Health and Development

Yearbook for the History of Global Development

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Volume 2

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Edited by
Iris Borowy and Bernard Harris

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Iris Borowy and Bernard Harris

Introduction: Health and development

It makes intuitive sense that health and development require one another: there can be no development without a critical mass of people who are sufficiently healthy to do whatever it takes for development to occur, and people cannot be healthy without societal developments that allow maintaining – or ideally improving – health. However, while this mutual dependence seems clear enough when presented in these simple terms, even minimal scratching of the surface reveals many complex and contested histories. Both "health" and "development" entail complex problems of conceptualisation, definition, and measurement. At its simplest, development implies a process of economic and social change leading to "increased living standards, improved health and wellbeing for all, and the achievement of whatever is regarded as a general good for society at large."[1] But ideas about what exactly such a "general good" would look like and how to reach it vary widely. Concepts discussed during the last century include modernization as a form of Westernization, Marxism, basic needs, growth with equity, free-market capitalism, sustainable development, inclusive development, structural adjustment, development as freedom, *buen vivir* and post-developmentalism.[2] These concepts are contested, often difficult to define, and even more difficult to measure. Meanwhile, health has been an obvious concern both to individuals and to communities throughout history but, again, definitions have varied widely, ranging from the ability to perform regular life functions, the fulfillment of socially constructed physical, mental and behavioral norms, and the balance of bodily fluids to the absence of or resistance to pathogens. Even the World Health Organization's widely-cited definition of health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" appears more like an aspirational goal than a realistic norm.[3] A connection to developmental factors (however defined) is not dif-

1 Alan Thomas, "Meanings and views of development," in *Poverty and development into the 21st century,* ed. Tim Allen and Alan Thomas (Oxford: Oxford University Press, 2000), 23–40, at p. 23.
2 Henry Veltmeyer and Paul Bowles, "Critical Development Studies. An Introduction," in *The Essential Guide to Critical Development Studies*, ed. Henry Veltmeyer and Paul Bowles (London: Routledge, 2nd edition, 2021), 1–27; A.P. Thirlwall, "Development and Economic Growth," in *The Companion to Development Studies*, ed. Vandana Desai and Robert Potter (London and New York: Routledge, 3rd ed., 2014), 61–65.
3 Jósef Kovács, "The concept of health and disease," *Medicine, Health Care and Philosophy* 1 (1998): 31–39; Peter White, "The concept of diseases and health care in African traditional reli-

https://doi.org/10.1515/9783111015583-001

ficult to see but it is indirect, affecting the social determinants of health that shape the preconditions of health rather than health itself. This lack of unequivocal unidirectionality can complicate a precise analysis, for public health experts as much as for historians. As Derek Oddy observed in 1982, whilst many historians are happy to adopt the WHO definition in theory, for their research they nevertheless continue to measure "health" in predominantly negative ways, by studying changes in mortality and life expectancy.[4] In any case, improving socio-economic well-being and health has been one of the major drivers of human activities throughout history, and the changes that human populations have seen in these areas during the last two centuries go a long way towards explaining how recent history has resulted in the world of today, its benefits as well as its threats.

This volume aims at contributing to the scholarly debate mainly in two ways: by gathering contributions on the World Bank, India, Japan, China, Mongolia, Indonesia, Germany, Wales, Brazil, and Mexico it seeks to tease out the truly global character of the interactions between development and health. And by combining contributions on various forms of interactions – health policies with a developmental relevance as well as developmental policies with a health relevance – it seeks to speak to and, ideally, reconcile two different approaches to and understandings of the question and, thereby, two relatively separate strands of scholarship. These strands form the background for the contributions in this volume.

Development and health: The historical record

It is difficult to overstate the importance for global history of the unprecedented growth in wealth and in world population, both generally considered important components of development. Between 1820 and the end of the twentieth century, increases in global GDP and population were nothing short of spectacular.[5]

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gion in Ghana," *HTS Teologiese Studies/Theological Studies* 71, no. 3 (2015), Art. #2762, 7 pages. http://dx.doi.org/10.4102/hts.v71i3.2762; Arthur L. Caplan, H. Tristram Engelhardt, Jr., and James J. McCartney, eds., *Concepts of Health and Disease: Interdisciplinary Perspectives* (London: Addison-Wesley Publishing Company, 1981); Stefan Winkle, introduction to *Kulturgeschichte der Seuchen,* by Stefan Winkle (Düsseldorf/Zürich: Artemis & Winkler, 1997), ix–xxxvii.

4 Derek Oddy, "The health of the people," in *Population and society in Britain, 1850–1980*, ed. Theo Barker and Michael Drake (London: Batsford, 1982), 121–140, at p. 121.

5 Richard Zijdema and Filipa Ribeiro de Silva, "Life Expectancy since 1820," in *How was Life? Global Well-being since 1820*, ed. Jan Luiten van Zanden et al. (Paris: OECD Publishing, 2014), 101–116; Angus Maddison, *The World Economy* (Paris: OECD Publishing, 2006), 19.

Changes accelerated in the twentieth century, and over the course of the last 100 years (i. e. since about 1920), world population has increased approximately fourfold, life expectancy rose by about 30 years, effectively doubling, and global per capita GDP increased about sevenfold.[6] Substantial health improvements are also reflected in the impressive gains in average heights of both men and women in virtually all countries. The most marked increases between 1896 and 1996 were recorded among Iranian men (16.5 cm) and South Korean women (20.2 cm).[7] Nothing remotely similar had happened before, and unless some terrible calamity reduces world population, wealth, and health to levels known in earlier centuries, nothing similar seems likely to happen again. Recent history, therefore, clearly represents a historically exceptional period, an outlier in human history, a developmental peculiarity. Historians have been discussing for years why these changes happened, their drivers and repercussions, and whether, overall, they can be interpreted as something positive or negative.

The health improvements cited clearly command appreciation. Connecting economic with health data, Nobel Prize laureate Angus Deaton recently declared:

> The greatest escape in human history is the escape from poverty and death. For thousands of years, those who were lucky enough to escape death in childhood faced years of grinding poverty. Building on the Enlightenment, the Industrial Revolution, and the germ theory of disease, living standards have increased by many times, life spans have more than doubled, and people live fuller and better lives than ever before. The process is still going on.[8]

The late Hans Rosling, Swedish physician, professor of public health, and statistician, compared health and living standards of different countries at different times, pointing out, for instance, that living conditions in Sweden in the year of his birth – 1948 – were similar to those in Egypt in 2018, while at the time of birth of his grandmother, 1891, life expectancy in Sweden was similar to life expectancy in 2018 Lesotho.[9] By showing that only a few generations ago people in today's high-income countries were living at levels experienced by people in the poorest countries today, he strongly suggested that it was only a matter of

6 Max Roser, Esteban Ortiz-Ospina, and Hannah Ritchie, "Life Expectancy," *OurWorldInData.org*, 2013, accessed 20 May 2022, https://ourworldindata.org/life-expectancy; Max Roser, "Economic Growth," *OurWorldInData.org, 2013, accessed 20 May 2022,* https://ourworldindata.org/economic-growth.

7 NCD Risk Factor Collaboration (NCD-RisC), "A century of trends in adult human height," *eLife* 5 (2016), e13410, doi: 10.7554/eLife.13410. PMID: 27458798; PMCID: PMC4961475.

8 Angus Deaton, *The Great Escape. Health, wealth, and the origins of inequality* (Princeton: Princeton University Press, 2013), 23.

9 Hans Rosling, *Factfulness* (New York: Flatiron Books, 2018), 58.

time before people in Lesotho would repeat the development already experienced by those in Sweden and enjoy similar health and living standards. He also argued forcefully that the general view of the state of the world was too negative. Charles Kenny, senior fellow at the Center for Global Development, has similarly invoked health aspects as a measurement of developmental achievement. Based on vaccination rates and the increasing controllability of several debilitating diseases, he concluded that "things are getting better, everywhere."[10] Historian James Riley argued that the overall improvement in average life expectancy represented "the crowning achievement of the modern era, surpassing wealth, military power and political stability in import."[11]

A generally positive view also highlights ways in which socio-economic development and health have been mutually supportive. David Bloom and David Canning identified four different avenues through which improvements in health could contribute to economic development. In the first place, improvements in childhood survival rates have meant that more children get to live to ages at which they can be economically productive. Second, improvements in child health have also led to improvements in cognitive development and school attendance, with subsequent impacts on adult productivity. Third, "healthy workers lose less time from work due to ill-health and are more productive when working." Finally, the increase in adult survival prospects means that individuals have more incentive to save for their retirements and this, in turn, frees up more money for business investment.[12]

The existence of a mutually-beneficial relationship between improvements in health and in economic performance has been noted on several occasions. In 2011, Roderick Floud and his coauthors described a virtuous circle of "technophysio evolution" in which improvements in the nutritional status of one generation led to subsequent improvements in the life-chances of its successors (see also Figure 1). Although Floud and his coauthors identified a number of factors which might disrupt this process, they nevertheless concluded that "technophysio evolution has benefited, and will continue to benefit, the human condition"

10 Charles Kenny, *Getting Better: Why Global Development is Succeeding, and How We Can Improve the World Even More* (New York: Basic Books, 2011), x.

11 James C. Riley, *Rising life expectancy: a global history* (Cambridge: Cambridge University Press, 2001), 1.

12 David Bloom and David Canning, "Population health and economic growth," *Commission on Growth and Development Working Papers* 24 (2008): 1–2.

and that "further significant gains in height, infant mortality and life expectancy are likely to be possible."[13]

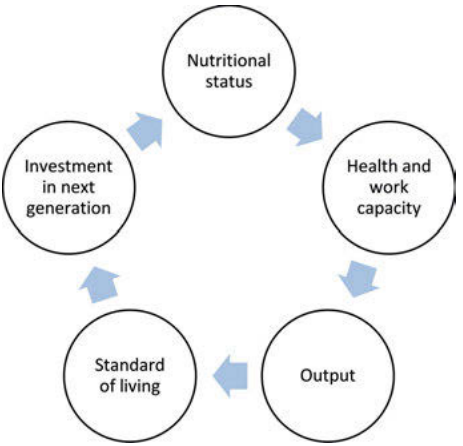

Figure 1: Technophysio evolution: a schema
Source: Derived from Roderick Floud, Robert Fogel, Bernard Harris, and Sok Chul Hong, *The changing body: health, nutrition and human development in the western world since 1700*, 3–4. Cambridge: Cambridge University Press, 2011. See also Bernard Harris, "Revisiting *The changing body*," Economic History Society blog, 11 October 2018 (https://ehsthelongrun.net/2018/10/11/revisiting-the-changing-body/).

This virtuous circle of nutrition, work, and standards of living can be disrupted by interactions with diseases and sudden changes in living conditions that can result from and/or contribute to this circle. These disruptions explain why the long history of humankind has not been a smooth, continuous succession of improvements but a line of development characterized by repeated jumps, contradictions, and setbacks. Historians musing about this interaction between development and health have often highlighted their ambiguous coevolution. Kenneth Kiple has pointed out that socio-economic developments generally considered positive have come with a health price, concluding that "human progress breeds disease, and has always done so."[14] Thus, the shift from nomadic to sedentary lifestyles, a prerequisite for urbanization, complex societies, and complex sci-

13 Roderick Floud, Robert Fogel, Bernard Harris, and Sok Chul Hong, *The changing body: health, nutrition and human development in the western world since 1700* (Cambridge: Cambridge University Press, 2011), 15–40 and 372–375.
14 Kenneth Kiple, preface to *Plague, Pox and Pestilence. Disease in History* by Kenneth Kiple (London: George Weidenfald & Nicolson, 1997), 6.

ence and art, gave humans at least three new diseases: anaemia (the result of a monotonous diet low in iron and of close contact with parasites), typhoid fever (the result of using drinking water from sources contaminated with human waste), and schistosomiasis (the result of using irrigation in early agricultural communities along the rivers Euphrates and Tigris, Nile, and the Yellow River).[15] The Columbian Exchange, conceptualized by Alfred Crosby, increased the supply of food and improved nutrition for large parts of the populations of Europe, Asia, and Africa, but also spread Old World pathogens, which devastated the indigenous populations of the New World.[16] In his 1976 book on *Plagues and Peoples*, William McNeill described human history from pre-Neolithic times to today as a constant struggle between human bodies and pathogens.[17] Similarly, Johan Mackenbach, writing about European health, conceptualized the health-development nexus as a dynamic system of constant co-evolution and adaptation:

> As a result of the drive for socioeconomic improvement, and the changes in behaviour associated with this drive, mankind is continuously confronted with new disease risks. However, because higher levels of development also bring higher living standards and a greater desire and capacity to control disease, after some time these disease risks decline again (but often to be replaced by new disease risks).[18]

The long-term development, therefore, would be determined by the degree to which the positive results of these development-health connections outweigh the negative ones.

This question of evaluating the overall record has provoked particularly heated discussions with regard to the recent and ongoing period of industrialization. In the first half of the nineteenth century, it is widely accepted that average mortality increased in Britain – the world's "first industrial nation"[19] – but explanations for this development continue to differ. Most historians would agree that mortality levels were higher in urban areas than in rural areas and

15 Kenneth Kiple, "Sickness and Sedentism," in *Plague, Pox and Pestilence. Disease in History,* ed. Kenneth Kiple (London: George Weidenfeld & Nicolson, 1997), 8–9.

16 Alfred W. Crosby, *The Columbian Exchange. Biological and cultural consequences of 1492* (Westport CT: Greenwood Publishing Group, 1972; Nathan Nunn and Nancy Qian, "The Columbian Exchange: A History of Disease, Food, and Ideas," *Journal of Economic Perspectives* 24, no. 2 (2010): 163–188.

17 William McNeill, *Plagues and Peoples* (Palatine: Anchor books, 2nd ed., 1998), 22.

18 Johan P. Mackenbach, *A History of Population Health. Rise and Fall of Disease in Europe* (Amsterdam: Brill/Rodopi, 2020), 51.

19 Peter Mathias, *The First Industrial Nation: The Economic History of Britain 1700–1914* (London: Methuen, 1969).

that the increase in the proportion of the population who were subjected to urban conditions caused average mortality levels to rise,[20] but Simon Szreter argued that there was also an absolute decline in life expectancy within these areas, and this led him to conclude that "economic growth entails critical challenges and threats to the health and welfare of the populations involved and does not, therefore, necessarily produce development."[21]

Although Szreter's arguments have been widely-cited, they have not gone unchallenged, and Romola Davenport has claimed that the impact of his "4Ds" of disruption, deprivation, disease, and death may have been exaggerated.[22] However, this debate also raises wider questions about the nature of development itself. Alan Thomas distinguished between "immanent" or unintentional development and "intentional" development. "Immanent development" implied a "spontaneous and unconscious ("natural?") process of development from within, which may entail destruction of the old in order to achieve the new." By contrast, intentional development "implies deliberate efforts to achieve higher levels in terms of set objectives" and "forms the deliberate policy and actions of states and development agencies."[23] Using this framework, Andrew Harmer and Jonathan Kennedy have argued that, over the course of the last two centuries, the process of immanent development "has resulted in massive inequalities between and within countries, as well as environmental destruction," and that

20 See e.g. Robert Woods, "The effects of population redistribution on the level of mortality in nineteenth-century England and Wales," *Journal of Economic History* 45 (1985): 645–651; Catalina Torres, Vladimir Canudas-Romo and James Oeppen, "The contribution of urbanization to changes in life expectancy in Scotland, 1861–1910," *Population Studies* 73 (1019): 387–404.

21 Simon Szreter, "Economic growth, disruption, deprivation, disease and death: on the importance of the politics of government growth for development," *Population and Development Review* 23, no.4 (1997): 693–728, at p. 693. See also Simon Szreter and Graham Mooney, "Urbanisation, mortality and the standard of living debate: new estimates of the expectation of life at birth in nineteenth-century British cities," *Economic History Review* 51, no. 1 (1998): 84–112; Simon Szreter, "Rapid economic growth and 'the four Ds' of disruption, deprivation, disease and death: public health lessons from nineteenth-century Britain for twenty-first century China," *Tropical Medicine and International Health* 4, no. 2 (1999): 146–152.

22 Romola Davenport, "Urbanization and mortality in Britain, c. 1800–50," *Economic History Review* 73 (2020): 455–485. See also Simon Szreter and Graham Mooney, "Scarlet fever and nineteenth-century mortality trends: a reply to Romola Davenport," *Economic History Review* 74 (2021): 1087–1095; Romola Davenport, "Nineteenth-century mortality trends: a reply to Szreter and Mooney," *Economic History Review* 74 (2021): 1096–1110.

23 Alan Thomas, "Meanings and views of development," in *Poverty and development into the 21st century,* ed. Tim Allen and Alan Thomas (Oxford: Oxford University Press, 2000), 23–48, at p. 29.

efforts to address these effects by means of intentional development policies have been largely unsuccessful.[24]

Such a clearcut division between "spontaneous" and "intentional" development seems difficult to maintain in view of the extent to which any type of health or economic development involves combinations of individual decisions, social contexts, and political frameworks and usually comes with intended as well as unintended (and unexpected) consequences. The invention of the steam engine was hardly unintentional, but it set in motion a wealth of consequences for today and future centuries that could not be foreseen, let alone intended in the eighteenth century.

Considering the improvements in general health standards which have undoubtedly occurred over the last two centuries, a one-sided focus on inequality and failures may be excessively pessimistic. Nevertheless, there is no denying that the development of the last two centuries has come with substantial health differentials. In 1999, average life expectancy in Africa was almost exactly two-thirds of western European levels.[25] Two decades later, overall health outcomes had improved but differentials remained: life expectancy at birth was 84.6 years in Japan but only 53.3 years in the Central African Republic.[26] In practice, these data are largely dependent on differences in infant and child mortality. In 2019, infant mortality in Japan was 1.8 per thousand but 81 per thousand in the Central African Republic, down from 4.6 per thousand and 115.5 per thousand respectively in 1990.[27] In other words, there has been improvement in the midst of continuing, deadly differences. This finding is revealing not only about infant health in a narrow sense. Infant mortality rates reflect many factors of how human communities are organized including access to healthcare, living conditions, social support for disadvantaged groups, health and social infrastructures resulting from politically-determined choices regarding the generation and distribution of national and international incomes.[28]

Views about the reasons for these health differentials differ. One of the most vehement areas of debate has involved the origins and nature of health inequal-

24 Andrew Harmer and Jonathan Kennedy, "Global health and international development," *The Oxford Handbook of Global Health Politics*, ed. Colin McInnes, Kelley Lee, and Jeremy Youde (Oxford: Oxford Handbooks Online, 2018), 2–3.

25 Angus Maddison, *The world economy. Vol. 1. A millennial perspective* (Geneva: OECD, 2003), 30 and 32.

26 Roser, Ortiz-Ospina, and Ritchie, "Life Expectancy" (2013).

27 The World Bank, Mortality rate, infant (per 1000 live births), n.d., accessed 28 January 2022, https://data.worldbank.org/indicator/SP.DYN.IMRT.IN.

28 Vaclav Smil, *Numbers don't lie* (Dublin: Penguin Books, 2021), 9–10.

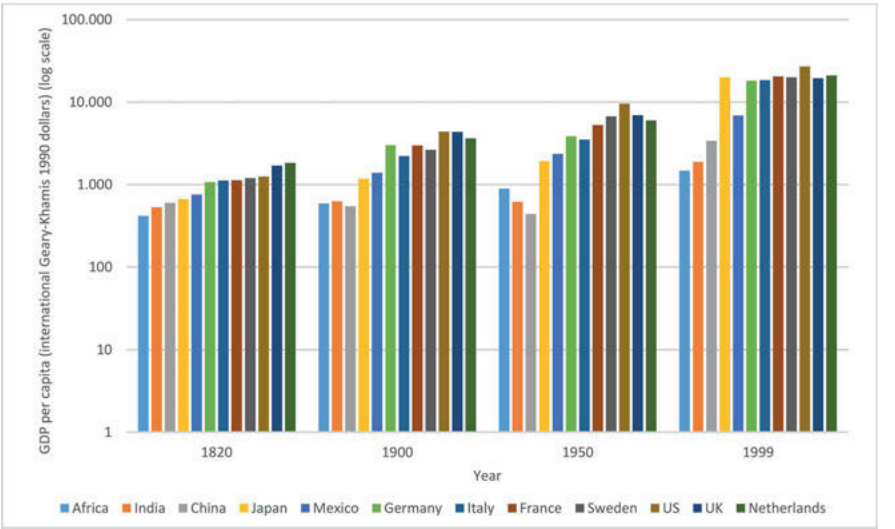

Fig 2A: GDP per capita (1990 international dollars).
Source: Angus Maddison, The World Economy. Vol. 2. Historical Statistics. Paris: OECD 2003, 642.

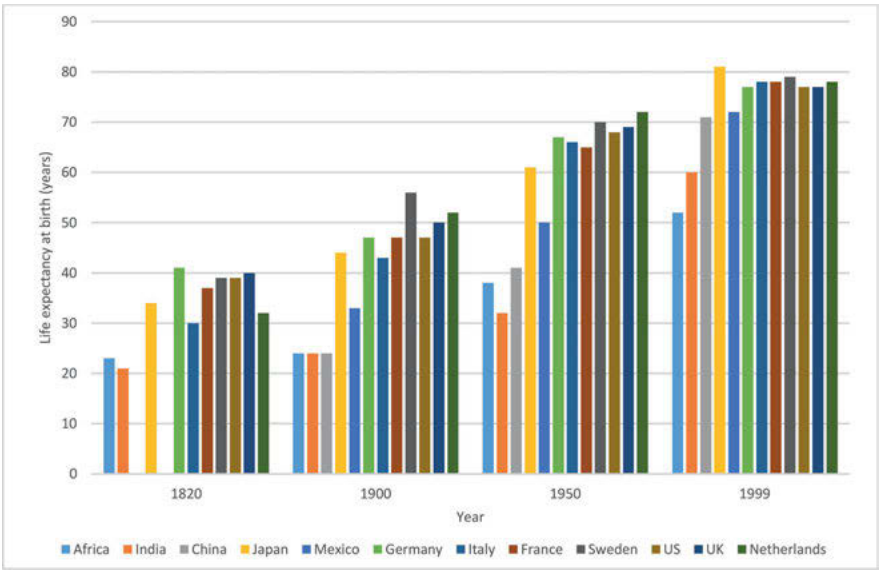

Fig 2B: Life Expectancy at birth.
Source: Angus Maddison. The World Economy. Vol. 1. A Millennium Perspective. Paris: OECD 2001, 32.

ities. Data limitations make it difficult to study international inequalities in health over long periods of time but the available evidence suggests that there has been a broad, though not universal, connection between international variations in GDP and international variations in life expectancy since at least 1820 (see Figures 2 A and 2B). As the graphs demonstrate, despite clear health improvements worldwide, this relationship has remained remarkably constant, and inequality of health outcomes remains a powerful indictment of the failings of modern development.

Harmer and Kennedy blame colonialism, capitalist globalization, and neoliberalism for undermining the health of developing societies.[29] By contrast, Angus Deaton has argued that recent health inequalities reflect the variable pace of health improvements, given that all improvements in health knowledge or medical practice would initially benefit the fortunate few before spreading more widely.[30] This perspective ties into debates on the reasons for health improvements and their relation to economic growth. James Riley argued that "social development and social growth" were more important than economic growth in promoting improvements in health in 12 low-income countries during the twentieth century. The key elements of this approach included the development of low-cost strategies to address public health problems, an emphasis on prevention rather than treatment, and "the participation of ordinary people in the effort."[31]

Riley's understanding of the causes of health improvement was influenced, at least in part, by an earlier debate between the social epidemiologist Thomas McKeown and the demographer Samuel Preston. In a series of publications between the 1950s and 1970s, McKeown argued that the decline of mortality in Britain and other western European countries was largely attributable to improvements in diet and the "standard of living," although he also attributed a significant, if secondary, role to sanitary improvements.[32] By contrast, Preston argued that, even though low income countries tended to experience poorer health than higher income countries, improvements in health during the twentieth century owed more to improvements in health technologies than improvements in income.[33]

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29 Harmer and Kennedy, "Global health and international development," 4–7.

30 Deaton, *Great Escape*, 18–31.

31 James Riley, *Low income, social growth and good health: a history of twelve countries* (New York: Milbank Memorial Fund, 2008), 172–173.

32 See e.g. Thomas McKeown, *The modern rise of population* (London: Edward Arnold, 1976).

33 Samuel Preston, "The changing relation between mortality and level of economic development," *Population Studies* 29 (1975): 231–248.

Over the last 40–50 years, Preston's analysis of the relationship between improvements in national income and improvements in health standards has achieved almost canonical status. In a report for the World Bank in 2008, Bloom and Canning argued that "overall, Preston's original view of the determinants on health seems to hold" and that, as a result, "health interventions can improve population health, without the need for prior improvement in income."[34] However, they did not exclude the impact of economic development on public health altogether. As they themselves observed, "to the extent that health follows income, income growth should be the priority for developing countries."[35]

However, the fact that income growth does not usually benefit all people similarly at the same time comes with problems of its own, including for health. The record on the relation between economic growth and income inequality is contested. In 1955, Simon Kuznets suggested that, even though inequality tended to increase during the early stages of modern economic growth, it declined subsequently. He attributed this to the redistributive effects of legislative intervention and "political decisions," allied to those of demographic change, technological change, and the increasing importance of the service sector.[36] Kuznets' theory was based on an extremely thin set of data and has since been the object of lively debate, as several analyses of empirical data have come to different conclusions.[37] Most prominently, Thomas Piketty has argued that the decline in inequality which Kuznets had identified was largely attributable to the specific effect of the First World War and that inequality has resumed its upward path over the last 40 years.[38]

Regardless of the question of what drives economic inequality, there is considerable evidence that it is detrimental to health. This relationship was high-

34 David Bloom and David Canning, "Population health and economic growth," *Commission on Growth and Development Working Papers* 24 (2008): 3–4.

35 Bloom and Canning, "Population health," 1–2.

36 Simon Kuznets, "Economic growth and income inequality," *American Economic Review* 45 (1955): 1–28; see esp. pp. 9–11. In calling for more research, he also acknowledged that "this paper is perhaps 5 per cent empirical information and 95 per cent speculation, some of it possibly tainted by wishful thinking" (26).

37 John Luke Gallup, "Is there a Kuznets Curve," Portland State University Paper, 25 September 2012, https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.703.1103&rep=rep1&type=pdf; Diego Martínez-Navarro, Ignacio Amate-Fortes, and Almudena Guarnido-Rueda, "Inequality and development: is the Kuznets curve in effect today?" *Economia Politica* 37 (2020): 703–735, https://doi.org/10.1007/s40888-020-00190-9; Çinar Baymul and Kunal Sen, "Kuznets Revisited: What Do We Know about the Relationship between Structural Transformation and Inequality?" *Asian Development Review* 36, no. 1 (2019): 136–167, https://doi.org/10.1162/adev_a_00126.

38 Thomas Piketty, *Capital in the 21st century* (Harvard, MA: Belknap, 2014), 13–15.

lighted in 1977, when the UK government initiated a wide-ranging enquiry into the extent and causes of health inequality, as recounted by Marcos Cueto in this volume. The resulting report demonstrated that there were systematic differences in the life-chances of different sections of the population. Those who were in the poorest socio-economic groups experienced higher levels of disease and shorter lives than the better-off.[39] In 1998, two British epidemiologists, Richard Wilkinson and Michael Marmot, used the phrase "social determinants of health" to explain these differences.[40] Marmot subsequently distinguished between biological markers of disease, such as raised cholesterol levels and high blood pressure, and the behavioral choices, such as poor diets and smoking, which lay behind them. However, he also recognized the need to examine the factors which underpinned these behaviors or, in his terms, the "causes of the causes." These included a range of psychosocial factors, such as feelings of inadequacy and powerlessness, as well as material factors, such as poverty, unhealthy living conditions, and adverse environments.[41]

However, it is unclear whether or to what extent these findings can explain long-term differentials. Some writers have argued that the emergence of socially determined difference in health is a comparatively recent phenomenon. Kunitz and Engerman found that a social gradient in mortality only emerged in Europe after previously-epidemic diseases became endemic.[42] Others have claimed that health differences based on wealth only became apparent in many countries in the twentieth century, and reflected the interaction between social class and behavior, and the increasing importance of behavioral factors in the causation of disease.[43] At any rate, the perception that parts of the world or of a given society suffered worse health than they could or should has formed an important driver

39 Peter Townsend and Nick Davidson, eds., *Inequalities in health: the Black report* (Harmondsworth: Penguin, 1982).

40 Richard Wilkinson and Michael Marmot, eds., *The solid facts: social determinants of health* (Geneva: World Health Organization, 1998).

41 Michael Marmot, introduction to *Social determinants of health,* ed. Michael Marmot and Richard Wilkinson (Oxford: Oxford University Press, 2006), 1–5. For a recent account of the ways in which the impact of these causes was reinforced during the first year of the Covid pandemic, see Michael Marmot, Jessica Allen, Peter Goldblatt, Eleanor Herd, and Joana Morrison, *Build Back Fairer: The COVID-19 Marmot Review. The Pandemic, Socioeconomic and Health Inequalities in England* (London: Institute of Health Equity, 2020).

42 Stephen Kunitz and Stanley Engerman, "The ranks of death: secular trends in income and mortality," *Health Transition Review* 2, Supplementary Issue (1992): 39–46; see esp. p. 33.

43 Tommy Bengtsson and Frans van Poppel, "Socioeconomic inequalities in death from past to present: an introduction," *Explorations in Economic History* 48 (2011): 343–356.

of policies specifically designed to improve health, pushing to action governments, NGOs, and international organizations.

National governments began taking larger roles in the lives of their citizens in the wake of industrialization and rising nationalism, as ill health among workers became a visible threat to members of the urban middle classes and good population health became seen as a sign of political strength and national prowess. Karl Marx argued that one of the main reasons why early British factory owners supported the introduction of factory legislation was because they saw this as a way of protecting not only the health but also the productive capacity of their workforces.[44] Beginning in Europe around 1900, all industrialized states invested substantially in public health in their own countries.[45] Some health related policies spread around the world as colonial powers enacted health policies in colonial or semi-colonial settings, whereby the focus was primarily on safeguarding the well-being of white settlers and officers. Measures were often directed at diseases to which non-locals were particularly susceptible rather than systemic changes that would improve the health and living standards of the population as a whole.[46] However, during the interwar period, a number of private and inter-governmental organizations also began to play important roles in the dissemination of health policies. Since World War II, these institutions have constituted the center of global development work.[47]

These efforts form the context for the second strand of historiography of health and development, in which development is understood as the process and result of policies designed to improve socio-economic living conditions in a given area, though most typically it is understood as efforts by actors from the Global North to accelerate industrialization and other forms of modernization in countries of the Global South. For many historians of development, their object of analysis is that process.

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44 Karl Marx, *Capital: A Critique of Political Economy*, Vol. 1 (Harmondsworth: Penguin, 1976), 344–348.

45 Charles Webster, "Medicine and the Welfare State 1930–1970," in *Companion to Medicine in the Twentieth Century*, ed. Roger Cooter and John Pickstone (London: Routledge, 2000), 125–140.

46 Randall Packard, *A History of Global Health* (Baltimore: Johns Hopkins University Press, 2016), 22.

47 Iris Borowy, "Health and Development," in *Routledge Handbook for the History of Development*, ed. Corinna Unger, Iris Borowy, and Corinne Pernet (London: Routledge, 2022), 71–86.

Development and health: the political dimension

People and institutions active in global development have routinely included health in their plans. In 1949, President Truman's inaugural address (a text widely accepted as foundational for international development efforts) justified establishing a development assistance program with the claim that half the world's population had inadequate food and were "victims of disease."[48] Twenty years later, the Commission on International Development (better known as the Pearson Commission) declared that there was probably no other area in which social improvement had been realized that was "of such direct benefit to the individual in developing countries as that of public health."[49] Similarly, in 1987, the Brundtland Commission, which established the concept of sustainable development, stated flatly that "good health is the foundation of human welfare and productivity."[50] Comparable statements were included in the health section of Agenda 21, the report of the 1992 UN Conference on Environment and Development.[51] Several development indexes such as the Human Development Index (UNDP), the Happy Planet Index (New Economics Foundation) or the Better-Life-Index (OECD) have included life expectancy in their calculations;[52] and the Millennium Development Goals, established after the Millennium Summit of the year 2000, dedicated three out of eight goals completely to health issues.[53] Between 2010 and 2015, approximately US$36.4 billion was spent annually on development assistance for health worldwide, of which a disproportionate share went to MDG-related health topics.[54]

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48 Harry Truman, Inaugural Address, 30 January 1949, accessed 5 August 2020, https://www.bartleby.com/124/pres53.html.

49 Commission on International Development, *Partners in Development* (London: Pall Mall Press, 1969), 40.

50 World Commission on Environment and Development, *Our Common Future* (Oxford: Oxford University Press, 1987), 109.

51 The Earth Summit: The United Nations Conference on Environment and Development (UNCED) (London/Dordrecht/Boston: Graham & Trotman / Martinus Nijhoff, 1993), § 6.2., 168.

52 Human Development Index, http://hdr.undp.org/en/content/human-development-index-hdi; Happy Planet Index, http://happyplanetindex.org/about#how; Better Life Index, http://www.oecdbetterlifeindex.org/#/11111111111, all accessed 5 August, 2020.

53 Millennium Development Goals, accessed 2 July 2020, https://www.un.org/millenniumgoals/environ.shtml.

54 Joseph Dieleman et al., "Development assistance for health: past trends, associations, and the future of international financial flows for health," *The Lancet* 387, no. 10037 (18 June 2016): P2536–2544, doi: https://doi.org/10.1016/S0140-6736(16)30168-4.

Consequently, many historians of health have researched the evolution of international health policies as part of international assistance efforts. The Rockefeller Foundation, as one of the largest actors in health assistance programs of the first half of the twentieth century, has attracted substantial interest. Beginning with anti-hookworm campaigns in the Southern states of the US, the Rockefeller Foundation became a major international actor in the 1920s. It conducted campaigns against a series of infectious diseases and financed the establishment of public health schools in many countries. When its work ended in 1951, it was active in over 80 countries. Researchers have been fascinated by, and have debated, how (or whether) its work combined elements of philanthropy, humanitarianism, US imperialism, and internationalism.[55] Among other ways in which it left its mark on twentieth century health development, it helped finance and also cooperated with the League of Nations Health Organisation, which followed a more social approach to health work, especially in response to the Great Depression. Its programs on health protection during economic crisis, housing, nutrition, and rural health set a precedent for focusing on the preconditions of health rather than on disease. In 1931 it organized a conference on rural health in Europe, followed six years later by a similar event in Bandoeng, Dutch East Indies. Both addressed topics ranging from sanitation to insurance schemes and community cooperation, which provided a model for later agendas that connected health to social developments.[56]

After World War II, international organizations, above all the United Nations, the World Health Organization, and, later, the World Bank, continued efforts aimed at global development and global health. While motivations changed, subsequent interventions conducted by Northern governments or international organizations in low-income countries in the global South shared some of the weaknesses of the colonial traditions from which they emerged: they were frequently developed far from the country they were designed for, they usually

55 Marcos *Cueto, Missionaries of Science: The Rockefeller Foundation and Latin America* (Indiana University Press, 1994); Anne-Emanuelle Birn, "Backstage: the relationship between the Rockefeller Foundation and the World Health Organization, Part I: 1940s–1960s," *Public Health*, 128, no. 2 (2014): 129–140; Josep L. Barona, *The Rockefeller Foundation, Public Health and International Diplomacy, 1920–1945* (London: Pickering & Chatto, 2015); Anne-Emannuelle Birn, *Marriage of Convenience: Rockefeller International Health and Revolutionary Mexico* (Rochester: Rochester University Press, 2006).

56 Iris Borowy, *Coming to Terms with World Health. The League of Nations Health Organisation* (Peter Lang: Verlag, Berlin, 2009), 325–460; Theodore Brown and Elizabeth Fee, "The Bandoeng Conference of 1937: A Milestone in health and Development," *American Journal of Public Health* 98, no.1 (2008): 42–43; Thelma Narayan, "Alma Ata and Social Movements," *Global Social Policy*, 8 (2008): 158–161, 158.

privileged biomedical treatment over the improvement of basic social conditions and Western science over local knowledge, decisions were often made at times of crisis with a focus on swift reaction rather than long-term planning, and if social development was considered it was usually with a view to improving the economic development of the area.[57] However, as various historians of health have pointed out, these organizations also became central places of debate on how health and development interlocked and how they could be improved. Thereby, they became rallying points for experiments with health as parts of social projects, ranging from modernization to nation-building or socialism.[58]

By contrast, although health clearly played an important role in development activities, many historians of development have paid relatively little attention to it while highlighting other aspects such as North-South power relations, notably the role of the United States, neo-colonialism, neo-liberalism, the role of institutions, development aid, raw materials, and knowledge. Many accounts of development taking this approach devote little – if any – space to health.[59] This is true both for accounts that take a comparatively positive view of development and those that flatly reject it.[60] There has, however, been a certain body of literature addressing health in international development.

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57 Randall Packard, *A History of Global Health* (Baltimore: Johns Hopkins University Press, 2016), 8–9.

58 Dorothy Porter, "The Social Contract of Health in the Twentieth and Twenty-First Centuries: Individuals, Corporations and the State," in *Shifting Boundaries of Public Health*, ed. Susan Gross Solomon, Lion Murard, and Patrick Zylberman (Rochester: Rochester University Press, 2008), 45–60; Zeljko Dugac, "New Public Health for a New State: Interwar Public Health in the Kingdom of Serbs, Croats, and Slovenes (Kingdom of Yugoslavia) and the Rockefeller Foundation," in *Facing Illness in Troubled Times*, ed. Iris Borowy and Wolf D. Gruner (Frankfurt a. M.: Peter Lang Verlag, 2005), 277–304; Sunil Amrith, *Decolonizing International Health. India and Southeast Asia 1930–1965* (Basingstoke: Palgrave Macmillan, 2007). Francesca Bray, "The Chinese Experience," in *Companion to Medicine in the Twentieth Century*, ed. Roger Cooter and John Pickstone (London and New York: Routledge 2000), 719–738.

59 See, for instance, David C. Engerman, Nils Gilman, Mark H. Haefele, and Michael E. Latham, *Staging Growth: Modernization, Development, and the Global Cold War* (Amherst: University of Massachusetts Press, 2003); Corinna Unger, *International Development: A Postwar History* (London: Bloomsbury, 2018); Sara Lorenzini, *Global Development: A Cold War History* (Princeton: Princeton University Press, 2019); Amy C. Offner, *Sorting out the Mixed Economy: The Rise and Fall of Welfare and Development States in the Americas* (Princeton: Princeton University Press, 2019); Ian Goldin, *Development. A very short introduction* (Oxford: Oxford University Press, 2nd ed 2018).

60 Olav Stokke, *The UN and Development. From Aid to Cooperation* (Bloomington and Indianapolis: Indiana University Press, 2009); Arturo Escobar, *Encountering Development. The Making and Unmaking of the Third World* (Princeton: Princeton University Press, 1995); Gilbert Rist, *The*

In a book that subscribes emphatically to the view of development as a post-World War II invention, Amy Staples included the World Health Organization in the *Birth of Development*, her study of three international organizations that established an infrastructure of development as a global commitment.[61] Some other publications have specifically addressed development assistance in the health sector, pointing out its ambiguity between foreign policy and humanitarian objectives.[62] Interest has focused disproportionately on large-scale health campaigns. The historian Randall Packard has dedicated several publications to the connection between development and malaria and the unsuccessful WHO efforts to eradicate the disease.[63] Similarly, Thomas Zimmer and Erez Manely, in contributions to edited volumes about the history of development, jumped from classic accounts of the beginnings of international health cooperation to analyses of WHO eradication campaigns of malaria and smallpox, respectively.[64]

History of Development: From Western Origins to Global Faith (London and New York: Zed Books, 1997).

61 Amy Staples, *The Birth of Development* (Kent: Kent State University Press, 2006). The other two organizations were the World Bank and the Food and Agriculture Organization, FAO.

62 Adam Szirmai, *Socio-economic Development* (Cambridge: Cambridge University Press, 2nd ed., 2015), 199–236; Kristin Ingstad Sandberg and Steinar Andresen, "From Development Aid to Foreign Policy: Global Immunization Efforts as a Turning Point for Norwegian Engagement in Global Health," *Forum for Development Studies* 37, no. 3 (2010): 301–325, doi: 10.1080/08039410.2010.506222; Walter Bruchhausen and Iris Borowy, "Development Aid and Solidarity World. East and West German Health Cooperation with Low-Income Countries, 1945–1970," in Special Issue "History and Global Health," *Gesnerus. Swiss Journal of the History of Medicine and Sciences* 74, no. 2 (2017): 173–187; Walter Bruchhausen, "Health Care between Foreign Politics and Humanitarian Neutrality. Medical Emergency Aid from the two German States before 1970," *Social History of Medicine* 32, no. 4 (2019): 819–842.

63 Randall M. Packard and Peter J. Brown, "Rethinking health, development, and malaria: Historicizing a cultural model in international health," *Medical Anthropology* 17, no. 3 (1997): 181–194, doi: 10.1080/01459740.1997.9966136; Randall Packard, "'Roll Back Malaria, Roll in Development'? Reassessing the Economic Burden of Malaria," *Population and Development Review* 35 (2009): 53–87; Randall Packard, "Malaria Dreams: Postwar Visions of Health and Development in the Third World," *Medical Anthropology* 17, no. 3 (1997): 279–296.

64 Thomas Zimmer, "In the Name of World Health and Development: The World Health Organization and Malaria Eradication in India, 1949–1970" in *International Organizations and Development, 1945–1990*, ed. Marc Frey, Sören Kunkel, and Corinna Unger (London: Palgrave Macmillan, 2014), 126–149; Erez Manela, "Smallpox and the Globalization of Development," in *The Development Century. A Global History*, ed. Stephen Macekura and Erez Manela (New York: Cambridge University Press, 2018), 83–103.

Thus, overall, while this focus on the role of health in development appears to be increasing, it is still limited and tends to target large campaigns against specific diseases rather than efforts to improve health more broadly.

Studies focusing on the Global South and written by authors from that area are still relatively few. The dominant theme, so far, seems to be how local communities and health workers negotiated their efforts with those influences from the outside, mostly from the Global North, be they repressive or benign. Thus, some historians have begun analyzing how, in large parts of the world, communities and policy makers responded to evolving landscapes of (post-)colonial power structures, creating tensions between indigenous and foreign concepts of society and health as well as rapidly changing global knowledge. Sokhieng Au's case study on French Colonial Cambodia shows how, as colonial authorities tried to impose their views of medicine and health on local populations, they would invariably clash with a variety of local beliefs and understandings, resulting in admixtures, coexistences, and hybrid forms.[65] For societies in Southeast Asia, modernization included changes in hospital care and declining mortality rates but also the arrival of new health actors as well as new health threats such as smoking.[66] In this context, Sunil Amrith has demonstrated how health work in India in the twentieth century incorporated elements of nationalism and internationalist health cooperation, addressing competing notions of "modernity" and "backwardness."[67] Similarly, Chinese communities, in the mainland as well as in other parts of Asia, needed to negotiate traditional versus new concepts of health, progress, and wellbeing.[68] Perhaps most need for research on the interaction of health and development lies in Africa, which has seen some of the smallest improvements in health standards over the course of the last century, and the difficulties associated with the pursuit of health and development in Africa are especially challenging.[69] Much to our regret, and despite real efforts, Africa is also missing from this volume.

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65 Sokhieng Au, *Mixed Medicines. Health and Culture in French Colonial Cambodia* (Chicago: University of Chicago Press 2011).

66 Tim Harper and Sunil S. Amrith, eds., *Histories of Health in Southeast Asia: Perspectives on the Long Twentieth Century* (Bloomington, IN: Indiana University Press, 2014).

67 Sunil Amrith, *Decolonizing International Health. India and Southeast Asia 1930–1965* (Basingstoke: Palgrave Macmillan, 2007).

68 Angela Ki Che Leung and Charlotte Furth, eds., *Health and Hygiene in Chinese East Asia* (Durham and London: Duke University Press, 2010).

69 According to Bentham et al., "there was little change in adult height in some sub-Saharan African countries and in South Asia over the century of analysis." See NCD Risk Factor Collaboration (NCD-RisC), "A century of trends in adult human height," *eLife* 5 (2016), e13410, doi: 10.7554/eLife.13410. PMID: 27458798; PMCID: PMC4961475. Maddison estimated that average

To the best of our knowledge this is the first collection centrally dedicated to the interactions between development and health. By gathering 11 contributions from nine countries in three continents as well as two international organizations it explores how negotiating health and development has been a ubiquitous struggle throughout the twentieth century. The cases do not fall neatly into either of the two paradigms described: they are neither all concerned with economic growth, nor with development aid or North-South relations. Instead, their contexts differ widely: the chapters on Wales, Japan, Brazil, and China address entirely domestic efforts, while those on Mexico, Mongolia, Germany, Indonesia, and India involve interactions between individual countries and external actors, though the circumstances varied greatly. Internal actors included local administrators (in Wales), the Roman Catholic church (in Brazil), and engineers (in Japan). The external actors could be international organizations (such as UNICEF or the World Health Organization), or a powerful neighboring country (as in Ana Mariá Carillo's study about Mexican policies near its border to the United States) or European doctors (as in the chapter on Indonesia by Uswatul Chabibah, Sudirman Nasir and Hans Pols).

In all cases, population health was considered a tool and/or an integral component of the overall development of the nation towards a desired, supposedly better state. The specific goals differed: they included political, economic, and medical independence (Indonesia, India); higher living standards and locally adapted modernization (Wales, Japan); increased productivity and national rejuvenation (Brazil, China, Mongolia); and the reorganization of society along racial (and racist) lines (Nazi Germany). Most, if not all, of the actors involved perceived health as more than "just" healthy people but as part of a larger process that would achieve some form of collective goal, and they all struggled with the challenge of reconciling the demands of population health and targeted socio-economic changes. Presented in broadly chronological order, these case studies demonstrate the broad conceptual similarities of these efforts as well as the profound differences in implementation.

In his paper, Keir Waddington describes the rather disparaging ways in which central government officials discussed the "backward" characteristics of rural areas and the contested history of efforts to improve public health in rural Wales in the late nineteenth century. This is probably the only paper

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life expectancy in Africa at the end of the twentieth century was 14 years lower than the global average. Angus Maddison, *The world economy. Vol. 1. A millennial perspective* (Geneva: OECD, 2003), 32; Irene Akua Agyepong et al., "The path to longer and healthier lives for all Africans by 2030: the *Lancet* Commission on the future of health in sub-Saharan Africa," *Lancet*, 390, no. 10114 (2017): 2803–2859.

which makes an explicit attempt to examine the history of public health "from below." It shows how the initiatives of rural communities led to local improvements in line with rural requirements, which must be evaluated in their own terms rather than through the lens of necessarily urban forms of development. Ana Mariá Carillo describes how, almost at the same time, Mexican authorities had to keep the health of their own citizens as well as those of the US in mind while engaging in the modernization of their country. Efforts focused on yellow fever which was only one of a large number of diseases causing premature mortality in late-nineteenth and early-twentieth century Mexico, but the government was forced to pay particular attention to it in order to placate its American neighbor. Structural improvements, therefore, followed a foreign policy logic as much as the exigencies of modernization and health protection.

