen system of undemocratic decisionmaking by self-designated mega-donors.

Collective activism to overturn the unjustified influence of philanthrocapitalism in global health would provide a necessary first step to address these issues. (Subsidiary to this is the need for philanthropic accountability—including the public and transparent election of board members and the assurance of external scientific evaluation of philanthropic activities.) At the center of this proposed effort is the urgent need to better

understand how powerful private foundations are shaping the global health agenda as well as the production and circulation of particular kinds of knowledge (and likewise the rendering invisible—due to lack of funding and attention—of other kinds of knowledge and questions), and how this power ought to be reined in (117). A key issue relates to why, given its avowed interest in improving equity, the BMGF has not engaged with the social determinants of health approach to addressing global health inequity, which has received wide international validation (257-259).

But such a movement should not come solely from civil society and policy critics. Global health researchers, practitioners, and grant recipients must play a vocal role, uncomfortable and potentially perilous as this may be. It is not enough for scientists who work in global health to claim that they are just carrying out research and cannot affect the larger context of global health funding and policy-making. Scientists must recognize that their scholarly independence is being threatened by the private sector and philanthrocapitalist intrusion on global health: the asymmetry of power between these actors and the public interest is such that WHO and other UN entities cooperating with the business sector (not to mention scientists within these organizations) are being urged to maintain their “integrity, independence and impartiality” (p4,260,261).

Scientists should not shirk their responsibility for advocating for public, accountable government-funded support for the scientific enterprise, lest their credibility be challenged (177,262). Global health scientists, joining with colleagues calling for action on climate change (e.g. James Hansen) (263), denouncing unethical drug company tactics (e.g. Peter Gøtzsche), and others (for instance, the Union of Concerned Scientists), should take inspiration from the brave activism and advocacy that have unfolded in the public protests against IMF and European Union-imposed Greek austerity, through Spain’s *indignados* mobilization, in the Andean *buen vivir* philosophy and policies, via global justice efforts battling extractive industries around the world, through the 200-million strong Via Campesina movement, the global Occupy! movements, and so on. These struggles are taking on the extreme greed and power of corporate capitalist interests and plutocrats in the contemporary global economy (256); so too ought scientists question the BMGF’s undemocratic influence over the global health agenda, and its implicit assault on the building and maintaining of welfare states, just as leftwing health experts in the past resisted and constructively sought to push the RF to consider international health approaches based on socialist and other equitable, redistributive welfare states (59).

International health in the 20th century was punctuated by the philanthrocapitalist’s prerogative. In the 21st it may well still be a rich man’s world, but we need not settle for a rich man’s agenda for global health. Scientists, scholars, activists, and ethical thinkers of all stripes should take notice of these untoward developments and work together for accountability and democratic decisionmaking in global health.H

Methodological Note

It is important to underscore the unevenness in the volume and nature of sources available to analyze each foundation. The Rockefeller Archive Center (<http://www.rockarch.org/collections/rf/>) provides comprehensive access to a wide range of primary sources related to the Rockefeller Foundation, including correspondence, diaries, memos, meeting minutes, project files, information about fellows, and internal reports related to its New York headquarters, and country-based and regional field offices, covering the period up until 1989, 1994, or 2000, depending on the record group (in addition to published annual reports, articles, and lectures). The Bill and Melinda Gates Foundation website (<http://www.gatesfoundation.org/>), meanwhile, furnishes annual reports, official letters, speeches, factsheets, and other public information about its various programs, as well as basic data about the grants it has made. Given that many of the programs, actors, grants, and grantees are still active, it is understandable that the Gates Foundation has yet to open its archives to the public, but this means that much of the analysis of the BMGF is journalistic or involves Kremlinology-style reading between the lines of official documents.

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Professor Anne-Emanuelle Birn's research explores the history of public health in Latin America and the history/politics/policy of international/global health, with interests ranging from the scatological to the ideological. Her books include: *Marriage of Convenience: Rockefeller International Health and Revolutionary Mexico* (Rochester, 2006); *Textbook of International Health: Global Health in a Dynamic World* (Oxford, 2009); and *Comrades in Health: US Health Internationalists, Abroad and at Home* (Rutgers, 2013). Her current book manuscript examines the history of the international child health/child rights movement from the perspective of Uruguay; she is also leading a CIHR-funded study on Social Justice-Oriented South-South Cooperation in Health.

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