Uswatul Chabibah, Sudirman Nasir, and Hans Pols analyze how Indonesian doctors and scientists negotiated concepts of health-related development stretching over a century between the 1880s and 1980s. Their debates evolved under the influence of colonial power relations, which were reflected in unequal access to education, and changing political contexts, as Indonesia shifted from Dutch rule to Japanese occupation to independence. These circumstances meshed with domestic discussions on what constituted progress and modernity. These debates entailed questions about the relative weight of university knowledge and broad-based horizontal approaches to healthcare, all facing the same expectation that improved health and development would (and should) strengthen the nation.

The relationship between health and modernity also plays an important role in Vsevolod Bashkuev's analysis of the newly-formed Union of Soviet Socialist Republics' efforts to combat sexually-transmitted diseases, and secure broader improvements in maternal and child health, in Mongolia. As Bashkuev demonstrates, these efforts were motivated by a complex mixture of factors, including a traditional desire to prevent the spread of cross-border infections, an interest in the use of health reforms to promote Soviet geopolitical ambitions, and a wish to demonstrate the superior wisdom of both scientific and socialist modernity.

Health policies also played a central role in both the internal and external policies of Nazi Germany. As Sabine Schleiermacher argues, the primary aim of Nazi health policy was to maintain and enhance the health of the German "racial corpus" but, following the outbreak of the Second World War, this became linked to two other policy imperatives. The first was to maintain health standards for the majority of the population in occupied countries, such as Poland, in order to prevent the spread of infection into Germany and ensure a supply of healthy workers. The second was the policy of segregating and isolating these countries' Jewish populations as a prelude to extermination. These contradictory demands

became more urgent when the war created a need for Germany to "import" workers from the occupied territories of eastern Europe in order to compensate for the loss of German workers who had been conscripted by the Wehrmacht. Her paper also illustrates the complicity of health officials in the implementation of these measures.

The end of the Second World War led to a new emphasis on the importance of health as an integral part of the process of reconstruction. This was true of both "developing" and "developed" countries but there were also disagreements as to the best way of achieving health improvements. On the one hand, many authorities believed that health deficits were rooted in underlying patterns of economic and social disadvantage; on the other hand, there were also those who believed these problems could be addressed more effectively by targeted therapeutic assaults on specific diseases. In his paper, Niels Brimnes shows how these debates played out in India between *circa* 1946 and 1957. He pays particular attention to the threats posed by tuberculosis and malaria, and shows how the emphasis of health policy changed over the course of the period from an initial focus on questions of poverty to a much sharper focus on the diseases themselves. This tension between "horizontal" and "vertical" approaches to health improvement has been a recurring theme of international health discourses.

In Brazil, Gilberto Hochman shows how the Catholic Church became more closely associated with campaigns for economic and social reform in the impoverished Northeastern part of the country as part of its efforts to keep people on the land – partly because it saw urbanization as a threat to social order. His chapter analyzes how the modernization policies of the government under Juscelino Kubitschek became aligned with those of the Catholic Church, which found itself harboring competing strands of developmentalism. While the official church highlighted limited local reforms that would uphold the existing social order, a more radical faction, exemplified by Bishop Dom Hélder Camara, drew a connection between rural poverty and urban favelas, calling for changes on a larger scale. Health was perceived as both a cause and an effect of poverty and underdevelopment.

Xun Zhou provides another example of the difficult relation between health and development under politically extreme conditions. The conviction of Mao Zedong, head of the Chinese Communist Party (CCP), that the successful revolution and the prosperity of the country depended on improving population health turned health strategies into the cornerstone of national policies for over 30 years. One of the central elements was a large-scale schistosomiasis eradication campaign in the 1950s, which eventually rid the Chinese people of a widespread disease but at immense financial, environmental, social, and also health cost.

Efforts to eradicate pathogen-carrying snails involved extensive land reclamations, use of toxic chemicals, loss of aquatic life, flooding, and pollution-related illnesses. The analysis shows that unrelenting political pressure to achieve a declared goal prevented critical discussions and early corrective measures. In fact, the overlap with the Great Leap Forward, another gigantic development campaign, obstructed positive results and exacerbated the negative outcomes.

By comparison, challenges in Japan around that time were far less tumultuous, though conceptually no less fascinating. Marta Szczygiel suggests that the association between health and development, or modernity, is not simply about the achievement of better health standards; it is also about the technologies associated with them. A case in point is the use of sewerage systems and the development of flush toilets, widely accepted as a marker of modern life, whose introduction in Japan was, however, remarkably late. Her paper explores the reasons for the persistence of more traditional methods of waste disposal in Japanese cities up until the end of the 1980s. These considerations call into question the shift towards flush toilets as an inevitable development without alternative, and also its relation to population health.

Turning from national to international contexts, Martin Gorsky and Chris Sirrs revisit the much-criticized structural adjustment programs imposed by the World Bank and the International Monetary Fund on low-income countries, which demanded, among other aspects, the opening of markets, an increased role for the private sector and the reduction of state expenditures, including for public healthcare. These measures objectively diminished access to healthcare services to the detriment of population health, especially for the poor. Their analysis adds nuance and highlights longer term continuities and compatibilities with widespread currents of contemporary international thought. After reviewing how the World Bank shifted from rejecting investments in health projects as beyond its remit to embracing health as a relevant component of development, they identify a combination of factors as underlying the embrace of structural adjustment, notably the US turn towards neoliberalism, general enthusiasm for the private economy after the collapse of Soviet Communism, and a relatively restricted disputational space from which relevant experts came and in which they moved.

As Marcos Cueto demonstrates, growing disillusionment with years of neoliberal health practices gave rise to two international health proposals that both emerged in 2005 at the World Health Organization: Social Determinants of Health (SDH) and Universal Health Coverage (UHC). The former built on research on health inequities that had been conducted mainly in Britain. It led to the creation of a Commission on Social Determinants of Health whose final report, published in 2008, found that the benefits of economic globalization

were good but dramatically uneven, favoring the already rich and creating new social disparities. It recommended far-reaching social reforms that generated a lot of international interest. However, WHO leadership soon shifted its attention to an approach to health policies that privileged the development of universal health insurance as a way of improving access to medical care. By 2009, work towards Universal Health Coverage had pushed out other, more social concepts.

Interestingly, these efforts to combine health and development efforts often transcended political systems. Contributions address events in liberal democracies such as the UK or Japan, in social democracies like India, in Socialist contexts like Soviet policies in early twentieth century Mongolia, in Nazi Germany of the 1940s, and in Maoist China of the 1950s. Political backgrounds include the (post-)colonial setting of twentieth century Indonesia, the neoliberal turn within the World Bank of the 1980s as well as the internationalism of the UN during the 1970s.

At the same time, these chapters also highlight the eminently political character of the health-development nexus. Political power has played a central role in the development of health policies at both national and international levels, whether this relates to the initial conceptualization of health problems (as in the papers by Gorsky and Sirrs, and Cueto), the identification of preferred solutions (as in Brimnes' paper), or the implementation of different measures (as described by Xun Zhao). In late-Victorian and Edwardian Britain, the campaign for public health reform became something of a battleground between central government, various local and regional authorities, and local communities. In Maoist China, the campaign against schistosomiasis demonstrated the power of the Chinese state to initiate large-scale (and potentially harmful) environmental changes; and, in the case of the World Bank and the World Health Organization, the campaigns to promote user-fees and universal health coverage both illustrate the power of international organisations and funders to shape national health agendas.

The papers also demonstrate the ways in which different countries saw the improvement of public health as an integral part of their developmental approaches. As mentioned, the Soviet authorities believed that improvements in health would transform the "backward" regions of Mongolia; after 1949, the Chinese government promoted the anti-schistosomiasis campaign as an integral part of its efforts to create a "disease-free socialist garden." In Indonesia, ideas about "health" and "development" were intertwined in a number of different ways, including not only the improvement of health standards but also the development of an indigenous cadre of highly-trained health professionals.

A number of papers also draw attention to some of the unintended and possibly negative consequences of health reforms. In Mongolia, the Soviet campaign

against sexually-transmitted diseases was also designed to challenge traditional cultural practices and align them more closely with "European examples," but this also implied the destruction of many of these practices, even though Bashkuev concludes that "even with such heavy Soviet influence, Mongols remained true to their nomadic culture." In China, Xun Zhou suggests that the anti-schistosomiasis campaign not only failed to achieve its own objectives, but also generated new health problems as a result of widespread environmental degradation. In Japan, the methods used to dispose of "night soil" after 1945 also created new problems of water pollution and generated new challenges for policymakers.

As all these papers suggest, health has been a major source of policy concern throughout the twentieth and early-twenty-first centuries, but many problems remain. Marcos Cueto interprets the episode analyzed in his contribution as part of a longer trend in which understanding health as an integral part of social development competes with views that conceptualize it as a developmental externality. This might well be a suitable motto for the entire volume.

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Keir Waddington

"Kindly see to the matter": Local communities and the development of rural public health, 1870–1920

Writing in 1895 about sanitary conditions in rural Glamorgan, Wales, the conservative newspaper the *Western Mail* reported how "in many [rural] places the authorities deal out the law with a very slack hand, the result being that the people live in squalor and dirt."[1] For the journal *Public Health* in 1901 one consequence of this apparent neglect was that "the poor natives" in rural districts were "in far worse plight" than those living in urban areas.[2] As Astri Andresen notes, Florence Nightingale's views of the rural as "pitiful and disgusting" served "not merely as a description of rural hygiene, but also signaled a change in perceptions of urban *versus* rural" in Western Europe in which the rural was characterized as on the margins of modernity.[3] If public health historians now reject any overarching modernizing trajectory to instead focus on regional and local structures, the limited scholarship on rural health in has broadly worked within this notion of rural under-development. Rural public health in Europe, in the words of Steven Cherry, is often portrayed as "a post-urban afterthought" in an environment in which authorities were more concerned with economy than reform.[4] Progress in rural communities is seen as hampered by a limited sense of the need for sanitary or environmental measures, problems of administration, a skills deficit to advocate and implement reform, and a limited fiscal capacity.[5]

1 "Glamorgan Sanitation," *Western Mail*, 23 September 1895.

2 "Housing in Rural Districts," *Public Health* 13 (1901): 27.

3 Astri Andresen, "Perspectives on the Interactions of Medicine and Rural Cultures," in *Health and Medicine in Rural Europe (1850–1945)*, ed. Josep L. Barona and Steven Cherry (Valencia: València Seminari d'Estudis sobre la Ciència, 2005), 147.

4 Steven Cherry, "Medicine and Rural Health Care in Nineteenth-Century Europe," in *Health and Medicine in Rural Europe*, ed. Barona and Cherry, 19.

5 For an overview of the literature on rural public health in Europe, see Josep L. Barona and Steven Cherry eds., *Health and Medicine in Rural Europe (1850–1945)* (Valencia: València Seminari d'Estudis sobre la Ciència, 2005), and Astri Andresen et al., "Introduction: 'Rural Health' as a European Historical Issue," in *Making a New Countryside: Health Policies and Practices in European History c.1860–1950*, ed. Astri Andresen et al. (Frankfurt am Main: Peter Lang, 2010), 11–24; Sarah G. Hastings et al., "Explaining Geographical Variations in English Rural Infant Mortality Decline using Place-centred Reading," *Historical Methods* 48, no. 3 (2015): 128–140; Andrew

https://doi.org/10.1515/9783111015583-002

Low population densities; dispersed, often poorly connected settlements; rural poverty; and the nature of the landscape all created what Nigel Richardson sees as "formidable" barriers to the development of sanitary infrastructures in rural areas.[6]

However, while we need to acknowledge the difficulties rural authorities faced, it is possible to move beyond the rhetoric of outsiders. As the minute books and correspondence from rural authorities responsible for sanitary reform in Britain show, a different assessment of rural sanitary reform is revealed, one which highlights not what Cherry sees as a dominant contemporary medical narrative of "cultural backwardness, ignorance and superstition… insanitary practices and bad habits," but of increasing sanitary intervention and community concerns about pollution.[7] Although the rural environment was hard to clean up, this did not mean that villages and market towns remained mired in their own filth or resistant to sanitary reform.

This essay demonstrates how efforts to improve public health in Britain were not marginal to the sociocultural changes that shaped the countryside in the decades between the passing of the 1872 Public Health Act and the end of the First World War. It does not judge rural communities against the technical solutions to sanitary problems adopted by towns – often London or Manchester in the existing literature – nor does it measure the scale of improvement through loans or mortality rates or seeks to determine whether rural sanitary intervention was adequate or not. Instead, it uses archival evidence from rural authorities to show how framing rural public health as under-developed is to underestimate the scale of self-instigated rural activity to reduce infectious disease and tackle environmental problems.[8] Modernity, as Tom Crook argues in *Governing Systems*,

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Hinde and Bernard Harris, "Mortality Decline by Cause in Urban and Rural England and Wales, 1851–1910," *History of the Family* 24, no. 2 (2019): 395.

6 Nigel Richardson, *Typhoid in Uppingham: Typhoid in Uppingham: analysis of a Victorian town and school in crisis, 1875–1877* (London: Pickering & Chatto, 2008), 4. For the obstacles to rural sanitary reform see Keir Waddington, "'It might not be a nuisance in a country cottage': Rural Sanitary Conditions and Images of Health in Victorian Rural Wales," *Rural History* 23, no. 2 (2012): 185–204.

7 Cherry, "Medicine and Rural Health Care," 37.

8 There is a substantial literature on urban public health, with excellent monograph length studies by Tom Crook, *Governing Systems: Modernity and the Making of Public Health in England, 1830–1910* (Oakland: CA: University of California Press: 2016); Christopher Hamlin, *Public Health and Social Justice in the Age of Chadwick: Britain, 1800–54* (Cambridge: Cambridge University Press, 2009); James G. Hanley, *Healthy Boundaries: Property, Law, and Public Health in England and Wales, 1815–1872* (Rochester: University of Rochester Press, 2016); Anne Hardy, *The Epidemic Streets: Infectious Diseases and the Rise of Preventive Medicine, 1856–1900* (Oxford: Oxford Uni-

was not a particular outcome or solution but an open-ended process.[9] This was acutely visible in rural regions. Here development favored a different trajectory and set of solutions that only gradually converged with urban-based sanitary solutions. Just like their urban counterparts, members of rural authorities and people in rural communities often embraced sanitary reform but in different ways or at a different pace.[10]

To explore the dynamics of rural public health, the essay focuses on the period from the 1872, when over 600 rural sanitary authorities were established, to the creation of the Ministry of Health in 1919.[11] This is a period associated with the making of a modern, complex public health system in Britain and the successful adoption of an urban sanitation-centered approach, later supplemented by surveillance, isolation, and disinfection practices. At a European level it saw widespread efforts to extend medical provision to rural areas and what Cherry sees as "rural medicalization."[12] In exploring the work of rural authorities in this period, the essay uses evidence from 18 rural authorities in two counties – Monmouthshire and Glamorgan – in Britain to provide case studies that challenge narratives of rural under-development at a regional and national level and show how we need to rethink the rural as a place of backwardness, whether that be in the context of the Global North or the Global South.[13] Monmouthshire and Glamorgan were not on the periphery. They were located in a key region of industrialization in Northern Europe, sharing similarities with other European industrializing regions.[14] Both counties shared the same administrative framework and were bound by the same public-health regulations. Yet, while both counties were intimately connected to coal mining and metal working, they retained a

versity Press, 1993); Graham Mooney, *Intrusive Interventions: Public Health, Domestic Space, and Infectious Disease Surveillance in England, 1840–1914* (Rochester: University of Rochester Press, 2015); Anthony S. Wohl, *Endangered Lives: Public Health in Victorian Britain* (London: Methuen, 1983).

9 Crook, *Governing Systems*, 9.

10 For a further discussion of rural modernity, see Keir Waddington, "Problems of Progress: Modernity and Writing the Social History of Medicine," *Social History of Medicine* 34, no. 4 (2021): 1053–1067.

11 For a recent overview see, Christopher Hamlin, "Public Health," in *The Oxford Handbook of the History of Medicine*, ed. Mark Jackson (Oxford: Oxford University Press, 2011), 411–428.

12 Cherry, "Medicine and Rural Health Care," 60.

13 Notwithstanding the use of Welsh in parts of South Wales, the administrative language of these bodies was English and a large proportion of the regional press was published not in Welsh but in English. When the LGB received correspondence and reports in Welsh, it rejected them and required rural authorities to present them in English.

14 Stefan Berger, "Working-class Culture and the Labour Movement in the South Wales and the Ruhr Coalfields, 1850–2000: A Comparison," *Llafur* 8, no. 2 (2001): 5, 7.

strong rural character into the Edwardian period even if defining the boundaries between the urban and rural was often problematic in South Wales.

Historians and demographers have used a range of metrics to categorize "urban" and "rural" – settlement size, population density, and the contiguity of the built-up area – but as Hinde and Harris show such an approach "has a tendency to classify too many places as urban, particularly rural areas with a fairly dense but non-contiguous settlement, such as mining districts."[15] Smith, Bennett, and Radicic use a population size of 10,000 to differentiate urban from rural but there is considerable debate over the degree of urban-ness of small towns and how they are defined in terms of population, administrative functions, occupational structure, and economic complexity.[16] What counted as rural or urban in Glamorgan and Monmouthshire did not easily map onto population size or density.[17] As the 1891 census reported, even "technically speaking urban" districts according to population density were in reality "thoroughly rural in character" in the region, a view confirmed a few years later by Charles Booth in his survey of old age and pauperism. If many settlements in the region were characterized by agricultural employment and had populations below 2,500, even larger market towns such as Abergavenny were considered mostly rural in nature by contemporaries, while land-use in the region continued to favor agrarian over industrial uses, even in mining districts.[18] For instance, where Hay Rural District Council covered 59,009 acres and had a population of 10,789 by 1914, it had a "very scattered population" and no industry other than agriculture.[19] The settlements explored in this essay were hence integral to a region that for the County Medical Officer for Monmouthshire in 1911 was "practically speaking" rural in character. They were part of administrative districts defined by the Local Government Board as rural, and even where they

15 Hinde and Harris, "Mortality Decline," 385.

16 Harry Smith et al., "Towns in Victorian England: A New Classification," *Urban History* 45, no. 4 (2018): 568–594. See Stephen Royle, "The Development of Small Towns in Britain," in *The Cambridge Urban History of Britain, vol. III: 1840–1950*, ed. Martin Daunton (Cambridge: Cambridge University Press, 2000), 151–184.

17 For a discussion of urban / rural boundaries in Wales, see Waddington, "'It might not be a nuisance in a country cottage'," 186–188.

18 Prys Gruffudd, "Back to the Land: Historiography, Rurality and the Nation in Interwar Wales," *Transactions of the Institute of British Geographers* 19 (1994): 61–77; Charles Booth, *The Aged Poor in England and Wales* (London: G. Norman & Son, 1894), 68–69.

19 National Archives, London (hereafter TNA): Hay RDC, MOH annual report, 1884; Annual Report for the Year 1913, MH97/141.

had populations over one person per acre – such as in the district that made up Hay Rural District Council – they were seen as rural in nature.[20]

To challenge notions of the under-developed nature of rural public health, this essay starts with late-Victorian and Edwardian assessments of how villages and market towns were insanitary and primitive places. In questioning the value of the evidence produced by outsiders, the essay moves on to examine the dynamics of rural public health. Here the focus is not on the activities of medical officers of health (MOH) as expressed in their annual reports, which often dominate accounts, but on the discussions and actions captured in the minute- and letter-books of rural authorities who employed and directed them. Although the character and pace of reform in villages and market towns did not match a metropolitan model of modernity, what was happening in hamlets, villages, and market towns suggests a different narrative of development but an equal concern with improvement: an assessment that challenges national perspectives that over-generalize the rural. The final part of the essay rethinks assessments of rural under-development through an analysis of rural agency and community activism. The essay addresses different scales of community engagement with sanitary reform. In doing so, it explores the role of parishes, parochial bodies, and individuals in shaping sanitary reform. This new narrative challenges the perception of the rural environment as under-developed, a challenge that has significant relevance to non-urbanized contexts of outside of Europe. In revealing the extent of sanitary activity through the archives of rural authorities the essay highlights how rural authorities and those living in rural communities were just as concerned with environmental transformation to improve individual or community health as their urban counterparts.

Managing rural public health

Until 1872 the administration of rural areas was viewed as "a chaos as regards authorities, a chaos as regards rates, and a worse chaos than all as regards areas."[21] Preceded by nearly a decade of debate over how to fit sanitary administration into the existing structure of local government, under the 1872 Public Health Act sanitary legislation was applied to rural areas and a new administrative tier was created through the establishment of rural sanitary authorities

20 TNA: Monmouthshire County Council, Quarterly Report of the County MOH, 12 October 1911, MH95/14.

21 *Hansard* 205 (3 April 1871), 1115–1143.

(RSAs). RSAs were coterminous with the existing boundaries of rural Boards of Guardians, which had been created by the 1834 Poor Law Amendment Act to administer poor relief, and were made up of the same elected officials. These new, second-tier authorities reported to the Local Government Board (LGB), the central body responsible for overseeing public health administration in England and Wales. The LGB acted as "an agent of boundary maintenance between local and central government" but was often overwhelmed: it was not always able to provide the leadership and support sanitary authorities were looking for. Although the LGB required annual reports, provided guidance and information, investigated epidemic outbreaks, and worked as a Treasury for local government, it would only occasionally intervene and had little direct influence on local sanitary affairs.[22] RSAs were hence responsible for sanitary works in their district. From their foundation, they were intended to reverse the "defective sanitary government" that had characterized rural districts.[23]

Although RSAs were the main body responsible for rural sanitation, they worked with and through local parishes and a range of parochial committees who operated at a hyper-local level. Together they set the pace of sanitary development, with RSAs appointing medically-qualified MOHs to investigate disease outbreaks and provide expert advice. A conventional narrative might stress the central role of the MOH and how they dictated the pace of reform. Some rural MOHs championed improvements in meetings, reports, and in the press, such as the truculent Elmes Steele, the MOH for Abergavenny Rural District Council (RDC) or Granger, the MOH for Cardiff Union RSA who challenged industrial polluters.[24] Others were part-time, poorly paid, and could be subservient to local landowners or farmers who made up the officials who elected them and on whom they depended in their private practices. However, a cautious MOH did not equate to a slow pace of reform. As explored below, RSAs could be progressive while MOHs were not always the officials responsible for driving reform within RSAs. Surveyors played a key role but it was often the RSA's nuisance inspectors who carried out day-to-day investigations, worked with local inhabi-

22 Christine Bellamey, *Administering Central-Local Relations, 1871–1919: The Local Government Board in Its Fiscal and Cultural Context* (Manchester: Manchester University Press, 1988); Simon Szreter, *Health and Wealth* (Rochester: University of Rochester Press, 2005), 286–287; Hardy, *Epidemic Streets*, 5.

23 *Second Report of the Royal Sanitary Commission*, vol. 1 (London: HMSO, 1871), 11.

24 For Granger's work on industrial pollution, see Keir Waddington, "Vitriol in the Taff: River Pollution, Industry and Rural Public Health in late-Victorian South Wales," *Rural History* 29, no. 1 (2018): 23–44.

tants, undertook most of the sanitary work, and highlighted the need for intervention.[25]

The responsibilities of RSAs were further defined under the 1875 Public Health Act. The 1875 Act set the parameters of public health in England and Wales until 1936 but gave rural authorities and their MOHs less scope for action than their urban counterparts, particularly with regard to the regulation of scavenging, street cleansing, and highways.[26] As Poor Law unions, parishes, and sanitary authorities often cut across county boundaries, the 1888 Local Government Act sought to standardize structures and at the same time created a further administrative tier between the RSA and LGB in the form of county councils who appointed a county medical officer of health to oversee the county.[27] Often the relationship between RDCs and county councils was distant: evidence from Glamorgan and Monmouthshire suggests the county council played only a marginal role in shaping sanitary reform at a local or district level. With the reform of local government and the extension of the franchise under the 1894 Local Government Act, RSAs were disbanded and replaced by elected rural district councils. Members of the newly established rural district councils (RDCs) inherited the sanitary functions of RSAs but had wider authority over matters such as local planning and housing. After 1894, elections to the new constituted parish and district councils reinforced the eclipse of the gentry as a political force in Wales, marking a change in the personnel of local government.[28] It was within this framework that rural public health was managed and the agency of rural communities was felt.

25 For a discussion of the role of nuisance inspector see Christopher Hamlin, "Nuisances and Community in mid-Victorian England: The Attractions of Inspection," *Social History* 38, no. 3 (2013): 346–379.

26 William Roberston and Charles Porter, *Sanitary Law and Practice* (London: Sanitary Publishing Company, 1909), 3; Thomas Whiteside Hime, *The Practical Guide to the Public Health Acts* (London: Baillière Tindall and Cox, 1901).

27 Josef Redlich and Francis W. Hurst, *The History of Local Government in England* (London: Macmillan, 1958), 197–199.

28 Alun Howkins, "Social, Cultural and Domestic Life," in *The Agrarian History of England and Wales: Volume VII 1850–1914*, part 2, ed. E. J. T. Collins (Cambridge: Cambridge University Press, 2000), 1368; R.J. Colyer, "Nateos: A Landed Estate in Decline, 1800–1930," *Ceredigion* 9 (1980–1984): 72.

"A pitiful and disgusting story, dreadful to tell"

While scholars have come to see how reform and sanitary modernity were contested, partial, and variable, in one respect metropolitan assessments of the rural environment were right: LGB officials and newspapers could point to evidence of foul and stagnant cesspools, inadequate drainage, and polluted water supplies in late-Victorian and Edwardian market towns and villages. If we take investigations conducted for the LGB at face value, rural authorities had a poor track record when it came to removing those sources of pollution seen as responsible for outbreaks of infectious disease. Reports from London-based LGB officials who visited rural areas drew attention to the extent of insanitary conditions in the countryside. They highlighted how "all manner of foul insanitation" existed "everywhere."[29] For instance, reports to the LGB on the village of Boas in Glamorgan explained how "the village is becoming very dilapidated owning to the carelessness and filthy habits of its inhabitants." In Grosmont on the Monmouthshire / Herefordshire border it was felt that conditions existed "that would be condemned in any other place in England," while the LGB was told how the Gower peninsula in southwest Wales was "in a very backward state and abounds in nuisances."[30] These assessments were echoed in regional and local newspapers. Reports re-emphasized the emotive and sensory dimensions of filth that featured in medical reports on rural communities to judge the rural environment as primitive and dirty; an image of poor sanitation that stood in contrast to popular images of the countryside.

The reports submitted to LGB and repeated in the press confirmed a sense that the virtues of cleanliness and hygiene – cornerstones of the civilizing ambition embedded in the public health movement – had fallen on barren ground in many rural communities. For the *Western Mail* it was self-evidently clear that many of those living in rural communities at the end of the nineteenth century were "prone to shut their eyes and ears and hold their noses" when it came to hygiene and cleanliness.[31] Rural cottages were frequently described as insanitary and overcrowded. Although reports from other parts of England identified similar problems, by the Edwardian period housing in rural Wales was seen as a na-

29 "Another View of the Matter," *Western Mail*, 11 September 1894.

30 TNA: Naunton Morgan to LGB, 11 September 1893, MH12/16424; TNA: Woodstock to LGB, 24 April 1905, MH97/118; LGB note on Gower RDC, 31 May 1908. MH95/136.

31 "Glamorgan Sanitation," *Western Mail*.

tional disgrace.[32] Reports of leaking roofs, rotten woodwork, damp floors, walls stripped of plaster, doors without panels, and broken windows were commonplace, emphasizing both rural immiseration and an apparent culture of neglect. Writing about 79 houses inspected in 1912, the nuisance inspector for Magor RDC, Monmouthshire, noted a series of common defects: "want of ventilation, defective or want of shutting and down pipes, roofs out of repair, dampness of walls, bad kitchen flooring, want of, or defective yard paving... defective or insanitary closet accommodation, and want of, or bad water supply."[33] Medical Officers of Health linked such housing conditions to high levels of infectious disease mortality, which, as Hinde and Harris show, fell at a slower rate than in urban areas until the 1890s.[34]

While the mid-nineteenth century framing of disease aetiology underscored the ubiquity of conditions viewed as harmful to health, rural sanitation was presented in a range of reports as inadequate. Along with rural habits, the poor sanitary conditions associated with market towns, villages, and hamlets were blamed for high levels of mortality in individual rural communities, which periodically exceeded urban death rates until the 1890s.[35] Sewerage and water supplies in rural communities were widely described as rudimentary, while watercourses in Monmouthshire and Glamorgan were considered among the most polluted in Britain. There were plenty of localized examples to support such claims. In Lower Machen, Monmouthshire, for instance, the water used for drinking in the 1890s flowed through an open ditch which was "often contaminated" by cattle and other animals, while houses in Ponthir in Monmouthshire used water that was felt to be "practically dilute sewage."[36] Naunton Morgan, the local surveyor for the Ystradyfodwg & Pontypridd Main Sewerage Board, told the LGB that "There is no safe water supply anywhere about here and I am sure that this is a condition of things under which the cholera which is now threatening us is sure to thrive."[37] Privy accommodation in small rural districts

32 C.F. Gardner and Lory Marsh, *Handbook of Rural Sanitation Science* (London: Smith Elder, 1876), 2, 3–5; "State of the Dwellings of Rural Labourers," in *Seventh Report of the Medical Officer of the Privy Council* (London: HMSO, 1864); George Wilson, *A Handbook of Hygiene and Sanitary Science* (London: J&A Churchill, 1879), 4th edn., 231–233. See, for example, Welsh Housing and Development Association, *Building for the Future* (Cardiff, 1917).

33 Gwent Archives: Magor RDC, Annual Report of the MOH for the Year 1912, A131/M/5.

34 Hinde and Harris, "Mortality Decline," 388–389.

35 Steven Cherry, "The Public Health Role of Rural Medical Practitioners: Norfolk and Fife c.1860–1914," in *Making a New Countryside*, ed. Anderson et al., 54.

36 Gwent Archives: St Mellons RDC minutes, 8 May 1895, A/132/1; Pontypool RDC minutes: 19 May 1905, A580/M/3.

37 TNA: Naunton Morgan to LGB, 11 September 1893, MH12/16424.

was equally rudimentary, often little more than "primitive wooden structures with a hole dug in the ground."[38] For example, in 1912, the nuisance inspector for St Mellons RDC referred to inspecting rural houses that were sitting on top of seven inches or more of stagnant water from overflowing septic tanks. In the village of Marshfield, Monmouthshire, reports lamented how sewage continued to be discharged into open ditches in the 1910s, polluting local water supplies.[39] Rural populations, it was suggested by public health officials, did not understand cleanliness as contemporary commentators puzzled over how to apply urban solutions to rural districts.

The environments described by LGB and public health officials reinforced ideas about the uncivilized nature of villages and market towns. Comparisons with urban notions of progress were made as commentators drew on a language of modernity to present rural areas as primitive places, resistant to modern public health measures. Newspapers and public health officials used evidence of poor sanitation in individual villages to present a generalized image of those living in rural districts as clinging to old-fashioned ways of life.[40] For example, in 1894, Henry Franklin Parsons, assistant medical officer at the LGB, reported how "In remote [...] districts people are satisfied with a standard of domestic comfort which would not be tolerated in most [towns]."[41] "Ignorant," "prejudiced," "dirty," "filthy," and "careless" were widely used labels by officials to describe both individuals living in rural communities and the communities themselves.[42] For example, writing about East Aberthaw in the Vale of Glamorgan, one surveyor blamed insanitary conditions on "the carelessness and neglect of the occupiers." Likewise, in an 1892 report on the Pontypridd RSA, "the carelessness and filthy habits of its inhabitants" was bemoaned, a state attributed to their ignorance.[43] Similar views were expressed in relation to those living in Llantrisant and Llantwit Fardre in Glamorgan. In both villages it was felt that "Unfortunately the people have not yet been taught to understand of what vital importance to them, and especially to the poorer classes of them, are all questions affecting

38 Glamorgan Archives: Bridgend and Cowbridge RSA Minutes, 22 March 1873, UB/68/1; Evans to Cardiff Union RSA, January 1873, UC/95/1.

39 Gwent Archives: Minutes of the St Mellon's RDC, 10 July 1912, 12 January 1913, A132/M/7.

40 Shannon L. Rogers, "From Wasteland to Wonderland: Wales in the Imagination of the English Traveller, 1720–1895," *North American Journal of Welsh Studies* 2 (2002): 15.

41 TNA: Parsons for the Medical Officer, LGB Note, 27 October 1894, MH12/16689.

42 "Crickhowell Rural Sanitary Authority," *Western Mail*, 23 January 1877; Glamorgan Archives: Cardiff Union RSA, Annual Report, 1889, D805/4/1.

43 TNA: Annual Report of the Caerphilly District of the Pontypridd RSA, 1892, MH/12/16424.

the Public Health."[44] Those living in rural dwellings were often likened to their animals, while those running rural authorities were widely associated with this mentality of ignorance and were characterized as disorganized or lazy. Assumptions about the backward nature of the rural population and those responsible for public health were used to explain why public health reform ran into difficulties in rural England and Wales.[45]

Limited financial resources, opposition from landowners, and tensions between villages and market towns over the boundaries of responsibility, along with technical difficulties, did provide barriers to the promotion to rural public health and sanitary reform. As a consequence, rural areas, many of which had high levels of outmigration and immiseration, lagged behind metropolitan districts when it came to public health reforms. For example, throughout the 1890s the LGB repeatedly complained about how improvements were "unduly delayed" in districts covered by the Bridgend and Cowbridge RSA in Glamorgan, while in the whole of Monmouth RDC there were only two sewers by 1912: most houses in the district relied on middens and cesspits, the contents of which were "usually buried in, and used as manure, for gardens."[46] However, while the use of localized conditions to label rural public health as backward served a purpose, relying on such claims that rural communities were undeveloped backwaters and as a consequence separate from sanitary modernization is problematic. Poor sanitation and conditions were localized, not uniform. Nor can we take low levels of borrowing by rural sanitary authorities for improvements before the 1890s as proxies of the scale of action.[47] As we shall see, many of the sanitary works undertaken by rural authorities between 1872 and 1920 to provide reliable and clean water supplies and improve drainage and sewerage were small-scale and low cost: rural authorities did not need loans to finance them as modern technologies and piped-networks of water and sewerage only gradually replaced existing methods. Evidence from rural authorities in Monmouthshire and Glamorgan reveals that rather than being indifferent or passive, they were often active in sanitary reform with the pace of reform driven by the needs of local communities, and throughout the Edwardian period, growing confidence in the

44 TNA: Davies to the Llantrisant RSA, March 1894, MH12/16424.

45 John Stewart and Steve King, "Death in Llantrisant: Henry Williams and the New Poor Law in Wales," *Rural History* 15, no. 1 (2004): 75–76.

46 Glamorgan Archives: Bridgend and Cowbridge RSA minutes, 1888–1895, UB/68/4–5; Gwent Archives: Monmouth RDC Annual Report of the MOH for the Year ending 31 December 1912, A570/R2/1.

47 Bernard Harris and Andrew Hinde, "Sanitary Investment and the Decline of Urban Morality in England and Wales, 1817–1914," *History of the Family* 24, no. 2 (2019): 1–38.

nature of sanitary improvement was expressed in the reports submitted to the Local Government Board.

Rethinking rural sanitary intervention

Revisionist assessments have sought to rejuvenate the reputation of local boards and have become more inclined to look favorably on the effectiveness of late-Victorian and Edwardian local government.[48] Rural boards of guardians may have been conservative but notwithstanding the assessment of outsiders this did not mean inaction. They quickly established sanitary authorities under the 1872 Public Health Act, while their appointment of qualified MOHs, nuisance inspectors, and surveyors increased local expert knowledge. As one MOH noted in 1878, whereas some rural authorities had initially been "indifferent to sanitary progress" they "have manifested of late much greater willingness to carry out measures which have been recommended."[49] For example, although sanitary conditions in the village of Skewen in Glamorgan were poor, as William Williams, county medical officer, explained in 1895, "Had it not been for the great care exercised by the sanitary officials in the management of various privies, drains, channels, etc., they would long since have become an intolerable nuisance."[50] As Williams' assessment suggests, efforts to improve conditions and limit pollution initially focused on tackling the most glaring nuisances. For instance, throughout the 1870s, Newport Union RSA in Monmouthshire focused its attention on dealing with dilapidated privies, preventing people in the district from drinking from polluted wells, and issuing notices to property owners to provide clean water to their properties.[51] In the area covered by Merthyr Tydfil RSA, Thomas Jones Dyke, the MOH, made 52 visits to local communities and attended 41 meetings in 1876 alone, travelling some 600 miles across the district to inspect and deal with nuisances.[52]

Once the most obvious sanitary defects had been dealt with, rural sanitary authorities shifted their attention to improving access to clean water and ad-

48 See Philip Harding, "The Centrality of the Locality: The Local State, local democracy and local consciousness in Late-Victorian and Edwardian Britain," *Journal of Victorian Culture* 9, no. 2 (2004): 216–224.

49 TNA: Caernarvonshire Combined Sanitary District Annual Report for the Year 1878, MH30/25.

50 William Williams, *A Sanitary Survey of Glamorganshire* (Cardiff: Daniel Owne & Company Ltd,1895), 23, 106.

51 Gwent Archives: Newport RSA minutes, 1872–1885, CSWBGN/M3/1.

52 Glamorgan Archives: Merthyr Tydfil RSA annual report, 1876, D404/1/3.

dressing problems of drainage and sewerage, seeing human waste, overcrowding, and sources of water and ground-soil pollution from a sanitary perspective.[53] While it can be harder to write a narrative of improvement than point to poor sanitation when attention often focused on those areas that were viewed as problematic, evidence of what was happening at a local level highlights action. By the 1880s, many rural authorities in Monmouthshire and Glamorgan were investing in disinfection equipment, regularly inspecting houses and water supplies, and using laboratory analysis to determine water quality. Urban powers were sought to deal with larger communities.[54] The 1890s saw a new generation of sanitary officials establish isolation facilities and oversee localized schemes for clean water and sewerage, which contributed to a decrease in diarrhoeal diseases between the 1890s and 1901–1910 after a slight increase in the decade before.[55] In the Edwardian period attention turned to improving housing, undertaking the construction of larger-scale sewerage schemes, and setting-up domestic waste collection schemes.[56]

Although there is little evidence to suggest a conscious effort by rural authorities to undertake improvements with a view to civilizing the rural, by the 1890s the language used by rural MOHs shifted from lamenting that more was not being done to highlighting improvements. For example, in his 1910 annual report, the MOH for Pontypool RDC explained how "all matters requiring attention have been promptly dealt with, and as far as possible, improvements have been carried out."[57] In his reports the MOH for Cowbridge RDC commented on the "anxiety and willingness of the present authority to carry out every reasonable improvement" and by 1910 wrote about "Great improvement in ... every part of the district."[58] While there was a rhetorical function to such claims, these were not isolated examples. Many rural authorities started to invest substantial time and effort in sewage schemes, extending rubbish collection, considering the appointment of lady health visitors, and undertaking large-scale house-to-house

53 *Minutes of Evidence taken before the Royal Commission on Land in Wales and Monmouthshire*, vol. 2 (London: HMSO, 1894), 331.

54 West Glamorgan Archives: Neath RSA minutes, 27 September 1876, U/N RSA 1/1; Gwent Archives: Chepstow Union RSA minutes, 27 May 1893, CSWBGC/M3/2.

55 Hinde and Harris, "Mortality Decline," 388.

56 See TNA: Cardiff RDC sanitary records, MH96/645; Glamorgan Archives: Llandaff and Dinas Powis RDC minutes, 1902–22, RDC/C/1/39; Gwent Archives: Magor RDC minutes, A131/M/1; St Mellons RDC minutes, A/132/M/1.

57 Gwent Archives: Pontypool RDC minutes, 10 April 1911, A580/M/4.

58 Glamorgan Archives: Cowbridge RDC minutes, 21 April 1896, RDCOW/C/1/1.

inspections under the 1910 Housing (Inspection of District) Act.[59] As the MOH for St Mellons RDC explained in his 1914 annual report, it was important to ensure local conditions conformed to "a high standard of public health."[60]

However, rather than urban-based initiatives being exported to the countryside, rural authorities tended to adopt pragmatic approaches fit their particular localities. The solutions they implemented to address nuisances, poor water supplies, inadequate sewerage or poor housing conditions reflected the physical and practical barriers they encountered and the need for cost-effective solutions for poor rural areas. Low-cost, small-scale measures, such as digging new wells or reducing the size of cesspits, were adopted: measures which did not need extensive infrastructures or loans. For instance, a dearth of clean water in Magor and Redwick in Monmouthshire was met through water carts into the 1890s. In Craig Trebanos in the Swansea valley, the provision of a water tank was seen as one of a number of "important improvements" which "have great satisfaction to those who were dependent on their water supply from these sources [two dip wells]."[61] Pontypool RDC tackled the need to improve local water supplies through sinking new wells, cleaning existing wells, and ensuring that wells were protected from pollution.[62] For isolated villages such measures were often the only cost-effective course of action available.

If such solutions made it easier to view rural public health as under-developed, they show how we should not always think of modernization of water supplies or sewerage as determined by whether an area adopted a piped infrastructure or not. In rural communities, improvement meant different things to the sanitary projects undertaken in urban areas. As the MOH for Abergavenny RDC commented in 1898, while sanitary officials would much rather have seen more comprehensive and expensive scheme implemented, "we... must be thankful for small mercies."[63] While this might not on the surface appear to be a glowing tribute, given the nature of what could be achieved in isolated rural communities, rural authorities increasingly strove to make improvements.

59 See, for example, Abergavenny RSA minutes, A/560/1–2; Chepstow RDC minutes, A540/M/1–2; Magor RDC minutes, A131/M/2–3; Monmouth RDC minutes, A570/M/3–4; St Mellons RDC minutes, A/132/M/1; Pontypool RDC minutes, A580/M/2–4.

60 Gwent Archives: St Mellons RDC Annual Report of the Medical Officer of Health for the Year 1913, A132/M/8.

61 TNA: Pontardawe RDA (Western Division) Sanitary Report for 1894, MH12/16436.

62 Gwent Archives: Newport Union RSA minutes, 4 October 1893, CSWBGN/M3/3.

63 *Twenty-Sixth Annual Report on the Sanitary Condition of the Abergavenny Rural Sanitary District* (Abergavenny, 1898), 5.

"The inhabitants complain[ed] bitterly…": community and agency in rural public health

In putting forward explanations for the shift in public health after 1870 there is a tendency to adopt a top-down model that highlights new theories of disease causation, municipal leadership, the activities of the LGB and medical officers of health, or the role played by nuisance inspectors.[64] While welfare historians are now accustomed to thinking in terms of how the poor used charitable or Poor Law services on their own terms, public health historians often think in terms of class interests, interest groups, or public opinion.[65] In his important work on nuisance inspectors Christopher Hamlin pointed to the role of complaints in the day-to-day work of inspection, but there remains a tendency to think less about communities or individuals as initiators of public health reform and more about how reform was contested.[66] Furthermore, when interest groups are considered, they are characterized as middle class or related to business interests. While Mooney and Newsom Kerr's works on disinfection and isolation respectively show how the urban working classes were not just governed by regulatory systems, most studies present the working class and poor as "powerless" or victims.[67] A different picture of active participation is seen when we look at the local records of rural authorities. As explored below, evidence from rural authorities in Monmouthshire and Glamorgan reveals growing pressure for reform from rural parishes and individuals living in them. Although rural authorities were increasingly proactive in their work, they were also responding to local pressure – pressure that shaped the agenda of rural public health at a quotidian level as communities and individuals exercised their agency. These calls could be to argue for improvements and the adoption of measures to prevent outbreaks of infectious disease or to resist measures which seemed ill-suited to local resources or the local environment.

Just as in urban areas, rural communities contested public health expenditure and the necessity of particular measures, both at a community and individual level. For instance, Reverend Williams wrote to the Pontypool RDC in 1901

64 Hamlin, "Nuisances and Community," 346–379.

65 See, for example, David Green, "Pauper Protests: Power and Resistance in Early Nineteenth-century London Workhouses," *Social History* 31, no. 2 (2006): 137–159; Steven King, *Writing the Lives of the English Poor 1750s-1830s* (Montreal: McGill-Queen's University Press, 2019).

66 Hamlin, "Nuisances and Community," 346–379.

67 Graham Mooney, *Intrusive Interventions*; Matthew L. Newsom Kerr, *Contagion, Isolation, and Biopolitics in Victorian London* (Cham, Switzerland: Palgrave, 2018).

expressing his annoyance about their nuisance inspectors, who were, he felt, putting the council "in the foolish position of ordering the abatement of... nuisance[s] which did not exist." Equally, Mrs. Wass told the nuisance inspector for St Mellons RDC in 1912 that "she did not consider it necessary to carry out the [drainage] requirements of the Council" for her property in Rumney, seeing the existing arrangements as adequate.[68] Measures, especially those that increased the rates, were resisted. This was often, as Francis Bond, MOH for Chepstow RSA, explained in 1893, because any improvements "involve more or less outlay, in some cases very considerable, in proportion to the resources from which it is to defrayed [sic]."[69] For instance, in 1899, A.G. Lee objected to Pontypool RDC testing the local well as he had "no guineas to throw away." When the residents of Nash in Monmouthshire complained about their water supply in 1908, the parish resisted making improvements given the cost it would incur for the small number of ratepayers in the area.[70] Yet where insistence on financial incapacity can be seen as offering a "framework and rationale for inaction," narrow economic interests were secondary to acts of resistance that reveal how local communities had a sense of their own environments and sanitary needs.[71]

As James Scott has shown for Southeast Asia, local stratagems of resistance reveal the large arena for opposition that existed between open defiance and quiescence.[72] Rural communities could stall and drag their feet, not just because they were wrestling with the type of complex issues Hamlin shows as often determining the pace of local reforms, but also as a form of resistance.[73] Such resistance was more than the conservatism of the propertied in rural communities, especially given growing levels of popular participation in rural local government after 1890. Acts of resistance went beyond simple expressions of opposition to increases in local expenditure: they also reveal a defense of traditional practices. For instance, in his second annual report as MOH for Cardiff Union RSA, Granger complained how "some of the inhabitants [of Glamorgan] have strenu-

68 Gwent Archives: Pontypool RDC minutes, 6 September 1901, A590/M/2; St Mellons RDC minutes, 10 April 1912, A132/M/7.

69 TBA: Report, 1893, MH12/8057.

70 Gwent Archives: Pontypool RDC minutes, 2 January 1899, A580/M/2/; Magor RDC minutes, 12 August 1908, A131/M/4.

71 Megan Evans and Peter Jones, "'A Stubborn, Intractable Body': Resistance to the Workhouse in Wales, 1834–77," *Family & Community History* 17, no. 2 (2014): 110.

72 See James C. Scott, *Weapons of the Weak: Everyday Peasant Resistance* (New Haven: Yale University Press, 1985); James C. Scott, *Domination and the Arts of Resistance: Hidden Transcripts* (New Haven: Yale University Press, 1990).

73 Christopher Hamlin, "'Muddling in Bumbledom': On the Enormity of Large Sanitary Improvements in Four British Towns, 1855–1885," *Victorian Studies* 32, no. 1 (1988): 55–83.

ously opposed the introduction" of new water supplies. If at one level this could be read as simple resistance, as Granger went on to explain, opposition came from a sense that local inhabitants "preferred following their old practices of fetching water from a distance" because they believed such supplies were adequate for their needs.[74] Where such an example suggests conservatism, resistance could also reflect a sense that the proposed solutions were unsuited to the local environment. For instance, residents in Gilestone, Glamorgan, resisted the adoption of a new system of sewerage put forward by Cowbridge RDC on the grounds that it would create "a serious nuisance" as the proposed outfall would see "effluvia" blown back across the village.[75] Residents in Pen-y-Graig in the Rhondda Valley took matters into their own hands and "destroyed the main and removed the tank" put in by Gelligaer and Rhigos RDC because its actions were viewed as "an attempt to rob them of their water" as the sources of supply local inhabitants relied on were placed under strain and diverted to the feed the water main.[76] Resistance was hence not just about a defense of traditional practices or opposition to expenditure. It could also reflect ideas of responsibility and local knowledge in an environment where rural authorities were acutely conscious of the need to avoid imposing solutions given the strength of parochial interests and the face-to-face nature of village society.

If outside experts challenged "locally situated ways of knowing," when it came to making decisions, the members of rural authorities often privileged these very same local forms of knowledge.[77] Representatives from parochial committees would accompany MOHs and nuisance inspectors on their visits and make recommendations, highlighting both their desire to monitor the work of officials and their active interest in sanitary affairs. Rural authorities drew on the evidence gathered from local communities on such local visits, as well as the information sent to them from parishes, individuals, and their officials, to identify and resolve problems. For instance, throughout the 1870s, Abergavenny RSA in Monmouthshire invited local landowners and residents on their visits to investigate local water supplies and actively sought their advice on how they might be improved. Writing to parishioners in Llanwenarth in June 1896, the chair of Abergavenny RDC felt that as they were "no doubt thorough[ly] acquainted with the resources and requirements" the parishioners should tell the council what they

74 Glamorgan Archives: Cardiff Union RSA, Annual Report, 1877, D805/4/1.

75 Glamorgan Archivse: Davies to Stockwood, 10 August 1896, RDCOW/C/1/1.

76 Glamorgan Archives: Annual Report on the Sanitary Condition of Gelligaer and Rhigos RDC: 1901, RDGR/M/1/1.

77 Dayna Nadine Scott, "Gender-Benders: Sex and Law in the Constitution of Polluted Bodies," *Feminist Legal Studies* 17, no. 3 (2009): 241–265.

required.[78] While the reliance on local knowledge by Abergavenny RDC was more marked than in other areas, a similar pattern was repeated elsewhere. For instance, both the Gower RSA and St Mellons RDC organized meetings with local communities to understand what improvements they wanted implemented, while Pontardawe RSA in the Swansea valley regularly consulted individuals over the most reliable local water supplies to use.[79] Because of the size of many rural sanitary districts and the isolation of some rural communities, rural authorities and their public health officials often had to rely on local knowledge to identify what communities felt constituted a nuisance or to understand local needs and priorities. Negotiations around sanitary reform between rural authorities and local communities could take time, even if all agreed improvements were needed. For instance, discussions over improvements to Mardy's water supplies began in 1876 and were ongoing in 1881 when the LGB intervened. Where this might suggest a slow pace of reform in rural areas, as Hamlin's findings for provincial British towns shows, urban improvements could take decades to implement.[80]

More than local knowledge of nuisances and water supplies was at stake. Rural sanitary authorities were part of an intricate and active system of local decision-making which involved close consultation with parish councils. The 1894 Local Government Act, regarded at the time as the "Rural Magna Carta," transferred responsibility for sanitation from rural sanitary authorities to newly formed rural district councils. They had a broader electoral base. However, while rural district councils became the executive body in rural districts, they continued to work with, and often through, parochial bodies. Local inhabitants were aware of the value of these bodies and frequently pressed for their creation, such as in Magor in 1896, to govern local sanitary matters.[81] As the Abergavenny RDC explained in 1906, underlying conflicts between rural authorities and the LGB in London was a strong sense of the need to protect local responsibility, any challenge to which was seen as "entirely 'subversive'" and against "popular

78 Gwent Archives: Abergavenny RSA minutes, 1872–1886, CSWBGA/M3/1; Abergavenny RDC minutes, 9 June 1896, A/560/M/1.

79 West Glamorgan Archives: Gower RSA minutes 1872–92, U/G/RSA1; Gwent Archives: St Mellons RDC minutes, 14 April 1897; 10 January 1900, A132/M/1–2; West Glamorgan Archives: Pontardawe Union RSA minutes, 1893–1897, RD/Pd/66.

80 For instance, negotiations started in 1876 over improvements to Mardy's water supplies were ongoing in 1881 when the LGB intervened: Gwent Archives: Abergavenny RSA minutes, 1872–1886, CSWBGA/M3/1.

81 Gwent Archives: Magor RDC minutes, 25 July 1896, A131/M/1.

local self-government."[82] Plans to transfer responsibility from rural authorities to county councils in the 1900s were actively resisted. In the words of one rural district council, many rural authorities saw this "a retrograde measure of very serious character."[83] Local knowledge, local responsibility, and localized effort were central to rural public health.

Meetings, parish committees, petitions, and letters were the main vehicles through which pressure was applied on rural authorities to make improvements as rural communities entered into a dialogue over what measures were needed or suited to the local environment. As with other local state agencies, public health was viewed as negotiable by communities. Parishes, the smallest unit of local government, along with those parochial bodies established to represent local sanitary interests, actively pressed for improvements, mixing public and private interests in their requests for action. Such local bodies were the key conduit in expressing local demands for improved sanitation with parishes frequently calling for improvements "to be pushed forward as much as possible" as they felt rural authorities were not moving quickly enough to improve local conditions.[84] For instance, in 1886 Llangeinor Parochial Committee in Glamorgan demanded "a thorough examination of the sanitary state of the Parish" by an independent inspector as it felt that the RDC was slow to respond to local requests for action.[85] A year later, Cardiff Union RSA responded to pressure and agreed to hold regular meetings at Cadoxton to discuss the surrounding villages' requests for sanitary improvements.[86] Through local forums, rural communities demanded better water supplies, complained about insufficient rubbish collection, protested their need for sewers, and tried to block measures they felt would be detrimental to local communities and their needs.

Evidence from Monmouthshire and Glamorgan shows that rural authorities were sensitive to community interests and increasingly worked with them. For instance, when Llanishen parish complained to Monmouth RDC about a polluted well, the RDC was conscious of the need to come to an "amicable arrangement" with the parish over how to improve local water supplies.[87] Following reports in 1896 about poor water supplies in Llanwenarth, Abergavenny RDC engaged in an active dialogue with the parishioners because they were "thoroughly acquainted

82 Gwent Archives: Abergavenny RDC minutes, 29 September 1906, A560/M/2.
83 Gwent Archives: Chepstow RDC minutes, 6 April 1907, A540/M/1.
84 Gwent Archives: Pontypool RSC minutes, 1 December 1902, A580/M/3.
85 Glamorgan Archives: Report of the Surveyor and Nuisance Inspector, Cardiff Union RSA, 1872/3, UC/91/1: Bridgend and Cowbridge RSA minutes, 5 June 1886, UB/68/3.
86 Glamorgan Archives: Cardiff Union RSA minutes, 23 July 1887, UC/75/3.
87 Gwent Archives: Monmouth RDC minutes, 9 October 1895, A570/M/1.

with the resources and requirements." Over a four-year period, parishioners and the district council referred plans back and forth as they developed a scheme for an improved water supply.[88] Newspaper reports on insanitary conditions increasingly referred to "the complaints of the villagers" as driving public health reform, while communities protested when they felt that sanitary officials were not doing enough for them.[89]

Beyond the expansion of the local franchise under the 1894 Local Government Act and creation of elected RDCs and parish councils, what might explain this growing interest by rural communities in improving conditions? Summing up the work of the Cardiff Union RSA in 1878, Robert Oliver Jones, the chair of the authority, explained how those living in the district "have generally shown readiness to comply with the requirements of the committee" as measures to improve water supplies and sewage were viewed as "sources of health and comfort."[90] Letters to rural authorities in the 1870s and 1880s reveal how those living in rural communities were anxious about their health, the health of those living nearby, and the need to prevent outbreaks of infectious disease, and called on rural authorities to make improvements.[91] Evidence to the Royal Commission on Land in Wales and Monmouthshire further drew attention to how by the 1890s changing attitudes to hygiene were encouraging "a bolder outspokenness in insistence on the necessity of carrying out" sanitary improvements.[92]

Improving water supplies were often central to local demands. Such was the level of interest in improving the water supply in Woodstone parish in 1894 that the vestry room could not hold all those who attended meetings on the matter.[93] Two years later, Redwick's parishioners petitioned for both an improved water supply and the creation of a parochial committee to oversee sanitary improvements in the village.[94] Undy Parish Council equally petitioned Chepstow RDC "to complete the arrangements for distributing the water," citing how "people find it difficult to get any water fit for drinking or domestic purposes." By 1901, "certain persons" in Undy were refusing to pay their water rates unless

88 Gwent Archives: Abergavenny RSA minutes, A/560/M/1.

89 "Penrhyn Deudraeth," *North Wales Chronicle*, 9 September 1899; Glamorgan Archives: Gelligaer and Rhigos RDC minutes, 28 June 1900, RDGR/C/1/1.

90 Glamorgan Archives: Cardiff Union RSA minutes: 20 April 1878, UC/75/1.

91 See, for example, Glamorgan Archives: Cardiff RSA correspondence, 1872–1875, UC/95/1–2.

92 *Minutes of Evidence taken before the Royal Commission on Land*, 330, 335.

93 Gwent Archives: Chepstow RSA minutes, 23 June 1894, CSWBGC/M3/2.

94 Gwent Archives: Magor RDC minutes, 25 July 1896, A131/M/1.

water supplies were improved.[95] Individuals in Monmouthshire and Glamorgan not only responded quickly when nuisances were identified, seeking advice when they did not fully understand what was being asked of them, but also pressed rural authorities to tackle defective drains, poor water supplies, and nuisances. Such actions suggest that those living in rural communities were becoming increasingly convinced of the importance of public health measures.

Some of this interest might reflect community antagonism, as in the case of complaints from F.R. Williams of Tintern who wrote to the local rural district council to call their attention to the stable manure he felt was "constantly being deposited in front of my house." Williams blamed Mr. Frayer and asked the council to "kindly see to the matter."[96] We can see this community antagonism even more vividly in the case of David Jerrams, who in 1901 complained to the Magor RDC about Mr. Baldwin of Cherry Orchard, Langstone, who Jerrams believed was polluting the local stream. On investigation it was found that Jerrams' two cowsheds were responsible. However, the minutes of rural authorities contain increasing reference to individuals demanding authorities remedy sanitary defects that went beyond neighbors' complaints about individual transgressions. Those living in rural communities did expect rural authorities to intervene. As Will Francis Bell noted in a series of letters to Chepstow RDC in 1899, "you are under a false impression if you are assuming that I am going to provide a water supply that should be done by the Rural District Council."[97] At a day-to-day level, the activities of MOHs and sanitary authorities were often shaped by complaints from individuals about local nuisances. Landowners and landlords turned to rural authorities, either to get their tenants to make improvements or to remove sources of pollution, the latter seen in how Mr. John sought to enlist the help of the St Mellons RDC in 1900 to stop people throwing slop-water onto his field at Rogerstone.[98]

Whereas women often controlled domestic space, men predominantly represented households in public forums and in discussions with sanitary officials and with male-dominated rural authorities.[99] In rural Monmouthshire and Glamorgan, questions of sanitation were a very male preserve and reinforced

95 Gwent Archives: Chepstow RDC correspondence, Petition, 1 January 1896, A540/C/236; Chepstow RDC minutes, 2 November 1901, A540/M/1.

96 Gwent Archives: Williams to RDC, n.d., 1898, A540/C/236.

97 Gwent Archives: W. Francis Bell to Chepstow RDC, n.d., 1899, A540/C/236.

98 Gwent Archives: St Mellons RDC, 12 December 1900, A132/M/2.

99 Frank Trentmann and Vanessa Taylor, "From Users to Consumers: Water Politics in Nineteenth-century London," in *The Making of the Consumer: Knowledge, Power and Identity in the Modern World*, ed. Frank Trentmann (Oxford: Berg, 2005), 53–79.

male authority over the household. During a period of growing religious and political divisions between landlords and tenants, male householders turned to rural authorities when it was felt that landlords or landowners were failing to make improvements.[100] For instance, Richard Williams, a roadman at Pwllmeyric, wrote to Chepstow RDC in 1914 about the sanitary condition of the cottages owned by Mr. Parry of Leamington. Williams explained how the water-closet, "which answers for 2 houses," had not been cleaned out for three years. He went on to detail how, without drains, the only way to get rid of the slops and other refuse was to throw them onto the garden. Williams reported that as many as five men, "besides women and children," were using the water-closet, the "stench" from which was "at times... enough to make any one sick." Williams hoped the council could apply pressure on Parry to remedy the matter.[101] Such requests for intervention often voiced a sense of disgust and fear about infectious disease that drew on the same vocabulary and pointed to the same problems as that of public health officials. For instance, a Llandaff resident wrote to the Cardiff Union RSA asking them to attend to the drainage of four houses, explaining how they were "very offensive" and that the occupiers of these houses believed their regular bouts of illness "had resulted from the defective drainage."[102] By the Edwardian period, local householders were framing their requests for action or intervention in terms of preventing disease outbreaks. Their shared language reveals both a common understanding of the problems and a common desire for improvement that is at odds with the claims made by the LGB about the backward-looking nature of rural communities.

Conclusions

Although rural authorities often found, as the *Western Mail* reported in 1895, that they were "confronted at every turn with the everlasting 'but'" as they encountered a backlog of sanitary problems, this was not evidence of inactivity.[103] Evidence from the minute books and correspondence of rural authorities in Mon-

100 R. Moore-Colyer, "Wales," in *The Agrarian History of England and Wales: Volume VII 1850–1914* part 2, ed. E.J.T. Collins (Cambridge: Cambridge University Press, 2000), 430–432, 448, 435; David A. Pretty, *The Rural Revolt that Failed: Farm Workers' Trade Unions in Wales, 1889–1950* (Cardiff: University of Wales Press, 1989); R. Moore-Colyer, "The Land Agent in Nineteenth-Century Wales," *Welsh History Review* 8 (1977): 401–425.

101 Gwent Archives: Williams to Chepstow RDC, 18 May 1914, A540/C/239.

102 Glamorgan Archives: Watkins to Cardiff RSA, 12 November 1874, UC/95/2.

103 "Sanitation in Glamorgan," *Western Mail*, 23 February 1895.

mouthshire and Glamorgan, rather than supporting assessments that the rural was an under-development backwater dominated by a primitive living peasanty, shows how rural authorities, communities, and individuals became increasingly active in public health between 1870 and 1920. While it is important to acknowledge the barriers of rural sanitary reform and how rural communities could express impatience that more was not being achieved, as the county-level case studies examined here reveal, public health did not just represent urban values distinct from rural cultures. To avoid the kind of unsympathetic readings embedded in assessments made by urban commentators, we should not understand the pace and nature of rural public health in terms of how it measures up to urban narratives of development at a regional, national or European level. Rather, we need to be aware of what sanitary work was being undertaken by rural authorities. As the case studies demonstrate, between 1872 and 1921, rural authorities moved from first tackling those nuisances initially held responsible for outbreaks of infectious disease to improving local water supplies, sewerage, and housing. Often the solutions they adopted favored low-cost measures suited to the local environment and resources. If such responses to local sanitary problems did not conform to metropolitan standards of public health interventions, new or deeper wells, better water supplies, and improved methods of sewerage were just as important in improving public health and mortality in rural communities as piped networks of water or sewerage in towns and cities. Rather than rural backwardness, often it was a question of scale and timing, while those living in rural communities were not the passive objects of mechanisms or tactics through which sanitation and efforts to combat pollution was imposed. Rather, they increasingly demanded that action be taken, especially when they felt that rural authorities, medical officers of health, or landowners were not doing enough.

If financial barriers, rural topographies, and the viable solutions for improving sanitation and housing available in rural areas limited what could be done, by thinking about the agency of rural authorities and rural populations in Monmouthshire and Glamorgan, a different assessment of public health emerges: one in which questions of nuisances and sanitation did not involve absolute standards or LGB approved solutions but took account of community demands. Thinking in this way not only shows how the governance of rural public health was multi-scalar but also reveals not under-development but a concern with improving local conditions. Even in those rural authorities deemed problematic by the LGB, such as Cowbridge RDC, could the MOH in the 1890s explain how

> "such... has been the anxiety and willingness of the present authority to carry out every reasonable improvement which has been brought under their notice... that I am sure the

> district has now entered upon a new experience and that another 12 months will see a good deal of work."[104]

Growing rural agency was important in shaping reform, even if the solutions adopted had to be matched to local circumstances rather than metropolitan standards of modernity. When it came to rural sanitary reform, as O.M. Edwards explained in a different context, the *gwerin* (common people) had become active agents of their own history by the Edwardian period.[105] Examining what was happening at a local level in hamlets, villages, and market towns between 1870 and 1920 can tell us much about public health in rural communities that is at odds with the views expressed by LGB official or in newspaper reports. This approach highlights the need to look beyond the assessment of metropolitan or central bodies at a regional or national level to focus instead on the nature of local activity and community agency. This perspective challenges the perception of the rural environment as on the margins of the modern and offers insights into how we can question the non-urban development model in Europe and the Global South.

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104 Glamorgan Archives: Cowbridge RDC minutes, 21 April 1896, RDCOW/C/1/1.
105 Owen M. Edwards, *Wales* (London: Fisher Unwin, 1901).

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Ana María Carrillo

Development, sanitation, and international public health in Mexico (1881–1911)

Introduction

Mexico is a North American country bordering the southern United States. This proximity encouraged the expansionist pretensions of the U.S. since Mexico gained its independence from Spain in 1821, after three centuries of colonial rule. In 1823, U.S. farmers began to peacefully occupy Texas, and beginning in 1829, the Mexican government allowed Stephen Austin to bring Anglo immigrants to the state. In 1836, these immigrants sought to gain independence from Mexico and annex the territory to the United States. They received economic and military support from the U.S. government for these efforts. The annexation of Texas to the United States took place in 1845, and after that the U.S. government attempted to purchase the territories of New Mexico and California. When the Mexican government did not yield to this pretension, the U.S. army invaded Mexico and started a war that lasted from 1846 to 1848, at the end of which Mexico lost half of its territory, currently occupied by the states of California, Nevada, Utah, New Mexico, Texas, Colorado, Arizona, and parts of Wyoming, Kansas, and Oklahoma.[1]

From then on, the Mexicans living in those territories became foreigners by conquest. Invasions from other countries and civil wars also limited development in the first decades of independent Mexico. However, between 1876—the year in which General Porfirio Díaz came to power—and 1910—when an armed revolution ended his 34 years government—there was economic development and a certain political stability, although marked by a lack of democracy and by social inequality.

The modernization process, which was not only economic, but also included education, science, technology, and culture, took place in the capital city, since this was not only the political and economic center of the region but also formed the junction of communication routes. Another center was in the Gulf of Mexico, whose development was driven by Veracruz, the busiest port in the Republic, and by tropical export agriculture. The Gulf-region economic hub also extended

1 Josefina Zoraida Vázquez, *La intervención norteamericana, 1846–1848* (México: Secretaría de Relaciones, Exteriores, 1997).

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to Campeche, Yucatan, and Quintana Roo which prospered due to the growing value of *henequen* in international trade. In addition, the ports of Coatzacoalcos, Frontera, and Progreso on the Gulf of Mexico as well as Acapulco, Salina Cruz, Guaymas, and Mazatlán on the Pacific played an important role. The same can be said about towns like Mulegé in Baja California and Cananea and Navojoa in Sonora, whose development was favored by the resurgence of mining. Likewise, cities in the north of the country and the region of the Isthmus of Tehuantepec developed along with the railroad branches.[2]

The modernization of Mexico, like that of other Latin American countries, was favored by its insertion in the new and expanding lines of international trade.[3] There was an increase in capitalist accumulation within the country, characterized by a mercantile boom and the redefinition of market networks. The country, having mainly traded with Germany, France, and Spain prior to 1877, joined the U.S. markets from the beginning of the Porfirio Díaz regime (1876–1911) and Mexican foreign trade became almost fully integrated with US trade during this period.[4]

However, the quarantines imposed on Mexican shipments due to endemics and epidemics in the national territory were an obstacle to the free transit of people and merchandise. In April 1878, the governor of the state of Texas put into effect a quarantine of six months for any ship or vessel coming from, or simply touching, the coasts of Africa, the Greater Antilles, South America, Central America, or Mexico. The quarantine was imposed every year, regardless of whether or not there was a threat of an epidemic disease.[5]

Some months later, the mayor of Brownsville, Texas, established a strict quarantine between this city and Matamoros, Tamaulipas, the nearest city on

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2 Moisés González Navarro, "La vida social," in *Historia moderna de México*, ed. Daniel Cosío Villegas, vol. 3 (México: Hermes, 1957), 24, 30; Eduardo Menéndez, *Poder, estratificación y salud. Análisis de las condiciones sociales y económicas de la enfermedad en Yucatán* (México: Centro de Investigaciones y Estudios Superiores de Antropología Social, 1981); Francisco G. Hermosillo-Adams, "Estructura y movimientos sociales," in *México en el siglo XIX (1821–1910). Historia económica y de la estructura social*, ed. Ciro Cardoso (México: Nueva Imagen, 1988).

3 Celso Furtado, *La economía latinoamericana. Formación histórica y problemas contemporáneos* (México: Siglo XXI, 1976).

4 Manuel Miño-Grijalva, Pedro Pérez-Herrero, and María Teresa Jarquín, "Tendencias generales de las relaciones económicas entre México y España," in *Tres aspectos de la presencia española en México durante el porfiriato: relaciones económicas, comerciantes y población*, ed. Clara Lida (Mexico: El Colegio de México, 1981), 27–29.

5 "Quarantine established between Brownsville and Matamoros," Archivo Histórico Genaro Estrada de la Secretaría de Relaciones Exteriores, México (hereinafter AHGESRE), *Embajada de México en Estados Unidos de América, 1805–1925*, file 89, exp. 3, f. 23.

the Mexican border, suspending communications among the inhabitants of both sides of the river. The explanation he provided was that the Matamoros authorities had not agreed to interrupt traffic with another Mexican city, which supposedly allowed the disembarkation of passengers and unloading of products from infested places.[6] In order to further tighten the isolation, the Brownsville authorities placed detachments of line troops to guard the points of entry or exit of the city and requested weapons from the federal government. The latter replied that it was the federal force that was responsible for maintaining order and security against any "invasion" from Mexico, but that if the Brownsville authorities insisted on their intention to obtain firearms, they should contact the state government since it was responsible for internal security.[7] Trying to avoid or limit these interruptions to trade was the reason why the Mexican government joined the international public health movement.

According to historian Claudia Agostoni, during the Porfirio Díaz government the sanitary bureaucracy's project was centered in Mexico City, "the allocation of resources [...] did not favored public health," while "the Sanitary Code was seldom respected or enforced."[8] I, on the contrary, have argued that the birth of modern public health in Mexico took place precisely in those 34 years of the late nineteenth and early twentieth centuries (1876–1910), and was made possible by an interweaving of scientific, political, and economic factors that included the incorporation of bacteriology, immunology, and epidemiology into the practices of Mexican health professionals and the creation of scientific institutions; the increasing focus of state power on sanitary issues that went hand in hand with the strengthening of its political power; and the need of the Porfirian elite and American and European investors to fight epidemics and endemic diseases in strategically important economic areas. I believe that public health in those years was a continuous policy with clear objectives, a national scope, and international projection.[9]

Also, according to historian José Ronzón, the sanitary project promoted in the Caribbean ports of Veracruz, Havana, and New Orleans was a policy of inter-

6 "Quarantine established between Brownsville and Matamoros," AHGESRE, *Embajada de México en Estados Unidos de América, 1805–1925*, file 89, exp. 3, f. 30.

7 "Reviews of major events in the demarcation: quarantine in Matamoros," AHGESRE, *Embajada de México en Estados Unidos de América, 1805–1925*, file 90, exp. 6, f. 1–4.

8 Claudia Agostoni, *Monuments of Progress. Modernization and Public Health in Mexico City, 1876–1910* (Calgary: University of Calgary Press, 2003), 59, 63, 103.

9 Ana María Carrillo, "Economía, política y salud pública en el México porfirista (1876–1910)," *História, Ciência, Saúde. Manguinhos* 9, *suplemento* (2002): 67–68.

national character.[10] While this is true, I will try to show that Mexico differed from other Latin American countries in its independence from the United States in the execution of its sanitary campaigns.

María de Jesús Duarte Espinosa has pointed out that relations between Mexico and the United States in the period 1876–1910 developed in a contradictory environment, with moments both of confrontation and cordiality, and that in its negotiations with the United States, the Mexican government always insisted on terms of equality, seeking reciprocity in the different aspects of the binational relationship. She has also studied how the Mexican government's foreign policy during the period was orchestrated by the prominent lawyers, Ignacio L. Vallarta and Ignacio Mariscal, who were at the head of the Ministry of Foreign Affairs, and by Manuel M. Zamacona and Matías Romero, the plenipotentiary ministers of Mexico in Washington, D.C., whose leadership gained Mexican diplomacy international recognition.[11]

This chapter deals with the important role that physician Eduardo Liceaga, President of the Superior Board of Health (*Consejo Superior de Salubridad*)—at that time, the highest sanitary body in the country—and the partnership established between the Board and the Ministry of Foreign Affairs played in international sanitary matters. The members of the Superior Board of Health defended in sanitary congresses what the representatives of the Ministry of Foreign Affairs tried to obtain through diplomatic channels. The essay also attempts to answer why the government of Porfirio Díaz yielded to pressure from the U.S. federal government to sanitize Mexico's major cities, ports, and border towns and to concentrate its efforts to combat yellow fever even though other diseases had higher morbidity and mortality rates while simultaneously taking action to defend the country's autonomy and sovereignty in health matters. I conclude that this policy was made possible by advances in public health, which were linked to the economic development of various regions of the country.

International public health

For a long time, the quarantines and isolation imposed on ships and individuals to try to prevent the arrival of epidemic diseases from one country to another represented an important obstacle to free trade; therefore, there were constant

10 José Ronzón, *Sanidad y modernización en los puertos del Alto Caribe. 1870–1915* (México: UAM-Porrúa, 2004), 9, 18, 177.

11 María de Jesús Duarte-Espinosa, *Frontera y diplomacia. Las relaciones México-Estados Unidos durante el Porfiriato* (México: Secretaría de Relaciones Exteriores, 2001), 18–19.

conflicts between commercial and health interests. Precisely to protect international trade and to simultaneously avoid the high mortality caused by epidemics, the idea of a world sanitary legislation began to be considered. The first attempts to do so date back to the first International Conference held in Paris in 1851. This legislation was only signed by five of the 12 countries in attendance and did not bind their respective governments. However, the modern apparatus for disease prevention along the frontiers of the world was derived from that meeting.[12]

The next sanitary conferences were held in Paris (1859), Constantinople (1866), and Vienna (1874). At these meetings, commercial interests were represented by diplomats and scientific interests by leading hygienists. It was common for the former to accuse the hygienists of getting lost in useless discussions, and for the latter to censure the former for being ignorant of diseases.[13] They also pitted those who defended sanitary cordons and lazarettos against those who, on the other hand, were in favor of individual, environmental and general sanitation. The discoveries of the medical sciences—which identified the causative agent of many diseases and explained how others are transmitted—were gradually accepted and facilitated an understanding between nations and the signers of international agreements.[14]

In 1880, the two houses of the United States Congress decided to promote holding the fifth International Sanitary Conference in their country. It took place in Washington, D.C., the following year and was the first conference in which the United States of America and some Latin American countries participated.[15] Before the conference, the President of the United States proposed establishing a trustworthy international system of communication on the existence of infectious contagious diseases, with special attention to cholera and yellow fever. The U.S. Minister to Mexico soon called the attention of the Mexican government to the matter. He maintained that world trade had suffered and continued to suffer great losses because of the obstacles and delays caused by unnecessary quarantines, a situation which could be remedied to a great extent by the establishment of an international system of communication of diseases such as

12 R. Hood, "Defeat of Pestilence Foreshadows, End of Quarantine," *World Health* 12, no. 1 (1959), 21.

13) Juan B. Mateos Jiménez. "Actas de las conferencias sanitarias internacionales (1851–1938)," *Revista Española de Salud Pública* 79, no. 3 (2005): 341.

14 Marcos Cueto, *The Value of Health. A History of the Pan-American Health Organization* (Washington, D.C.: PAHO, 2006), 9–12.

15 Balaguer-Perigüel and Ballester-Añón, "Medicina y sociedad," 370.

that proposed by the Congress of the United States of America.[16] In Mexico, the mere call to the meeting influenced sanitation as the Mexican government began constructing a lazaretto in Veracruz to give effect to the sanitary measures that might be taken at the fifth International Sanitary Conference, and sent two official delegates to Washington.[17]

On 5 January 1881, the fifth Sanitary Conference was installed, which in effect established a Permanent International Sanitary Organization of Notification. The organization had two offices: one in Vienna, for the epidemic diseases of Europe, Asia, and Africa, and another one in Havana, for those related to America. Subsequent international sanitary conferences included: sixth, Rome (1885); seventh, Venice (1892); eighth, Dresden (1893); ninth, Paris (1894); tenth, Venice (1897); eleventh Paris (1903), and twelfth, Paris (1911). There were 14 sanitary conferences all in all, but the next two took place outside the time period studied here: thirteenth, Paris (1926), and fourteenth, Paris (1938). Each meeting focused on a particular issue: among others, medical inspection, disinfection, or maritime quarantines. The eleventh Sanitary Convention, held in Paris in 1903, was the first effective meeting after almost 50 years. In it, the European countries signed the International Sanitary Convention, in accordance with which the duration of quarantines should not be arbitrarily decided but should correlate with the incubation period of the respective diseases.[18]

The process of internationalization of public health regulations that began in the Americas with the fifth International Sanitary Conference continued to develop with a series of further international agreements or meetings. These included the United States-Mexico Reciprocal Convention on Contagious Diseases (held in 1891); the Pan American Medical Congresses; the meetings of the American Public Health Association, into which sanitary authorities of Canada, Mexico, and Cuba were gradually incorporated; the Latin American Scientific and Medical Congresses; three conventions held by South American countries: the Convention on Sanitary Measures held by Uruguay, Brazil, and the Argentine Republic; the International Sanitary Convention of Rio held by these three countries together with Paraguay and the Sanitary Convention of the Lima Congress held by Bolivia, Chile, Ecuador, and Peru, and, lastly, the Sanitary Conventions

16 "Letter from the US Secretary of State of the United States of America to the Minister of Foreign Affairs of México, August 24, 1880," Archivo Histórico de la Secretaría de Salud (hereinafter AHSSA), *salubridad pública*, congresos y convenciones, box 1, exp. 1, 112f.: 1–4.

17 "Letter from Dr. Ignacio Alvarado to the Minister of the Interior of Mexico, Veracruz, September 17, 1880," AHSSA, *salubridad pública*, congresos y convenciones, box 1, exp. 1, f. 33–37.

18 Eduardo Liceaga, *Mis recuerdos de otros tiempos* (México: Talleres Gráficos de la Nación, 1949), 229–232.

of the American Republics that were not academic congresses to discuss scientific matters, but meetings held to regulate international sanitary policy.[19] The Mexican government hosted four of these meetings and sent delegates to all of them, except for those that were exclusive to South American countries, and even in those cases was attentive to their resolutions.

These congresses and conventions were not confined, neither in theory nor in practice, to the medical profession. As other authors have pointed out, physicians debated with other professions, and with other social sectors including government, business, industry, and commerce.[20] They interacted with local actors (political and health authorities, health professionals, researchers, and citizens) and international actors (transnational professionals and international agencies). Due to its dual nature of being both sanitary and political, international public health activities were a central element of health conditions at the local and national levels, for the establishment of public policies and for relations between countries.[21]

The attendees of these international medical and health meetings recommended to their governments the nationalization and centralization of the sanitary authorities, as well as the enforcement of sanitary codes. They sought to obtain epidemiological information from each of the attending countries; to promote the sanitation of ports and border cities and to improve maritime sanitary inspection in order to protect the nations of the American continent from epidemics and epizootics, particularly yellow fever; to establish an international system of sanitary declarations and a uniform quarantine system for the American countries, which, while protecting society, would place the least possible restrictions on trade, in accordance with the dictates of the sanitary science of the time.[22]

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19 Ana María Carrillo, "Surgimiento y desarrollo de la participación federal en los servicios de salud: 1902–1940," in *Perspectiva histórica de atención a la salud en México 1902–2002*, ed. Guillermo Fajardo et al. (México: Organización Panamericana de la Salud, 2002), 23; Ronzón, *Sanidad y modernización*, 105–106; Cueto, *The Value of Health*; Carrillo and Birn, "Neighbors on Notice: National and Imperialist Interests in the American Public Health Association, 1872–1921," *Canadian Bulletin of Medical History* 25 (2008): 231.

20 Marta de Almeida, "Circuito aberto: idéias e intercâmbios médico-científicos na América Latina nos primórdios do século XX," *História, Ciência, Saúde. Manguinhos* 13 no. 3 (2006): 735.

21 Anne-Emanuelle Birn and Gilberto Hochman, "Guest Editor's Note," *História, Ciência, Saúde. Manguinhos* 13, no. 3 (2006): 541.

22 "Disposiciones sanitarias a las que han de sujetarse las subcomisiones," in *Memorias del Segundo Congreso Médico Panamericano (1896)*, vol. 1 (México: Hoeck y Hamilton, 1898), 169. Carrillo and Birn, "Neighbors on Notice," 231, 233, 238–241; Eduardo Liceaga, "Reflections on the Desirability of an Agreement Between the Sanitary Authorities of Adjoining Countries for Mutual

International influence on Mexican public health

International public health meetings exerted a decisive influence on the progress of hygiene in Mexico. This was partly the case because the advances in preventive medicine and public health were presented and discussed there, and partly because of the large number of professionals from Mexico who participated in them,[23] but, above all, because of the decision of the Diaz regime to support all initiatives by the Superior Board of Health. However, it is impossible to specify the extent of that influence since these policies were always the result of many factors and of a long process.

The Porfirian health bureaucracy carried out studies in medical geography to assess the health of the country's inhabitants, developed school hygiene programs, and organized health campaigns against plague, yellow fever, smallpox, malaria, tuberculosis, and syphilis. At the outset of the Porfirio Díaz regime, the Board of Health had jurisdiction only over Mexico City because the Federal Constitution of 1857 granted individual states the freedom to decide on sanitary issues. This situation would change dramatically in later years. The first Sanitary Code was issued in 1891 and granted the Board of Health the authority to extend its sphere of influence to include ports and frontiers, which, in Dr. Liceaga's view, did not pertain to the state in which they were located but, rather, to the Republic itself.[24]

The ports were classified into four categories. The first category included those ports that had a lazaretto, a disinfection stove, and a delegate of the Superior Board of Health;[25] the second category included those that had a stove and a delegate; and the third category contained those that only had a delegate. The remaining ports were fourth class, but a couple of them had port chiefs and the ports of Veracruz and Manzanillo had laboratories where the respective delegates could diagnose plague, yellow fever, and various forms of malaria and dictate measures against their propagation. Foreign ships had to arrive at seaports that had delegates of the Superior Board of Health. In addition, they had to carry a health patent. Sometimes, the local authorities of other countries is-

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Defense Against Transmissible Disease," in *Public Health Papers and Reports*, vol. 29 (Columbus: The Berlin Printing Company, 1904): 43.

23 Mazÿck P. Ravenel, "The American Public Health Association. Past, Present, Future," in *A Half Century of Public Health. Jubilee Historical Volume of the American Public Health Association*, ed. Mazÿck P. Ravenel (New York: American Public Health Association, 1921), 18–20.

24 Liceaga cited by Carrillo, "Economía, política y salud pública," 70.

25 They were: Veracruz (Veracruz) on the Gulf of Mexico; Acapulco (Guerrero) and Salina Cruz (Oaxaca) on the Pacific (where the largest number of Asian migrants arrived).

sued such patents, and if they coincided with the sanitary condition of the harbors, the Mexican consuls abroad endorsed them. In order to have more accurate reports, governments even sent doctors to the countries with which they traded the most.[26]

In 1894, the Maritime Sanitary Code was promulgated. It had been adapted from the convention signed in Dresden in 1893 and accepted by Mexico seven months later. The Dresden Convention reduced quarantine days and facilitated the transit of persons and goods, and the Mexican authorities had endeavored to adjust their laws to bring them into line with the quarantine ordinances of the European nations with which Mexico maintained commercial relations.[27] The Maritime Sanitation Code and the Sanitary Code showed the growth of the role and weight of the state in all aspects of social life. The places in which they were enforced were the same ones in which there were private Mexican or foreign investments. It is no coincidence that it was precisely in those zones that the Mexican government financed large-scale public works of a sanitary nature.

Although during the last decades of the nineteenth century and the first decade of the twentieth century the port of Veracruz had competition from other ports, it continued to have majority participation in the national foreign trade. In the state bearing the same name, there were substantial investments from the United States, since the US had the monopoly on the oil industry and was constantly acquiring new land in the area whose agricultural and industrial production was largely directed to satisfy the U.S. markets.[28] At a cost of millions of pounds sterling, the government of Porfirio Diaz contracted, primarily together with S. Pearson and Son, Limited, the execution of major works in the port, as well as the sanitation and supply of drinking and filtered water to the inhabitants of the city.[29]

The Díaz government also carried out work in the port of Coatzacoalcos, located on the Gulf of Mexico, and the port of Salina Cruz, located on the Pacific

26 Porfirio Díaz, "Informe leído por el C. presidente de la República," *Diario Oficial del Supremo Gobierno de los Estados Unidos Mexicanos*, 16 September 1892, 1.

27 Eduardo Liceaga, "Explanation of the scientific principles, and the data acquired through experience, on which the ordinances of the international maritime police were founded," in *Public Health Reports and Papers of the American Public Health Association*, vol. 16 (Concord: Republican Press Association, 1894), 139.

28 Stallings cited by Ronzón, *Sanidad y modernización*, 28.

29 Person had also carried out the drainage and sewage works in the Valley of Mexico. Priscila Connolly, *El contratista de don Porfirio. Obras públicas, deuda y desarrollo desigual* (México: Fondo de Cultura Económica, 1997), 96, 129, 138, 245.

Ocean, which were connected by railroad, in order to favor foreign trade.[30] In 1876 there were 410 miles of railroad tracks in the country, and in 1910 there were already 11,980.[31] In general, they did not connect Mexican cities with each other, but instead connected the main mining and agro-exporting enclaves of Mexico with the main border cities of the United States.[32]

On the other hand, between 1890 and 1920 Yucatan was one of the comparatively most developed Mexican states. In 1910 it had the highest per capita production of agricultural products for export. In 1885, 135 square miles were used for growing *henequen*,[33] and in 1890 the number had increased tenfold to 1,447.[34] This expansion was the result of the mechanization of North American agriculture and the subjugation of the Mayan Indians,[35] with the most extensive railroad network in Mexico built on the peninsula and schools existing in almost all the *henequen*-producing towns and haciendas.[36]

Yellow fever was the illness that most gravely affected trade between Mexico and the United States. The United States claimed that the disease came either from Mexico or from Cuba. To avoid obstacles to the free traffic of its merchandise, the Mexican Superior Board of Health gave priority to the fight against the disease.[37] Starting in 1893, its president presented a report on yellow fever cases in Mexico at the annual meeting of the American Public Health Association.[38]

At the fifth International Sanitary Conference held in Washington, D.C., in 1881, Finlay presented for the first time his theory on the transmission of yellow fever and established the basis of the scientific concept of disease transmission by means of a vector. He established that the disease is transmitted by the bite of

30 Connolly, *El contratista de don Porfirio*, 92, 94.

31 John Coastworth cited by Connolly, *El contratista de don Porfirio*, 113.

32 Inés Herrera Canales, "La circulación (comercio y transportes en México entre los años 1880–1910)," in *México en el siglo XIX (1821–1910). Historia económica y de la estructura social*, ed. Ciro Cardoso (Mexico: Nueva Imagen, 1988), 445–446.

33 A strong hard fiber obtained from the leaves of a tropical American agave [*Agave fourcroydes]* of major global importance, found chiefly in Yucatán and used especially in making twine and rope.

34 Bellingeri cited by Eduardo Menéndez, *Poder Poder, estratificación y salud*, 25.

35 In 1847, the Mayan Indians rebelled against the whites and mestizos, and what is known as the Caste War lasted until 1901, when their movement was defeated.

36 Menéndez, *Poder Poder, estratificación y salud*, 28–29.

37 Eduardo Liceaga, "Arrangment of the sanitary stations which the Board of Health proposes to establish to prevent the propagation of yellow fever," in *Public Health Reports and Papers of the American Public Health Association*, vol. 25 (Columbus: The Berlin printing Company, 1900).

38 Eduardo Liceaga, "Memoria presentada a la Asociación Americana de Salubridad Pública, en su reunión de Milwaukee, Wisconsin," AHSSA, *salubridad pública*, congresos y convenciones, box 10, exp. 13 [4 f.], 1910.

the *Aedes aegypti* mosquito, which, after biting a sick person, bites a healthy person. However, 20 years elapsed before his doctrine was accepted. Based on Finlay's theory, during the first American occupation of Cuba, backed by Cuban physicians and by some army officers, the government began to sanitize the island. The campaign succeeded in controlling yellow fever and was then replicated in other parts of the world.[39]

In Mexico, the campaign began in the state of Veracruz in 1903, continued in the state of Yucatan, and was later carried out in all locations affected by yellow fever. Both the west coast of Mexico and the Pacific coast were surveyed; measures included sanitary inspections of ships, railroads, and public and private places.[40] Pearson mentioned that he received help from Liceaga in convincing the Mexican government of the need to carry out cleanup work at the port of Salina Cruz. In all cases, the public works contractors worked in coordination with the delegates of the Superior Board of Health.[41] In 1910, Mexico was able to suppress yellow fever throughout the national territory, although the disease would return during the years of the revolution, in 1910–1921.

Seeking reciprocity

While these policies were the result of international cooperation, their practice was not without tensions between Mexico and its neighbors. In 1903, Texas placed the city of Torreon under quarantine on the grounds that there had been cases of plague in the city. It was lifted after the Mexican Ministry of Foreign Affairs protested and the town's doctors, the U.S. consul, and representatives of the U.S. Navy Hospital Service and the Cuban government declared that not a single case of the disease had occurred, and that therefore the quarantine imposed on Torreon was not justified.[42]

In 1900 there was again fear in the United States due to the supposed presence of bubonic plague in Cozumel, a port in southeastern Mexico. The president

39 José López Sánchez. *Carlos Finlay. His life and his work* (La Habana: José Martí, 1999), 189–191, 193–194, 199–213, 396–397.

40 Eduardo Liceaga, "Annual report presented to the American Public Health Association, in its meeting at Atlantic City, September, 1905–December, 1906," AHSSA, *salubridad pública*, congresos y convenciones, box 8, exp. 4 [42 f.].

41 Connolly, *El contratista de don Porfirio*, 249.

42 "Letter from from Ignacio Mariscal, Mexican Minister of Foreign Affairs, to Manuel de Aspíroz, Mexico's Ambassador to Washington, April 4, 1903," AHGESRE, *Embajada de México en Estados Unidos de América, 1805–1925*, file 164, exp. 4, 115 f.: 78–81.

of the Superior Board of Health had to clarify to the U.S. health authorities that the alarm was unfounded. However, to try to prevent the arrival of the disease in Mexico, it was decided to close Cozumel to any ships coming from South American ports, which the Mexican Ministry of Foreign Affairs communicated to the Secretary of the Treasury in Washington.[43] Two years later, the bubonic plague arrived in Mexican territory—not from South America but from California, without the Californian authorities having informed the countries with which they traded, including Mexico, that they were suffering from a plague epidemic.[44]

Between 13 and 31 December 1900, 72 people died of the plague in the western port of Mazatlán. J. S. Fulton, Secretary of the State of Maryland, assured Liceaga that the bubonic plague epidemic affecting Mazatlan and La Paz had reached those ports from San Francisco. He encouraged Liceaga to file a complaint about this fact.[45] Liceaga replied that the Mexican authorities thought that the disease had indeed come from San Francisco, but they had not yet finished their investigation, so he did not dare make such a claim. They knew that bubonic plague had occurred in Chinatown for two years, and the Mexican government's protests could be made on the grounds that they had not been warned.[46]

With an energetic sanitary campaign, the epidemic in Mexico was extinguished in six months, while in the United States it lasted several years.[47] But the quarantines did not stop. Although they affected merchants and settlers on both sides of the border, they were much more serious for those in Mexico, because since 1880, more than 50% of the sale of Mexican products went to the United States; on the other hand, exports to Mexico represented no more

43 "Letter from Mexican Ignacio Mariscal to Manuel de Aspíroz, March 26, 1900, and "letter from John Hay, Secretary of State of the United States, to Manuel de Azpíroz, March 31, 1900," AHGESRE, *Embajada de México en Estados Unidos de América, 1805–1925*, file 164, exp. 4, 115 f.: 1, 5.

44 Antonio Butrón y Ríos, *Epidemiología. Datos históricos sobre la peste bubónica de 1902 a 1903 en el estado de Sinaloa, México* (México: Andrés Botas, 1916), xiv.

45 "Letter from Dr. J. S. Fulton, Secretary of the Board of Health in Baltimore, to Eduardo Liceaga, President of the Mexican Superior Board of Health, about the appearance of the plague in Mazatlan, which probably reached that port via San Francisco, California, on the steamship Curaçao, December 27, 1902," AHGESRE, *Embajada de México en Estados Unidos de América, 1805–1925*, file 164, exp. 4, 115 f.: 39.

46 "Letter from Eduardo Liceaga to J. S. Fulton, January 3, 1903," AHGESRE, *Embajada de México en Estados Unidos de América, 1805–1925*, file 164, exp. 4, 115 f.: 40.

47 Ana María Carrillo, "¿Estado de peste o estado de sitio?: Sinaloa y Baja California 1902–1903," *Historia Mexicana* 54, no. 4 (2005): 1094.

than 3% of U.S. trade.[48] For this reason, Mexico sought to reach agreements on sanitary matters.

The International Sanitary Convention of the American Republics was signed in Washington in 1905. With additions on yellow fever, it was modeled on the International Sanitary Convention signed in Paris two years earlier.[49] The delegates concluded that matters of international sanitary police should be left to national governments; that there should be two kinds of detention in ports, one for inspection and observation, and another for disinfection; and that the prohibitive quarantine of manufactured articles and other goods should be abolished.[50]

Argentina, Uruguay, Brazil, and Paraguay fought for the countries of their continent to sign the International Sanitary Convention of Rio de Janeiro. Juan César García—one of the leading figures of the twentieth century Latin American social medicine movement—held the thesis that in his capacity as president of the Superior Health Board of Mexico, Eduardo Liceaga "lent himself to the maneuvers of the United States delegation to disarm the resistance to the continental maritime sanitation project presented by Argentina,"[51] and that those he called "intellectuals of state sanitation" of Mexican government "were intertwined with the imperialist interests of the United States with whom they collaborated in their hegemonic project."[52] But any communication exchanged at the time between Washington and Mexico indicates that García's thesis is simplistic if not altogether incorrect.

Mexican sanitarians had participated in all Latin American Medical and Scientific Congresses originally promoted by Argentina, which, as García also pointed out, opposed the hegemony of the United States in politics and international sanitary police matters and criticized Pan-Americanism.[53] On several occasions, Liceaga presented to the Minister of the Interior the desirability of Mexico's attendance at these meetings, stating that the country and the other Latin American countries shared a community of scientific and other interests.[54]

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48 Pablo González, *¿Reciprocidad imposible? La política de comercio entre México y Estados Unidos. 1857–1938* (México: El Colegio Mexiquense-Instituto Mora, 2003), 49–52.

49 "Letter from Dr. Eduardo Liceaga to Ramón Corral, Minister of Interior, Mexico City, April 20, 1906," AHSSA, *salubridad pública*, congresos y convenciones, box 6, exp. 10 [22f.].

50 "Resolutions of the Second International Sanitary Convention of the American Republics, October 9, 1905," AHSSA, *salubridad pública*, congresos y convenciones, box 6, exp. 3 [17f.].

51 Juan César García, "La medicina estatal en América Latina," *Revista Latinoamericana de Salud* 1 (1981): 84.

52 García, "La medicina estatal," 84.

53 García, "La medicina estatal," 81.

54 "Letter from Eduardo Liceaga to Manuel González, Minister of Interior," 19 November 1902, AHSSA, *salubridad pública,* congresos y convenciones, box 5, exp. 5 [176f.].

It is true that through diplomatic channels, the government of the United States had informed the Superior Board of Health of Mexico that, for political reasons, their country did not consider it appropriate to take the initiative for an international convention, but "would gladly welcome the motion on the part of Mexican delegates," and asked that it not be made known that they were the promoters of the same.[55] It is also true that when Dr. Liceaga attended the First International Tuberculosis Congress (held in Washington, D.C., in 1908), he conducted formal interviews with members of the U.S. government and had a personal meeting with President Roosevelt for having been the main promoter of the International Sanitary Convention, signed in 1905.[56]

But once Mexican sanitary authorities took the initiative to standardize international health policies in the Americas, proposing a convention modelled on the one signed in Paris in 1903 by the European countries, the government of the United States was reluctant to sign it. According to them, the difficulty lay in the fact that for Mexicans, health policy was a national concern while for the United States government it was the responsibility of individual US states, some of which refused to abide by the resolutions agreed upon at the Sanitary Convention held in Washington.[57]

Mexican sanitary authorities believed in the International Sanitary Convention (of the American Republics) and needed it to avoid quarantine warfare between nations. In a letter to the Minister of the Interior, Liceaga requested that the Senate ratify it, since: "from the point of view of the future progress of our ports and border cities, it is indispensable that there be agreements with the peoples with whom we maintain trade relations."[58] He also pressured the American sanitary authorities so that its government would not only impose

55 "Report from Manuel de Aspíroz to Ignacio Mariscal, January 4, 1904," AHGESRE, *Embajada de México en Estados Unidos de América, 1805–1925*, file 164, exp. 6, 208 f.: 1–2.

56 "International Congress of Tuberculosis, 1908," AHGESRE, *Embajada de México en Estados Unidos de América, 1910–1912*, file 252, exp. 21, 33 f.: 22–24; Ana Rosa Suárez Argüello, "El maletín diplomático del Dr. Eduardo Liceaga," in *A la sombra de la diplomacia. Actores informales de las relaciones internacionales de México*, ed. Ana Rosa Suárez Argüello and Agustín Sánchez Andrés (México: Instituto Mora-Universidad Michoacana de San Nicolás de Hidalgo, 2017), 140.

57 "Letters from Manuel de Aspíroz, to Ignacio Mariscal, January 4, 1904 and 27 de abril de 1904," AHGESRE, *Embajada de México en Estados Unidos de América*, file 164, exp. 6, 208 f.: 1–2, 50–51.

58 "Letter from Eduardo Liceaga to Ramón Corral, 20 de abril de 1906," AHSSA, *salubridad pública*, congresos y convenciones, box 6, exp. 10 [22 f.].

the International Sanitary Convention of the American Republics on other countries but would also personally abide by it.[59]

There are many examples of the demands for reciprocity and the establishment of scientifically justified sanitary measures that the Superior Board of Health made to representatives from several countries but especially to the United States. The Superior Board of Health protested, for example, against the ten-day quarantine that Texas continued to impose on merchandise and persons coming from certain places in Mexico where yellow fever was present, arguing that they should have lasted only five days, the length of the disease's incubation period.[60] But the sanitary officer of this state replied that Texas had not been a party to the International Sanitary Convention held in Washington in 1902, and therefore did not have to obey it. This argument was supported by the U.S. Navy Hospital Service.[61]

Between imperialist interests and self-determination

Twenty years after Finlay put forward his theory on the mosquito-borne transmission of yellow fever, the American Medical Commission led by Walter Reed —major of the United States occupying army in Cuba—tried to take credit for this discovery. Cuban historian of medicine José López Sánchez says that it was necessary to find a pretext as humanitarian and philanthropic as the eradication of yellow fever and the sanitation of Cuba to justify American military intervention on the island. He also states that later on the Americans plotted a campaign to usurp Finlay's scientific discovery to further their neocolonial ambitions for Latin America. The discovery allowed the government of the United

59 "Superior Board of Health memorandum, January 14, 1904," reproduced by *Diario Oficial de los Estados Unidos Mexicanos*, April 29, 1904, 864–866. Carlos Viesca-Treviño, "Eduardo Liceaga y la participación mexicana en la fundación de la Organización Panamericana de la Salud," *Revista Cubana de Salud Pública* 24, no. 1 (1998): 15.

60 For example, "Letter from Eduardo Liceaga to Walter Wyman, U.S. Surgeon General, January 13, 1904," AHGESRE, *Embajada de México en Estados Unidos de América*, file 164, exp. 6, 208 f.: 84–90.

61 "Letter from the acting Secretary of the Department of State to Manuel de Aspíroz, December 28, 1903," AHGESRE, *Embajada de México en Estados Unidos de América*, file 164, exp. 4, 115 f.: 98–100.

States the elimination of unsanitary areas in Latin America, for its plans for territorial expansion.[62]

In July of 1905, an epidemic of yellow fever broke out in New Orleans and the infection spread to Havana. At the meeting of the APHA celebrated in Cuba that year, Carlos M. García, a Mexican hygienist, asked: "Why did the US, always so zealous and threatening if its ports were at risk of being infected, not take the required measures to prevent yellow fever from spreading to Cuba and other countries from its epidemic center, which it had failed to cleanse?"[63]

At the Second International Sanitary Conference of the American Republics, it was agreed that the observation or detention of vessels in ports should be carried out only when necessary, and that the period of detention and disinfection in quarantine stations should be as short as was compatible with public safety and the teachings of science. The Mexican government fought for the enforcement of these resolutions when authorities in Cuba and some of the federal states of the United States—including Louisiana, Florida and especially Texas, probably because of business interests or different scientific understanding—continued to impose quarantines that did not coincide with these postulates.[64]

To the logic of Liceaga's argument that quarantines should be based on the incubation period of the disease and not on arbitrary calculations, U.S. Surgeon General Walter Wyman replied that he did not understand why it was so difficult for the Mexican government to accept that the U.S. Congress recognized the quarantine powers of the states, and that it was impossible for the U.S. government to prevent any state from taking extraordinary measures.[65] In fact, in all countries, including Mexico, there were confrontations regarding national sanitary laws and regional autonomy, and it took efforts on the part of the state to advance the centralization of international sanitary police matters.

Since the Americans insisted that yellow fever often came from Mexico, in 1904 a commission composed of Wyman and George R. Tabor, state health officer of Texas, presided over a commission of health physicians that visited Mexico to learn about the campaign against yellow fever that the health authorities had organized, first in Veracruz and then in other states where the disease was endemic. The commission later reported that, if Liceaga's plan against yellow fever was successful, it would exterminate the disease from the country forever. However,

62 José López Sánchez, *Carlos Finlay*, 32.

63 García cited by López Sánchez, *Carlos Finlay*, 435.

64 Liceaga, "Reflections on the Desirability," 45.

65 Walter Wyman's words in "Official Report of the Proceedings of the Thirty-first Annual Meeting of the American Public Health Association," in *Public Health Papers and Reports of the Americanns Public Health Association*, vol. 29 (Columbus: the Berlin printing Company, 1904), 277.

almost immediately afterwards the Washington government established a formal quarantine in El Paso, Eagle Pass, and Laredo for passengers arriving from anywhere in Mexico.By order of the Mexican President, the Mexican Minister of Foreign Affairs asked Mexico's Ambassador to the US to request that the quarantine be suspended since there was no disease in Mexico that merited such an extreme measure.[66]

Liceaga also wrote to Tabor. He told him that he had been informed that the cause of the quarantine was that the Mexican authorities were doing nothing to prevent the return of yellow fever. Liceaga had been unwilling to believe what he was told because Tabor and other physicians had been satisfied with the plan of defense that Mexico carried out against the disease and that included sending an expeditionary brigade to the smallest town. The only extra proposal Wyman had made was that the dry bush where the mosquitoes lodged in the winter be burned. His proposal was readily accepted:

> How could we believe that you would quarantine against an entire nation when there is no epidemic? If there were any authorization to take restrictive measures, it would be Mexican authorities who should impose them against Laredo, Texas, where there have been isolated cases as recently as last month, according to the publications made by *The Public Health Reports*.[67]

Although the representatives of the United States recognized the work of the Mexican Superior Board of Health and of Liceaga in extinguishing yellow fever, they argued that it would require several years of work and that, in the meantime, their country would be permanently threatened along the Mexican border. Therefore, they were obliged to maintain a quarantine on Mexico which would almost completely prohibit traffic between the two republics. These strict measures, they said, could change if the Mexican government accepted the proposal to place U.S. sanitary inspectors at different ports and borders.[68] But, unlike what happened in some Latin American countries, the Mexican government openly opposed U.S. interventionism in sanitary matters.

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66 "Letter from Ignacio Mariscal to Chargé d'Affaires ad interim of Mexico in Washington, April 19, 1905," AHGESRE, *Embajada de México en Estados Unidos de América*, file 164, exp. 6, 208 f.: 188.

67 "Letter from Eduardo Liceaga to George R. Tabor, State Health Officer of Texas, March 24, 1904," AHGESRE, *Embajada de México en Estados Unidos de América*, file 164, exp. 6, 208 f.: 61–63.

68 "Letter from George R Tabor to Eduardo Liceaga, April 5, 1904," AHGESRE, *Embajada de México en Estados Unidos de América*, file 164, exp. 6, 208 f.: 64–69.

Liceaga recalled that the Mexican government was acting decisively against yellow fever, thus guaranteeing to prevent the exportation of communicable diseases. He clarified: "The Mexican government is implementing these measures in the use of its sovereignty, without infringing on the rights of any other nation, and to execute these works it does not need foreign watchmen."[69] Liceaga also wrote to Dr. Wyman: "... I as a Mexican cannot propose to my government that it accept a tie that binds it to that of the United States, and obliges it to do under pressure from them, what it has done voluntarily since September 1903."[70] For his part, Minister Ignacio Mariscal wrote to Mexico's Ambassador to Washington; he reproduced Liceaga's letter and declared himself "against the intervention of the United States government in our populations."[71]

Since the Americans did not want to dispense with the special quarantine laws that some US states had, the Mexican health authorities approached other republics of the Western Hemisphere. One by one the American countries signed the Sanitary Convention of the American Republics, and the states of the Union had to recognize that the measures had to be identical for all countries.[72]

The Superior Board of Health also approached the European nations. In 1905, the *Arrangement de Rome* was signed, in which representatives of several countries proposed the creation, in Paris, of the first world sanitary organization, the *Office Internationale d'Hygiène Publique*. On 9 December 1907, the organization was established, creating relations between the (American) International Sanitary Bureau and its European counterpart. On 10 February 1909, the Mexican government declared its adherence to the *Arrangement de Rome*, and therefore to the *Office Internationale d'Hygiène Publique*.[73] From April 1910 on, the Mexican government had a permanent delegate in this office.[74]

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69 "Letter from Eduardo Liceaga to George R Tabor, March 24, 1904," AHGESRE, *Embajada de México en Estados Unidos de América*, file 164, exp. 6, 208 f.: 59; Paul Ross, "Mexico's Superior Health Council and the American Public Health Association: The Transnational Archive of Porfirian Public Health, 1887–1910," *Hispanic American Historical Review* 89, no. 4 (2009): 601.

70 "Letter from Eduardo Liceaga to Walter Wyman, January 14, 1904," reproduced by *Diario Oficial de los Estados Unidos Mexicanos*, 29 April 1904, 866.

71 "Letter from Ignacio Mariscal to Manuel de Aspíroz, April 28, 1904," AHGESRE, *Embajada de México en Estados Unidos de América*, file 164, exp. 6, 208 f.: 57–58.

72 Hugh S. Cumming, "The United States quarantine system during the past fifty years," in *A Half Century of Public Health. Jubilee Historical Volume of the American Public Health Association*, ed. Mazÿck P. Ravenel (New York: American Public Health Association, 1921), 123–124.

73 "Accession du gouvernent du Mexique a l'Arrangement de Rome du 9 décembre 1907," *Bulletin de l'Office International d'Hygiène Publique* 1, no. 4 (1909): 251.

74 "International Office of Public Hygiene, 1909–1912," AHSSA, *salubridad pública*, congresos y convenciones, box 8, exp. 13 [97 f.].

Until 1876, Mexico had only maintained diplomatic relations with the United States and cordial sympathetic relations with the Latin American countries.[75] In 1911, when Porfirio Diaz left power, Mexico was, from a public health point of view, connected with all the nations of Europe and America, with Persia in Asia, and with Egypt in Africa.[76]

Final reflections: standardizing international public health policies

During the Porfirio Díaz government, the process of modern economic integration took shape in Mexico. Trade was the main economic link between Mexico and the United States, but it developed within the framework of the asymmetry that characterized them in terms of power and resources.

From 1885 onwards, the Mexican government's participation in the internationalization of public health was constant and active. In this process, there were important confrontations at the international level because the imperialist countries—mainly the United States—determined in each period which diseases were a priority; they imposed on the countries of the area the obligation of sanitation of their ports or agricultural zones under penalty of prohibitive quarantines; and they interfered in internal political matters under the pretext of monitoring their sanitation.

The explicit objectives of the U.S. government in promoting international public health among the countries of the Americas and the Caribbean were to promote sanitary codes and organize active departments of health within each country; gather firsthand information on the epidemic and endemic diseases of each member nation; standardize sanitary policies, and to establish an efficacious quarantine service that could prevent the high mortality rates caused by epidemic diseases and, at the same time, protect commerce from unnecessary detentions.[77]

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75 Antonio de la Peña y Reyes, *La diplomacia mexicana: pequeña revista histórica* (México: Secretaría de Relaciones Exteriores, 1923).

76 Eduardo Liceaga, "Algunas consideraciones acerca de la higiene social en México," *Boletín del Consejo Superior de Salubridad* 16, no .11 (1911): 378.

77 Felix Formento, "Discurso del presidente de la sección inaugural," in *Documentos e informes presentados en la Vigésima Reunión Anual de la Asociación Americana de Salubridad Pública (1892)*, vol. 18 (México: Republican Press Association, 1894), 5.

The Mexican government sought to prevent the spread of epidemics from one country to another while at the same time protecting international trade and the free movement of people. It did so firstly by adapting its laws to the advances in medical sciences and by carrying out the sanitation of its main cities and ports; secondly, by playing a leading role in the internationalization of public health in America; and finally, by defending its autonomy and sovereignty.

Although the influence of U.S. public health was then dominant in Mexico, the Mexican government retained much more independence in health matters than other Latin American governments. Diaz's government carried out sanitation policies in the most economically developed areas of the country, almost all of them linked to foreign trade, partly under pressure from the US government. At the same time, however, it was the Mexican state's active involvement in addressing the collective health problems affecting the country that allowed it to defend its independence in health matters.

The role of physician Eduardo Liceaga, the joint action of the health authorities with the Ministry of Foreign Affairs, and the Mexican government's sanitary relations with other countries in America and Europe, and even Asia and Africa, were fundamental in this firm opposition to the intervention of the United States in Mexican public health activities.

During that period, an extraordinary modernization of the most important cities and ports took place. However, modernization failed to bring the country out of underdevelopment since it opened the doors to international monopolies and was designed mainly for foreign trade. In addition, large investments deepened regional imbalances, and even between areas within the same region, since sanitation did not have the same impact on the main ports or cities as it did on small towns. This scenario was interrupted abruptly; inequity and lack of democracy led to a civil war in Mexico that began in 1910 and lasted for a decade. The country had not been able to reach development, and modernization in all areas was halted until 1921.

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salubridad pública (*public health*)

epidemiología (epidemiology)

congresos y convenciones (congresses and conventions)

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Uswatul Chabibah, Sudirman Nasir, and Hans Pols

Medicine, health, and development in Indonesia

On August 17, 1945, two days after Japan capitulated, Sukarno and Mohammad Hatta, Indonesia's first president and vice-president, declared Indonesia's independence. At that time, several physicians had been discussing plans for the organization of medical education, healthcare, and public health in the newly independent nation, which were suffused with ideas about development, modernization, and the role of science and medicine in achieving both. Similar ideals had already been formulated by Indonesian intellectuals before the turn of the twentieth century; they soon became central in the philosophy of the Indonesian nationalist movement. Because the Netherlands refused to recognize Indonesia's independence and sent military troops to recover its former colonies, the realization of these plans had to wait for four and a half years. After the transfer of sovereignty from the Netherlands to the Republic of Indonesia on 27 December 1949, physicians faced the daunting task of establishing medical education, and rebuilding and expanding healthcare institutions, guided by the conviction that the population's health was essential for the nation's development.[1]

In this article, we analyze how Indonesian conceptions of development were related to ideas about health during four periods, following conventional demarcations in Indonesian historiography. We relate these conceptions to fundamental demographic changes, changing challenges and health outcomes, and changes in the provision of healthcare. We commence with the notions of development articulated by Indonesian physicians and other intellectuals during colonial times, from the 1880s to the end of the Japanese occupation (1942–1945) and the war of independence (1945–1949). Before 1949, Indonesian physicians debated the various interrelationships between medicine, health, and develop-

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1 Our discussion of notions of development is inspired by Ariel Heryanto's seminal essay *Language of Development and Development of Language: The Case of Indonesia* (Canberra: Research School of Pacific and Asian Studies, Australian National University, 1995). See also Ariel Heryanto and Nancy Lutz, "The Development of 'Development,'" *Indonesia*, no. 46 (1988): 1–24. Although the Indonesian words for development distinguished here were at times used interchangeably; we distinguish them here for clarity and analytical purposes.

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ment; articulated health policies but were hardly able to implement these. After independence, this changed. During the Sukarno era (1950–1965), which constitutes the second period to be discussed, physicians developed plans on the organization of healthcare, which they could only implement to a limited degree because of political instability and economic problems. Through the expansion of healthcare provision and the introduction of antibiotics, mortality rates related to infectious diseases declined and life expectancy rose.

In November 1965, general Suharto seized power during a bloody coup, inaugurating the New Order [*Orde Baru*], also named the Development Order, which focused on industrialization, economic reconstruction, and reforming agricultural production. During the Suharto era (1965–1998), the third period analyzed in this article, the number of medical schools increased, community health centers were established all over the country, and vertical health initiatives targeting malaria and smallpox were implemented. Indonesia's standard of living, overall welfare, and health outcomes increased significantly. Finally, after the end of Suharto's dictatorial rule in 1998, the fourth period covered in this article, the rhetoric around development receded. Although the introduction of universal health insurance in 2014 made healthcare much more accessible, Indonesia faces a variety of health challenges for which the healthcare system is ill prepared. While life expectancy continues to increase, noncommunicable and chronic health problems, including mental health issues, became more prevalent amid the still common infectious diseases, indicating that Indonesia is currently passing through the epidemiological transition, facing multiple burdens of disease.

Indonesian physicians in colonial times

From 1851 until 1924, physicians were the only Indonesians who had received any scientific training. That year, a Technical School was established in Bandung, which primarily focused on engineering; it provided instruction in scientific methods as well. A very small number of Indonesians received training in medicine, biology, and engineering outside the colonies, mostly in the Netherlands. Consequently, the number of Indonesians who had received any scientific instruction during the colonial period remained very small, although the influence of this small group was nonetheless significant. In colonial times, Indonesian physicians and medical students were enthralled by the promises of modern science and medicine to improve living conditions in the Indies, thereby realizing progress and development. During the 1880s, Indonesians who had received Western education—doctors, teachers, clerks, and junior officials employed by

the colonial state and Dutch businesses—started discussing science, progress, and the promises of modernity or *kemajuan* (progress, development) in the burgeoning vernacular press. *Kemajuan* is a concept rich in meaning: it suggests possibilities for increasing one's social status, but also of attaining "educational progress, enlightenment, civilization, modernization, and success in life."[2] The small group of Indonesians conversant with these ideas valued Western-style education, mastery of the Dutch language, technological innovation, and the new printed mass media highly.

During the nineteenth century, the colonial medical service was operated by the military and primarily provided medical care to soldiers, officers, and colonial officials. Indonesians only received medical attention when their afflictions potentially affected the European inhabitants of the colonies. The extensive smallpox vaccination campaigns, which commenced during the first part of the nineteenth century, constituted one of the few health initiatives undertaken by the Dutch colonial administration that had some effect for Indonesians, at least on Java.[3] In the 1870s, the indigenous population started to be of interest to European physicians, as several tobacco plantations in the Deli area around Medan (North Sumatra) introduced medical services to safeguard the health of their work force, which consisted of coolies or indentured workers.[4] Most of them had been recruited in China or on Java, which was relatively expensive. Plantation managers hoped to maximize the productivity of their workforce and expected that health measures would result in overall savings and increased profits. Public health measures were introduced, and hospitals and a medical laboratory established. The research evaluating their combined effect demonstrated significant gains in health status, life expectancy, and productivity of the workforce.[5] After 1880, several missionary organizations started to provide medical care to Indonesians, but their coverage was patchy at best.

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2 Ahmat B. Adam, *The Vernacular Press and the Emergence of Modern Indonesian Consciousness* (Ithaca, NY: SEAP, 1995), 80.

3 Peter Boomgaard, "Smallpox, Vaccination, and the Pax Neerlandica, Indonesia, 1550–1930," *Bijdragen tot de Taal-, Land- en Volkenkunde* 159, no. 4 (2003): 590–617. See also Peter Boomgaard, "The Development of Colonial Healthcare in Java: An Exploratory Introduction," *Bijdragen tot de Taal-, Land- en Volkenkunde* 149, no. 1 (1997): 77–93.

4 The conditions at the plantations in the Deli area were abysmal and abuses of laborers were rife. See Ann Laura Stoler, *Capitalism and Confrontation in Sumatra's Plantation Belt, 1870–1979* (Ann Arbor, MI: University of Michigan Press, 1985); Jan Breman, *Taming the Coolie Beast: Plantation Society and the Colonial Order in Southeast Asia* (Delhi and New York: Oxford University Press, 1989).

5 W. Schüffner and W.A. Kuenen, "Die Gesundheitlichen Verhältnisse des Arbeiterstandes der Senembah-Gesellschaft auf Sumatra während der Jahre 1897 bis 1907: Ein Beitrag zu dem Prob-

In 1901, the Dutch parliament adopted the so-called Ethical Policy to guide colonial governance. According to its principles, the Netherlands recognized the responsibility to foster the further development of its colonies towards eventual independence instead of merely viewing them as sources of profit.[6] During the first part of the twentieth century, economic, religious, and ethical imperatives demanded safeguarding and improving the health of Indonesians. Medical education had commenced in Batavia in 1851 on a very modest scale at the local military hospital. In 1902, the Batavia medical college (School for the Education of Native Physicians; *School ter Opleiding van Inlandsche Artsen*; STOVIA) moved to new, purpose-built quarters, which were funded by three leading (and exceedingly wealthy) plantation owners from the Deli area, who were convinced that the Dutch East Indies needed more, and more affordable, physicians.[7]

At the turn of the twentieth century, developments within medicine had inspired increased optimism about its potential efficacy. In the 1870s, the bacteriological revolution led by Louis Pasteur and Robert Koch had revolutionized medical research, medical care, and public health; it also had started to influence routine hygienic practices. Around 1900, the parasitological revolution provided significant new insights into various tropical diseases. This revolution was inspired by the work of Ronald Ross, who had identified mosquitoes as the primary vector of disease transmission in malaria.[8] At the same time, X-Ray machines became available in the colonies and the possibilities of aseptic surgery expanded. In combination, these developments increased the optimism of physicians in the efficacy of modern medicine. They also increased public confidence in the ability of medicine to maintain the health of both European settlers and Indonesian laborers in the colonies.

In colonial times, a modest number of Indonesians received instruction at Dutch university medical schools; most of them were trained at the medical colleges in Batavia (today: Jakarta) and Surabaya, both of which had a practical or

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lem der Assanierung großer Kulturunternehmungen in den Tropen," *Zeitschrift für Hygiene und Infektionskrankheiten* 64 (1909): 167–257.

6 Robert Cribb, "Development Policy in the Early 20th Century," in *Development and Social Welfare: Indonesia's Experiences under the New Order*, ed. Jan- Paul Dirkse, Frans Hüsken, and Mario Rutten (Leiden: KITLV Press, 1993), 225–245.

7 Liesbeth Hesselink, *Healers on the Colonial Market: Native Doctors and Midwives in the Dutch East Indies* (Leiden: KITLV Press, 2011), 167.

8 Laurence Monnais and Hans Pols, "Health and Disease in the Colonies: Medicine in the Age of Empire," in *The Routledge History of Western Empires*, ed. Robert Aldrich and Kirsten McKenzie (New York: Routledge, 2014), 270–284.

professional curriculum.[9] The degrees awarded by these colleges were considered inferior to those from European university medical schools, which were academic in nature and primarily provided training in conducting medical research. Because of their practical training, Indonesian physicians earned much less than their European colleagues, and generally occupied subordinate and less desirable positions in the colonial medical service. Indonesian physicians were acutely aware of their inferior status and earnings, which fueled the desire for equality with European physicians with respect to education, income, and placement. They consequently emphasized the emancipatory aspects of developmental ideas and envisaged themselves as participants in cosmopolitan scientific and medical communities, which they believed valued education, training, and skills regardless of race and ethnic background. In 1909, they founded the Association of Native Physicians (*Vereeniging van Inlandsche Artsen*; later: Association of Indies Physicians; *Vereeniging van Indische Artsen*) to improve their professional position and emancipate themselves with respect to their European colleagues.[10]

In 1927, the Batavia Medical School [*Geneeskundige Hoogeschool*], which awarded degrees equivalent to those awarded by Dutch university-affiliated medical schools, commenced operations. The same year, the Batavia medical college (STOVIA) no longer accepted new students and offered enrolled students the opportunity to transfer to the new institution. Indonesian physicians had long advocated the establishment of a fully-fledged medical school in the Indies, which would enable them to attain the same medical degrees as their European colleagues. Unfortunately, the Batavia Medical School did not offer bursaries and the tuition fees were too high for most Indonesians. Most students were Dutch, Indo-European, or Chinese Indonesian.[11]

In the 1930s, the Rockefeller Foundation, at times with reluctant cooperation from the Dutch East Indies Public Health Service, initiated several demonstration projects in rural hygiene in an impoverished rural area in Java.[12] The Foun-

9 The Batavia medical college was founded in 1851 as the Dokter Djawa School (School for Javanese Physicians). In 1901 it was renamed School for the Education of Native Physicians [School tot Opleiding van Inlandsche Artsen; STOVIA]; in 1913, it was renamed again as the School for the Education of Indies Physicians [School tot Opleiding van Indische Artsen; the acronym remained STOVIA]. The medical college in Surabaya was named the Dutch Indies Physicians School [Nederlandsch-Indische Artsen School; NIAS]. For a history see Liesbeth Hesselink, *Healers on the Colonial Market*.

10 Hans Pols, *Nurturing Indonesia: Medicine and Decolonisation in the Dutch East Indies* (Cambridge: Cambridge University Press, 2018), 102–115.

11 Pols, *Nurturing Indonesia*, 139–141.

12 The program is described in J.L. Hydrick, *Intensive Rural Hygiene Work and Public Health Education of the Public Health Service of Netherlands India* (Batavia: Author, 1937). See also Pols,

dation's officers were guided by the idea that health was a necessary condition for economic development.[13] They established several small clinics providing basic medical assistance, primarily focusing on maternal and child health. They also encouraged Indonesians to build latrines and change health behaviors through elaborate public health education projects that focused on hookworm and malaria.[14] These projects were of little interest to Dutch physicians, who preferred to work in the large urban centers in well-equipped modern hospitals while maintaining lucrative private practices on the side. Many of their Indonesian colleagues, however, were interested in these projects because they demonstrated how basic healthcare could be provided to the vast majority of Indonesians. Abdul Rasyid, a member of the colonial parliament throughout the 1930s and, in 1939, the newly elected president of the renamed Association of Indonesian Physicians, was impressed by these projects, which inspired him to articulate his ideas about "medical nationalism."[15] He argued that medical care should no longer rely on expensive and technologically-intensive hospital-based care, but focus instead on increasing the number of low-cost clinics providing basic medical care as well as on enlisting the population in hygienic efforts through intensive public health education.

In colonial times, the activism of Indonesian physicians initially focused on protesting the dualistic organization of the Dutch East Indies Health Service, which relegated them to secondary and subordinate positions. In the 1930s, they embraced Rasyid's medical nationalism and started contemplating how medical care could benefit all Indonesians. They also established contact with indigenous physicians in other Asian countries, which assisted them in formulat-

Nurturing Indonesia, 138–60; Eric Andrew Stein, "Colonial Theatres of Proof: Representation and Laughter in 1930s Rockefeller Foundation Hygiene Cinema in Java," *Health and History* 8, no. 2 (2006): 14–44; Eric Andrew Stein, "Hygiene and Decolonization: The Rockefeller Foundation and Indonesian Nationalism, 1933–1958," in *Science, Public Health, and the State in Modern Asia*, ed. Liping Bu, Darwin H. Stapleton, and Ka-Che Yip (New York, 2012), 51–70.

13 John Farley, *To Cast out Disease: A History of the International Health Division of the Rockefeller Foundation (1913–1951)* (New York: Oxford University Press, 2004).

14 These programs, and the philosophy that inspired them, were presented to the world at the Intergovernmental Conference on Far-Eastern Countries on Rural Medicine, which was held at Bandung in 1937. According to several historians of medicine, the ideas presented there prefigured those presented at the 1978 Alma Ata conference on primary healthcare. See Theodore M. Brown and Elizabeth Fee, "The Bandoeng Conference of 1937: A Milestone in Health and Development," *American Journal of Public Health* 98, no. 1 (2008): 40–43.

15 Pols, *Nurturing Indonesia*, 148–153.

ing alternatives to the organization of medical care in the Indies.[16] When they were seeking to emancipate themselves and when they were advocating horizontal, community-based health initiatives, they were guided by ideas of *kemajuan* or development, emphasizing different strands—emancipation, access to medical care—within the complex set of ideas encompassed within that concept. Despite their involvement in colonial politics and their explicit ideas about the organization about medical care, Indonesian physicians were hardly able to implement their ideas.

The Japanese occupation (1942–1945) and the Indonesian war of independence (1945–1950)

The Japanese occupation, during which the Indonesian archipelago became part of the Japanese colonial empire, led to significant changes in medical research, medical education, and the organization of health care. Batavia's Medical School was renamed *Ika Daigaku* [Japanese: medical school] and came under the leadership of a Japanese dean and a small number of Japanese professors.[17] Several leading Indonesian physicians were appointed to key positions in the medical school, the health service, and various public health initiatives. Through the intervention of the Japanese, the emancipation of Indonesian physicians was realized to a much greater extent than had been possible under Dutch rule. All European physicians (except German ones) were interned and relieved of their official functions. Because the Japanese had outlawed the Dutch language, medical teaching had to be conducted in Indonesian (Malay), which at that time was rapidly developing. Indonesian physicians established a committee to determine Indonesian counterparts for Dutch and Latin medical terms.[18] They viewed devel-

16 Sunil S. Amrith, *Decolonizing International Health: India and Southeast Asia, 1930–1965* (Houndmills, Basingstoke, Hampshire: Palgrave Macmillan, 2006).

17 Soejono Martosewojo, "Risalah Pembentukan Djakarta Ika Dai Gaku," in *125 Tahun Pendidikan Dokter di Indonesia 1851–1976*, ed. M.A. Hanafia, Bahder Djohan, and Surono (Jakarta: FKUI, 1976), 33–34; T. Karimoeddin, "Pendidikan Dokter Jaman Pendudukan Jepang (Ika Dai Gaku)," in Hanafia, Djohan, and Surono, *125 Tahun Pendidikan Dokter di Indonesia*, 26–32.

18 Achmad Ramali was associated with this committee. The results were published as Ahmad Ramali and K. St. Pamoentjak, *Kamus Kedoktoran: Arti dan Keterangan Istilah* (Djakarta: Djambatan, 1953). The most recent edition is Ahmad Ramali, K. St. Pamoentjak, and Hendra T. Laksman, *Kamus Kedoktoran: Arti dan Keterangan Istilah*, 25th ed. (Djakarta: Djambatan, 2003). See also Leo Suryadinata and Hock Guan Lee, eds., *Language, Nation and Development in Southeast Asia* (Singapore: Institute of Southeast Asian Studies, 2007).

oping a suitable vernacular medical language as central to their efforts to create an Indonesian medical profession.

The Japanese physicians stationed in Indonesia introduced their Indonesian colleagues to Japanese conceptions of public health, which were, in turn, derived from German approaches which had been incorporated into Japanese medical thinking.[19] According to Japanese physicians, medicine and public health were essential tools for nation building; their ideas reinforced Rasyid's medical nationalism.[20] In a speech to Indonesia's physicians in 1944, Sukarno, who served various roles within the Japanese military administration to maintain and enhance the loyalty of the Indonesian population to the Japanese regime, emphasized that their work was not limited to "*treating the sick*, but also looking after and taking care of the Indonesian people so that they become a very healthy and physically strong nation (*rakyat sehat dan kuat*)." During the 1950s, the phrase "healthy people, strong nation (*rakyat sehat, negara kuat*)" became one of the main slogans of public health initiatives.[21] The Japanese established neighborhood associations across Indonesia as a conduit for political propaganda and public health education; they also intended to establish clinics in each. These neighborhood associations were later used for the same purposes by the Suharto regime; they still exist today.

Soon after Japan's capitulation and the declaration of Indonesia's independence, the Dutch started to send troops to reclaim their former colonies. In 1949, anticipating the end of the Dutch colonial empire, the Dutch scientific elite in Indonesia celebrated their scientific accomplishments.[22] Despite their pride in their accomplishments in the Indies, the Dutch colonial administration had hardly provided any form of education to most Indonesians. In 1942, over 90 percent of Indonesians were illiterate and there were a mere 500 Indonesian physicians, only about 30 of whom had academic qualifications.

19 Hoi-eun Kim, *Doctors of Empire: Medical and Cultural Encounters between Imperial Germany and Meiji Japan* (Toronto: University of Toronto Press, 2014).

20 Pols, *Nurturing Indonesia*, 161–182.

21 Emphasis in original. Quoted in Pols, *Nurturing Indonesia*, 167.

22 W.H. van Helsdingen, *Daar Wèrd Wat Groots Verricht: Nederlandsch-Indië in de Twintigste Eeuw* (Amsterdam: Elsevier, 1941); Pieter Honig and Frans Verdoorn, *Science and Scientists in the Netherlands Indies* (New York: Board for the Netherlands Indies, Surinam and Curaçao, 1945). For medicine see the series of articles in the journal *Quarterly Journal of Tropical Medicine and Hygiene* in 1949.

According to Peter Boomgaard, the population of Southeast Asia hardly grew during the eighteenth century.[23] During the nineteenth century, population size and life expectancy were slowly increasing. During the last decades of the nineteenth century, life expectancy was around 30 years, a figure significantly depressed because of high infant mortality rates. During the 1870s, the biological standard of living as measured by human body size declined as a consequence of famine and epidemics, and only recovered slowly during the following three decades. Average heights increased from the turn of the twentieth century, a trend that accelerated after World War II.[24] Even though the Dutch colonial administration had been proud of its health initiatives, health expenditures were minimal and colonial health initiatives only had a very limited effect on the life expectancy of Indonesians. Not surprisingly, conditions during the Japanese occupation and the war of independence adversely affected health. After 1950, because of better sanitation, increasing standards of living, easier access to healthcare, and the availability of antibiotics, a rapid decline of mortality related to infectious disease took place, leading to a fundamental demographic transition.[25]

Health and medicine in Indonesia after 1950

After the transfer of sovereignty on 27 December 1949, the political, social, and economic environment for medical care, medical education, and public health changed dramatically. The Indonesian government aimed to transform colonial institutions for higher education into institutions educating professionals to staff its bureaucracy, schools, and businesses.[26] In the 1950s, Indonesians faced the daunting task of establishing government institutions and a national infrastructure during a period of economic instability and political unrest.

23 Peter Boomgaard, "The Demographic History of Southeast Asia in the Twentieth Century," in *Histories of Health in Southeast Asia: Perspectives on the Long Twentieth Century*, ed. Tim Harper and Sunil S. Amrith (Bloomington, IN: Indiana University Press, 2014), 87–98.

24 Jörg Baten, Mojgan Stegl, and Pierre van der Eng, "The Biological Standard of Living and Body Height in Colonial and Post-Colonial Indonesia, 1770–2000," *Journal of Bioeconomics* 15, no. 2 (2012): 103–122.

25 See the essays in Tim Harper and Sunil S. Amrith, eds., *Histories of Health in Southeast Asia: Perspectives on the Long Twentieth Century* (Bloomington, IN: Indiana University Press, 2014).

26 Despite this, some critics have argued that too many elements from colonial times have been retained. See, for example, Denys Lombard, *Nusa Jawa, Silang Budaya: Kajian Sejarah Terpadu*, trans. Winarsih Partaningrat Arifin, Rahayu S. Hidayat, and Nini Hidayati Yusuf, vol. 1, *Batas-batas Pembaratan* (Jakarta: Gramedia, 1990), 121–124.

Ideas about development during the Sukarno era (1950–1965) resembled those formulated during colonial times: modernization was seen as the main goal, experts and administrators were seen as essential, and (foreign) experts were highly valued. At this time, the primary concept associated with development was *perkembangan* (root word: *kembang*, flower), which has organic connotations of growth, flowering, and flourishing, and implies participation, mutual cooperation, and being strong and self-reliant.[27] Education, especially at the primary level, was considered of utmost importance.[28] To realize a flourishing nation, Indonesian politicians were convinced that vast numbers of teachers, engineers, lawyers, doctors, and other professionals were needed.

During the Cold War, the United States, the Soviet Union, and, later, China commenced offering developmental assistance to newly independent nations to gain their political allegiance.[29] President Sukarno eagerly accepted such offers but also played donors off against each other to maintain the country's independence. Indonesia opposed free trade, the abolition of tariffs, and free rein for international corporations, all of which were promoted by the United States. Instead, Sukarno aimed to make Indonesia self-sufficient with respect to food (in particular rice), natural resources, and technical expertise.[30] The goal of self-sufficiency was central to the Asian-African Conference that Indonesia hosted at Bandung in April 1955; delegates argued that newly independent nations should retain control over their natural resources and build up local expertise in exploiting them, which would reduce their dependence on the developed world. The Bandung conference aimed to foster an alliance between recently decolonized countries by forming a third, independent voice in international affairs.[31] Health and medicine were seen as essential in the newly independent country because they could help foster a healthy, strong, and vigorous population which could

27 For a discussion of different Indonesian conceptions of development, see Heryanto, *Language of Development*.

28 Suzanne Moon, *Technology and Technical Idealism: A History of Development in the Netherlands East Indies* (Leiden: CNWS, 2007).

29 Sara Lorenzini, *Global Development: A Cold War History* (Princeton, NJ: Princeton University Press, 2019).

30 Bradley R. Simpson, *Economists with Guns: Authoritarian Development and US–Indonesian Relations, 1960–1968* (Stanford, CA: Stanford University Press, 2008), 13–36. For food and agriculture, see Suzanne Moon, "Takeoff or Self-Sufficiency: Ideologies of Development in Indonesia, 1957–1961," *Technology and Culture* 39, no. 2 (1998): 187–213.

31 Christopher J. Lee, *Making a World after Empire: The Bandung Moment and its Political Afterlives* (Athens, OH: Ohio University Press, 2010). See also Seng Tan and Amitav Acharya, eds., *Bandung Revisited: The Legacy of the 1955 Asian-African Conference for International Order* (Singapore: NUS Press, 2008).

play its part in realizing these developmental ideals. Medical research that could contribute to realize these goals—such as research into nutrition—was generously funded.[32]

Resurrecting colonial institutions for higher education (in particular medical education) and medical care as well as making them suitable for the newly independent nation was challenging.[33] In 1951, the Ministry of Education and Culture established a program for higher education and set out the parameters for scientific research.[34] First, the needs and demands of the state took precedence over those of pure research—or, as it was expressed in the Ministry's words, research and higher education needed to develop in harmony with the state. Second, to stimulate the development of the Indonesian scientific community, universities and research institutions had to give priority to Indonesians when hiring staff. Promising future academics received scholarships for advanced study abroad. Third, the Dutch language was outlawed while Indonesian was preferred; although English was tolerated, few Indonesians spoke it. Finally, instead of graduating small numbers of highly qualified academic researchers, as had been the aim of Dutch medical schools and the Batavia Medical School, Indonesian universities were instructed to graduate large numbers of teachers, physicians, engineers, and lawyers, as there was a dire shortage of all these professionals.

In the early 1950s, Indonesian physicians formulated plans to reform medical education. Until then, medical education had been based on the academic "free study" model which the Batavia Medical School had introduced in 1927. Medical education was primarily oriented towards inculcating academic skills, students worked at their own pace, and examinations were held only once a

32 Vivek Neelakantan, *Science, Public Health and Nation-Building in Soekarno-Era Indonesia* (Newcastle upon Tyne: Cambridge Scholars, 2017), 49–51. At this time, Poorwo Soedarmo was the leading medical researcher on nutrition. For his autobiography see: Poorwo Soedarmo, *Gizi dan Saya* (Jakarta: Fakultas Kedoktoran Universitas Indonesia, 1995).

33 For a report on the success of Indonesianizing the University of Indonesia see Willard A. Hanna, "From Universiteit to Universitas: The 'Indonesiatization' of a Dutch University," *American Universities Field Staff Reports, Southeast Asia Series* 4, no. 17 (1956): 1–17.

34 See R. Thomas Murray, *A Chronicle of Indonesian Higher Education: The First Half Century, 1920–1970* (Singapore: Chopmen Enterprises, 1973), 40–172; William K. Cummings and Salman Kasenda, "The Origins of Modern Indonesian Higher Education," in *From Dependence to Autonomy: The Development of Asian Universities*, ed. Philip G. Altbach and Viswanathan Selvaratnam (Dordrecht: Kluwer, 1989), 143–166; R.M. Koentjaraningrat and Harsja W. Bachtiar, "Higher Education in the Social Sciences in Indonesia," in *The Social Sciences in Indonesia*, ed. R.M. Koentjaraningrat (Jakarta: LIPI, 1975), 1–42; Bachtiar Rifai and Koesnadi Hardjasoemantri, *Perguruan Tinggi di Indonesia* (Jakarta: Departemen Perguruan Tinggi dan Ilmu Pengetahuan, 1965).

year. Consequently, only a small number of highly qualified medical researchers graduated each year. To meet the country's urgent need for more physicians, instructors associated with the Faculty of Medicine at the University of Indonesia decided to reform medical education following the American model, which was known as "guided study."[35] Medical education became cohort-based, attendance at lectures and practical classes compulsory, and examinations were held regularly. In 1952, the University of Indonesia entered into an agreement with the University of California at San Francisco (UCSF) to develop and implement a new medical curriculum. American lecturers spent several months a year in Jakarta while Indonesian medical staff travelled to the United States for advanced instruction. The number of medical graduates steadily increased in the early 1960s.[36] During the 1950s, several new medical schools were established. In the decade after independence, Indonesian physicians relinquished ideals of conducting research to advance knowledge and made medical education more practical in nature, embracing models of medical education that they had firmly opposed during colonial times.

In the early 1950s, officials at Indonesia's Ministry of Health developed plans for a comprehensive healthcare system for the entire country in which community health clinics played a central role. Most of these plans were formulated by Johannes Leimena, who was Minister of Health from 1947 until 1953 and from 1955 to 1959. According to Leimena, providing healthcare was part of the "larger project to reconstruct the whole nation," which meant it had to be considered from a holistic perspective: "work in the field of health can only be of value if also progress is made in fields of economy, social security and education."[37] Leimena presented the "Bandung plan," named after the city where it

35 Vivek Neelakantan, *Science, Public Health and Nation-Building*, 142–55. See also Francis Scott Smyth, "University of California Medical Science Teaching in Indonesia," *Journal of Medical Education* 32, no. 5 (1957): 344–349; Francis Scott Smyth, "Health and Medicine in Indonesia," *Journal of Medical Education* 38, no. 8 (1963): 693–696; John S. Wellington, "Medical Science and Technology," in *Indonesia: Resource and Their Technological Development*, ed. Howard M. Beers (Lexington, KT: University Press of Kentucky, 1970), 165–173. See also Willard A. Hanna, "A Binational Project in Medical Education," *American Universities Field Staff, Southeast Asia Series* 4, no. 19 (1956): 1–10.

36 During the 1950s, there was an extreme shortage of physicians in Indonesia. In 1957, for example, there were 1,450 physicians, which is roughly equal to one physician for every 55,000 persons. See Willard A. Hanna, "No Place for Hypochondriacs: Medical Services in Indonesia," *American Universities Field Staff Reports, Southeast Asia Series* 5, no. 5 (1957): 1–5.

37 J. Leimena, *The Upbuilding of Public Health in Indonesia* (Jakarta: Ministery of Public Health, 1950), 9, 18; this is the English version of J. Leimena, *Membangun Kesehatan Rakjat* (Jakarta:

was first implemented, as the blueprint for the organization of national health care.[38] According to this plan, healthcare should be delivered at four levels, starting with hospital care in urban centers, auxiliary hospitals in the regions, primary care clinics in the districts, and mobile health posts in small villages. Primary care clinics or community health centers were the first port of call for those seeking medical attention; conditions that could not be treated there were referred to auxiliary hospitals or main hospitals. This emphasis on community clinics revived the ideals of the Rockefeller Foundation and Abdul Rasyid's medical nationalism. Leimena aimed to integrate public health initiatives, public health education, and preventive and curative care at all four levels. In a decision that proved to be very unpopular among physicians and medical students, recent medical graduates were required to work in remote areas for a period of three years before they received permits to establish private practice, which were (and continue to be) financially much more rewarding than working in the public healthcare system.[39] This requirement was opposed by the Indonesian Medical Association (*Ikatan Dokter Indonesia*; IDI), which was primarily focused on improving the status and working conditions of Indonesian physicians.

According to Leimena, malaria was Indonesia's most significant public health challenge. In 1955, the World Health Organization announced its Global Malaria Eradication Program, which relied almost exclusively on spraying DDT to eradicate the mosquitoes that transmit malaria.[40] This program promised to stimulate agricultural development and foster a more productive labor force. The program was also an example of the new, vertical, and technology-intensive programs that the WHO advocated during the second part of the twentieth century. These programs relied primarily on technology and expert intervention to target specific diseases and were not concerned with local participation or public health education. In Indonesia, the program commenced in 1958 and continued in an episodic manner for the next 20 years. In the late 1960s, when the toxicity of DDT became widely known and the mosquitoes that transfer malaria developed resistance to DDT, the program was discontinued. Smallpox remained a major problem in post-independence Indonesia. Although Dutch physicians

Noordhoff-Kolff, 1952). This booklet covered the 1937 Bandung conference and the Rockefeller Foundation program extensively.

38 Leimena, *Upbuilding of Public Health*, 26–43. For a discussion see Neelakantan, *Science, Public Health and Nation-Building*, 67–91.

39 Neelakantan, *Science, Public Health and Nation-Building*, 29–66.

40 Randall M. Packard, "Malaria Dreams: Postwar Visions of Health and Development in the Third World," *Medical Anthropology* 17, no. 3 (1997): 279–296. For developments in Indonesia see Neelakantan, *Science, Public Health and Nation-Building*, 92–141.

had started vaccination campaigns in the early nineteenth century, the disease was still widely prevalent in the 1960s. However, the WHO launched an Intensified Smallpox Eradication Program in 1966 and the disease was finally eradicated in the country in 1974.[41]

Until 1965, both horizontal health initiatives, such as the establishment of community health centers, and vertical initiatives, such as malaria eradication programs, were implemented in Indonesia. Both were justified by referring to ideals of development, as both promised to realize a healthier nation. Because of continuing political instability, the occurrence of various local insurrections, and severe economic problems fueling hyperinflation, most health initiatives could not be realized. During the Sukarno era, many ideas and plans were formulated, which could only be implemented later. Despite this, life expectancy rose from 39.77 years to 49.33 years, a significant increase over a 15-year period.[42] This increase was mainly caused by increases in the standard of living and the availability of antibiotics.

Health and development under Suharto (1965–1989)

In November 1965, General Suharto seized power in a bloody coup that was followed by anti-Communist massacres across the country during which over one million people were killed. Indonesia re-established ties with the United States, the World Bank, the International Monetary Fund, and the United Nations. Because of its strong anti-communist stance, the Suharto regime gained the trust of the American government; during the 1970s, Indonesia received the second-highest distribution of foreign aid in aggregate terms, after India.[43] Suharto's military dictatorship was characterized by a strong centralized government that forcefully pursued *pembangunan* (development, a phrase derived from engineering indicating constructing or erecting buildings) that focused on economic liberalization, industrialization, and agricultural reform.[44] Suharto employed a group of economists who were trained in the United States, nicknamed the "Ber-

41 Vivek Neelakantan, "Eradicating Smallpox in Indonesia: The Archipelagic Challenge," *Health and History* 12, no. 1 (2010): 61–87.

42 Data obtained from the website of the World Bank. See https://data.worldbank.org/indicator/SP.DYN.LE00.IN?locations=ID, accessed 1 July 2021.

43 Bradley R. Simpson, *Economists with Guns*; Hal Hill, *Indonesia's New Order: The Dynamics of Socio- Economic Transformation* (Sydney: Allen & Unwin, 2004).

44 Heryanto, *Language of Development*.

Figure 1: Poster on the eradication of malaria and dengue fever, with strong militaristic overtones. The text reads: "Break the chain of transmission of dengue fever and malaria! The mosquito is our enemy! Kill! Destroy!" Published by the Department of Defence and Security, Commando Operation Mosquito I. Poster from the 1970s. From the collection on Indonesian health of Hans Pols.

keley mafia" or the "technocrats," to reform the economy following American ideas.[45] Obstacles to foreign investment were removed and the country started to export primary resources in great quantities. During Suharto's reign, the Indonesian economy grew significantly and inflation came under control. The average *per capita* income increased from US$65.05 in 1968 to US$1,137.41 in 1996 at current prices.[46] Between 1965 and 1998, life expectancy rose from 48.7 to 66.6 years; infant mortality declined from 131 to 44.7 per 1,000 births. Suharto became known as Father Development [*Bapak Pembangunan*]; his regime, named the *New Order* [*Orde Baru*] or the *Orde Pembangunan*, was characterized by a complex combination of economic development, corruption, patronage networks, repression, and random state-sanctioned violence.[47] By aligning itself with the West, the Indonesian economy boomed. It abandoned ideals of self-sufficiency and exported large amounts of primary resources (mostly crude oil), which bolstered its economy.

Medical education and medical care improved significantly during Suharto's New Order.[48] Several new medical schools as well as numerous community health centers [*Pusat Kesehatan Masyarakat* or *Puskesmas*] were established (today, there are close to 10,000). Besides providing healthcare, these health centers commenced public health education and community outreach programs in the 1980s in the form of monthly village meetings; villages were visited in rotation [*Posyandu: Pos Pelayanan Terpadu* or integrated service post]. At these monthly visits, nurses, village midwives, or community health workers (popularly named *kader kesehatan* or health volunteers[49]) weighed children, provided advice to pregnant women, dispensed nutritional information, and administered vaccinations. In this way, basic medical care and health promotion was provided to the inhabitants of even the smallest villages. Politicians hoped that these community health centers would maintain and improve the health of the population,

45 Michael E. Latham, *The Right Kind of Revolution: Modernization, Development, and U.S. Foreign Policy from the Cold War to the Present* (Cornell, NY: Cornell University Press, 2010); Simpson, *Economists with Guns*.

46 Data provided by the World Bank. See "GDP per capita (current US$)" Indonesia," https://data.worldbank.org/indicator/NY.GDP.PCAP.KD?locations=ID, accessed 29 September 2021.

47 See Hal Hill, *Hal Hill, Indonesia's New Order.*

48 Wasisto Broto, Thomas Suroso, Rushdy Hoesein, and Abdul Syukur, *Sejarah Pembangunan Kesehatan Indonesia 1973–2009* (Jakarta: Kementrian Kesehatan Republik Indonesia, 2009).

49 Health volunteers continue to be an essential part of health care provision in Indonesia. See Ralalicia Limato et al., "What Factors Do Make Quality Improvement Work in Primary Health Care? Experiences of Maternal Health Quality Improvement Teams in Three Puskesmas in Indonesia," *PLoS ONE* 14, no. 12 (2019): e0226804, accesed 10 May 2021, https://doi.org/10.1371/journal.pone.0226804.

which would increase the quality of the human resources available for industrialization. These community health centers did not always live up to expectations, in particular because local politicians came to see them as a source of income by charging fees for the medications which had been provided free of charge by the Ministry of Health, which left fewer funds for healthcare purposes.[50] In 1978, at the International Conference on Primary Healthcare, held at Alma Ata, in the Soviet Socialist Republic of Kazakhstan, the Indonesian delegation presented overviews of several of the initiatives that they had undertaken.[51] At this conference, horizontal health initiatives in addition to vaccinations were lauded as the best way to achieve "health for all" by the year 2000.

American developmental aid was contingent on the implementation of family planning programs across Indonesia. Physicians associated with the World Health Organization had become increasingly concerned with the threat of imminent overpopulation, in particular in developing nations.[52] During colonial times, Indonesian physician Marie Thomas had started advocating for family planning. During the Sukarno era, most Indonesian politicians and physicians were opposed to family planning, despite the advocacy of leading physician Julie Sulianto Saroso.[53] Sukarno was convinced that large numbers of Indonesians were needed to develop the nation; many Muslim leaders were afraid that making contraception available would promote immorality. In December 1967, Suharto signed the World Leaders' Declaration on Population and subsequently managed to convince most Muslim political groups to endorse his plans by assuring them that contraception would only be made available to married couples. The following year, the National Family Planning Co-ordinating Board,

50 Januar Achmad, *Hollow Development: The Politics of Health in Soeharto's Indonesia* (Canberra, ACT: Australian National University Press, 1999).

51 WHO and UNICEF, *Primary Health Care: Report of the International Conference on Primary Health Care, Alma Ata, USSR, 6–12 September 1978* (Geneva: World Health Organization, 1978). For a significant Indonesian contribution see Gunawan Nugroho, "A Community Development Approach to Raising Health Standards in Central Java, Indonesia," in *Health by the People*, ed. Kenneth W. Newell (Geneva: World Health Organization, 1975), 91–111. For Alma Ata see also Marcos Cueto, "The Origins of Primary Health Care and Selective Primary Care," *American Journal of Public Health* 94, no. 11 (2004): 1864–1874.

52 See Paul R. Ehrlich, *The Population Bomb* (New York: Ballantine Books, 1968). See also Matthew James Connelly, *Fatal Misconception: The Struggle to Control World Population* (Cambridge, MA: Belknap Press of Harvard University Press, 2008). For Indonesia see *People, Population, and Policy in Indonesia*, ed. Terence H. Hull (Jakarta Equinox, 2005).

53 Uswatul Chabibah, "Kegigihan Julie Sulianti Saroso Mengangkat Derajat Kesehatan Rakyat," *Tirto.id* (29 April 2021), accessed 9 May 2021, https://tirto.id/kegigihan-julie-sulianti-saroso-mengangkat-derajat-kesehatan-rakyat-gd92.

Figure 2: Poster promoting infant health services, used in and around Yogyakarta, used before 1972. The text reads: "For the welfare of the nation's hope, doctors and midwives are always ready." From the collection on Indonesian health of Hans Pols

which reported directly to Suharto, was established.[54] This organization was highly successful and was often praised in international circles. It established hundreds of clinics throughout Indonesia with financial assistance from USAID and the United Nations Population Fund (UNPFA, which awarded Suharto its population award in 1989). The Board's motto was: "Two children [is] enough [*dua anak cukup*]." In addition to relying on physicians, midwives, and nurses, the Board also relied on large numbers of volunteers, particularly the leaders of village organizations. Between 1965 and 1997, the reported fertility rate in Indonesia declined from 5.612 to 2.579 per woman, or about 53 percent.[55]

Under Suharto, the health of Indonesians improved dramatically following substantial rises in the standard of living and impressive increases in the country's health infrastructure. From 1965 to 2000, life expectancy rose from 49.629 years to 65.772 years.[56] From 1950 on, the incidence of communicable disease dropped significantly, but it remained relatively high as compared to high income countries. Near the end of Suharto's presidency, the prevalence of noncommunicable diseases started to increase. Even though maternal and child mortality decreased, they remained high in comparison to other Southeast Asian nations. Health inequality, including the unequal distribution of physicians, other health professionals, and health infrastructure remained a formidable challenge.[57]

54 Firman Lubis, "History and Structure of the National Family Planning Program," in *Two Is Enough: Family Planning in Indonesia under the New Order, 1968–1998*, ed. Firman Lubis and Anke Nienhof (Leiden: KITLV Press, 2003), 31–55. See also Terence H. Hull, "The Political Framework for Family Planning in Indonesia: Three Decades of Development," in the same volume, 57–81.

55 Based on figures provided by the World Bank. See World Bank, "Fertility Rate, Total (Births per Woman): Indonesia," accessed 1 July 2021, https://data.worldbank.org/indicator/SP.DYN.TFRT.IN?locations=ID.

56 Data obtained from the website of the World Bank. See World Bank, "Life Expectancy at Birth, Total (Years): Indonesia," accessed 1 July 2021, https://data.worldbank.org/indicator/SP.DYN.LE00.IN?end=2019&locations=ID&start=1960&view=chart.

57 Lorraine Corner and Y. Rahardjo, "New Directions in Health Policy in Indonesia: The Need for a Demand-Oriented Perspective," in *Health and Development in Southeast Asia*, ed. Paul Cohen and John Purcall (Canberra, ACT: Australian Development Studies Network, Australian National University, 1995), 77–103; Achmad, *Hollow Development*.

Figure 3: Poster promoting family planning from the Suharto era, but from before 1972. The text reads: "Mothers are now able to space pregnancies for the sake of her own health. Get involved in family planning." Issued by the National Association for Family Planning. From the collection on Indonesian health of Hans Pols

Health and medicine after the fall of Suharto (1998–present)

Suharto was able to hold on to power through severe repression and steadfast support from the military, police, and secret services. In 1997, the Asian monetary crisis commenced with severely adverse consequences for the Indonesian economy. In a matter of months, the Indonesian rupiah lost 80 percent of its value, businesses and banks collapsed, the economy shrank by more than 10 percent, unemployment rose significantly, living standards declined, and poverty increased.[58] Demonstrations were held with increasing frequency and Suharto's position became untenable; he resigned on 21 May 1998. His vice-president, B.J. [Bacharuddin Jusuf] Habibie, took his place for a mere 17 months to allow elections to be organized. Despite the short duration of his presidency, Habibie significantly shaped modern Indonesia by initiating a far-reaching program of political decentralization, which delegated most decision-making powers from the central government to the regencies (districts). He also abolished media censorship, liberalized the press, instituted economic reforms (particularly in the banking sector), and allowed political parties to organize and participate in elections.

By profession, Habibie was an airplane engineer; he had received his training in Germany and the Netherlands in the 1950s. He subscribed to Suharto's developmental ideals and was recruited by him in 1974 to guide Indonesia's industrial development; four years later he became Minister of Research and Technology. Habibie aimed to transform Indonesia from an agricultural to a modern society through industrialization. He stimulated state-owned enterprises to build ships, aircraft, communication technology, and military equipment.[59] His technological and industrial idealism came under criticism for tending to focus on realizing "mega-projects" that would never be economically viable while only benefitting a few insiders. In 1992, Habibie revived Batavia's Eijkman

58 World Bank, "The World Bank on the Social Impact of the Indonesian Crisis," *Population and Development Review* 24, no. 3 (1998): 664–666.

59 Sulfikar Amir, *The Technological State in Indonesia: The Co-Constitution of High Technology and Authoritarian Politics* (London: Routledge, 2012); Sulfikar Amir, "Nationalist Rhetoric and Technological Development: The Indonesian Aircraft Industry in the New Order Regime," *Technology in Society* 29, no. 3 (2007): 283–293; Sulfikar Amir, "Symbolic Power in a Technocratic Regime: The Reign of BJ Habibie in New Order Indonesia," *Sojourn: Journal of Social Issues in Southeast Asia* 22, no. 1 (2007): 83–106; Suzanne Moon, "Justice, Geography, and Steel: Technology and National Identity in Indonesian Industrialization," *OSIRIS* 24 (2009): 253–277.

Institute as the Eijkman Institute for Molecular Biology (*Lembaga Biologi Molekuler Eijkman*), thus honoring its first director, Christiaan Eijkman, who had conducted research on the causes of beriberi in the late nineteenth century, explaining it as a nutritional deficiency. In 1929, Eijkman had been awarded the Nobel Prize for Physiology or Medicine for this research. Habibie recruited Professor Sangkot Marzuki, a well-known Indonesian biomedical scientist then working at Monash University in Australia, as director.[60] The Eijkman Institute played a key role in advancing biomedical science in Indonesia. Through DNA analysis, its researchers were able to identify the perpetrators of the bombing of the Australian Embassy in Jakarta in 2004.[61] It also played a central role in investigating the COVID-19 pandemic.[62] Unfortunately, because of its recent integration in Indonesia's science super-agency BRIN (*Badan Riset dan Inovasi Nasional*; Indonesia Agency of Research and Innovation), it has lost its independence and is now more subject to political interference.[63]

The effects of Habibie's decentralization program have not always been uniformly positive for healthcare provision. Although health budgets have increased significantly since 1998, most of these have been allocated to curative medical interventions; spending on health promotion, monitoring and evaluation, and public health initiatives have decreased. Moreover, health services have become fragmented, disparities between regions have increased, and family planning services have declined. Many regencies, the basic area of organization in Indonesia below the provinces, lack the capacity to plan, manage, and provide health services adequately. Local healthcare delivery generally lacks transparency. Critics have recommended increases in spending by the central government with concomitant accountability and the allocation of funds for environmental and

60 Jeffrey Jervis, "Reviving a Nobel Past in Indonesia," *Science* 279, no. 5356 (6 March 1998): 1482.

61 Herawati Sudoyo et al., "DNA Analysis in Perpetrator Identification of Terrorism-Related Disaster: Suicide Bombing of the Australian Embassy in Jakarta 2004," *Forensic Science International: Genetics* 2, no. 3 (2008): 231–237.

62 Ardila Syakriah, "Indonesia Targets Local COVID-19 Strain in Eijkman-led 2022 Vaccine Initiative," *Jakarta Post*, 5 May 2020, accessed 15 September 2021, https://www.thejakartapost.com/news/2020/05/05/indonesia-targets-local-covid-19-strain-in-eijkman-led-2022-vaccine-initiative.html; Sandra Perrett, "Australia and Indonesia to Partner on COVID-19 Research," *CSIRO Media Releases and Statements*, 14 July 2020, accessed 15 September 2021, https://www.csiro.au/en/news/news-releases/2020/australia-and-indonesia-to-partner-on-covid-19-research.

63 Dynah Rochmyaningsih, "'Superagency' May Further Politicize Indonesian Research," *Science* 372, no. 6541 (30 April 2021): 449; Dyna Rochmyaningsih, "Indonesia's Research Reform Triggers Layoffs and Protests," *Science* 275, no. 6577 (12 January 2022): 131–132.

preventive health.[64] In 2015, just after the end of Susilo Bambang Yudoyono's presidency (2004–2014), Indonesia inaugurated universal health insurance (*Jaminan Kesehatan Nasional*; JKN) to ensure equity in access to healthcare services. It continues to be an important program but faces both administrative and financial challenges, including significant budget shortfalls.[65]

From 1999 to 2019, Indonesia's GDP rose at a high rate of around 5.6% per annum. During the same period, its poverty rate halved to 9.78%. Average per capita income rose from US$830 (just after the Asian monetary crisis) to US $4,196. Although Indonesia's Gini index rose from 31.1 to 39.5, indicating that economic inequality had increased, health conditions continued to improve overall.[66] Life expectancy increased by 5.77 years to 71.7 years. The neonatal mortality rate declined from 23.6 to 12.4 deaths per thousand live births between 1999 and 2019 and the maternal mortality rate declined from 2.72 to 1.77 deaths per thousand live births between 2000 and 2017.[67] However, despite these improvements, both neonatal mortality and maternal mortality remained high in comparison with other south-east Asian countries and middle-income countries. These relatively high rates are associated with delayed referrals from community health centers to hospitals and limited referral transportation. Moreover, basic

64 Stein Kristiansen and Purwo Santoso, "Surviving Decentralisation?: Impacts of Regional Autonomy on Health Service Provision in Indonesia," *Health Policy* 77, no. 3 (2006): 247–259, https://www.sciencedirect.com/science/article/pii/S0168851005001806; Abdullah Asnawi and Johannes Stoelwinder, "Decentralization and Health Resource Allocation: A Case Study at the District Level in Indonesia," *Health Care Quarterly* 9, no. 4 (2007): 5–16; Trisya Rakmawati, Reece Hinchcliff, and Jerico Franciscus Pardosi, "District-Level Impacts of Health System Decentralization in Indonesia: A Systematic Review," *The International Journal of Health Planning and Management* 24, no. 2 (2019): e1026–e53; Aderia Rintani and Adik Wibowo, "Health Sector Decentralization and Its Implication to Health Services in Indonesia," *Jurnal Ilmu Kesehatan Masyarakat* 10, no. 1 (2019): 1–14.

65 Rina Agustina et al., "Universal Health Coverage in Indonesia: Concept, Progress, and Challenges," *The Lancet* 393 (19 December 2019): 75–102.

66 The data in the following paragraphs are derived from Nafsiah Mboi et al., "On the Road to Universal Health Care in Indonesia, 1990–2016: A Systematic Analysis for the Global Burden of Disease Study 2016," *The Lancet* 392, no. 10147 (18 August 2018): 581–591. Some additional data have been obtained through the website of the World Bank. I have not included data from 2020 and 2021 because they reflect the influence of the COVID-19 pandemic and are therefore not illustrative of long-term trends.

67 For the neo-natal mortality rate see: "Indonesia: Mortality Rate, Neonatal (per 1,000 Live Births), *KNOEMA*, https://knoema.com/atlas/Indonesia/Neonatal-mortality-rate, accessed 15 September 2021; for the maternal mortality rate see: "Indonesia: Maternal Mortality Rate (Deaths/100,000 Live Births), KNOEMA, https://knoema.com/atlas/Indonesia/Maternal-mortality-ratio, accessed 15 September 2021.

emergency obstetrical and neonatal care centers are not available in all districts; where they are available, they rarely offer services 24 hours a day. In 2019, stunting in children under five years, a key measure of childhood malnutrition, was 27.7%, the fifth-highest rate in the world. Stunting is primarily a problem in poorer families.[68] Unfortunately, several programs to address this problem have thus far not been successful.

After 1950, a demographic transition took place in Indonesia (and the rest of Asia), as life expectancy increased and mortality decreased because of increasing standards of living, better sanitation, easier access to healthcare facilities, and the availability of medications, in particular antibiotics.[69] Nevertheless, mortality related to communicable diseases remains significant, in particular because of malaria, tuberculosis, pneumonia, and diarrheal disease. Malaria is still endemic in many areas and causes around 40,000 deaths a year, predominantly among children, who are also affected by pneumonia and diarrheal disease. Indonesia has the second-highest tuberculosis burden in the world; every year around 1,000,000 new cases are recorded. Indonesia currently has the fastest increase of individuals with HIV in Southeast Asia (current prevalence: 0.4%). Emergent infectious diseases such as dengue fever, Zika virus, and avian influenza are persistent threats.[70]

Although the contribution of communicable diseases to overall mortality has declined over the past 70 years, Indonesia's disease burden associated with noncommunicable diseases has risen significantly after 1990, indicating that the country is passing through the epidemiological transition.[71] From 1997 to 2016, obesity rates have risen from around 10% to 21%. From 2005 to 2018, the number of individuals with diabetes increased by 63%. The incidence of stroke increased 46% between 2007 and 2013; the rate in 2019 was 12.1 strokes per 1,000 individuals, which accounts for about 15% of total deaths. DALYs (Disabil-

68 Ty Beal et al., "A Review of Child Stunting Determinants in Indonesia," *Maternal & Child Nutrition* 14, no. 4 (2018): e12617, https://doi.org/10.1111/mcn.12617.

69 Harper and Amrith, eds. *Histories of Health in Southeast Asia*.

70 See, for example, Julio Frenk, and Octavio Gómez-Dantés, "The Triple Burden: Disease in Developing Nations," *Harvard International Review* (September 2011): 36–40; and Nila F. Moeloek, "Indonesia National Health Policy in the Transition of Disease Burden and Health Insurance Coverage," *Medical Journal of Indonesia* 26, no. 1 (2017): 3–6. At the time this invited editorial appeared, Moeloek was Indonesia's Minister of Health.

71 Antonio Dans et al., "The Rise of Chronic Non-Communicable Diseases in Southeast Asia: Time for Action," *The Lancet* 337 (2011): 680–689; Preet K. Dhillon et al., "Status of Epidemiology in the WHO South-East Asia Region: Burden of Disease, Determinants of Health and Epidemiological Research, Workforce and Training Capacity," *International Journal of Epidemiology* 41, no. 3 (2012): 847–860.

ity Adjusted Life Years) related to cerebrovascular disease and ischemic heart disease have increased significantly over the past 30 years (55.4 % and 57.3 %, respectively). Smoking is a well-known risk factor for several chronic diseases. Around 65 % of Indonesian men smoke every day; among women, this percentage is much lower. Indonesia still has not signed the WHO Framework Convention on Tobacco Control, partly because of the economic significance of tobacco taxes and the political influence of the tobacco industry.[72]

The combined disease burden associated with communicable and noncommunicable diseases poses distinct challenges to Indonesia's healthcare services.[73] The global COVID-19 pandemic has hit Indonesia very hard, partly because of the inept and delayed reactions by the Ministry of Health during 2020, and partly because Indonesian president Joko Widodo and his government consistently prioritize economic growth over health. During the first and second waves, Java's hospitals were overwhelmed and mortality rates were high, although it remains difficult to estimate prevalence and mortality rates because of insufficient testing.[74] During the first 10 months of 2020, there was an excess mortality rate of 61 %, which corresponds to 16,118 deaths.[75] The tally for 2021 is expected to be much higher.

72 Putu Ayu Swandewi Astuti, Mary Assunta, and Becky Freeman, "Why Is Tobacco Control Progress in Indonesia Stalled? A Qualitative Analysis of Interviews with Tobacco Control Experts," *BMC Public Health* 20 (2020): article 527.

73 Peter Heywood and Terence H. Hull, "Dealing with Difficult Diseases: Renovating Primary Health Care to Deal with Chronic Conditions in Indonesia," in *Health Transitions and the Double Disease Burden in Asia and the Pacific: Histories of Responses to Non-Communicable and Communicable Diseases*, ed. Milton J. Lewis and Kerrie L. MacPherson (New York: Routledge, 2013), 216–229. See also, for example, Dhillon et al., "Status of Epidemiology in the WHO South-East Asia Region."

74 See, for example, Stanley White, "Indonesia's COVID-19 Situation Nears 'Catastrophe': Red Cross," *Jakarta Post* (29 June 2021), accessed 29 June 2021, https://www.thejakartapost.com/news/2021/06/29/indonesias-covid-19-situation-nears-catastrophe-red-cross.html; Nur Janti and Yerica Lai, "Java's Health System Paralized," *Jakarta Post* (5 July 2021), accessed 5 July 2021, https://www.thejakartapost.com/paper/2021/07/04/javas-health-system-paralyzed.html; Gemma Holliani Cahya, "Covid Surge Pushes Indonesia's Health System to the Brink," *The Guardian* (8 July 2021), accessed 8 July 2021, https://www.theguardian.com/global-development/2021/jul/08/covid-surge-pushes-indonesias-health-system-to-the-brink.

75 Iqbal R.F. Elyazar et al., "Excess Mortality During the First Ten Months of COVID-19 Epidemic at Jakarta, Indonesia," *MedRxiv: The Preprint Server for Health Sciences* (14 December 2020), accessed 8 July 2021, https://doi.org/https://doi.org/10.1101/2020.12.14.20248159.

Conclusion

From the 1880s until today, Indonesian intellectuals have articulated multi-faceted and subtly changing ideas on progress, development, and modernization which continue to play a central role in Indonesian social, political, and medical thought. According to Indonesian physicians, health constituted a significant condition for progress and social development, making medicine a significant tool of nation building. At times, they focused on professional advancement; at other times, on optimal forms of healthcare delivery; at still other times, they proposed and implemented public health measures. At specific junctures in Indonesia's history, physicians and policymakers advocated top-down health initiatives; at other times, they favored community-based programs; at still other times, a combination of both. Indonesian politicians have generally focused on economic and industrial development, which, they hoped, would lead to increased standards of living and, thereby, better health outcomes. Although ideas on development inspired various initiatives in medical care and public health, their influence on health outcomes has been rather limited. In colonial times, medical care benefiting Indonesians was too limited to influence health outcomes. After the 1950s, increases in living standards were far more significant, while during the past 40 years nutrition and an increasingly sedentary lifestyle have led to an increase in noncommunicable diseases.

During the Dutch colonial era, the Japanese military occupation (1942–1945), and the war of independence (1945–1949), Indonesian physicians were not able to develop and implement substantial health initiatives, but they became acquainted with ideas on public health and the organization of medical care. During the Sukarno era (1950–1965), leading physicians primarily focused on reforming and expanding medical education to counteract the shortage of physicians in the country. They developed plans for the organization of medical care, of which establishing community health centers all over the country was central. Because of political instability and economic problems, these ideas were only partly realized. Despite that, life expectancy rose and mortality rates because of infectious diseases declined because of increasing standards of living and the availability of antibiotics. Under Suharto (1965–1998), industrialization and economic liberalism resulted in a steady increase in the standard of living. Life expectancy rose dramatically while infant and maternal mortality rates declined.

During the past 20 years, the significance of noncommunicable diseases on mortality and quality of life has increased significantly. Indonesia, like other countries in Southeast Asia, is currently facing a double burden of disease

through a combination of communicable diseases (common and newly emerging) and non-communicable diseases. To address this multi-faceted challenge adequately, a robust healthcare system, a comprehensive and well-administered health insurance system, preventive initiatives, and a strong capacity in medical science are required. As elsewhere, Indonesia's healthcare system is ill prepared to deal with the increasing importance on non-communicable diseases, as they result from poor nutrition and an increasingly sedentary lifestyle.

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Vsevolod Bashkuev

Soviet medical assistance and the making of Mongolian healthcare: geopolitics, ideology, and transformation of a traditional nomadic society, 1923–1947[1]

Throughout the entire socialist period (from the early 1920s until 1990), Mongolia, the first true ally of the USSR in the world, was also the most consistent recipient of Soviet aid. As the country embarked on a non-capitalist way of development, aid poured into practically every sphere of its domestic life, bringing about unimaginable transformations of traditional nomadic society. Of all the state and social institutes that the Soviet Union helped to build in Mongolia, it is the healthcare system which offers the most illustrative example of humanitarian commitment, capital spending, and effort. In the early 1920s, while still not yet quite recovered from revolutionary turmoil and civil war, Soviet Russia committed itself to an annual sharing of the much-needed currency reserves with Mongolia and, most of all, precious cadres who could otherwise have been sent to a multitude of troublesome corners of the war-weary country in a desperate need of peaceful reconstruction. Instead, by the late 1920s, qualified physicians and nurses from the People's Commissariat for Health (*Narkomzdrav*) of the Russian Soviet Federative Socialist Republic (RSFSR) crisscrossed Mongolia to build European medical facilities for the nascent national healthcare system.

In the early 1920s the Bolsheviks, concerned with the international isolation of Soviet Russia, invested much resources and effort into the assistance to Asian countries, whom Moscow viewed as "oppressed" by Western imperialism. The official "overt" credo of the Kremlin diplomacy toward the East was rendered in an instruction of the People's Commissariat for Foreign Affairs (*NKID*) to the Soviet plenipotentiary in Afghanistan (1921). It read, "...we have one formation, you have another; we have our ideals, you have yours; yet we are connected by the commonness of our efforts to reach complete self-sufficiency and independence of our peoples. We do not interfere into your internal affairs, we do not intervene into personal affairs of your people; we just render assistance to any phe-

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nomenon that plays a progressive role in the development of your people."[2] In the case of Mongolia, Tuva, Afghanistan, Iran, and other countries along the USSR's Asian frontiers, medicine was exactly such a "progressive phenomenon." The problem, however, was in the fact that Soviet developmental assistance to Mongolia and other Asian countries had layers of covert geopolitical and ideological agenda.

While the *Narkomzdrav* physicians, bearers of the humanitarian mission, toiled in Mongolia to relieve its population of a century-old burden of untreated diseases, bringing about a profound sociocultural change in a hitherto inert traditional nomadic society, Soviet political leadership stitched its own ideological and, most of all, geopolitical agenda into the creation of healthcare. The Comintern, whose primary goal was to fan the revolutionary flames around the globe, viewed the construction of schools and hospitals as an inseparable part of the emancipation of the East through Soviet cultural influence.[3] The Soviet government, still concerned about the Japanese and US American intervention in Siberia and the Far East in 1918–1922, was highly sensitive to any geopolitical threats from the south, be that a Chinese reoccupation of Outer Mongolia, Japanese attempts to create a pan-Mongolian state, or German and American business or scientific enterprises.[4] So, for the Bolshevik leadership investment into healthcare development in Mongolia was an additional lever of cultural influence. Cleverly used, it could, and as we will see, did create an elaborate multi-facet asset. The humanity and skill of Soviet physicians would produce respect to the USSR as a mighty cultural power, a brotherly state in the north to rely on in times of trouble. A modern healthcare system would require constant maintenance and influx of Soviet cadres and technologies. Finally, Soviet medicine acted as a live advertisement of Soviet successes in social transformation, thus creating an incentive to replicate them in Mongolian nomadic society.

As the title suggests, I focus on the connections between the Soviet assistance in building Mongolian healthcare and the aspects of Soviet policy in Asia. This paper shows the reasons why the Soviets considered Mongolia as a strategic foothold against Chinese, Japanese, and international imperialism and highlight the geopolitical role of Soviet medicine. In so doing, I adhere to my previously formulated hypothesis that medicine was used as an instrument

2 A.E. Ioffe, *Mezhdunarodnye svyazi sovetskoi nauki, tekhniki i kul'tury 1917–1932 [International Connections of Soviet Science, Technology, and Culture 1917–1932]* (Moscow: "Nauka," 1975), 363.
3 Politicheskaya rabota v Persii i na Vostoke [Political work in Persia and the East]. 3 December 1921. List 2. Delo 44. Opis 90. Fond 495. The Executive Committee of the Comintern. Russian State Archive of Social and Political History, Moscow.
4 Robert A. Rupen, "The Buriat Intelligentsia," *The Far Eastern Quarterly* 15, *no. 3* (1956): 391.

of soft power along the Asian "underbelly" of the USSR: from Mongolia and Tuva to Xinjiang, Afghanistan, and Iran.[5] I also outline and explain the role of Soviet medicine in promoting Bolshevik ideology in Mongolia. Lastly, I trace the connection between Soviet medicine and the transformation of the nomadic Mongolian society. Overall, the paper presents the introduction of Soviet medicine in Mongolia as a multi-stage process during which the Soviets used targeted strategies to transform a traditional nomadic society into a society prepared for building socialism.

It is always difficult to present a complex development process as a linear movement. Replete with invisible political, ideological, and geopolitical undercurrents, the process of building healthcare in Mongolia requires several chronological flashbacks from the imperial to the Soviet period and back to reveal continuity and changes in strategic and geopolitical aspirations, realities, and goals. Therefore, this paper's structure is not strictly chronological, but offers a more flexible "retrospective within retrospective" approach.

Problematizing health and healthcare in Mongolia: a historical and political background

Prior to the 1921 revolution, Outer Mongolia was "cocooned" in its own civilizational paradigm.[6] Although *de iure* an autonomous region (in contrast to the traditionally Chinese controlled Inner Mongolia), *de facto* it formed the northernmost part of the Qing empire from the late seventeenth century until 1911. The Khalkha (Outer Mongolian) princes, fearful of the Dzungar Galdan Boshogtu Khan, their bitter enemy, swore allegiance to the Kanxi Emperor (founder of the Manchu Qing dynasty in China) in September 1688. Since the Manchus valued the military capacity of the Khalkha Mongols in the conflict with the Dzungars and, later, as auxiliary cavalry policing China's rebellious provinces, they

5 Vsevolod Bashkuev, *Rossiiskaya meditsina i mongol'skii mir: istoricheskiy opyt vzaimodeistviya (konets XIX – pervaya polovina XX vv.) [Russian Medicine and the Mongolian World: the Historical Experience of Interaction (Late Nineteenth – First Half of the Twentieth Century)]* (Irkutsk: Ottisk, 2016), 247; see also Joseph S. Nye, "Soft Power," *Foreign Policy* 80 (1990): 166–167.

6 Inner Mongolia is a large region adjacent to the Great Wall, which historically was under heavy Chinese political influence. For centuries, Southern Mongolian tribes were skillfully manipulated by the Chinese emperors who used them as highly effective irregular troops against northern nomads or peasant rebels. Outer Mongolia was a *de iure* autonomous region. See: Owen Lattimore, *Inner Asian Frontiers of China* (New York: American Geographical Society, Research Series 21, 1940), 78–79.

granted them a certain degree of self-administration. In the early twentieth century, Outer Mongolia comprised four core Khalkha aimags (regions) as well as Khovd (Western Mongolia) and Uryankhai (Tannu-Tuva). The Manchu military governor resided in Uliastai and two civil governors (amban) were stationed in Urga and Khovd, respectively. Compared to the more closely administered Inner Mongolia, Outer Mongolia experienced a more restrictive immigration policy for Chinese settlers.[7]

By the early twentieth century, China, nearly subjugated by the Western powers itself, began its own capitalist expansion into Inner Mongolia. Railroad construction allowed the Qing administration to transfer thousands of Chinese settlers there, displacing pastoralists from their hereditary lands. Owen Lattimore argues that, thus, the Qing government "...did not transform either the old economy or the old society in that part of the steppe that had not yet been penetrated. On the contrary, the steppe society, because it had been displaced from so much of its old domain, became increasingly hostile to China."[8] Attempts by the Qing administration to put Outer Mongolia under direct control brought to life a growing discontent of the Mongolian elites reluctant to lose authority over their *aimags*, and of the rank-and-file herders impoverished by the unbearable Qing taxes.[9] The Mongolian discontent acquired a sharp nationalistic and secessionist edge.

Hence, when the Qing empire collapsed in 1911 as a result of the Xinhai Revolution, the Mongolian princes immediately renounced their allegiance to republican China on the basis that the Qing dynasty, to whom they had sworn allegiance, no longer existed. In the summer of 1911, a delegation of Outer Mongolian princes and high lamas went to St. Petersburg to seek Russian support for an independent Mongolia. However, the joint Russo-Chinese declaration of 1913 that recognized China's sovereignty over an autonomous Outer Mongolia and the tri-partite agreement of 1915 that formalized the autonomous status of Mongolia within China showed St. Petersburg's reluctance to face international

7 Ivan Sablin, *Governing Post-Imperial Siberia and Mongolia, 1911–1924* (London and New York: Routledge, 2016), 22–23.

8 Owen Lattimore, "Inner Asian Frontiers: Chinese and Russian Margins of Expansion," *The Journal of Economic History* 7, no. 1 (1947): 48.

9 Thomas E. Ewing, "Ch'ing Policies in Outer Mongolia 1900–1911," in *The History of Mongolia. Vol. III. The Qing Period. Twentieth Century Mongolia*, ed. David Sneath and Christopher Kaplonski (Global Oriental, 2010), 839.

problems nor bear enormous expenses for organizing the still underdeveloped Mongols into an independent state.[10]

Despite all this, Outer Mongolia did enjoy *de facto* independence until 1919, when the Beijing government decided to strengthen its military presence there. However, instead of developing a modern state structure along the European model, the Mongolian elites merely replicated the medieval imperial setup by enthroning the highest-ranking Mongolian lama, the "Living Buddha" Jebtsundamba Khutukhtu, as the *Bogd Khan*, the theocratic ruler of Mongolia. Lattimore views the enthronement of the *Bogd Khan* as the persistence of the "medieval conditions" and "medieval psychology" of the Mongolian elite in the early twentieth century.[11] With respect to his personal lifestyle and political rule the *Bogd Khan* was not much different from Chinese emperors. Eight years of the *de facto* independence gave some Mongols ample reasons to believe that Manchu exploitation had simply been replaced by the exactions of the native Mongolian ruling class. So, when news arrived that the Tsar had been deposed in St. Petersburg, many Mongols were sympathetic to the Bolshevik cause.[12]

In the summer of 1919, the Bolsheviks denounced the 1915 tripartite agreement and sent a message to the Mongols stating that as an independent country, Mongolia was free to choose allies regardless of the position of either Beijing or St. Petersburg. Fujiko Isono considers this appeal a manifestation of early Soviet idealism. In Isono's view, the Bolsheviks faced a difficult geopolitical dilemma: on the one hand, they promised support to the small Asian nations in their struggle against foreign imperialism; on the other hand, open military assistance to the Mongols against the Chinese would greatly deteriorate relations with China amidst the already strained geopolitical situation when large portions of the Far East and East Siberia were under the control of the Japanese and American interventionist forces. The ambiguous Soviet position was clearly seen during a long visit to Soviet Russia of the Mongolian revolutionaries that began in July 1920 and ended four months later, when news of the offensive of White Guards general Baron Ungern von Sternberg on Urga finally forced the Soviets to provide real support to the revolutionary Mongols. They did so first by providing weapons and ammunition, then by sending troops that crossed the Soviet-

10 Fujiko Isono, "Soviet Russia and the Mongolian Revolution of 1921," in *The History of Mongolia. Vol. III. The Qing Period. Twentieth Century Mongolia*, ed. David Sneath and Christopher Kaplonski (Global Oriental, 2010), 910–911.

11 Cited in: Michael Dillon, *Mongolia: A Political History of the Land and its People* (London: I.B. Tauris, 2020), 47.

12 Isono. *Soviet Russia and the Mongolian Revolution*, 911.

Mongolian border to help the Mongols overthrow Ungern's bloody rule in Urga in June 1921.[13]

This procrastination by the Bolsheviks showed that their views on foreign policy were far from uniform. On the one hand, there were idealistic followers of the idea of world revolution, mostly entrenched in the Comintern. On the other hand, there were sober adherents of *Realpolitik* whose fear of foreign intervention was stronger than the urge to revolutionize the world in general and the East in particular. Having endured foreign intervention on all flanks, from Turkistan to Arkhangelsk and from Crimea to the Far East, they were reluctant to risk confrontation with China because of Outer Mongolia. However, Ungern's assault on Urga and his short but extremely bloody rule meant the revival of White Guard threat to Siberia, and this threat could not be tolerated by either faction. Hence, Mongolia received Soviet military aid against Ungern.

Even after the overthrow of the Chinese and Ungern's rule in Mongolia, its political setup remained archaic. The Mongolian revolutionaries reinstated the *Bogd Khan* and proclaimed a constitutional monarchy that lasted until his death in May 1924. The *Bogd Khan*, though considerably reduced in his real powers, was still a great religious leader and a symbol of anti-Chinese struggle.[14] The Mongolian People's Republic was not proclaimed until November 1924, and Mongolia entered the Soviet geopolitical orbit with a still unclear international status.

If the ideas of national sovereignty and political transformation awoke early in the twentieth century as a reaction against growing Chinese colonization,[15] in other aspects, Mongolia was far behind mainstream civilization as defined by the West. As they had for centuries, the Mongols lived a simple nomadic life, grazing their cattle on the vast steppes. A national industry was non-existent. The only available form of schooling consisted of Buddhist religious education at lamaseries. European political, social, technical, or economic ideas were not only unknown but could not even be expressed in Mongolian as there were no suitable lexemes. All in all, the Bolsheviks set out to modernize a society whose beliefs and practices had not changed for centuries. The complexity of this task never discouraged them.

Against this backdrop, by the mid-1920s the problem of healthcare became the most burning of all issues in Mongolia. The Bolsheviks rightly noted that in the Mongolian People's Republic (1924), health problems were directly con-

13 Isono. *Soviet Russia and the Mongolian Revolution*, 914–924.

14 Dillon, *Mongolia: A Political History*, 67.

15 Irina Y. Morozova, *Socialist Revolutions in Asia: The Social History of Mongolia in the Twentieth Century* (Routledge, 2009), 8–10.

nected with the national economy. In 1929, the first Soviet counselor to the Mongolian Ministry of Health, Il'ya Leonidovich Baevsky, wrote that population density in the country was only slightly higher than that of the Sahara desert (0.26 persons per square kilometer compared to 0.2 persons per square kilometer). As population growth was unattainable through migration, the only hope to boost it was by natural reproduction. However, due to rampant syphilis and gonorrhea, Mongolian women had only one third of the fertility of Russian women. Incidences of sterility were twice as high in Mongolian women as in Russian women. A declining population was not able to provide enough of a workforce for much-needed economic development. Hence, in Baevsky's words, "a large economic problem is, therefore, directly connected to medical activities to fight venereal diseases."[16]

Syphilis and gonorrhea severely undermined the quality of the Mongolian workforce and led to early incapacitation or death. As their health deteriorated, the productivity of sick workers also tended to decline. Already overly specific due to nomadic cattle breeding as the only economic activity, the Mongolian workforce could not contribute much to the construction of a new non-capitalist society without urgent measures to reduce the incidence of venereal diseases. Other dangerous diseases, such as plague, usually halted all economic activity in the affected areas and, as such, also required immediate attention. Baevsky described the situation as follows:

> Therefore, we must bear in mind both when assessing the efficiency of medical activities and when allocating funds for healthcare that a fight against syphilis, plague, and other contagious diseases, increasing the birth rate and reducing infant mortality are the most important economic tasks. The economic development of Mongolia, an increase in the population's prosperity, an increase in national income and budget are all closely connected to the governmental activities in this field.[17]

Similarly, there existed a direct connection between health issues and political transformations. The Bolsheviks soon realized that the introduction of European medicine by Soviet physicians carried definite political significance. Medicine could be used as a vehicle of either open or concealed Communist propaganda. The successes of Soviet doctors earned them the respect of the population, and this authority gradually helped inculcate in Mongolian nomads a new attitude

16 Khain-Khirba and I.L. Baevsky, "Voprosy Organizatsii Zdravookhraneniya v Mongol'skoy Narodnoy Respublike [Issues of Public Healthcare Organization in the Mongolian People's Republic]," *Khozyaistvo Mongolii* 1, no. 19 (1930): 97.

17 Khain-Khirba and Baevsky, "Voprosy Organizatsii Zdravookhraneniya," 98.

both to Russians (who were perceived as selfless, kind, and generous friends) and the new social order (as a regime of cleanliness, justice, and harmony).

However, the advent of socialist healthcare also entailed consequences for traditional Mongolian culture and lifestyle. For centuries, health protection remained tightly sealed from any external influence because it remained almost exclusively in the hands of the Lamaist church. By the early twentieth century, the Lamaist clergy possessed a large portion of the nation's wealth via the *jas (jisa)* – monastic funds or treasuries containing, according to some estimates, up to 17 percent of all Mongolian livestock. The lamas also controlled a large part of the population in the form of *shav'*. While the term literally means "disciple," in reality the most suitable interpretation is "serf," which is very close in meaning to the Russian peasant serfs. Monastic serfs or *shabinar* amounted to 42,000 men in the early twentieth century, which was a large number for a thinly populated country (647,500 persons in 1918; 651,700 persons in 1925).[18] Hence, during that period the Lamaist clergy rivaled or even exceeded the secular aristocracy in wealth and influence.[19]

Healing was one of the main "miraculous" functions of the lamas and had greatly assisted the conversion of the Mongols and Buryats to Lamaism in the seventeenth and eighteenth centuries. Walther Heissig cites a seventeenth century source, noting that the lamas living in the Selenga and Khori Buryat districts "...were of help to the people with prayers and medicine." The translation continues as follows: "...moreover, the faith spread while lamas trained at the medical facilities, treating the diseases and venereal contagions and reciting prayers and relieved human beings from the fear of being afflicted by various diseases and of premature death..."[20] These healing lamas who were educated at medical schools throughout Tibet, Mongolia, Buryatia, and Tuva were known as *emchi-lamas*. Before specializing in Tibetan medicine, the disciples underwent a 12-year-long training at a lamasery, growing from small boys to full-fledged

18 Thomas Spoorenberg, "Reconstructing Historical Fertility Change in Mongolia: Impressive Fertility Rise before Continued Fertility Decline," *Demographic Research* 33, *Article 29* (2015): 846; Owen Lattimore, *Nomads and Commissars: Mongolia Revisited* (New York: Oxford University Press, 1962), 117. Lattimore also indicates a growth in the number of lamas from 87,300 in 1925 to 94,900 in 1928 as a sign that Buddhist church prospered during the early years of the Mongolian People's Republic.

19 Christopher Kaplonski, introduction to *The History of Mongolia. Vol. III. The Qing Period. Twentieth Century Mongolia*. ed. David Sneath and Christopher Kaplonski (Global Oriental, 2010), 640–641.

20 Walther Heissig, "A Mongolian Source to the Lamaist Suppression of Shamanism in the 17th Century," in *The History of Mongolia. Vol. II. The Qing Period. Twentieth Century Mongolia*, ed. David Sneath and Christopher Kaplonski (Global Oriental, 2010), 584.

lamas. The Swedish traveler Frans August Larson pointed out that no monk could reach this rank before the age of 20, but few actually ever attained it before the age of 40. Afterwards, the lamas went to specialize in various spheres: metaphysics, magic, or medicine. As Larson puts it, "The treatment of the sick, whether by magic or weird prayer or herbs is the most lucrative profession in the priesthood. In times of bad health people will part with all their wealth to be restored to normal physical condition again."[21]

From the early years of medical assistance to Mongolia, Soviet doctors faced competition, opposition, and, finally, the open hostility of the *emchi-lamas*, who saw their predictably obedient economic base – consisting of Mongolian commoners – defect to more efficient and better equipped Russians. The existence of an indigenous medical system deeply rooted in the traditional lifestyle and beliefs was a formidable obstacle that eventually led the Bolsheviks towards a political solution. First, they deprived Tibetan medicine of state funding, then banned it altogether, and finally repressed most of the healing lamas. Consequently, the advent of socialist healthcare brought about the destruction of the entire social and professional group of *emchi-lamas*.

Yet another negative consequence was the loss of many traditional practices of everyday nomadic life. If the *emchi-lamas* who actively opposed Soviet medicine were the actors in the cultural-turned-political clash with the Bolsheviks, the traditional lifestyle castigated by the Soviet doctors was the "negative context" of interaction. It posed an even greater danger to the intended Soviet-style cultural development than the lamas and was subject to radical change. European hygienic practices introduced by Soviet medics in the 1920s gave an impetus to cultural campaigns led by the Mongolian People's Revolutionary Party (MPRP) that lasted from the 1930s to the late 1980s. As a result, the Mongols underwent a radical transformation of their traditional cultural environment and many age-old everyday practices, such as folk medicine practices, were irretrievably lost.

21 Frans August Larson, "The Lamas of Mongolia," in *The History of Mongolia. Vol. II. The Qing Period. Twentieth Century Mongolia*, ed. David Sneath and Christopher Kaplonski (Global Oriental, 2010), 880.

Soviet medicine in Mongolia as an instrument of Bolshevik geopolitics

Soviet interventions in Mongolia were based on strategic interests that developed during the second half of the nineteenth century.

At the end of the nineteenth century, Russian rulers viewed Mongolia as an inseparable part of China. However, military researchers gradually realized that China and Mongolia were in fact very different and there was a deep antagonism between the Mongols and Han Chinese that was exacerbated by Chinese colonization of Mongolian lands. They were the first to state that an independent Mongolia, friendly to Russia and hostile to China, could become a geopolitical buffer against possible Chinese aggression.[22] A well-grounded interpretation of the "Mongolian question" was presented by Russian military Mongolist Alexey Mikhailovich Baranov. He believed that the Chinese pressure on the Mongolian political and economic interests, such as colonization, the duty to supply horses to the Chinese army at unbelievably low prices, the stationing of troops in Outer Mongolia, the forcible closing of lamaseries, and the disrespect to the Lamaist clergy stirred nationalistic anti-Chinese sentiments among the Mongolian aristocracy and common folk. He wrote that this policy entailed a takeover of the Mongolian lands and a formation of new Chinese provinces on the Russian borders that posed a threat to the Russian Empire and required its intervention. As Baranov stressed, the Mongolian princes developed their own defense strategy but needed external support from Russia. To strengthen Russia's position in Mongolia, Baranov proposed opening a Russo-Mongolian school in Urga and founding a Mongolian-language newspaper. This approach accompanied supporting the program of Mongolian princes that presupposed Russian assistance in arms and military instructors, a joint development of Mongolia's gold deposits and other mineral resources, and the creation of a modern monetary system.[23]

In 1861, the first Russian consulate opened in Urga. By 1916, there existed three other consulates in Uliastai (1906), Kobdo (1911), and Maimachen (1916), as well as representative offices of the Russo-Chinese bank in Urga (1900) and Uliastai (1900); the gold-mining JSC "Mongolor," Mongolian bank (1915); Russian telegraph offices, and a telephone station. As was the case in many parts of Cen-

22 A.P. Sukhodolov and Yu.V. Kuz'min, *Mongolia i Russko-Mongol'skie Otnosheniya Pervoy Poloviny XX Veka: Problemy Istorii i Istoriografii [Mongolia and Russo-Mongolian Relations in the First Half of the Twentieth Century: Problems of History and Historiography]* (Irkutsk: Izd-vo Baikal'skogo universiteta, 2016), 105–107.

23 Sukhodolov and Kuz'min, *Mongolia i Russko-Mongol'skie Otnosheniya*, 79–80.

tral Asia, the first detailed studies of Mongolia's geography, resources, and society were carried out by military research expeditions between 1903 and 1910. Russian medical presence in Mongolia dates back to 1861. The Russian consular medic and doctor's assistant, I. Osipov, served not only Russian subjects but Mongols as well. Thanks to medical treatment and, especially, smallpox vaccinations, he earned the respect of the Mongolian aristocracy.[24] Permanent medical care units appeared in 1901 along with the arrival of Russian troops. In 1909, Russian army physician Sanzhimiteb Tsybiktarov opened a consular clinic and hospital in Urga. Tsybiktarov, a Buryat Cossack by origin, was a dedicated medic who treated many Mongols and died in the line of duty in 1921 at the hands of Ungern's white guards.

By the late nineteenth century, the interest of Russian physicians in Mongolia shifted to studying endemic plague. This research intensified when Russia faced the danger of plague during the construction of the Chinese Eastern Railroad. In 1898, the Russian governmental commission for the prevention of plague, or *Komochum*, sent bacteriologist Danilo Kirilovich Zabolotny to eastern Mongolia. In 1899 another doctor, Julian D. Talko-Hryncewicz, studied the plague in Urga and western Mongolia. It was he who first highlighted the danger of the Mongolian plague for Siberian and Ural towns and even European Russia.[25] In 1900, professor Ivan Nikolaevich Lange and doctor Alexander Ippolitovich Podbelsky continued plague studies in Mongolia. In 1901, the *Komochum* dispatched another bacteriologist, Faddey Feliksovich Skrzhivan, and, in 1905–1906, plague research was carried out by Manuil Fedorovich Shreiber and Vasily Ivanovich Shendrikovsky.[26]

Subsequently, plague research became one of the key aspects of Russian activities in Mongolia. The epidemic danger, vividly demonstrated by the devastating Manchurian plague of 1910–1911, became a geopolitical issue first for the Russian Empire, then for the USSR. The 1928 plague outbreaks in Mongolia worried the Soviet government so much that at the inter-departmental meeting in Moscow on 11 September 1928, the representatives of four People's Commissariats (health, trade, transport, foreign affairs) and the OGPU (state security) decided to petition the Council of the People's Commissars to immediately close the

24 M.A. Ibragimov and B. Demberel, *Ocherki po Istorii Zdravookhraneniya Mongol'skoy Narodnoy Respubliki [Essays on the History of Healthcare of the Mongolian People's Republic]* (Moscow: Meditsina, 1977), 25.

25 J.D. Talko-Hryncewicz, "O Chumnykh Zabolevaniyakh v Mongolii [On Plague Diseases in Mongolia]," *Trudy Troitskosavsko-Kyakhtinskogo Otdeleniya Priamurskogo Otdela Imperatorskogo Russkogo Geograficheskogo Obshchestva* 1–2 (1899): 109.

26 Ibragimov and Demberel, *Ocherki*, 28–29.

Soviet-Mongolian border. The Acting People's Commissar of Foreign Affairs, Maksim Maksimovich Litvinov, argued:

> Taking into account the ease with which this disease can penetrate our territory near the Siberian way [Trans-Siberian Railroad – *VB*], and considering that in such a case our entire western border would immediately fall under all those restricting measures according to the International Sanitary Convention, the Collegium of the People's Commissariat of Foreign Affairs deems it necessary to immediately and completely close the state border between the USSR and Mongolia for all communication.[27]

Though the Soviet diplomats realized all the negative consequences of this act for Soviet-Mongolian relations, what they feared most was a possible international quarantine that would hamper Soviet economic relations with the West in the wake of industrialization.[28]

Another geopolitical dimension of plague research directly concerns soft power. The view of decision makers at the time was influenced by memories of the infamous Vetlyanka plague epidemic of 1878–1879. This outbreak of a disease that had long been viewed in Europe as a medieval scourge and as no longer existent in civilized nation states severely undermined Russia's international prestige. Germany and Austria openly accused Russia of being uncivilized, and a team of 11 international experts led by a well-known German epidemiologist, August Hirsch (1817–1874), arrived in the Astrakhan province to investigate the outbreak.[29] This led Russia to invest considerable funds and effort into plague research, first to prove her status as a modern civilized power and secondly to secure her borders from a possible entry of plague. Russian bacteriologists gained an international reputation and made groundbreaking discoveries. In 1898, Zabolotny proposed a hypothesis that marmots were carriers of *Yersinia pestis*, the plague bacillus. Russian bacteriology developed the theory of endemic regions according to which plague entered Russia not from abroad, but from sick places either in the empire or near its borders. In 1911, Leonid Isaev experimen-

27 M.M. Litvinov to the Council of People's Commissars of the USSR, September 1928, List 2, Delo 253, Opis 35, Fond A-482 Ministry of Health of the RSFSR, State Archive of the Russian Federation, Moscow.

28 Litvinov to the Council of People's Commissars of the USSR, List 5.

29 M.M. Pirogovskaya, "Vetlyanskaya Chuma 1878–1879 gg.: Sanitarnyi Diskurs, Sanitarnye Praktiki i (Re)formirovanie Chuvstvitel'nosti [The Vetlyanka Plague of 1878–1879: Sanitary Discourse, Sanitary Practices and the (Re)forming of Sensibility]," *Antropologicheskii Forum* 17 (2012): 206–209; D.V. Mikhel', "Chuma i Epidemiologicheskaya Revolyutsiya v Rossii, 1897–1914 [Plague and Epidemiological Revolution in Russia, 1897–1914]," *Vestnik Evrazii* 3 (2008): 144.

tally confirmed this theory by finding *Yersinia pestis* in a Transbaikalian marmot.[30]

This way, at the turn of the twentieth century, Mongolia became a "laboratory" for studying plague, offering unrivaled research and testing opportunities. In addition to studying the disease, Russian physicians learned much about indigenous plague prevention and, in a sense, introduced the Mongols to the broad medical world. They earned the respect of the Mongols as plague fighters and their activities became one of the cornerstones of the Soviet medical prestige. Thus, plague prevention turned into a valuable component of Russian and Soviet soft power. It was all the more uncomfortable for the Soviets when they realized that foreign competitors were offering quicker assistance and cheaper vaccines.

In 1926–1928, when the outbreaks of pneumonic plague claimed dozens of victims, the Soviet medical expedition failed to respond quickly and the Mongolian authorities turned to German medics who provided cheap and efficient vaccines. It was an embarrassing situation. On 9 January 1929, the Comintern commission of inquiry into the issues of assistance to Mongolia seriously discussed this issue and decided that Soviet medics should always be on alert with all necessary materials at hand. The commission also noted that there was German competition in the supply of medicine and sanitary literature.[31]

Any potential foreign influence in Mongolia was a chronic fear of the Comintern functionaries and Soviet diplomats. In December 1925, Elbek-Dorzhi Rinchino, head of the Mongolian-Tibetan section of the Comintern, wrote in his report entitled "Mongolia from the Viewpoint of the Comintern" that the Soviet-Mongolian border was too close to Siberian resources and the Trans-Siberian railway and that if Mongolia fell under the control of international or Chinese imperialists it would become a springboard of aggression against Soviet Siberia.[32] In his view, Mongolia was a unique place where the Comintern could develop and enhance the practices of cooperation between the world proletariat and a mass of "backward" Asiatic peoples.[33] Rinchino concluded that a loss of Soviet influence in Mongolia and an imposition of foreign control would be extremely dangerous for Siberia. Conversely, further strengthening Soviet influence would allow the Comintern to use Mongolia as a "revolutionary springboard in the

30 Mikhel', "Chuma i Epidemiologicheskaya Revolyutsiya," 155–156.

31 *Mongoliya v dokumentakh Kominterna. Chast' I (1919–1929) [Mongolia in the Documents of the Comintern. Part 1 (1919–1929)]*, ed. B.V. Bazarov (Ulan-Ude: Izdatel'stvo BNTS SO RAN, 2012), 439.

32 E.-D. Rinchino, "Mongoliya s Tochki Zreniya Kominterna [Mongolia from the Viewpoint of the Comintern]," December 1925, List 9, Delo 35, Opis 152, Fond 495 The Executive Committee of the Comintern, Russian State Archive of Social and Political History, Moscow.

33 E.-D. Rinchino, "Mongoliya s Tochki Zreniya Kominterna," List 11–12.

heart of Asia, a live advertisement and example of the results of our policy towards the peoples of the East."[34] Mongolia was important as a communication channel with China and Tibet, an instrument for breaking a possible blockade from the East, and a serious raw materials and foodstuffs base.

Such ideas were widespread among Buryat members of the Comintern and their Russian sympathizers.[35] The Far Eastern secretariat of the Comintern saw Mongolia as a laboratory of social experiments and a showcase of Soviet-style social transformations for East and Central Asia. That is why the Soviets were so wary of any foreign competition there.

Archival documents from the formerly secret *opis* 55 of the People's Commissariat for Health of the RSFSR prove that the decision to render regular assistance to Mongolia in medicine and healthcare had geopolitical reasons. In autumn and winter of 1925/26, the People's Commissariat for Health, People's Commissariat for Foreign Affairs and the Council of the People's Commissars of the USSR exchanged lively letters in which they discussed the urgent sending of a Soviet medical and sanitary expedition to Mongolia. On 4 October 1925, Lev Mikhailovich Karakhan, head of the Eastern department of the People's Commissariat for Foreign Affairs, wrote to Nikolay Aleksandrovich Semashko, People's Commissar for Health of the RSFSR that "...if due to absence of medical assistance from the USSR, Mongolia is forced to agree to the arrival of a German medical expedition to organize healthcare, the USSR will receive an unquestionable political and moral blow."[36] He referred to Petr Mikhailovich Nikiforov, Soviet Plenipotentiary in Ulan-Bator, as being knowledgeable about the mood in the Mongolian government. In this context, the People's Commissariat for Foreign Affairs urged the People's Commissariat for Health to petition the Soviet government to allocate funds for a medical expedition to Mongolia.[37]

On 18 December 1925, Nikolai Semashko sent the request to the Council of People's Commissars of the USSR. He asked for 175,000 rubles to finance the expedition and repeated Karakhan's concern that if Germany attempted the construction of modern healthcare in Mongolia, the USSR would receive a political

34 E.-D. Rinchino, "Mongoliya s Tochki Zreniya Kominterna," List 13.

35 Rinchino was a Buryat. Buryats are closely related to Mongols. They are basically the same Mongolian people, but are politically divided. Rinchino was a Pan-Mongolist and a Comintern agent.

36 L.M. Karakhan to N.A. Semashko, 4 October 1925, List 15, Delo 22, Opis 55, Fond A-482. Ministry of Health of the RSFSR, State Archive of the Russian Federation, Moscow.

37 Karakhan to Semashko.

and moral blow.[38] On 19 January 1926, Georgi Vassilejevich Chicherin, People's Commissar of Foreign Affairs of the USSR, declared his full support for the expedition. He wrote:

> [t]he interests of strengthening friendly relations with Mongolia and expanding possibilities of economic cooperation require the immediate launch of an undertaking, pioneering for Mongolia – the organization of healthcare, which must ensure its cultural and economic development and prevent the possibility, to the detriment of the policy and influence of the USSR in Mongolia, of Germany organizing healthcare here.[39]

Soviet concerns were justified. At that moment, nationalistic "right-biased" politicians wary of Russian cultural domination were entrenched in the Mongolian government. Ardent proponents of political integration of all Mongolian peoples (pan-Mongolism) and the development path that would combine indigenous Mongolian culture with European progress kept looking for other cultural envoys or *Kulturträger* to balance the Soviet influence or at least bargain a better deal with the USSR. Hence, from time to time they reminded the Soviets that Mongolia could indeed request German assistance in building healthcare.[40]

The first medical and sanitary expedition of the People's Commissariat for Health of the RSFSR arrived in Ulan-Bator in September 1926. The swiftness with which the Soviets found qualified physicians and nurses, equipped them, and dispatched them to Mongolia proves that they took the German competition seriously. Although the USSR and the Weimar Republic cooperated fruitfully in many fields during the 1920s, including medicine, the Soviet government vehemently opposed any German involvement in Mongolia, a region they already viewed as an exclusive zone of geopolitical influence.

The first expedition opened an important channel of the Soviet-Mongolian medical cooperation. Four more followed from 1926 to 1938. Until 1930, Soviet expeditionary doctors allegedly reported that German and other foreign drugs were openly circulating in the country. Moscow undercut the competitor's prices but did so at a loss because the Germans offered their medicines and vaccines

38 N.A. Semashko to the Council of the People's Commissars of the RSFSR, 18 December 1925, List. 12, Delo 22, Opis 55, Fond A-482. Ministry of Health of the RSFSR, State Archive of the Russian Federation, Moscow.

39 G.V. Chicherin to the Council of the People's Commissars of the RSFSR, 19 January 1926, L. 21, Delo 22, Opis 55, Fond A-482. Ministry of Health of the RSFSR, State Archive of the Russian Federation, Moscow.

40 G.V. Ivitsky to the People's Commissariat of Health of the RSFSR, 1927, List 17, Delo 245, Opis 35, Fond A-482. Ministry of Health of the RSFSR, State Archive of the Russian Federation, Moscow.

very cheaply.[41] However, economic losses were considered a necessary evil as the USSR was making a long-term investment into the key sphere of Mongolia's cultural life. Efficient healthcare guaranteed positive demographic changes and a rise in labor productivity and was therefore seen as inseparable from the social and cultural development of Mongolia. Thus, medicine and healthcare formed a complex sphere in which geopolitical concerns became entangled with developmental goals to form one of the cornerstones of Soviet political and cultural influence in the Mongolian People's Republic.

Medicine as a transmission channel of Soviet ideology

By autumn 1926, a small community of Soviet doctors had already formed in Mongolia. Its unquestioned leader was Pavel Nikolaevich Shastin from Irkutsk, a mature and highly qualified surgeon professionally trained in imperial Russia and decorated for medical merit with the orders of St. Stanislav and St. Anna.[42] In 1923, Shastin arrived in Urga on the invitation of the Mongolian government to assist with organizing a military hospital. In 1925, he reorganized it into a civilian hospital with 35 beds. As the leading expert in health management and a person who had treated the Mongolian revolutionary leader, Sukhe-Bator, back in 1921, Shastin was well received in the political establishment of Mongolia. The Mongols worshipped him for his top-class medical skills. For years they referred to all Russian physicians as "Shastin-doctor."

Six other doctors, Nekipelov, Gremyanitsky, Kats, Burmakina, Ermilov, and Onishchik, worked alongside Shastin. This handful of medics was unable to provide help to all residents of the huge Mongolian countryside. Therefore, the nascent European healthcare was concentrated in the capital while distant regions mostly remained under the control of the healing lamas.

The new Soviet expeditions, well-equipped and mobile, offered a new format of spreading healthcare across Mongolia. They surveyed the remote areas, pinpointed problematic zones, and delivered medical assistance directly where it was most needed. While the 1926 expedition mainly reconnoitered the health sit-

41 *Mongolia v dokumentakh Kominterna*, 438.

42 Yu.V. Kuzmin and A.P. Sukhodolov, *Istoriya Mongolii i ee Mezhdunarodnykh Otnoshenii v XX Veke v Rabotakh Mongol'skikh i Rossiiskikh Issledovatelei [History of Mongolia and its International Relations in the Twentieth Century in the Works of Mongolian and Russian Researchers]* (Irkutsk: Izd-vo BGU, 2018), 268.

uation in the country, it also opened an outpatient clinic in Tsetserleg, the administrative center of Zain-Shabi in western Mongolia. The second expedition (1927–1928) launched a large outpatient clinic in Ulan-Bator (to be merged with the civil hospital later), a venereological clinic in the eastern region of San-Beise (Choibalsan), and a maternity care facility in Underkhan (East Mongolia). The third expedition (1929–1931) was split into three autonomous units. The first unit went to Uliastai (West Mongolia) where its members founded another outpatient clinic, the second one to Tsetserleg where they opened a six-bed hospital in addition to the outpatient clinic, and the third unit traveled south to the Gobi areas stricken by famine.

The fourth (1933–1936) and fifth expeditions (1936–1938) consisted of research teams engaged in medical examinations of the population and the study of Mongolia's mineral springs. All five Soviet expeditions were a source of replenishing the medical staff of the Mongolian health authority. Upon completion of each expedition's tasks, several of its doctors and nurses switched to the Mongolian service. That way, the Mongolian healthcare received experienced and knowledgeable cadres preferable to fresh employees arriving from the USSR.[43]

The expeditionary format made it more convenient for the Soviet government to slip political goals into medical activity. If the first expedition was headed by non-party physician, Anisim Abramovich Frantsuzov, the head of the second expedition (1927–1928), Georgy Vasil'evich Ivitsky, was a devoted Bolshevik who directed his subordinates ideologically and resorted to political maneuvering in relations with the Mongolian government. It was Ivitsky who constantly complained to Moscow of the "Russophobic" mood among the Mongolian officials and the "biased" attitude of Shastin and his colleagues to his expedition.[44]

The People's Commissariat for Health of the RSFSR developed specific statutes for the second expedition. While the instructions specified mandatory aspects of medical services, such as the continuous survey of the health condition of the population, educational activities, and the collection of data on Tibetan and folk medicine, the main principle carried the key ideological purport. The statute read:

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43 Vsevolod Bashkuev, *Evropeiskaya meditsina i traditsionnoe obshchestvo v mongol'skom mire (poseldnyaya tret' XIX – pervaya polovina XX v.) [European Medicine and Traditional Society in the Mongolian World (Last Third of the Nineteenth – First Half of the Twentieth Century]* (Irkutsk: Ottisk, 2021), 223, 229–234.

44 Bashkuev, *Evropeiskaya Meditsina*, 273–275. Also see: Bashkuev, *Rossiiskaya meditsina*, 269–272.

> The expedition's activities and each member are guided by the basic principle of building the confidence of the Mongolian people in the cultural institutions and in all their work in providing healthcare for the Mongolian population. The Mongolian people's trust in cultural institutions is the guiding principle. Every step and undertaking of the expedition and its workers is primarily checked from this viewpoint.[45]

The expedition's statutes strictly forbade any private medical practice. All medical help to the Mongols had to be completely free of charge.[46] Ivitsky himself construed this general principle in a more detailed way. He wrote:

> First of all, to strengthen the authority of scientific medicine by qualified treatment so that the question of the benefit of European medicine for the Mongolian population would be finally clarified... By developing the medical measures step by step, we can achieve the strong and deserved consolidation of the authority of the Russian outpatient clinic – and this is the main and basic task of the expedition, which the members of the expedition are called upon to consider with the utmost seriousness and to treat with the utmost conscientiousness and energy.[47]

Both Semashko and Ivitsky required the expeditionary physicians to interact with the Mongols in such a form that would immediately produce trust and confidence through a psychological effect of European treatment. As Georgy Ivitsky put it, "[t]his is possible to attain specifically by developing surgery when the Mongols could see for themselves how strong the European medical science is. Rationally organized maternity care will also help a lot."[48] In addition, the Soviet expedition had *Neosalvarsan*, an efficient anti-syphilitic drug of the pre-antibiotics era and the most powerful means of impressing the Mongols. As Ivitsky noted, "We should sincerely state that the expedition's success rested, for the most part, if not exclusively, on the treatment of venereal patients. Here, there was such a positive, brilliant effect against which all the warnings of the lama healers were powerless..."[49]

Salvarsan, the "magic bullet" invented by Paul Ehrlich in 1907, produced a powerful effect. As a rule, in Mongolia syphilitic patients arrived at Soviet clinics

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45 Statute of the Second Medical and Sanitary Expedition of the People's Commissariat of Health of the RSFSR, 6 September 1927, List 164, Delo 239, Opis 35, Fond A-482 Ministry of Health of the RSFSR, State Archive of the Russian Federation, Moscow.

46 Statute of the Second Medical and Sanitary Expedition, List 165.

47 G.V. Ivitsky. Outcomes of the First Medical and Sanitary Expedition, 19 December 1927, List 109–110, Delo 239, Opis 35, Fond A-482. Ministry of Health of the RSFSR, State Archive of the Russian Federation, Moscow.

48 Ivitsky. Outcomes, List 110.

49 Ivitsky. Outcomes, List 108.

with advanced symptoms following inefficient Tibetan treatment. Administered by the Soviet doctors, *Neosalvarsan* usually produced a quick positive effect in half-incapacitated, desperate patients. "Miraculously" recovered Mongols were sincerely grateful to Soviet physicians. Many became their devoted admirers. As Georgy Ivitsky described the departure of the first Soviet expedition from Tsetserleg: "Many Mongols gathered, crying, grabbing the doctors' hands, asking them to stay ... especially the sick (some were positively rotting alive, and after the 'infusions' they were among those who saw us off – they were crying their eyes out...)."[50]

The Bolsheviks, who had launched development programs for Soviet national minorities before, had a term for peoples like Mongols. Calling them "culturally backward" or "oppressed peoples of the Orient" had a special connotation in the Bolshevik lexicon far from the modern interpretations of colonialism. The Soviets viewed their roles in the social transformation of the Mongols as those of decolonization and modernization. To them, the feudal order they encountered in Mongolia was the direct result of Qing colonialism. Its essence was in keeping the Mongols backward and diseased to prevent their political revival and possible secession. So, for the Bolshevik doctors, venereal diseases afflicting the Mongols were the means of colonial oppression. One of the founders of Soviet venereology, Volf Moiseevich Bronner, metaphorically called venereal diseases "the scourge of humanity" and argued that this "scourge" itself was powerless without capitalism, the fist that gripped it. He wrote that Soviet Russia had chopped off this fist, but the people's bodies still carried deep and sordid wounds inflicted by the "scourge."[51] These words applied to the Mongols as much as to the other formerly oppressed Asiatic minorities of the USSR.

It was politically advantageous for the Bolsheviks to present disease as a means of oppressing the masses. If there was a means, then there had to be someone who employed it or benefited from it. In Mongolia, the Bolsheviks quickly identified them in the form of the lamas. If the Chinese had been considered the main spreaders of venereal diseases earlier on, with the advent of socialist medicine it was the lamas whom the pro-Soviet Mongolian government viewed as the "walking epidemics." As Ines Stolpe argues,

> ...syphilis was considered a perfect way to represent the shortcomings of the old social order, along with depicting its representatives as morally impure. Syphilis could be used

50 Ivitsky. Outcomes.

51 V.M. Bronner, *Vliyanie sotsial'nykh faktorov na rost venericheskikh boleznei i rol' gosudarstva v bor'be s etimi boleznyami [Influence of Social Factors on the Growth of Venereal Diseases and the Role of State in the Struggle against These Diseases]* (Moscow: State Publishing House, 1921), 26.

> to present the idea of an urgent need to rescue the Mongolian people. The free vaccination appeared to be very effective and could therefore be promoted as evidence that modern medicine was superior to traditional healing.[52]

Depicting the lamas as morally corrupt, promiscuous, and greedy syphilitics was both a shocked response by a European observer and a method of defaming his opponents. As newcomers in the Mongolian world, the Soviet doctors knew little about the doctrinal side of Lamaism and the intra-social characteristics of the Mongolian clergy. The fact that in Lamaism, sex has a completely different meaning than in Christianity escaped them. Meanwhile, among the Mongolian lamas, sex was seen as an obstacle to reaching nirvana only at the low or mundane level. The more a lama grew in religious enlightenment and status, the more habitual were the so-called "sex conquering" Tantric practices, which often involved women. Sex practices of the highest lamas took the form of "secretive meditation" where, instead of simple reproduction, intercourse presupposed directing sexual energy toward complete spiritual emancipation. As B. Terbish argues, this was one of the reasons why sexual debauchery of the high lamas did not create condemnation by either their peers or society in general.[53]

Another reason why the Mongols tolerated sexual indulgence of the lamas was the proximity of the lamas to the laity. Many lamas lived among the nomads and participated in all aspects of their life, including bodily and sexual matters such as helping during childbirth or praying for fertility. They also had sexual intercourse with Mongol women.[54] American anthropologist Roy Chapman Andrews was wrong when he wrote that the celibate lamas contributed to the low birth rate of the Mongols, but he was right when he accused them of spreading sexually transmitted diseases.[55] The lamas, especially their "roaming" faction (*badarchin*), did spread venereal diseases. As Ivan Okhotnikov, a Soviet district physician in the Khentei region in the mid-1930s put it,

> ... the percentage of social diseases prevails among the lama population, who willingly visit the outpatient clinic to receive specific treatment... The high incidence of venereal diseases

52 Ines Stolpe, "From Purity to Cleanliness. Changing Concepts in Mongolia," in *How Purity is Made*, ed. P. Rösch and U. Simon (Wiesbaden: Harrassowitz Verlag, 2012), 371.

53 Baasanjav Terbish, "Mongolian Sexuality: A Short History of the Flirtation of Power with Sex," *Inner Asia* 15 (2013): 246–247.

54 Terbish, "Mongolian Sexuality," 248.

55 Roy Chapman Andrews, *Across Mongolian Plains. A Naturalist's Account of China's "Great Northwest"* (New York: D. Appleton and Company, 1921), 71–72, 78.

> in the lama population testifies to illicit liaisons since marriage is forbidden in the lamaseries.[56]

Generally, the Soviets depicted even the highest-ranking lamas in this manner:

> Usually a lama is a man who is no stranger to anything human: neither wine, nor women, nor peddling tricks, nor deceit. And such is not only ordinary monks but even the great saints of the church. Of the eight Bogdo-gegens who sat in Urga since the Mongols adopted Buddhism, three (the fifth, seventh and eighth) were noted for their extremely dissolute lifestyle. The fifth even died of syphilis...[57]

The medically biased defamation of Buddhist hierarchs had two goals: to strip them of their sanctity in the eyes of lay Mongols and present the society with a culprit who, in this case, was also the bitterest ideological enemy of socialism.

In contrast to the moral corruption and promiscuity of the lamas, cleanliness was one of the most important concepts of Soviet medical work in Mongolia. Soviet expeditionary medics received clear instructions to avoid any material compensation for their services to produce an image of selflessness and high moral intentions. All of their medical activities were centered on physical cleanliness: obstetricians demanded that Mongolian women bring bathed and washed infants to the observation yurts; venereologists gave their Mongolian patients soap and asked them to wash before a visit.[58] Without any doubt, such a fixation on cleanliness found its reflection in the Mongolian language, where the concept of hygiene (*ariun tsever*) was expressed by an emphatic construction combining two semantically different lexemes. As Stolpe argues, taken separately, both words denote cleanliness but carry different connotations. The word *ariun* denotes spiritual cleanliness, like "clean soul" or "honesty," while *tsever* presupposes a purely lay context meaning "free from dirt," like in "clean air" or "pure gold."[59] Together, these elements formed a concept that was very appealing to the "new" Mongols, people of the epoch of hygiene as opposed to the "cul-

56 I.A. Okhotnikov, "Sanitary Essay on the Study of Medical and Sanitary Activity in Khentei Aimak of the Mongolian People's Republic," 1938, List 6, Delo 77, Opis 10, Fond R-8009. Ministry of Health of the USSR, State Archive of the Russian Federation, Moscow.

57 Bulletin of the Plenipotentiary Office of the USSR in Mongolia, March 1924, List 181–182, Delo 29, Opis 152, Fond 495. The Executive Committee of the Comintern, Russian State Archive of Social and Political History, Moscow.

58 Dr. Makarenkov on the activity of the medical detachment in Underkhan, 24 August 1928, List 45, Delo 244, Opis 35, Fond A-482. Ministry of Health of the RSFSR, State Archive of the Russian Federation, Moscow.

59 Ines Stolpe, "Display and Performance in Mongolian Cultural Campaigns," in *Conflict and Social Order in Tibet and Inner Asia*, ed. Fernanda Pirie and Toni Huber (Brill, 2008), 66–67.

turally backward" and diseased Mongols of the past. Mongolian historian Tsendoo even characterized communism as the "regime of hygiene" (*ariun tseveriin deglem*).[60]

The above cases demonstrate that the political agenda that the Bolsheviks included in their medical assistance to Mongolia manifested itself at several interconnected levels. By imposing strict rules for the expeditionary medics, they intended to create a code of ethics of a Soviet internationalist physician free from greed, commercialism, racial or social prejudices, ideologically reliable and morally clean. The Narkomzdrav personnel managers were instructed to make an applicant firstly/primarily interested in the political prospects of the job, secondly in the professional and scientific opportunities, and to only then discuss wages and material support.[61] Expedition chiefs monitored the ideological reliability of their subordinates and compiled the political characteristics of each employee.[62] In doing so, the Soviet organizers of Mongolian healthcare were shaping an ideologically stable and predictable medical community that would produce equally controllable impressions in Mongolian society.

The ideological manipulation of the Mongolian masses was much more implicit. People's respect for the authority of the Soviet medical workers was built up slowly. First, Soviet doctors appeared to "work wonders" by curing seemingly incurable patients, instilling awe in the Mongolian herders around. Then they deepened the effect by handing out expensive medicines and exotic hygienic items. The conversion was further secured by sanitary propaganda in various, mostly visual, forms, such as theatrical performances, booklets, and lectures accompanied by displays of pictures and placards via magic lanterns and, later, portable film projectors. Finally, under Soviet supervision, the Mongols developed concepts that conveniently expressed the meaning of personal and social hygiene, health, disease, and treatment in the Mongolian language. It was a long and complex but ultimately successful process.

At the same time, medicine was suited for rendering hostility to "exploiters" such as clergymen, whom the Soviets depicted as immoral, greedy, and diseased. The diseases were metaphorically interpreted as means of colonial and capitalist oppression. The Bolsheviks were consistent in employing both the mobilizing and restricting potential of European medicine. By using militaristic rhetoric in social campaigns against venereal and infectious diseases, dirt, Tibet, and

60 Ines Stolpe, "Display and Performance," 68.

61 P.Y. Berlin on recruitment of medics for Mongolia, 1939, List 99, Delo 78, Opis 10, Fond R-8009. Ministry of Health of the USSR, State Archive of the Russian Federation, Moscow.

62 G.V. Ivitsky to the People's Commissariat of Health of the RSFSR, List 23, Delo 245, Opis 35, Fond A-482. Ministry of Health of the RSFSR, State Archive of the Russian Federation, Moscow.

folk medicine they mobilized the masses and directed them against the "class enemies." However, before Tibetan medicine was officially deprived of state funding in 1930, Soviet doctors were careful in their critiques[63] and preferred practical demonstrations of their superior healing skills instead.

Soviet medicine and transformations of the traditional nomadic society

Reading medical representations of the traditional nomadic lifestyle, one cannot escape the idea that this is where the Russian doctors saw the main source of health problems. Almost every aspect of it, from sexual habits to baby care and from nomadic diet to personal hygiene, was under severe criticism and, in the Soviet medical view, required urgent transformation. This was not only limited to Mongolia, but wherever the Soviets happened to encounter nomadic societies, including Buryatia, Kalmykia, Altai, Tuva, Xinjiang, and Afghanistan. In those encounters, deep cultural shock was the initial reaction, followed by the medical assessment of the situation and prescriptions for how to change it. The two interconnected spheres – sexual activity and childcare – required the most urgent interventions, followed by basic personal hygiene and diet, traditional clothing, and dwelling habits. The cultural changes that the Soviets brought in the traditional lifestyle were broadened and deepened in the course of Mongolian cultural campaigns from 1931 to the late 1980s.[64]

Sergei Tikhonovich Ilyin, an experienced Soviet venereologist who had worked in Buryat-Mongolia before working in the Mongolian People's Republic, left vivid critical descriptions of the traditional nomadic life. In his view, it was the main source of unsanitary conditions and, as a result, chronic or infectious diseases. He wrote,

> The Mongols are not squeamish; they share a common pipe, a common cup, and the cup is never washed. The hostess just wipes it with the flap of her robe after use, and the cup is considered clean. With the same flap she wipes her hands and nose, and it generally serves her as a towel. The absence of squeamishness and simplicity of manners can explain the habit of Mongols to answer the call of nature regardless of the place and presence of strang-

63 G.V. Ivitsky to the Head of the Far Eastern Department of the People's Commissariat of Foreign Affairs of the USSR Kozlovsky, 23 October 1928, List 4, Delo 28, Opis 55, Fond A-482. Ministry of Health of the RSFSR, State Archive of the Russian Federation, Moscow.

64 Stolpe, "Display and Performance," 60–65.

> ers. On the contrary, they often sit down in groups in the middle of the street and, not to lose time, continue the conversations they have begun.[65]

Soviet doctors considered the early beginning of sexual activity (typically starting at 13–14 years of age) as well as early marriage (16–17 years) as being conducive to both venereal diseases and infertility. Ilyin noted that Mongolian girls started to become sexually active long before their first menses. He wrote, "It is not uncommon for a bride to have children when she marries. Children born out of wedlock are not a disgrace to a woman in a Mongolian family. There are times when parents and daughters argue about who will keep the child in custody."[66] Doctor Ilyin highlighted the fact that an unmarried woman with children was preferred to other brides because she had already proved her fertility.

Another source of trouble was dirt. Soviet doctors were in shock when they saw the interior of a yurt, which the Mongols shared with lambs, calves, horse and camel colts. Ilyin described the inside of the yurt as dirty, smoked, and soiled. He referred to Buddhist "religious prejudices" according to which "dirt is the symbol of happiness." That is why, he explained, the Mongols never bathed nor washed their clothes. Dirt and sweat produced favorable conditions for myriads of parasites. The Mongols skillfully caught them and threw them on the floor alive because according to Lamaism killing lice was a sin.[67]

The Soviets adeptly used typical everyday life situations for sanitary propaganda. For instance, referring to the tradition of sharing smoking pipes, they created a comic book story about Lupsan-Dordzhi, a wealthy and happy owner of a nice yurt and a healthy family, who got infected with syphilis by his guest, Cholchak. Three weeks after sharing a smoking pipe with him, Lupsan-Dordzhi, his wife, and children fell ill. They had sore throats and rashes on their bodies. The family went to the *emchi-lama*, but the disease would not stop. Lupsan-Dordzhi's younger son died of this disease, his daughter began losing sight, his wife developed a painful open sore on her hand, and he lost his nose. The only salvation was the Soviet expedition. Russian doctor Orlov gave him infusions and ordered him to bring his whole family to the medical examination. The family began proper treatment and followed all medical prescriptions. As a result, they finally recovered. The comic showed the spirochete as it could

65 S.T. Ilyin on the activity of the venereological detachment in Baintumenkhanula, 24 August 1928, List 6, Delo 244, Opis 35, Fond A-482. Ministry of Health of the RSFSR, State Archive of the Russian Federation, Moscow.

66 S.T. Ilyin on the activity.

67 S.T. Ilyin on the activity, List 5.

be seen in a microscope and informed the Mongols that it spread by sleeping together, via breastfeeding, or by sharing smoking pipes or cups.[68]

Untreated venereal diseases led to infertility. Out of 484 women examined by the Soviet maternal care detachment in Underkhan in 1928, 166 (36 percent) had syphilis or gonorrhea and 67 (13 percent) suffered from other gynecological diseases. As a result, 153 out of 484 (31 percent) women were infertile. Obstetrician Anna Gurina described childbirth in a yurt as an extremely cruel and unsanitary process. She wrote that once they saw a lama accelerate the process by tying one wooden plank to the woman's waist and another to her feet. By strongly beating on the lower plank, the lama caused her entire body to convulse, which was believed to accelerate delivery. After this procedure, the woman continued to sit on her haunches for three days. Of course, from the obstetrical viewpoint, such "manipulations" were unacceptable and led to infertility.[69]

Soviet doctors organized a small examination camp in several yurts that quickly turned into a makeshift maternal care center. First, the obstetrician and nurses examined and consulted the Mongolian women, then offered assistance to the pregnant women. The only condition was that a woman should give birth the European way, while lying on a bed and under medical supervision. Many agreed and gave birth to relatively healthy babies. It was then that the tradition of naming children after the nurse or obstetrician who delivered the baby emerged. Nowadays, thousands of Mongols have first names that sound Russian. These names are the intangible legacy of Soviet medical assistance.[70]

According to Soviet doctors, traditional baby care methods were the second reason for high infant mortality. They pointed to the absence of baby linen, diapers, and supplemental feeding. Gurina complained that makeshift soothers, such as chewed-up raisins in a dirty pouch or a piece of the raw fatty tail of a sheep that infants received from the first days of life led to infectious diseases and indigestion, claiming many infant lives.[71]

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68 Text of a Soviet sanitary comic book, 1927, List 117, Delo 239, Opis 35, Fond A-482. Ministry of Health of the RSFSR, State Archive of the Russian Federation, Moscow.

69 A.I. Gurina on the activity of a maternity care detachment in Underkhan, 24 August 1928, List 97, Delo 239, Opis 35, Fond A-482. Ministry of Health of the RSFSR, State Archive of the Russian Federation, Moscow.

70 A.I. Gurina on the activity, List. 53.

71 A.I. Gurina, "On the Issue of Maternity and Child Care in Mongolia," December 1927, List 101, Delo 239, Opis 35, Fond A-482. Ministry of Health of the RSFSR, State Archive of the Russian Federation, Moscow.

The best way to introduce the European baby care methods in Mongolia was through practical demonstration. Soviet obstetricians taught Mongolian women to cook porridge and starch drinks, to sew and wash children's diapers and linen, bathe infants, and apply baby oil to their bodies. Another vehicle of promoting healthcare and pro-natalist policies was the printed press. A 1926 cover picture of the first Mongolian women's journal depicted the idealistic version of a new generation of Mongolian housewives: a young woman with a fashionable short haircut and a toddler at her feet sitting in front of the yurt reading a book. Around her, the artist (most likely Russian) depicted attributes of modernity: a milk skimming centrifuge and a sewing machine. Clean washing hangs above the woman on a clothesline like a banner, bearing an inscription in Mongolian that reads "Workers of the world, unite!" The healthy-looking toddler wearing European-style clothes symbolizes a new happy generation of Mongols.[72]

The traditional Mongolian diet was another serious medical concern. Everything from baby food to habitual nomadic meals shocked the Soviet doctors who thought that the Mongols lacked many vitamins and microelements because they never ate vegetables, fruit, or fish. Ivan Okhotnikov described the Mongolian diet as exceedingly monotonous, "They eat mostly meat and huge quantities of curdled dairy products. In summer, especially in the south, they drink koumiss. Sugar and sweets can be encountered in more cultured families. ... The Mongols do not eat any vegetables, though in the south of the Khentei aimak I saw them put Manchurian garlic in noodles as seasoning."[73]

Okhotnikov believed that the nomadic diet was bad for people's health. He wrote that Mongols desperately needed vegetables and fruit. Hospital practice proved his thesis correct. Okhotnikov talked about cases when patients got scurvy ten days after they had recovered from the flu. As a true Soviet physician, he explained the absence of vegetables, fruit, and berries to be due to numerous Buddhist taboos on agricultural labor because digging soil meant disturbing or killing the small creatures (insects, worms, and rodents) inhabiting it. Contrastingly, he believed that cultivating the land was the main human labor skill, and he referred to the ideas of the nineteenth-century English writer and moralist Samuel Smiles. Therefore, he advised to "introduce labor processes at least into gardening, especially through schoolchildren's groups because it

72 Stolpe, "From Purity to Cleanliness," 382–383.

73 Okhotnikov, "Sanitary Essay," List 16.

could play an important role in the improvement of health and prolongation of life of the Mongols."[74]

Okhotnikov insisted that the nomadic diet directly affected the physical and mental development of Mongolian youth. As a district physician, he often examined Mongolian pre-conscription military trainees and noted that there were sufficient differences between Mongols and Buryats, their northern kin. He wrote that "Young Buryats look lively, quick-witted, and are physically well-developed. Conversely, it takes longer for the Mongols to answer questions, their movements are sluggish and they quickly become tired. Generally, the physical development of the people from the southern counties is far more retarded. There are fewer persons higher than the average height among the Mongols than the Buryats."[75] He explained the differences by the diet. The Buryats ate more vegetables, berries, mushrooms, and other plant products than the Mongols. Since the Buryats in Mongolia were recent refugees from Russia's Transbaikalia, the reason why they ate better food is clear. They had learned some agricultural skills from Russians and borrowed some of their culinary traditions.

The above cases demonstrate that the Soviet physicians approached the traditional nomadic lifestyle from a thoroughly Eurocentric viewpoint. Though officially the Soviets were atheists, Christian morality shaped their perception of sex, marriage, and procreation. This made laxer Mongolian sexual practices unacceptable. In addition, physicians had their own sanitary standards of sex, childbirth, communal life in general, and diet. They had acquired this conceptual framework at Russian universities and took it wherever they went with their medical mission. In the context of Sovietization, this rigid framework resonated well with the Bolshevik developmental goals that strove to replace the traditional lifestyle with a more controllable and predictable hybrid of socialist industrial and cultural development; mass production and consumption; European hygiene; and socialist healthcare. The result would be a new generation of Mongols: stronger, cleverer, more creative, and generally capable of building socialism.

Conclusions

Soviet medical assistance to the Mongolian People's Republic is a multi-faceted research problem that combines various perspectives, from geopolitics to ideo-

74 Okhotnikov, "Sanitary Essay," List 19.

75 Okhotnikov, "Sanitary Essay."

logical indoctrination and cultural revolution. Like a prism, it allows tracing and explaining connections between health issues, politics, ideology, and societal transformations in the specific cultural environment of pastoralist Mongolia. The Soviet medical involvement in Mongolia forms a benchmark in the history of the Soviet assistance to its neighboring Asian countries and regions, and a reference point for understanding the entire Soviet experience of exporting its medical technologies and healthcare organization models to the "Third World" later on.

In Mongolia, the USSR successfully carried out the complete application of its healthcare system to a pre-industrial, traditional nomadic society. The only other such case during the interwar period was the Tuvinian People's Republic. In all other places along its Asian geopolitical "underbelly," the USSR cautiously pursued the policy of humanitarian assistance, intentionally abstaining from propaganda or Soviet-style ideologized cultural campaigns. Mongolia was the pivot of Soviet geopolitical strategy toward China and therefore had to be firmly tied to the "elder Russian brother." The wholesale export of socialist healthcare to Mongolia provided one of the braces with which the USSR kept Mongolia in its geopolitical and ideological orbit.

As a valued ideological ally, Mongolia had to be protected from any possible foreign influence. The strong concerns about prospective German help vividly demonstrated how geopolitical concerns shaped the form and, especially, the timing of Soviet medical assistance in 1925–1926. Another geopolitical factor underlying the Soviet interest in developing European medicine in Mongolia was the plague. For decades, Russian bacteriologists hunted the *yersinia pestis* in Mongolia, trying to secure the borders against a possible entry of plague. During the socialist period, plague research was one of the cornerstones of Soviet medical assistance to Mongolia. There were critical moments when the USSR was ready to temporarily freeze all Soviet-Mongolian relations in the face of the epidemic threat for the sake of keeping valuable trade connections to the West. This once again testifies that plague prevention was an important geopolitical issue and that Mongolia played a crucial role in it as a possible pest spot and a research laboratory.

For decades, the USSR painstakingly created a living space for socialist medicine in Mongolia. In this process, medicine served political as well as ideological purposes. Its standoff with Tibetan medicine demonstrated that it could be equally used as a soft power instrument for winning over the hearts and minds of the Mongols and as a pretext for the obliteration of the competing medical system. Soviet medicine was both the channel through which the Mongols received European concepts of personal and communal hygiene and a vehicle for the delivery of class struggle principles. As an inherently humanitarian enter-

prise, the transfer of Soviet medicine to Mongolia was a constructive force, but it also served as the means of class struggle. The fate of Tibetan medicine and its carriers, the healing lamas, was a vivid example of this dichotomy.

The export of Soviet medicine played its intended role in the cultural transformation of the traditional nomadic society and lifestyle. It did not only disseminate the new hygienic practices in the countryside. To a greater extent, it also provided the Mongols with the benchmarks of cultural and social development and stimulated them to organize mass cultural campaigns, using the Soviet experience and expertise as the main frame of reference. Slowly but surely, the Soviet model of healthcare changed the traditional Mongolian lifestyle, approximating it to European modes of living. As the Soviet order of importance ordained, the first things to discard were the "outdated" sex habits, childcare practices, and diet. Next came the traditional clothes and dwelling. Luckily, however, in Mongolia, the Soviets never achieved the complete extrusion of the traditional nomadic lifestyle as they did in Buryat-Mongolia. Despite such heavy Soviet influence, the Mongols remained true to their nomadic culture.

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Sabine Schleiermacher

Gatekeepers for the Third Reich: public health officers, forced labor and the control of epidemics

Introduction

The construct of the state as a homogeneous German "racial corpus" ("Volkskörper") represented an essential characteristic of National Socialist ideology. This perceived homogeneous entity was based on social, cultural, and biologistic concepts and was proclaimed in the form of laws and ordinances. The concept was implemented situationally and brought the question of belonging to the forefront. National Socialist health policy was therefore defined primarily as a population and race policy intended to establish a healthy "racial corpus."[1] Thus, it was not the assurance of individual health, but, rather, the healthy German "racial corpus" that represented the point of reference for health policy intervention. The public health services shifted from a socially oriented perspective to a biologistic one. Implementing this reorientation required restructuring the state-financed public health service. As a result, the focus on the "racial corpus" became one of the most important aspects of the National Socialist health policy. The responsibilities of the public health service that initially aimed to promote preventive health and hygiene education were increasingly expanded to include preferably comprehensive monitoring of population groups that were considered carriers of particularly threatening diseases or of undesirable social characteristics and, therefore, a threat to "public health" ("Volksgesundheit"). Thus, health policies were established that no longer provided elements for integration but, rather, became a program consisting of biologistic criteria of selection ("Auslese"), eradication ("Ausmerze"), exclusion, and social segregation. Such policies had already been discussed during the Weimar Republic but were radically implemented under National Socialism when health policy was converted into racial policy and social hygiene into racial hygiene with the goal of a racial improvement ("Aufartung") of the German people. The expectation was that such "biologistic improvement" would result in increased overall performance of the nation. The mechanisms of inclusion and exclusion served as an instrument

1 Arthur Gütt, "Der öffentliche Gesundheitsdienst im Dritten Reich," *Der öffentliche Gesundheitsdienst* 1 (1935/36, A): 84–94.

https://doi.org/10.1515/9783111015583-006

of domination: those who were considered part of the German "racial corpus" received support while those who were not had to expect persecution and even death.[2] This racist principle formed the basis not only of domestic policy but also of a far-reaching transformation—particularly of Eastern Europe—along racial lines that culminated in the radical "General Plan East" ("Generalplan Ost") that affected many areas of life.[3] This plan combined political, social, racial, demographic, and medical components. From the perspective of National Socialism, it was a large-scale development program to shape European societies based on racial terms and, thus, along meritocratic lines. The "healthy people of the future" were believed to be the "result of permanent selection," and of health-boosting behavior. This context formed the background for the view that the population had an obligation to safeguard health.[4]

A reform of the public health system that had been planned in principle since the Weimar Republic was now being carried out to serve the interests of the National Socialist state. The healthcare system was organized in a centralized manner, leaving previously existing areas of work largely untouched. All new fields of activity associated with the National Socialist racial policy were assigned to the Public Health Service ("Öffentlicher Gesundheitsdienst"), a cornerstone in the system of medical care in the German Reich. Its institutions were the health offices ("Gesundheitsämter") and its protagonists were the public health officers (PHO). Their activities were focused on specific population groups and they were supposed to counteract the development of diseases by using preventive measures. In the 1920s, medical officers took the social situation of individuals into account when determining the causes of any illnesses. However, during the deteriorating economic conditions caused by the Great Depression from 1929 onward, officers blended economic criteria with arguments of biological racism, effectively transforming concepts of "heredity and racial hygiene" into the basis for a mainstream understanding of health. Increasingly, this view became the accepted framework for medical decisions.

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2 Alfons Labisch and Florian Tennstedt, *Der Weg zum "Gesetz über die Vereinheitlichung des Gesundheitswesens" vom 3. Juli 1934. Entwicklungslinien und -momente des staatlichen und kommunalen Gesundheitswesens in Deutschland.* (Düsseldorf: Akademie für öffentliches Gesundheitswesen, 1985) Vol. 2, 366.

3 Mechthild Rössler and Sabine Schleiermacher, eds., *Der "Generalplan Ost". Hauptlinien der nationalsozialistischen Planungs- und Vernichtungspolitik* (Berlin: Akademie Verlag, 1993).

4 Christoph Sachße and Florian Tennstedt, *Der Wohlfahrtsstaat im Nationalsozialismus.* Vol 3 of the series *Geschichte der Armenfürsorge in Deutschland* (Stuttgart et al.: Verlag W. Kohlhammer, 1992.), 52.

The invasion of Poland by the German Wehrmacht that unleashed the Second World War in 1939 led to a shift in emphasis in the medical officers' activities. They were now deeply involved in the medical supervision of forced laborers and in the health administration in the occupied territories as well as in the concretization of the racial-hygienic and racial-biological settlement policy in Eastern Europe which was later developed into the "Generalplan Ost." The living conditions caused by war and by the German occupation were catastrophic. Different population groups were forced to live in crowded living conditions located throughout the German Reich and in the occupied territories.[5] These factors led to the emergence of epidemics that were then interpreted within the framework of racist stereotypes. Thus, with its elements of registration, exclusion, and persecution, disease control served as a component in the mechanism of inclusion and exclusion and as an instrument of National Socialist hegemonic interests. PHOs played a central role as gatekeepers in this process. They conducted medical examinations according to racial criteria and determined who belonged to the "racial corpus" according to Nazi legislation and who did not. They carried out the same role by participating in the physical examination accommodations and the removal of civilians in German-occupied territories who were forcibly transported to Germany to provide forced labor in the Reich. PHOs played a key role as enforcers of Nazi health, population, and labor policies since they were experts in the surveillance, categorization, and triage of bodies. By using assessments such as authorizing quarantine measures, PHOs participated in assigning individuals to population groups. As a result, they assumed the role of gatekeepers at the borders of the German Reich. As the state's representatives, they acted within an ideologically predetermined, predefined legal framework that they implemented without any hesitation. At the same time, they were able to follow their profession-specific routines and to determine their own priorities regarding the specific usage and implementation in the pro cess of categorization. However, in so doing they neither disregarded the health policy nor the general policy framework.

Starting with the labor market during National Socialism and the organizational framework of public health offices and PHOs, the following steps constituted the field of work and the options for handling epidemics: prevention, containment, treatment. This sequence is followed by a look at epidemics control, racial hygiene, and the responsibilities of public health officers in health surveillance regarding forced laborers from Eastern Europe and regarding segregation as a method of epidemic control. The health workers' actions when faced with

5 Ulrich Herbert, "Das Jahrhundert der Lager," in *Wer waren die Nationalsozialisten?*, ed. Ulrich Herbert (München: Beck Verlag, 2021), 82–104.

epidemics, their prevention strategies, containment, and counteractions illustrate the workers' roles in the context of inclusion and exclusion in the German Reich and in the occupied Eastern European countries.

The labor market during national socialism

The level of unemployment in the German Reich had surged due to the global economic crisis of 1929 and reached its peak in 1932. In the following years, the unemployment numbers began to drop just as quickly as they had risen, thanks to provisions made by the administration of the Weimar Republic. Several decisions of the Nazi administration amplified this process, for instance, the expansion of so-called voluntary service obligations, wage reduction, the expulsion of women from the job market, and especially a massive rearmaments program. These measures, particularly those connected to rearmament, resulted in a shortage of manpower as early as 1935/36. The problem increased dramatically with the outbreak of World War II and the wartime economy, when millions of workers became drafted and could no longer continue working in their civilian professions while war production continued to expand. This shortage of manpower was supposed to be offset by new groups of recruits. As a result, following Poland's defeat in September 1939, numerous prisoners of war (POWs) and civilian forced laborers were deported from German-occupied territories to the German Reich.[6] In the course of the Battle of France ("Westfeldzug") that began in spring 1940 as well as the invasion of the Soviet Union in 1942, many more people were displaced, including Northern and Western Europeans as well as Soviet citizens.[7] Approximately 13 million people were recruited for forced labor altogether, of whom approximately 2.5 million did not survive[8]: "At the end of World War II, approximately one out of four laborers in the German Reich was a POW or a 'foreign worker'." [9]

6 Ulrich Herbert, *Fremdarbeiter. Politik und Praxis des Ausländer-Einsatzes in der Kriegswirtschaft des Dritten Reiches* (Berlin, Bonn: Verlag J.H.W. Dietz Nachf., 1985), 43–44; Annette Schäfer, *Zwangsarbeiter und NS-Rassenpolitik. Russische und polnische Arbeitskräfte in Württemberg 1939–1945* (Stuttgart: Kohlhammer Verlag, 2000), 4.

7 Bundesarchiv, "Sowjetische Kriegsgefangene und ‚Ostarbeiter'", accessed 27 April 2021, http://www.bundesarchiv.de/zwangsarbeit/geschichte/auslaendisch/russlandfeldzug/.

8 Volkhard Knigge, Rikola-Gunnar Lüttgenau, and Jens-Christian Wagner, eds., *Zwangsarbeit. Die Deutschen, die Zwangsarbeiter und der Krieg. Begleitband zur Ausstellung im LWL-Industriemuseum Zeche Zollern* (Essen: Klartext Verlag, 2012), 92.

9 "In addition, several hundred thousand mostly foreign prisoners came from central- and subcamps of concentration camps as well as Jews from forced labor camps that mainly had to work

Employment offices managed the forced employment of the human beings as human capital.[10] Forced workers were being exploited for agriculture, industry (arms, mining, construction sites, machines), as well as in municipal administration, crafts and even in private households.[11] Working conditions, housing, and nutrition as well as medical care were organized by the respective employers. These included local authorities, businesses, and private employers who had requested workers.[12] The surveillance of the forced workers' physical condition rested on the public health officers, operating on behalf of the employment offices, the state insurance institutions, and public health service. All non-German persons who were supposed to be recruited or forced to work were first examined concerning their fitness for employment in internment camps that had been built outside the borders of the German Reich. The task was in the hands of the labor administration ("Arbeitsverwaltung") whose staff were able to pass the examination on to the health administration. Members of the health administration then assigned physicians from occupied territories to select who was and was not considered fit to work. Supervision was regulated by public health offices and thus by the operating PHOs who were authorized to issue instructions and were allowed to conduct medical assessments even in their secondary employment.[13] These medical assessments were intended to examine the physical condition of the inspected people—their health and, consequently, their ability to work—but they were also screened for any disease that could have crossed the German Reich's boarders, such as tuberculosis, typhus, dysentery, diphtheria, and many others. Those classified as "able to work" were moved from internment camps to transit camps and then to labor camps which were near their place of work.[14]

The overall goal was to completely separate these people from the "German National Comrades" even though they were already clearly visible everywhere

in the construction and arms industry." Jens-Christian Wagner, "Zwangsarbeit im Nationalsozialismus – ein Überblick," in *Zwangsarbeit*, ed. Volkhard Knigge et al., 182–195, 182.

10 Elizabeth Harvey, "Arbeitsverwaltung und Arbeitskräfterekrutierung im besetzten Europa. Belgien und das Generalgouvernement," in *Das Reichsarbeitsministerium im Nationalsozialismus. Verwaltung – Politik – Verbrechen*, ed. Alexander Nützenadel (Göttingen: Wallstein Verlag, 2017), 348–386.

11 Knigge et al., *Zwangsarbeit*, 2; Annette Schäfer, "Zwangsarbeit in den Kommunen. ‚Ausländereinsatz' in Württemberg 1939–1945," *Vierteljahrshefte für Zeitgeschichte* 49 (2001): 53–75.

12 Schäfer, *Zwangsarbeiter*, 5.

13 W. Giller, "Die Landarbeiterwerbung," in *Kampf den Seuchen! Deutscher Ärzte-Einsatz im Osten. Die Aufbauarbeit im Gesundheitswesen des Generalgouvernements*, ed. Jost Walbaum (Krakau: Buchverlag Deutscher Osten, 1941), 181–189.

14 H. Schulte, "Die seuchenhygienische Überwachung polnischer Landarbeiter durch das Gesundheitsamt," *Der öffentliche Gesundheitsdienst* 8 (1940/41 A): 640–645.

and their otherness was highlighted by compulsory markings on their clothing saying "EAST" or "P" for persons from the Soviet Union or Poland. In Berlin alone, half a million people were forced to work until the end of the war and were housed in approximately 1,000 camps across the city.[15]

The organizational framework: public health offices and PHOs

The German Empire was a federation of German *Länder*, and responsibility for medical administration traditionally lay with the *Länder*. Apart from Bismarck's social legislation and a few exceptions, such as an epidemic law, there were few standardized regulations in the field of public health and a corresponding ministry at the level of the Reich did not exist. Facilities for a municipal public health service started to emerge in the late nineteenth century and placed a special emphasis on sanitary police measures (epidemics and vaccination law), the sanitation of cities, and the construction of an infrastructure of local, publicly funded healthcare.

After World War I, the Weimar Republic's governments addressed the issue of the population's health condition to ensure the efficiency of the employable population and continued to develop publicly funded healthcare as part of poverty relief efforts and social welfare. While health insurance covered individual therapy and economic protection in case of illness, publicly funded healthcare was supposed to counteract the development of diseases by employing preventive measures at the state level. The field of publicly funded healthcare, which initially covered hygienic education about health risks in specific situations and circumstances, grew to include a "preferably comprehensive" surveillance of those population groups who were seen as carriers of especially dangerous diseases and, therefore, as a threat to public health. In this process, medical, societal, and sociopolitical levels of action were fused. From 1933 onward, when "racial hygiene" became an essential part of the Nazi state's ideology, these developments became part of a biologistic matrix. By creating standardized nation-

15 See also "Dokumentation: Ausgrenzung – Deutsche, Behörden und Ausländer," in *Herrenmensch und Arbeitsvölker. Ausländische Arbeiter und Deutsche 1939–1945*, ed. Jochen August, Matthias Hamann, Ulrich Herbert, Christoph Schminck-Gustavus, and Vittorio Vittali; Beiträge zur nationalsozialistischen Gesundheits- und Sozialpolitik, vol. 3 (Berlin: Rotbuch Verlag, 1986), 131–141; Tanja von Fransecky, *Zwangsarbeit in der Berliner Metallindustrie 1939 bis 1945. Eine Firmenübersicht*. Eine Studie im Auftrag der Otto Brenner Stiftung, Arbeitsheft 31 (Otto Brenner Stiftung: Berlin, 2003), 17–18.

al public health offices while simultaneously maintaining existing municipal structures and redefining the PHOs' function, the Nazi administration intended to organize public health service centrally. The *Act to Standardize the Healthcare System* (GVG) dated 3 July 1934 created the legal basis for this realignment and redefined the function and field of duties of public health offices.[16] In general, public health offices in urban and rural districts resided at lower administrative levels. The type and number of employees were based on the number of inhabitants as well as on region-specific problems. The health departments were headed by PHOs who had qualified for the civil service after completing their medical school training at a State Academy of Public Health and who had a strong affinity to the state's health policy goals. A significant number of them were members of the *National Socialist German Workers' Party* (NSDAP). PHOs were civil servants and therefore had to follow government orders.[17] All in all, PHOs were key actors in public health offices and in national health policy.

Depending on which further procedures were planned, civil administrations were established to replace the previous military administrations in the territories occupied by the *Wehrmacht*; according to the ideology of the "people without space," Eastern European countries up to the Urals were to be annexed by the German Reich. Therefore, the Germans implemented a kind of streamlined "ideal structure" in these geographic areas.[18] This structure reflected centralized hierarchical structures that were also intended for the German Reich but that had not yet been enforced. The structures included the health offices in the occupied territories that were headed by German PHOs. Local physicians—for example, Polish doctors —were subordinate to these PHOs.[19]

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16 "Gesetz über die Vereinheitlichung des Gesundheitswesens vom 3. Juli 1934," *Reichsgesetzblatt Teil 1* (Berlin: Reichsverlagsamt, 1934), 531–532. Sabine Schleiermacher, "Amtsärzte und öffentlicher Gesundheitsdienst im Nationalsozialismus und in der frühen Nachkriegszeit," in *Hippokratische Grenzgänge – Ausflüge in kultur- und medizingeschichtliche Wissensfelder*, ed. Michael Busch, Stefan Kroll, and Malgorzata Anna Maksymiak (Hamburg: Verlag Dr. Kovač, 2017), 232–251.

17 Arthur Gütt, *Der öffentliche Gesundheitsdienst. Erläuterungen zum Gesetz zur Vereinheitlichung des Gesundheitswesens vom 3. Juli 1934 nebst Durchführungsverordnungen, Gebührenordnungen und Anhang mit Erlassen* (Berlin: Carl Heymanns Verlag, 2nd edn, 1939), 409, 467, 487. Schütt, Eduard and Nathanael Wollenweber, eds., *Der Arzt des öffentlichen Gesundheitsdienstes 1941* (Leipzig: Georg Thieme Verlag, 1942), 75–81.

18 Mechtild Rössler, *Wissenschaft und Lebensraum. Geographische Ostforschung im Nationalsozialismus* (Berlin/Hamburg: Dietrich Reimer Verlag, 1990).

19 F. Müller, "Organisatorischer Aufbau des Gesundheitswesens," in *Kampf*, ed. Walbaum, 17–20; Jost Walbaum, "Gesundheitswesen," in *Das Generalgouvernement*, ed. Max Freiherr du Prel (Würzburg: Konrad Triltsch Verlag, 1942), 190–194; Johannes Vossen, "Der öffentliche Gesundheitsdienst im ‚Reichsgau Wartheland' und die Durchführung der nationalsozialistischen ‚Volk-

The health administration's range of tasks broadly corresponded to that of its counterpart in the Reich. In contrast, the "medical service during the employment of Polish forces in the Reich" was nevertheless "exclusively a matter" of the Department of "Healthcare" that was responsible for "the deployment of physicians and with that health supervision," unlike in the Reich, where employment offices were responsible.[20]

The place of deployment of the public health physicians was determined exclusively by *Division IV*, which was responsible for public health in the *Reich Ministry of the Interior*.[21] Once the war had begun, civilian administrations were established according to military administration. PHOs were sent to German-occupied countries to take charge of the local health care system, especially concerning disease control. According to statements made by PHOs, in 1940, 377 out of 2015 PHOs were transferred to Eastern regions while many other areas criticized the lack of PHOs and, by extension, their neglect of their fields of duty.[22]

Epidemics: prevention, containment, treatment

The legal basis for dealing with diseases that could lead to an epidemic was the *Reich Epidemics Law* ("Reichsseuchengesetz") from 1900.[23] It had created the legal framework for administrative actions for preventing the spread of highly contagious diseases characterized by a painful course of disease and an expected mass outbreak. The police were responsible for the organization, requests, surveillance, and implementation of measures. According to the separation of powers, the police in their function as executive power were even responsible for coercive measures, such as the closing of public spaces, businesses, limiting movement, or involuntary hospitalization, which is why there were

stumspolitik' 1939–1945," in *Gesundheit und Staat. Studien zur Geschichte der Gesundheitsämter in Deutschland, 1870–1950*, ed. Axel C. Hüntelmann, Johannes Vossen, and Herwig Czech (Husum: Matthiesen Verlag, 2006), 237–254, 238–241.

20 Müller, "Aufbau," 17.

21 Reich Ministry of the Interior, Dr. Ernst, Internal Note of 10 December 1942, in Bundesarchiv R 1501/2958. Bundesarchiv, Berlin (hereafter BArch).

22 157 were assigned to the " Generalgouvernement," 129 to the "Ostmark" and 91 to the "Sudetengau." In 1940, the number of appointed medical officers in the occupied "Western territories" was a lot less: only 33. Message to Permanent Secretary Dr. Krahn, 9 December 1940, in BArch R 1501/2958. See also Conti (Reichsministerium des Innern) to Göring (Beauftragter des Vierjahresplans), 1 August 1940, in BArch R 1501/2956.

23 "Reichsgesetz, betr. die Bekämpfung gemeingefährlicher Krankheiten vom 30. Juni 1900," in *Arzt*, ed. Schütt et al., 283.

close ties between the police and health administration.[24] From 1935 onward some of these responsibilities were transferred to the health authorities. The PHO had an "obligation to disclose" any information on communicable diseases and to "immediately carry out the necessary investigation on the spot" concerning the "type and path of infiltration" (origin), "schools, worksites, commercial enterprises" (occurrence of diseases), "drinking water and food" (contamination, security), and individuals (surveillance of potential fomites). Only the "ordinance of preventive measures," consisting of quarantine, the closing off of districts, and "limiting the choice of residence and workplace" were reserved for police authorities. The PHO merely had the "right of proposal." In the case of "exigent circumstances," PHOs still had the authority to take actions independently and "take the measures needed to prevent the spread of the disease before local police arrived."[25]

Although the PHOs' activities mainly focused on German civilians, they had the authority to enter "any establishment" "in order to detect contagious diseases or other official matters." This included even those institutions that were not subordinate to the municipality, as well as companies or private citizens such as Wehrmacht facilities or the camps of the *Reich Labor Service* ("Reichsarbeitsdienst") and *German Labor Front* ("Deutsche Arbeitsfront").[26] While the GVG was supposed to uniformly regulate the fields of work of the public health service, the *Regulations to Combat Transmittable Diseases* ("Verordnung zur Bekämpfung übertragbarer Krankheiten") of 1 December 1938 focused on the standardization of epidemic laws that had previously been regulated in part by regional governments. The new regulation not only specified the supervisory function of the health department including police work but toughened measures by treating the mere suspicion that someone suffered from an illness as a sufficient reason for being reported to the health department as a disease carrier. The local police were no longer only authorized to order individuals with a contagious disease to undergo medical treatment.[27] In addition, they were now au-

24 Sabine Schleiermacher, "Redeker. Biographische Skizze eines Medizinalbeamten," in *Lungenheilkunde im Nationalsozialismus*, ed. Robert Loddenkemper, Nikolaus Konietzko, and Vera Seehausen (Berlin: Deutsche Gesellschaft für Pneumologie und Beatmungsmedizin e.V., 2018), 230–239.

25 "Verordnung zur Bekämpfung übertragbarer Krankheiten, § 7,2," in *Reichsgesetzblatt Teil I*, ed. Reichsministerium des Innern (Berlin: Reichsverlagsamt, 1938), 1721–1724, 1722; *Arzt*, ed. Schütt et al., 309 f., 318.

26 *Arzt*, ed. Schütt et al., 316, 325.

27 "Verordnung zur Bekämpfung übertragbarer Krankheiten § 23," in *Reichsgesetzblatt Teil I, ed. 1938*, 1724.

thorized to "isolate unteachable and hazardous tuberculosis patients" by force, along with "mass bacillus excretors just as physicians had demanded for a long time."[28] At local police departments, PHOs were now able to arrange for compulsory admissions in cases of "intransigence as well as open or covert reluctance by the patient."[29] Tuberculosis patients, for instance, were involuntarily hospitalized in special sanatoriums. The psychiatric sanatorium of Stadtroda in Thuringia already held "antisocial or unteachable patients" who had been committed to the ward by the police. The sanatorium had forcibly detained these patients since 1934 under prison-like conditions with poor alimentation and without medical attention.[30]

Epidemics control and racial hygiene

The public health service played a central role in implementing the Nazi administration's biologistic demographic policy. The *Act to Standardize the Healthcare System* of 1934 and its three executive orders had redefined PHOs' scope of activities and made "genetic and racial care" a new and central part of it. PHOs played a major role in enforcing and implementing this healthcare policy paradigm and Nazi demographic policies. This role also provided them with an enormous increase in impact and power. PHOs were not only obligated to create genetic databases as part of a "genetic and racial care" program in which they collected and unified their findings, along with information from registry, citizens, youth welfare offices and even from Nazi party offices. They also played an advisory role by having to issue marriage certificates as well as reports in connection with adoption, marriage loans, child support, education allowances, nat-

28 Fritz Cropp, "5 Jahre Abteilung "Volksgesundheit" des Reichsministeriums des Innern unter Leitung von Ministerialdirektor Dr. Arthur Gütt," *Der öffentliche Gesundheitsdienst* 4 (1939): 869–896, 888. Under §11 of this regulation, a hospitalization or a "placement in a different suitable asylum ... – even against the will of the sick or those suspected to be sick – on a proposal by the local police to the health department ... could be ordered in all cases where isolation in the own apartment ... cannot be completely guaranteed or if the protective measures dictated are not followed or if there is a risk of transmission of the disease." C. L. P. Trüb, "Was muß der praktische Desinfektor von der reichsgesetzlichen Neuregelung der Seuchenbekämpfung wissen?," *Der praktische Desinfektor. Zeitschrift für Seuchenabwehr, Wohnungshygiene und Schädlingsbekämpfung* 31 (1939): 7–9, 8.

29 (Franz) Ickert, "Die Bekämpfung der Tuberkulose," in *Arzt*, 372–377, 375.

30 Astrid Ley, "Ausgegrenzt – vernachlässigt – ermordet. TB-Kranke im Nationalsozialismus," in *Lungenheilkunde*, ed. Loddenkemper et al., 152–179, 156.

uralization procedures, and settlement programs for the German Reich and Eastern Europe. [31]

The Public Health Office, along with its PHOs, created the organizational platform for the *Law for the Prevention of Hereditarily Diseased Offspring* (1933) because PHOs were the only ones allowed to decide whether a person should be considered for sterilization and whether proceedings for a forced sterilization should be initiated.[32]

In the course of rearmament and, even more so, under conditions of war, the PHOs' prioritization of activities shifted. The main priority became to medically examine the workforce now urgently needed in the German Reich, and to take preventive measures for epidemics that were applied to forced laborers as well as to the camps in which they lived. This surveillance of forced workers and the sterilization law overlapped in certain ways.

A note in the records of the *Reich's Ministry of Labor* ("Reichsarbeitsministerium") from the year 1944 shows the importance that PHOs' activities played at the time, as well as the "clinical pictures" involved and the hinge position of the PHOs: "The fight for ultimate victory depends on each and every employee, even on every working hour. In that respect, great responsibility was imposed on PHOs. Every day, they are on the front line in the battle against dawdlers at work, malingerers, and individuals who knowingly and willfully sabotage their work assignment. They are enemies of the state and the state will treat them accordingly." According to that note, the municipal Health Departments deserved a special recognition. "They determine: Is the individual sick or fit to work. Is he/she capable of work and if yes, what kind of work is he or she able to do. That makes it easy to be prepared for any case. If the person was employed incorrectly, a redeployment will be obtained from the employment office. Dawdling at work will result in very harsh national policy measures against malingerers. If the doctor handles his patients properly, many a person who has gone off the rails can be bent back into shape."[33]

Initially, PHOs examined forced laborers regarding their use in secondary employment, but these investigations were gradually transferred to these officials on a full-time basis, making them key players in dealing with the labor force which were gradually turned over to civil servants and played a key role up until 1945. The civil servants were not only authorized to conduct medical examinations; they were also in control of lodging facilities, various types of

31 Schleiermacher, "Amtsärzte," 237–242.

32 Eduard Schütt, "Erb- und Rassenpflege," in *Arzt*, ed. Schütt et al., 387–454, 394.

33 Medical care and treatment of German and foreign workers, 21 April 1944, in: BArch R3901/20.288a, 84.

camps, and even of handling living conditions, including the nourishment of forced workers. Consequently, the PHOs not only ensured the forced laborers' capacity to work, but also decided on when a person was no longer fit to work and what should happen with that person. Therefore, their task was to avert any damage to the German "racial corpus" ("Volkskörper") and to assist with the efficient use of forced laborers' manpower.

For example, forced laborers who were pregnant were maltreated with the entire repertoire of measures that were part of the Nazis' ideology of "genetic and racial care." PHOs took on the task of evaluating the "racial quality" of the unborn child. They forwarded their statements to the *Reich Main Security Office* ("Reichssicherheitshauptamt") whose members then issued final decisions. The future of the mother and her unborn child hinged on the PHO's report, which, among other factors, took into consideration the probable father's heritage. If the embryo was ranked "inferior," the mother was forced to abort it, since her potential as a labor was assigned a higher value than the potential of her future child. If, on the other hand, the embryo was determined to be "of better racial quality," the mother was forced to carry it to term. Once born, the child was taken away from the mother and handed over to a "racially valuable" family. Annette Schäfer has described in detail how PHOs dealt with creating facilities in which abortions as well as childbirths for Eastern European workers took place under the same roof.[34]

The health surveillance of eastern Europe workers

After the German *Wehrmacht* invaded Poland in September 1939, public health scholars published several articles in professional journals that explicitly addressed the epidemiological tasks of public health offices concerning the recruitment of foreign workers. The first transports of Polish farm workers were sent directly into the German Reich immediately after Germany had invaded Poland. The recruitment for the war economy and the army caused a shortage of more than a million workers. In the first few months of the war, about 40,000 Polish civilian workers and 300,000 prisoners of war were deployed in the German

34 Schäfer, *Zwangsarbeiter*, 170–172. Gabriele Czarnowski, "Russenfeten. Abtreibung und Forschung an schwangeren Zwangsarbeiterinnen in der Universitätsfrauenklinik Graz 1943–1945," *Virus: Beiträge zur Sozialgeschichte der Medizin* 7 (2008): 53–67.

Reich. All of them had previously been background-checked by police and been medically inspected in transit camps.[35]

A PHO commented: "It is clear that the transfer of thousands of men and women from a region where war was raging not too long ago may carry the risk of spreading epidemics. This risk was especially high in the case of Poland, since it is a culturally retarded nation in many ways, and on top of that, had a deficient state order which had collapsed under the attacks of the victorious German Wehrmacht."[36]

Since many infectious diseases are transmitted by parasites the health office was also in charge of fighting parasites. So, the health office not only monitored the "disinfestation" of clothing and luggage as well as the "delousing" of individuals, but also had to provide corresponding facilities. Health offices were confronted with great problems since large numbers of people, including forced laborers, lived in horrible conditions that promoted the spread of parasites. Not every health office had the appropriate facilities, and since they were not designed for large populations, they could not handle the vast number of examinations in such a short time. Given the high local demand for forced laborers, the transit camps in which hygienic measures against epidemics were to be taken were not actually equipped to temporarily accommodate the large number of people during the implementation of these measures. As a result, they distributed the forced laborers to the camp of their designated workplace.[37]

The report on "typhus cases" by the PHO from the national health office in Gotha was sent to the *Reich Governor* ("Reichsstatthalter") in Thuringia and pointed to the consequences of the system of "forced labor" that resulted from the ruthless exploitation of human beings. At the same time, the report refers to the German administration, including health offices and PHOs, as well as commercial enterprises, and, finally, the economically inactive German population as parts of this system. The report also gives an impression of the level of knowledge that the PHOs had of this system. Typhus, it says, repeatedly appeared in the 26 *Eastern workers camps* ("Ostarbeiterlagern") holding about 1,500 forced laborers that the PHO had regularly inspected and that "were located in almost every part of the city." "During their construction, all of the camps were examined by a PHO with the immigration department of the employment office and the district administration of the German Labor Front and are continuously inspected as necessary. ... Monthly reports from the institution to the department constantly

35 Herbert, *Fremdarbeiter*, 68, 378.
36 Schulte, "Überwachung," 640 f.
37 Schulte, "Überwachung," 640–645.

monitor the level of infestation [...]. The cleanliness inside the housing is sometimes very poor, partially due to the shortage of camp and surveillance personnel. One particular source of the repeatedly arising vermin infestation is the frequent access by the entire family, in some cases with small children and even oldest family members, whose delousing and disinfestation pose problems. The disinfestation in transit camps also exhibits deficiencies."[38] Writing from a perspective that is inherent to the system, no one asked about the causes of the infestations which could have been determined by a PHO's instruments, such as the extremely poor living conditions in the camps, nor were there requests for eliminating these causes.

Those chosen to be forced laborers had a specific value to the Germans: they were regarded as human capital whose ability to perform needed to be maintained. In order to prevent diseases from being brought into the German Reich with them, "delousing," i.e., measures to eliminate parasites by means of hot air or chemicals,[39] had to be carried out on them while they were still in the *General Government* (the part of Poland that was occupied and administered by Germany during World War II) and, at the latest, again in the transit camps which were located in the German Reich. Regional employment offices operated the transit camps. From here, forced workers were sent to their future workplaces.[40]

The state supervision of "delousing" was the responsibility of PHOs and the public health offices in charge of the region who worked closely with the employment offices and local police. In June 1941, the head of the health department in the Reich's ministry of the interior, Leonardo Conti, sent a confidential express letter to the *Reich Governor* ("Reichsstatthalter"), the district presidents and police commissioners as well as health authorities. In his letter, he pointed out that the increased occurrence of typhus in the *General Government* created the risk of forced workers "introducing" this disease into the German Reich. However, a "quarantine" did not come into question as a measure to combat epidemics due to "work effort reasons." Therefore, employment offices were ordered

38 Report Walter Dracklé, State health department of the urban district of Gotha, 20 May 1944, in Landesarchiv Thüringen – Hauptstaatsarchiv Weimar, Thüringisches Ministerium des Innern E 1472, Bl. 225, 250.

39 Angelika Ebbinghaus, "Der Prozeß gegen Tesch & Stabenow. Von der Schädlingsbekämpfung zum Holocaust," *1999. Zeitschrift für Sozialgeschichte des 20. und 21. Jahrhunderts* 13 (1998): 16–71.

40 Schäfer, "Zwangsarbeit," 68.

to "conduct a second thorough delousing of each Polish worker upon arrival [...] and disinfect their clothes and baggage without exception."[41]

The Germans' fear of becoming infected was just as strong as the racial attribution in the German population, which is why forced workers were especially monitored for epidemics during the first few weeks following their arrival. The camps in which they were forced to live were increasingly inspected under special consideration of hygienic aspects, and camp physicians were obligated to report any epidemic. Forced workers' living conditions were, however, not negotiable. Rather, the focus of the PHOs was on preventing infectious diseases from being transmitted to the German population while maintaining the forced workers' labor force.

Contemporary accounts report that over 50 % of Polish forced workers fell ill with an infectious disease within four weeks of their arrival in the German Reich. The PHOs were, therefore, given the task of conducting tight inspections. Especially in mass accommodations and camps where forced workers were housed, PHOs had to "regularly and continuously [...] search for vermin."[42]

All in all, the wellbeing of forced workers was not a main priority. On one occasion, the examining physicians sent forced workers who became infected on their journey to the German Reich to hospitals for further treatment. Health authorities, however, were unhappy with this procedure. They claimed that the admission of Poles for longer periods of time not only failed to generate "the work performance urgently needed in agriculture" but that the "burden for social insurance carriers resulting from these services" was unacceptable. Additionally, they argued that an "improvement [...] of the mere status of health and performance [...] could not be worth spending resources which are insufficiently available for the same procedures for our own comrades."[43]

In the future, sick Polish workers were only to be admitted to a hospital for "highly pressing reasons," for instance, in the case of "life-threatening danger" or the contamination by "infectious diseases [...] that otherwise seemed impossible to isolate," meaning that the "German National comrades'" infection with that disease was to be feared.[44] Chronic conditions were only supposed to be treated if the patient showed acute symptoms.

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41 Confidential letter from the Reich Ministry of the Interior, signed by Conti, 28 June 1941. Landesarchiv Thüringen – Staatsarchiv Gotha, Regierung Erfurt, 19673, Bl. 22.

42 A. Heinmüller, "Die hygienische Überwachung von Massenquartieren und Lagern ausländischer Arbeiter," *Der öffentliche Gesundheitsdienst* 9 (1943 A): 269–277, 270.

43 President of the State Labor Office of Central Germany ("Mitteldeutschland"), 20 July 1940, in Thüringisches Hauptstaatsarchiv Gotha, Regierung Erfurt, 19673, 14.

44 Schäfer, *Zwangsarbeiter*, 180.

None of the known official bodies considered sending able workers to their country of origin. Infected forced workers and those suspected of being infected were quarantined after a "delousing" in the camp as well as at their workplace, but "without reducing their work input."[45] The health office of the district of Iserlohn, for instance, reported on the basis of their own research that: "The isolation of people with open tuberculosis generally takes place in the camp [...]. Occupancies in German hospitals are being avoided as far as possible." Since experience had shown that many camps did not have the capacities for isolation, the PHO in charge recommended creating a "camp for workers from Eastern Europe ("Ostarbeiter") with tuberculosis," where contagious patients would remain until they were being deported to their respective homelands. There were no concerns that opposed the continued employment of closed tuberculosis patients up until their deportation.[46] Forced laborers who could no longer work were directly sent back to their countries of origin, deported to concentration camps without any medical assistance, or murdered as a part of "euthanasia" programs. PHOs carried out the medical examination of forced workers.[47]

All in all, the PHOs' numerous efforts to fight contagious diseases showed very little success; their activities could not compensate for the relentless decline in forced laborers' disastrous living conditions. Malnutrition, lack of clothing, non-existing medical care, the cheapest forms of accommodation, mass housing with the worst sanitary conditions and enormous workloads made the PHOs' interventions futile.[48] The situation deteriorated as the war progressed. In 1944, the state's public health office in Württemberg reported an increase in typhus and tuberculosis infections caused by the forced workers' living conditions that were continuously worsening.[49]

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45 Confidential letter from the Reich Ministry of the Interior, signed by Conti, 28 June 1941, in Landesarchiv Thüringen – Staatsarchiv Gotha, Regierung Erfurt, 19673, Bl. 22–23.

46 K. Funke, "Das Tuberkuloseproblem bei den im Deutschen Reich eingesetzten Ostarbeitern," *Der öffentliche Gesundheitsdienst* 9 (1943B): 154–158, 156.

47 Georg Lilienthal, "Das Schicksal von ‚Ostarbeiter'-Kindern am Beispiel der Tötungsanstalt Hadamar," in *Kinder in der NS-Psychiatrie*, ed. Thomas Beddies and Kristina Hübner. Schriftenreihe zur Medizin-Geschichte des Landes Brandenburg (Berlin-Brandenburg: be.bra wissenschaft verlag, 2004), 167–184. Uta George, "Polnische und sowjetische Zwangsarbeitende als Opfer der NS-'Euthanasie'-Verbrechen. Das Beispiel Hadamar, in Medizin und Zwangsarbeit im Nationalsozialismus," in *Einsatz und Behandlung von "Ausländern" im Gesundheitswesen*, ed. Andreas Frewer and Günther Siedbürger (Campus Verlag: Frankfurt a.M., 2004), 389–406.

48 Schäfer, *Zwangsarbeiter*, 123–124.

49 Elisabeth Timm, *Zwangsarbeit in Esslingen 1939–1945. Kommune, Unternehmen und Belegschaften in der nationalsozialistischen Kriegswirtschaft* (Ostfildern: Jan Thorbecke Verlag, 2008), 270.

Segregation as a method of epidemic control

The correlation between the emergence and spread of infectious diseases and the significance of social situations and living conditions was already known, just as the methods for countering them. Therefore, it did not come as a surprise that, as a result of the German occupation and the resulting forced reorientation of the entire economy towards exploitation of the available resources for the benefit of the Wehrmacht as well as the German population, the living conditions of the local population in the territories occupied by the Wehrmacht rapidly deteriorated, resulting in fatal conditions for the already socially weak segments of the population.

Socially deprived sections of the population had to face even more disastrous conditions. The Jewish community was especially hard hit. Jews were forced into ghettos where their chances of survival were deliberately being reduced. The impoverishment of the local population outside the ghettos was equally unsurprising. Resulting from the German occupation, these conditions provoked the emergence and spread of diseases. Living conditions in the German-occupied countries where the Germans recruited forced workers were catastrophic, not least due to the German occupation. This occurred especially in ghettos, which is why epidemics, primarily typhus, had spread in the *General Government*.[50]

The repertoire of instruments used to counter infectious diseases in general, and thus also in the occupied Eastern European countries, was defined in the epidemic legislation including its various ordinances. Measures ranged from mass x-ray screenings to vaccinations and hygienic monitoring, even separation by restricting places of residence or enforcing involuntary admission into asylums.[51]

One disease that Nazi Germany considered was especially dangerous from their perspective – a country heading for total war and shipping millions of people across Europe for forced labor – was typhus, which is transmitted by lice and had a lethality rate of 10–20% at that time and an extremely long recovery phase. The path of typhus infection via lice on clothes was well-known, but a

50 Willi Dreßen and Volker Rieß, "Ausbeutung und Vernichtung. Die Gesundheitspolitik im Generalgouvernement," in *Medizin und Gesundheitspolitik in der NS-Zeit*, ed. Norbert Frei (München: Oldenbourg Verlag, 1991), 157–171, 165.

51 G. Heilig, "Die Durchführung der Aufgaben der Gesundheitsämter im Kriege," *Der öffentliche Gesundheitsdienst* 7 (1941/42 A): 78–83.

therapy or a fully developed immunization did not exist.[52] Consequently, in normal times the medical focus was on supporting the constitution of the afflicted as well as on disrupting the path of infection which meant preventing the disease from spreading. These methods entailed the elimination of carriers (lice) as well as improving general living conditions. Due to the severity of the illness and its protracted course the disease could not be ignored by the PHOs. Without any available treatment, the focus was on prevention, surveillance, and compulsory registration. Therefore, the Nazis created disinfestation facilities where clothes were treated with steam, hot air or chemicals and where humans had to clean themselves and were then "deloused." At the same time, disinfectors cleansed living spaces in order to eradicate typhus pathogens. These disinfestation institutions were equipped and monitored by health authorities and therefore by PHOs in the civilian range. Additionally, they could issue directives concerning epidemic laws including "road blocks, limitations or complete closure of passenger transport on certain railway sections," "marking typhus villages with bill-boards, setting up 'typhus search parties' under the leadership of a German disinfector in order to (even in suspicious cases) search all apartments for bedridden patients," and "carrying out medical examinations on potential patients."[53] Since PHOs did not have any executive functions they could only impose these measures in exceptional situations. However, they had the right of proposal; as executive bodies, police departments had the right of ordinance.

Starting in late 1939, German authorities had been considering proposals according to which Jews were to be isolated in designated city districts. By creating such ghettos, officials intended to separate particular population groups, like Jews, from the rest of the population. From the perspective of the Nazis, some additional benefits of these measures included cheap mass accommodation, surveillance, and, last but not least, efficient economic exploitation.[54] These provi-

52 As of 1940, the Institute for Typhus and Virology (Institut für Fleckfieber- und Virusforschung) of the high command of the army (Oberkommando des Heeres) in Cracow created a vaccine named after the Polish biologist (Rudolf) Weigl. The mass production of this vaccine was described as difficult and expensive. A vaccine against Typhus was not available in unlimited quantities. Vaccines were only intended for those involved in delousing as well as nursing and treatment of Typhus patients. Hermann Eyer, "Das Problem der Fleckfieberschutzimpfung und ihre Bedeutung für die Praxis," *Der öffentliche Gesundheitsdienst* 7 (1941): 97–106, 102f. See also Paul Weindling, *Epidemics and Genocide in Eastern Europe, 1890–1945* (New York: Oxford University Press, 2000), 350–352.

53 Fritz Steiniger, "Die Entlausung der Zivilbevölkerung in den besetzten Ostgebieten," *Der öffentliche Gesundheitsdienst* 8 (1942B): 137B–146B, 145B.

54 Klaus-Peter Friedrich, "Einleitung," in *Die Verfolgung und Ermordung der europäischen Juden durch das nationalsozialistische Deutschland 1933–1945, Vol. 4, Polen September 1939-Juli 1941*,

sions caused catastrophic living conditions among the ghettoized population which in turn led to the emergence and spread of infectious diseases. According to Christopher Browning, the health administration continuously demanded a hermetic sealing of the ghettos in order to prevent a transmission of epidemics onto military personnel, Germans, and Poles living in the *General Government* as well as the population of the German Reich.[55] Since the "four-year plan" specified that Polish forced laborers would still be deported to the German Reich, according to the specifications in the "four-year plan," there were concerns that these "transports of workers" could bring typhus into the Reich which would then spread.[56]

The steps that German PHOs took in order to prevent the spread of diseases corresponded to the value attributed to individuals in the occupied territories in Eastern Europe from a German perspective: they were either considered able to work or destined to die. Chief Medical Officers' perceptions of diseases and relevant strategies for fighting them revealed anti-Polish and anti-Semitic attitudes that, along with racist constructs, already existed in the German public. For example, the precarious living conditions that had been caused by the occupation authorities were now listed as a root of the spread of infectious diseases. Furthermore, these conditions were described with the words "Polish economy," a state that was perceived to be characterized by "uncleanliness" and "disorder" and was considered responsible for the occurrence of epidemics, especially typhus.[57] Representatives of the health administration of the city of Łódź ("Litzmann-

ed. Klaus-Peter Friedrich (München: Oldenbourg, 2011), 46. Friedrich points out that in the interwar period the population of what would later be Ghettos was already 90 % Jewish and it was a poor neighborhood. The beginning of the war worsened the social situation through various relocation measures in the occupied territories. Lack of housing space, jobs and food lead to a decrease in living conditions. Klaus-Peter Friedrich, "Rassistische Seuchenprävention als Voraussetzung nationalsozialistischer Vernichtungspolitik: Vom Warschauer ‚Seuchensperrgebiet' zu den ‚Getto'-Mauern (1939/40)," *Zeitschrift für Geschichtswissenschaft* 53 (2005): 609–636, 609.

55 See also Christopher R. Browning, *Die Entfesselung der "Endlösung". Nationalsozialistische Judenpolitik 1939–1942* (München: Propyläen Verlag, 2003), 186–187. Christopher R. Browning, "Genozid und Gesundheitswesen. Deutsche Ärzte und polnische Juden 1939–1941," in *Der Wert des Menschen. Medizin in Deutschland 1918–1945*, ed. Ärztekammer Berlin (Berlin: Edition Hentrich, 1989), 316–328, 318.

56 See also "Regierung und Behördenleiter des Generalgouvernements sprechen am 16. Dezember 1941 über die Fleckfiebergefahr und die nächsten Schritte bei der Verfolgung der Juden," in *Die Verfolgung und Ermordung der europäischen Juden durch das nationalsozialistische Deutschland 1933–1945, Vol. 9, Polen: Generalgouvernement August 1941–1945* ed. Klaus Peter Friedrich (München, Oldenbourg, 2014), 151–171, 154.

57 J. Ruppert, "Die Seucheninsel Polen. Allgemeine Gesundheitspflege unter deutscher Ärzteführung," in *Kampf* ed. Walbaum, 23–36, 23.

stadt") argued that the containment of a typhus epidemic could only be achieved by "removing" or, rather, ghettoizing resident Jews. A memorandum from the health administration considered it necessary to arrange "constant police surveillance of the ghetto-borders" as well as protection with barbed wire and observation towers to ensure that the entrapped Jewish inhabitants could not leave these closed off areas: "With this race's lack of cleanliness, the general infestation of apartments and people with lice comes as no surprise. [...] The lice-infested Jew who mingles without hindrance with the rest of the population, is a safety hazard for the public that could open the doorway to an uncontrollable spread of infections in the entire city."[58] According to Browning, "the physicians' behavior [...] revealed their medical as well as ethical basic assumptions: Jews do not count as people whose lives were worth saving, but as a hazard that needed to be eliminated."[59] By claiming that Jews were "carriers of epidemics," doctors and their perceived medical expertise conferred scientific merit on economic and physical strategies of annihilation while the resulting courses of action were juridically legitimized by the Reich's epidemic laws. In the face of the constant increase of typhus infections, PHOs carried out the instruments defined by German epidemics laws and made suggestions to the executive branch regarding how the spread of this epidemic could be prevented including isolation of fomites and the afflicted.[60]

As Alberti's analysis of persecution and extermination of the Jewish population in *Reichsgau Wartheland* shows, preventing epidemics was merely one of many reasons that local authorities listed as reasons for setting up ghettos. In fact, ghettos were configured according to regional preferences and justified by the elimination of "illicit trade" ("Schleichhandel"), securing the nourishment of the German people, supplying accommodation in connection with the Nazi resettlement program "Generalplan Ost" or with claims of the security police. This line of argument legitimized the economic expropriation and deliberate impoverishment of the domestic non-German population.[61] In October 1941, Governor General Frank imposed the death penalty for individuals who illegally fled

58 "Denkschrift über die Notwendigkeit der Einrichtung eines Ghettos in Lodsch," written by Medizinalrat Schmitz, 1 February 1940 (Korrekturexemplar), cit. by Michael Alberti, *Die Verfolgung und Vernichtung der Juden im Reichsgau Wartheland 1939–1945* (Wiesbaden; Harrassowitz Verlag, 2006), 151.

59 Browning, *Genozid*, 325. See also Weindling, *Epidemics*, 273–278.

60 See also: Speech of the deputy director of the healthcare department in the General Government. Günther Ohrloff at the meeting of the medical officers in the General Government. *Der öffentliche Gesundheitsdienst* 7 (1941): 223–224, 223.

61 Alberti, *Verfolgung*, 152–154, 153.

ghettos.[62] This regulation was aimed at the "fight against smuggling"[63] and the economic segregation of ghetto residents and did not have any direct connection to any public health policies, even though it drastically accentuated the procedures defined by the Reich's epidemics laws concerning "segregation."

The question of "segregation" was a topic on the agenda of the healthcare department's conference in the *General Government* on 13 and 14 October 1941, during which approximately 100 doctors discussed the issue of "epidemic control" and dealing with typhus. The medical doctors did not take a clear position on the issue. Instead, they criticized the fact that, rather than following their advice, the decision-making authorities in charge took medically non indicated actions against the doctors' advice.

German health officials, unlike the *General Government*'s internal administration, considered the establishment of ghettos as a quarantine measure for preventing the spread of typhus to be an "utopian idea."[64] Instead, they pointed out that the reason for the rise in typhus infections lay in the "absence of laundry detergent, lack of heating fuel, clothes and clothes fabric." The request to remove these shortcomings was on the health-political agenda of medical officers. Tackling "the deficiency of delivery of heating material" was called for in particular, since heating material was a prerequisite for operating the "delousing facilities." Just as in the Reich, medical officers relied on methods familiar to them to fight typhus: disrupt the path of infection by delousing people, disinfesting clothing, and disinfecting apartments and material possessions. In addition, they demanded the isolation of typhus patients in hospitals, even as a coercive measure that was supposed to be financed with "public funds." With that in mind, they viewed "closing off" Jewish ghettos, which the interior administration of the *General Government* had commanded, with skepticism: "Well, what is most important is not the quarantining of cases of contact but their delousing, this would not only save money but also a lot of trouble." "If you want to fight the infestation of the people with lice and if providing soap is unfeasible, one

62 "Governor General Frank orders on October 15, 1941 that Jews leaving the ghetto without permission are punished by death. Third Ordinance on Restriction of Residence in the General Government," in *Verfolgung*, Vol. 9, 92–93.

63 Browning, *Entfesselung*, 242.

64 In the following, I will cite the presentation of the sub-department head of health administration in Cracow, Otto Buurman, during the work conference of the healthcare department of the General Government on 13 and 16 October 1941 in Bad Krynica. Buurmans colleagues, who were present, shared these views. Representatives of the healthcare department in the General Government discussed the epidemics laws in October 1941. Minutes of the working meeting of the Health Department in the Government of the General Government in Bad Krynica, 13–16 October 1941, in *Verfolgung*, Vol. 9, 93–107, 94–98.

must at least tell the people what to do (about it) ... General regulations like 'Beware of lice' are only half a measure." Furthermore, PHOs requested the "monitoring and instruction of individual families." Finally, the improvement of living conditions i.e., nutrition, reducing residential density and sufficient job opportunities were noted instead of quarantine. The correlation between living conditions and state of health was known to attending doctors, which is why they did not consider quarantine to be an appropriate method in the case of typhus. Public health officers in this case did not oppose the system of camps as a means for mass housing of people. Instead, completely inherent to the system, they pointed to methods by which, according to their experience, the spread of specific infections in these camps and thus their transmission to persons outside the camps could be prevented.

Almost like a cynical piece of evidence, one year later, Wilhelm Hagen, the PHO responsible for the Warsaw Ghetto, described the impact of deporting a large part of the Ghetto residents from the perspective of an accountant: "significant structural changes lead to the expulsion of Jews [...] Only about 30,000 of the 400,000 Jews stayed in Warsaw and were collected in camps and had to work in Wehrmacht plants [...] The threat of a typhus focus in the city center has thus stopped."[65]

Conclusion

A central component of National Socialist ideology was the idea of the state as a homogeneous "racial corpus." In this sense, the establishment of a healthcare system that guaranteed this "völkisch" state was the goal of National Socialist health care policy. To establish such a state, based on racist criteria, medicine provided the theoretical and thus legitimizing framework. PHOs were central actors as gatekeepers by deciding who did or did not belong to this "racial corpus," basing their decisions on criteria of race as well and of usability in the labor process. Ever since Germany's invasion of Poland and the beginning of World War II, the National Socialist state depended on a steadily increasing number of workers. This need was met by millions of forced laborers, who were sharply demarcated from the "racial corpus." The racial classification and hierarchiza-

65 Annual Report for the Year 1942, cit. by Ute Caumanns and Michael Esch, "Fleckfieber und Fleckfieberbekämpfung im Warschauer Ghetto und die Tätigkeit der deutschen Gesundheitsverwaltung 1941/42," in *Geschichte der Gesundheitspolitik in Deutschland. Von der Weimarer Republik bis in die Frühgeschichte der "doppelten Staatsgründung"*, ed. Wolfgang Woelk and Jörg Vögele (Berlin: Duncker & Humblot, 2002), 225–262, 259.

tion of groups of people legitimized this procedure and PHOs were responsible for the medical examination and permanent surveillance and "selection" of these people. At the same time, PHOs ensured that the consequences caused by the mass deportation of persons under inhumane circumstances that led to the spread of epidemics did not get out of control and, if at all possible, did not affect the German population. Here, in their concrete activities they worked ahead of the ideas later formulated in detailed plans, without the need to assume, even in this case, that there was a thoroughly structured plan predetermined by a central body. In fact, players and protagonists of the National Socialist health policy and its guarantors PHOs followed the subject-specific routines and logics of their profession as well as their experience and used their scope of action without resolutely opposing the health policy framework and thus having possibly to accept restrictions. In that regard, PHOs were not only active in the German Reich itself, but also in the territories occupied by the German Wehrmacht where they were able to implement their population and health policy goals in an ideal-typical manner, especially within the framework of the "Generalplan Ost."

Within the framework of specific economic and expansionist interests, the public health system was made into an instrument for the implementation of hegemonic interests. The PHOs were the guarantors of the implementation of these state intentions. In this respect, they acted at establishing and maintaining a society oriented towards the criterion of performance. For this purpose, they engaged in a strategy of racial exclusion and social engineering.[66] While the health legislation offered the legal framework legalizing these procedures, the practice based on the epidemic legislation meant a forced implementation of specific ideas about a Nazi social and political order. Thus, this example of disease control serves as a magnifying glass for health policy developments and its dynamics, interests, and different political intentions.

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66 Sachße et al., *Wohlfahrtsstaat*, 53.

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Niels Brimnes

Rallying around the magic wand: Visions of social medicine, public health and disease control in India 1946–1957

> Nor can the ideal of community health be achieved through a bottle of medicine or a surgical operation. ... (...) ... There is no magic wand to wave these changes into being overnight.
> *Report of the Health Survey and Development Committee*, 1946

> Today, malaria has been brought to bay though not completely conquered ... (...) ... [The] battle is ours and it is not too much to hope that this scourge of the tropics will have been wiped out from this country in the near future.
> C. Borkar, *Health in Independent India. A Decade of Progress*, 1957

A decade separates these two quotes. It separates the caution against believing that simple technological solutions could solve the massive challenges confronting medical men and women in a future independent India from the confident – almost triumphant – rhetoric about the expected disappearance of one of the most severe of these challenges, malaria. A major reason for this change in perspective was the large-scale application of the new insecticide DDT, which by 1957 still promised to be the magic wand against malaria that had looked so unlikely in 1946. The decade also separates a difference in focus. In 1946, the official medical ideology in India saw "community health" as an ideal to strive for. In 1957, "conquering" specific diseases and the microorganism that caused them was deemed more important.

At a more general level, the decade separates different ways of thinking about the relation between health and development. The creation of independent India was based on the central promise of bringing "development" to its citizens – in the form of more food, secure employment, better education, and improved health – and the "developmentalist" impulse was, as Medha Kudaisya has argued, "perhaps the most important *raison d'etre* of the new post-colonial state."[1] The notion of development, as it was constructed in debates among Indian elites in the last decades of colonialism, was based on science, privileged

1 Medha Kudaisya, "'A Mighty Adventure': Institutionalizing the Idea of Planning in Post-colonial India, 1947–60," *Modern Asian Studies* 43, no. 4 (2009): 940. doi: 10.1017/S0026749X13000644; Taylor C. Sherman, "From 'grow more food' to 'miss a meal': hunger, development and the limits of post-colonial nationalism in India, 1947–57," *South Asia* 36, no. 4 (2013): 571–572, doi: 10.1080/00856401.2013.833071.

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state-driven planning and had rapid industrialization as the overarching goal. At the same time, however, it was a product of political compromises within and beyond the nationalist movement and therefore quite elastic. It accommodated both large-scale infrastructural projects and ideas about "community development" tinged by Gandhian visions; it promoted heavy industries and mechanization, but at the same time acknowledged the need to protect cottage industries.[2] As this collection of ideas associated with development was converted into actual programs, it created, in Taylor Sherman's words, a decade of "uncertainty and flux" before a more articulate Indian planning ideology was in place by the late 1950s.[3]

In this article, I investigate the transformation that took place in the approach to health and development in this decade of uncertainty. In 1946, improved health was seen both as an integral part of and as something to be achieved through a broad process of development, because ill-health was caused by poverty. The report from which the first quote above is taken asserted that the health of the people "depends primarily upon the social and environmental conditions under which they live and work, upon security against fear and want, upon nutritional standards, upon educational facilities, and upon the facilities for exercise and leisure."[4] A decade later, ill-health was no longer a product of poverty, but its cause. Disease, on the other hand, was caused by micro-organisms, which could be identified and eliminated. Successful disease control, in turn, facilitated and accelerated development. In 1951, India's first five-year plan provided an indication of this emerging relation between health and development:

> Health is fundamental to national progress in any sphere. In terms of resources for economic development, nothing can be considered of higher importance than the health of the people which is a measure of their energy and capacity as well as of the potential of man-hours for productive work in relation to the total number of persons maintained by

2 Benjamin Zachariah, *Developing India. An Intellectual and Social History* (Delhi: Oxford University Press, 2005), 211–290.

3 Sherman, "From Grow more Food," 574; see also A. H. Hanson, *The Process of Planning: A Study of India's Five Year Plans 1950–64* (London: Oxford University Press, 1966), 123.

4 *Report of the Health Survey and Development Committee*, Calcutta: Government of India Press, 1946, vol. I, 17, accessed June 3, 2021, https://www.nhp.gov.in/bhore-committee-1946_pg. The report here quoted the view articulated by the British Medical Association in a debate on the Beveridge report.

> the nation. For the efficiency of industry and of agriculture, the health of the worker is an essential consideration.[5]

The relation between health and development was gradually turned around. From being intimately linked to broader processes of development, health had become the absence of disease; something that had to be fixed, before the process of development could really take off. One might say that improving the health of the Indian population changed from a social project driven by development to an economic project driven by technology.[6]

I investigate this transformation, as it was expressed in reports, speeches, and publications issued by sources from – or at least close to – the Government of India. Looking specifically at the position taken in relation to the two most dreaded infectious diseases at the time – malaria and tuberculosis – my analysis reveals a process through which the Indian state's initial commitment to the doctrine of social medicine came to be overshadowed by the fascination of the vertical, techno-centric campaign against specific diseases.[7] My analysis is limited in two important ways. First, it is a study of "visions" and not of what occurred on the ground or of the results achieved. Second, it looks at these visions at the

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5 Planning Commission, Government of India, *First Five Year Plan*, Chapter 32, Health, para 2, accessed June 3, 2021, https://niti.gov.in/planningcommission.gov.in/docs/plans/planrel/fiveyr/welcome.html. This view of the relation between health and development was not new, but had been promoted by the Rockefeller Foundation in the early decades of the twentieth century. John Farley has even identified a "Rockefeller Creed" expressed most succinctly by Frederick Gates: "Disease is the supreme ill human life, and it is the main source of almost all other human ills." John Farley, *Bilharzia. A History of Imperial Tropical Medicine* (Cambridge: Cambridge University Press, 1991), 74–75.

6 I have taken inspiration from a recent analysis by Neeti Nair, in which she characterizes the transformation of educational policies in post-independent India as a change from a "social" to a "state" project. In Nair's analysis, the Indian state went from an initial post-colonial pledge to provide equal educational opportunities to all, to restricting higher education to a selected elite segment. Instead of being an integrated part of community development, education became "instrumentalized" to serve the state's goal of rapid industrialization. One might think of the turn towards techno-centric disease control as a similar "instrumentalization" of public health. Neeti Nair, "Towards Mass Education or an 'Aristocracy of Talents': Nonalignment and the Making of a Strong India," in *The Postcolonial Moment in South and Southeast Asia*, ed. Gyan Prakash, Michael Laffan, and Nikil Menon (London: Bloomsbury, 2018).

7 I have borrowed the term "techno-centric" from Sunil Amrith. See Sunil S. Amrith, *Decolonizing International Health. India and Southeast Asia, 1930–65* (Basingstoke: Palgrave Macmillan, 2006), 3. Amrith's imaginative work has inspired the present analysis, but whereas Amrith pays much attention to actors both "above" the state (international organizations such as WHO, UNICEF) and "beneath" the state (individuals and professional networks), my focus is more narrowly on the Indian state.

all-India level. Although health was a subject devolved to the states within the Indian Union and regional differences certainly existed, the Union Government did exercise significant influence over the states and remained a relevant site for the study of the visions that defined the health policy in the country.[8]

From social medicine to techno-centric public health

The process documented and discussed here was not unique to India. On the contrary, the Indian case exemplifies a broader trend, which began when social medicine rose to prominence in the 1930s, particularly under the auspices of the League of Nations Health Organization (LNHO). The term "social medicine" refers to a range of related approaches to health, which emphasized the intimate connection between healthful living and improved social and economic conditions. These approaches were united in their scepticism towards a narrow, biomedical, and clinical understanding of health, and in their preference for broader, "horizontal" sanitary interventions, improvements in housing and nutrition, and ultimately social and economic reform. Social medicine was not only critical of the focus on individual patients in clinical medicine, it also preferred interventions that aimed to improve general living conditions over "vertical" public health programs that targeted single diseases. Preferring technologically simple interventions, social medicine attempted to improve the health not of the privileged few, but of the population in general.[9]

Applied in a still rural world social medicine transformed into the closely related concept of "rural hygiene," and a major event was a large LNHO conference in Bandung, Indonesia, in 1937, which debated rural hygiene in the context of a largely colonial Asia.[10] In the 1940s, ideas connected to social medicine remained important, not least in discussions about the proper governance of colonized areas, and they featured as part of the commitments made by Britain

8 The Union Government regulated medical education and was responsible for the control of communicable diseases. It could also use funds channeled through the five-year plans as incentives to the state governments to pursue certain health policies. See Roger Jeffery, *The Politics of Health in India* (Berkeley: University of California Press, 1988), 113–114.

9 Amrith, *Decolonizing International Health*, 29–42. Iris Borowy, *Coming to Terms with World Health. The League of Nations Health Organization 1921–46* (Frankfurt: Peter Lang, 2009), 199–204, 325–360; Randall M. Packard, *A History of Global Health. Interventions into the Lives of Other Peoples* (Baltimore: Johns Hopkins University Press, 2016), 47–88.

10 Borowy, *Coming to Terms*, 347–356; Packard, *A History of Global Health*, 84–88.

and France to develop their colonial possessions and improve the standard of living of their colonial subjects.[11]

After World War II, the vision of social medicine became enshrined in the definition of health in the constitution of the World Health Organization (WHO). The preamble listed nine fundamental principles, of which the first stated: "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." The last principle stipulated that governments "have a responsibility for the health of their peoples which can be fulfilled only by the provision of adequate health and social measures."[12] The WHO Constitution arguably marked the zenith of the short-lived flourishing of the ideas connected to social medicine and rural hygiene in the mid-twentieth century. When the constitution was ratified in 1948, these ideas were already severely challenged.

A combination of post-war health emergencies, major advancements in health-related technologies during the war – most notably in the successful application of penicillin and DDT – and the embryonic cold war rivalry paved the way for a more narrow vision of health, focussing on campaigns against single diseases, which promised to yield immediate and measurable results. As noted by Sunil Amrith, these developments "placed the 'magic bullet' at the heart of international medicine."[13] Randall Packard identifies the emergence of a "world of technical assistance" based on the seemingly apolitical application of "quick fix solution to complex problems" in several of the agencies associated with the United Nations – UNRRA, FAO, and WHO – while the establishment of UNICEF, originally conceived as a temporary emergency fund, in many ways amplified this trend.[14] In 1949, the Soviet Union and most of the eastern bloc left the

11 Packard, *A History of Global Health*, 93–94. In South Africa, a comprehensive 1945 report suggested building a health system directed toward the African communities based on principles derived from social medicine. Farley, *Bilharzia*, 181–185.

12 "Constitution of the World Health Organization. New York 22. July, 1946." The preamble is reprinted in *Bulletin of the World Health Organization* 80 (2002), 983–984. For a recent and detailed study of the origins of the WHO definition of health and its connection to proponents of social medicine, see Lars Thorup Larsen, "Not Merely the absence of disease: A genealogy of the WHO's positive health definition," *History of the Human Sciences*, 35, no. 1 (2021): 111–131, doi:10.1177/0952695121995355.

13 Amrith, *Decolonizing International Health*, 53

14 Packard, *A History of Global Health*, 89–129, quoted from 104, 106. See also Amrith, *Decolonizing International Health*, 86–90. For UNICEF's role as promoter of narrow, techno-centric solutions see James A. Gillespie, "International Organizations and the Problem of Child Health 1945–60," *Dynamis* 23 (2003) and Niels Brimnes, "Settling the Matter on Indian Soil: Frictions

WHO, and took with them influential proponents of social medicine. For most of the 1950s the WHO was dominated by the United States – which also provided a third of the budget – and its preference for spectacular campaigns against specific diseases; campaigns that were far removed from any idea of social reform.[15] I offer the following analysis of the shifting visions of health in India as a case study of how this general transformation was played out in a significant post-colonial context.

The report of the Bhore Committee

By 1947, the independent Indian state faced massive challenges in the field of health. Core statistics made this clear. In the 1940s the crude death rate was 27 per 1,000 – more than twice the rate in England – infant mortality was 182 per 1,000 live births and life expectancy at birth a mere 32 years. More than half of the deaths in India were registered as "fevers," and the majority of these were deaths associated with malaria. One hundred million were estimated to be infected and the annual mortality given as 2.4 million. For the 1930s direct and indirect deaths from malaria contributed 37% of all deaths in British India. According to a rough estimate, the number of infective cases of tuberculosis was 2.5 million, resulting in 500,000 deaths annually. India desperately lacked medically trained personnel to change this situation. It had one doctor for every 6,000 inhabitants and more than two thirds of these were believed to be in private practice. For nurses the situation was even worse. Compared to one nurse per 300 inhabitants in the United Kingdom, the ratio in India was one to 43,000. The number of beds confirmed the picture. Whereas the United States had more than ten beds per 1,000 inhabitants – and England had about seven – the dismal ratio in British India was 0.24. These numbers made it overwhelmingly clear that it would take an unacceptably long time before India could provide even rudimentary hospital-based health care to all of its inhabitants.[16]

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between WHO and UNICEF over Vaccination against Tuberculosis, 1947–51," *Hygiea Internationalis* 13, no. 1 (2016), doi: 10.3384/hygiea.1403–8668.1613181.

15 Marcos Cueto, Theodore M. Brown, and Elizabeth Fee, *The world Health Organization. A History* (Cambridge: Cambridge University Press 2019), 62–71 .

16 *Report of the Health Survey and Development Committee*, I, 7–15, 90 97; Jeffery, *Politics of Health*, 119–22; Sunil S. Amrith, "Health in India since Independence," in *History, historians and development policy. A necessary dialogue*, ed. C. A. Bayly et. al. (Manchester: Manchester University Press 2011), 125–128.

The Indian authorities had prepared, however, an answer to the challenges ahead. In 1946, the "Health Survey and Development Committee," commonly referred to as the "Bhore Committee" after its Chairman Sir Joseph Bhore, published a hugely influential report. The Committee had been established in 1943 with the double task of conducting an extensive survey of existing health services in British India and making recommendations for their future development. The report officially suggested plans for a reformed health service in a post-war British India, but most people knew that it did in fact suggest plans for an independent, but also desperately poor, state. The report drew heavily on ideas developed in the 1930s and appeared as a clear endorsement of the doctrines of social medicine and rural hygiene. This orientation was probably influenced by its international members and consultants, including prominent proponents of social medicine such as Henry Sigerist, John Ryle, and John Grant.[17]

The report defined health in a broad sense and in terms strikingly similar to those simultaneously written into the WHO constitution: "The term health implies more than the absence of sickness in the individual and indicates a stage of harmonious functioning of the body and mind in relation to his physical and social environment, so as to enable him to enjoy life to the fullest possible extent and to reach his maximum level of productive capacity."[18] Introducing the health plan for the future, it made it clear that it gave priority to broad interventions in the environment: "At the outset, we must ensure the conditions essential for healthful living in town and country-side. Suitable housing, sanitary surroundings and a safe drinking water supply are the primary conditions for securing such a measure of environmental hygiene as is essential to ensure the prerequisites of a healthy life."[19] A few pages later, the report made an explicit reference to and aligned itself with social medicine. This approach to health was seen as "modern" and had "widened the conception of disease from the narrow view of tissue changes and microbial and other specific causes by the inclusion of social, economic and environmental factors which play an equally important part in the production of sickness."[20] It cautioned against any belief in "technological fixes," declared that the desired "new health order" could not "be achieved through a bottle of medicine or a surgical operation" and – as quoted at the beginning of this article – that it saw no magic wand able to solve India's

17 Amrith, *Decolonizing International Health*, 57–63.

18 *Report of the Health Survey and Development Committee*, I, 7. This quote illustrates that an "instrumentalized" view of health as a precondition for accelerated economic growth was also present – perhaps even significant – in texts written from the position of social medicine.

19 *Report of the Health Survey and Development Committee*, II, 2.

20 *Report of the Health Survey and Development Committee*, II, 7

health related problems in the short term.[21] In the introduction to a chapter on environmental hygiene, this position was once again stated with admirable clarity: "In the campaign for improved health, drugs, vaccines and sera can in no way replace such essentials as a hygienic home, good food, fresh air and a safe water supply."[22]

The Committee took rural India as the focal point "for it is the tiller of the soil on whom the economic structure of the country eventually rests." It unambiguously recommended that the future health service in India should be the responsibility of the state and free for all. This was, the report stated, "the modern trend" and the only way to ensure that "the poor man in the rural areas received equal attention with his richer neighbor."[23] Inherent in the vision of the Bhore Committee was the notion of a "new doctor." In a lofty tone the report stated that the "physician of tomorrow … will naturally be concerned with the promotion of the new era of social medicine."[24] The training of this "new" or "basic" doctor had, therefore, to include community, preventive, and ultimately social medicine: "Preventive medicine leads easily to social medicine, and it is as exponents of the principle of social medicine that we would wish the 'basic' doctor to go forth into the world of medicine."[25]

While the report of the Bhore Committee devoted much attention to the broader, horizontal aspects of healthcare, it did also contain sections in which it considered how to target important diseases separately.[26] The Committee's views on malaria and tuberculosis provide interesting glimpses of how it negotiated its broad vision based on ideas harking back to the 1930s with the promises of emerging technological solutions against specific diseases.

Malaria was seen as "the most important health problem in the country," and existing measures taken against it were judged clearly inadequate. These measures consisted mainly of environmental engineering and water management, and they lacked both continuity and a proper infrastructure to support them.[27] The Committee found, however, reason to believe that the time had come to change this situation. Recent successes in the war theaters in eastern

21 *Report of the Health Survey and Development Committee*, II, 3–4.
22 *Report of the Health Survey and Development Committee*, II, 218.
23 *Report of the Health Survey and Development Committee*, II, 4, 8–15, quoted from 4 and 15.
24 *Report of the Health Survey and Development Committee*, II, 18.
25 *Report of the Health Survey and Development Committee*, II, 339–341, 356.
26 This was in contrast to a report from Planning Committee of the Indian National Congress on public health, which was silent on the issue of disease specific campaigns. Jeffery, *Politics of Health*, 112–113.
27 *Report of the Health Survey and Development Committee*, I, 90–97, quoted from 90.

Asia and during an epidemic outbreak in Delhi in 1942 had shown that it was possible to control malaria, "given the determination, the money and the requisite staff." In these circumstances, the Committee argued, "we feel that there can be no excuse for Governments in this country not attempting to organize an effective campaign against the disease."[28]

While the Committee emphasized the crucial need to establish a permanent and adequately staffed malaria organization throughout India, its deliberations also considered potential technological solutions. It noted that in recent years "even more effective preventive measures against malaria have become available, including potent chemicals for the destruction of the mosquito and drugs for protecting man against repeated infection."[29] It was not least the alluring promises of DDT that crept into the report. Discussed together with the existing organic insecticide, pyrethrum (made from chrysanthemum flowers), the Committee noted that DDT was "even more effective," and further speculated whether "insecticides more potent than D.D.T. may be produced and brought into use."[30] A similar technological optimism was applied in the discussion of drugs against malaria. The Committee compared the relation between the synthetic drug mepacrine to the organic quinine (derived from the bark of the cinchona tree) to the relation between DDT and pyrethrum, and watched for further assistance from the chemists, as recent "investigations suggest that an even more effective synthetic drug, paludrine, is likely to come into use at an early date."[31]

Yet, the faith in new and simple technological solutions in malaria control remained circumscribed. While DDT appeared to be superior to pyrethrum in its longer-term effect, the Committee believed "the immediate knock-down effect" of pyrethrum to be better. It envisaged, therefore, that a combination of the two products would be used in the future and noted that "indiscriminate use of D.D.T. has been shown to result in the destruction of certain types of beneficial insects."[32] The Bhore Committee's views on DDT exemplified an emerging, but still cautious, belief in the potential of applying "technological fixes" against specific diseases. While the Committee expressed reservations towards this type

28 *Report of the Health Survey and Development Committee*, I, 93, 96–97; II, 144, 147–148. Quotes from 144 and 148.

29 *Report of the Health Survey and Development Committee*, II, 144.

30 *Report of the Health Survey and Development Committee*, II, 146, 155.

31 *Report of the Health Survey and development Committee*, II, 146. Simple low-technology efforts to prevent malaria - repellants, nets, and coils, which one might expect to be endorsed in a text endorsing the approach of social medicine – were discouraged as having "limited practical application." See II, 147.

32 *Report of the Health Survey and Development Committee*, II, 146.

of disease control, it turned out to be more difficult to maintain a critical distance to the promises of techno-centric health in the decade following the publication of its report.

Tuberculosis – ranked next to malaria as the second most serious disease in India – is particularly interesting in this context because it exemplified the "social disease" intimately tied to the conditions under which people lived. The Bhore Committee did indeed define tuberculosis as such. According to its survey of India's existing tuberculosis problem: "A social disease such as tuberculosis can be combatted successfully only if ameliorative measures on an extensive scale can be undertaken so as to improve the general standard of living, including housing, nutrition and the sanitation of the environment of the home, the workplace, and places of public resort."[33] In its recommendations for future action, the Committee similarly argued that tuberculosis should be attacked through "improvement of the socio economic conditions so as to provide for the people a higher standard of living," but deemed this to be beyond its field of enquiry. Instead, the Committee concentrated on the "direct attack on the reservoirs of infection," which had to supplement the distant goal of improved standards of living.[34] With an estimated 2.5 million infective cases of tuberculosis, and just 6,000 beds and fewer than 100 tuberculosis specialists to care for them, it was out of the question to imitate the sophisticated hospital and sanatoria treatment known to Western countries. Instead, the Committee suggested "organized home treatment" radiating from a grid of simple tuberculosis clinics as the centerpiece in the tuberculosis control strategy for a future India. It was important, the Committee emphasized, to spend existing meagre funds on "the expansion of staff and equipment and not to the erection of costly buildings."[35]

By contrast to the field of malaria, the recommendations of the Committee on tuberculosis were issued without any references to drugs and vaccines and home "treatment" presumably meant isolation, rest, proper food, and fresh air (in whatever possible combination).[36] While this was in accordance with the gen-

33 *Report of the Health Survey and Development Committee*, I, 103.

34 *Report of the Health Survey and Development Committee*, II, 158.

35 *Report of the Health Survey and Development Committee*, II, 159–164 , quoted from 164. Similar warning against costly buildings were raised in the context of malaria. See II, 150.

36 The report did not specify what kind of treatment they had in mind, beyond receiving "medical attention." See *Report of the Health Survey and Development Committee*, II, 160–161. Tuberculin skin testing for tuberculosis was used on a very limited scale in surveys before 1946; but this was for diagnosis, not for treatment. Its value was limited because it identified all infected with tuberculosis bacteria, of which only a small proportion would develop the disease. In one survey, 70% of adults tested positive. The preferred methods of identifying actual tuberculosis disease in the 1950s was through X-ray or sputum microscopy. *Report of the Health Survey*

eral approach taken by the Committee, it was also a question of timing. Streptomycin – the first antibiotic drug against tuberculosis – was discovered in 1943 but did not become generally available until after the publication of the report. The BCG vaccine, by contrast, had been around since the 1920s, and while references to BCG did surface in the medical debate in late colonial India, it was not high on the agenda. In 1944, three of India's leading experts had drafted the sections on tuberculosis for the Committee without any reference to the vaccine and, in a paper from 1946 one of these experts, P. V. Benjamin, explained that despite the promising potential of BCG, India did not yet possess the necessary health infrastructure to benefit from it. Shortly after the publication of the report, however, the approach to BCG changed. By early 1948 Benjamin advocated the adoption of the vaccine and the Government of India had released a press note declaring that it had adopted BCG. The reasons for this sudden change are not entirely clear, but foreign-assisted campaigns to introduce BCG vaccination became an option from 1948, when UNICEF decided to fund them. India was the first country outside Europa to request such assistance, and the sudden adoption of BCG does illustrate that the belief in technological solutions was on the rise in India and beyond from the late 1940s.[37]

Negotiating the legacy of the Bhore Committee

The report of the Bhore Committee became the foundational document for the development of health policies in India after independence, and its views found fertile ground with its political leadership. In 1950, Prime Minister Nehru delivered an opening address to the Third Health Minister's Conference.[38]

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and Development Committee, I, 100–101; Niels Brimnes, *Languished Hopes. Tuberculosis, the State and International Assistance in Twentieth-century India* (New Delhi: Orient BlackSwan, 2016), 43–44, 211–213.

37 Brimnes, *Languished Hopes*, 81–84, 87–89, 106–108. There might have been other reasons for not including BCG in the planning for anti-tuberculosis services in India. BCG was a controversial vaccine and its safety was questioned, particularly in the 1930s. Among the European nations most reluctant to adopt BCG was Britain. See Niels Brimnes, "BCG Vaccinations and WHO's Global Strategy for Tuberculosis Control," 1948–1983, *Social Science & Medicine* 67 (2008), doi: 10.1016/j.socscimed.2008.05.016.

38 The Health Minister's conference were held bi-annually between 1946 and 1950 to coordinate the health policies in India's provinces (from 1950 states), to which health had been devolved since the Montagu-Chelmsford reforms in 1919. After 1950 the Central Council of Health took over as an important coordinating body of health policies within the Indian Union. See Jeffery, *Politics of Health*, 114.

Entitled "The Modern System of Medicine," it emerged as a genuine lecture in social medicine. From the state's point of view, Nehru declared, individual treatment was "infinitely less important than the other important aspects, namely general public health, sanitation, hygiene, etc." Emphasizing the importance of food and housing, he voiced a poorly disguised criticism of the presumed clinical outlook of the health ministers of the Indian states: "These are not normally within your purview and probably your conference will not consider them."[39] If the views of the Committee still set the general terms of the debate in India five years after its publication, they were not entirely uncontested, and the trust in technological solutions – which had only appeared in glimpses in the report – was now more noticeable. Two examples from 1951 illustrate this: the launching of the first five-year plan and a lecture series by one of India's highest-ranking health bureaucrats.

The year after Nehru had lectured on social medicine before the Health Ministers, India's first five-year plan was launched, and its chapter on health closely echoed the rhetoric of the Bhore Committee. Having established the fundamental importance of health to national progress it went on to define health in terms similar to the Committee and, therefore, also the World Health Organization: "Health is a positive state of well-being in which the harmonious development of physical and mental capacities of the individual leads to the enjoyment of a rich and full life. It is not a negative state of mere absence of disease."[40] It further pointed to the lack of a hygienic environment, adequate diet, proper housing, safe water, and proper removal of human waste along with lack of medical care as the primary reasons for the poor health status of the Indian population. The plan listed seven areas of priority, with provision of water supply and sanitation on top. Malaria appeared as the only specific disease on the list. Under the heading "Organisation and Administration" the plan explicitly referred to the Committee and endorsed the view that establishing peripheral primary and secondary health units was "of the greatest importance in providing broad based health services to the community."[41] The plan took pride in the fact that the increase in expenditure in programs categorized under "public

39 Jawaharlal Nehru, "The Modern System of Medicine," in *Jawaharlal Nehru's Speeches*, II (Delhi: Government of India, 1954), 537, 540. While it seems obvious that Nehru was inspired by the report of the Bhore Committee, another source of inspiration could have been the report on public health by the Congress' "National Planning Committee." It was also published in 1946 and held similar and in some cases even stronger views influenced by social medicine. See Jeffery, *The Politics of Health*, 113; Amrith, *Decolonizing International Health*, 44–45.

40 Planning Commission, *First Five Year Plan*, Chapter 32, para 2.

41 Planning Commission, *First Five Year Plan*, Chapter 32, paras 5, 8, and 9.

health" was much larger than in those under "medical" and Roger Jeffery has calculated that the planned outlay for "water supply and sanitation" was twice the amount set aside for the "control of communicable diseases."[42] Plans for the provision of safe and adequate water supplies and hygienic waste disposal had the highest priority and were considered first. Emphasis was on simple solutions, be it "simple types of water supply for almost all villages" or "[s]imple types of latrines which require no special servicing." Having emphasized these areas within environmental hygiene, the plan considered nutrition which it described as "perhaps the most important single factor in the maintenance of health and resistance to disease."[43] So far, the members of the Bhore Committee would surely have recognized and approved the way the Planning Commission approached issues related to health.

Another illustration of the influence of the views of the Bhore Committee is three lectures delivered at the University of Madras by Dr. K.C.K.E. Raja, Director-General of Health Services. Before rising to his high government post, Raja had served as secretary to the Committee, and it is therefore not surprising that his views closely followed those of the report, even if he did clarify that he spoke for himself and not on behalf of the Government. Under the title "Building the Nation's Health," Raja began by defining health in what had become conventional, broad terms. He, too, pointed to the fundamental importance of hygienic housing, good food, and fresh air; he emphasized preventive campaigns and gave priority to community care over individual treatment.[44] Improving the health of the Indian population was understood as closely connected to the general effort to develop India and it could not, Raja noted, be secured by the health sector alone. This allowed him to align his views on health with India's grand project of centrally planned development:

> the health of the people depends so much on food, water-supply, housing and other factors that production in these directions must receive high priority ... (...) ... In the circumstances

42 Planning Commission, *First Five Year Plan*, Chapter 32, para 12; Jeffery, *Politics of Health*, 156–157. These numbers are notoriously difficult to use, because they were outlays, not funds actually spent. Moreover, significant contributions from state budgets and international assistance might change the picture. Anti-malaria programs received, for instance, massive funding from the United States. See Jeffery, *Politics of Health*, 194–200.

43 Planning Commission, *First Five Year Plan*, Chapter 32, paras 12, 15–31, quoted from 17, 19, 20, and 23.

44 K. C. K. E. Raja, *The Building of the Nation's Health*, The Dr. Lakshmanaswami Mudaliar Endowment Lectures, (Madras: University of Madras, 1951), 2, 6, 10

> planning can be done only by a body which is able to take a comprehensive view of the whole situation. This is the task the Planning Commission in New Delhi is facing.[45]

If both the Planning Commission and Raja remained loyal to the basic views of the Bhore Committee, their approach to malaria and tuberculosis illustrated the growing belief in the potential of new technologies. While the five-year plan did refer to the coordination of several existing measures taken against malaria, including "malaria engineering consultation" and treatment with anti-malarial drugs, DDT clearly occupied center stage. According to the plan, the use of DDT had "brought about far reaching changes in the technique of the control of malaria and it has been successfully controlled with dividends several times the expenditure involved." In contrast to the report of the Bhore Committee, the plan contained no references to pyrethrum. Instead of reserving up to 120,000 acres for the plants yielding pyrethrum, as suggested by the Committee, the plan opted for the construction of two chemical plants "to ensure the sufficient supply of DDT at reduced costs to meet the needs of the country."[46] A similar enthusiasm for the new insecticide was apparent in Raja's lectures. He found the results of initial DDT-based anti-malarial campaigns in Ceylon (Sri Lanka) and Bombay State "striking beyond measure," and noted how spraying had made mosquito nets superfluous on the night trains from Calcutta to Delhi. To Raja, controlling malaria with DDT appeared alluringly simple:

> It must be remembered that an anti-malaria campaign under present day conditions largely dispenses with the detailed study of bionomics of the vector species by expert entomologists and of the application of the result of such studies to the adoption of control measures by naturalistic and other methods. Such studies may perhaps be still required under special circumstances but, by and large, a direct attack on the adult mosquito through insecticides has become the method of choice. In the circumstances the problem of malaria control has become considerably simplified from the point of view of technical staff.[47]

In the field of tuberculosis, the plan repeated the double-sided attack suggested by the Bhore Committee: a long-term increase in the standard of living and a more immediate effort to isolate and "treat" patients. But the top priority in the program was new: preventive BCG vaccination. The plan resolved that preventive measures yielded "the best return for the limited resources now available," and found BCG an effective and safe measure. Successful mass vaccination

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45 Raja, *The Building of the Nation's Health*, 3–36.

46 Planning Commission, *First Five Year Plan*, Chapter 32, para 33 and 34.

47 Raja, *The Building of the Nation's Health*, 8. Pilot projects in malaria control based on DDT-spraying began as early as 1949 in India. Amrith, *Decolonizing International Health*, 101.

over 15 to 20 years promised to reduce the mortality to a fifth. Moreover, UNICEF and WHO had agreed to assist – financially and technically – in a countrywide mass vaccination drive. Having accorded top priority this new remedy, the plan followed the recommendations of the Bhore Committee by emphasizing the expansion of district clinics, which were envisioned as "simply designed and cheaply constructed." While the number of tuberculosis clinics was supposed to grow from 127 to 180 in the plan period, the number of BCG vaccination teams was expected to increase from 73 to 137.[48]

Raja did not discuss the initiatives taken to control tuberculosis, but revealed that he too was a firm believer in modern medical technology. Discussing indigenous traditions of medicine he dismissed the claim that these traditions offered cheaper remedies than imported drugs: "with the coming into existence of antibiotics, sulpha and other synthetic drugs, medicines of high potency against all major infections widely prevalent in India are available."[49] This remark elegantly sums up the prevalent discourse on medicine and health in India by 1951. The recommendations of the Bhore Committee stood their ground, but the modernist, techno-centric elements were accentuated.

Towards techno-centrism

India's Union Minister of Health from 1947 to 1957, Rajkuimari Amrit Kaur, appears as a central figure in India's embrace of the increasingly influential techno-centric approach to health. It is not difficult to find examples of Kaur lauding the views of the Bhore Committee and its emphasis on social medicine and rural hygiene. This was, after all, the officially endorsed basis of India's approach to health. On All India Radio, for example, Kaur stated in 1949:

> Prevention is at all times better than cure and I believe that 80% of our diseases could be eliminated if we had proper housing and therefore no overcrowding, proper drainage and sewerage and therefore no insanitation, proper health education which would teach the people the art of living cleanly and eating what is good for them and, above all, enough food and milk and a pure water supply everywhere.[50]

More than a decade later – in the address given when she received the Rene Sand Memorial Award – Kaur referred to malnutrition and overcrowding as the under-

48 Planning Commission, *First Five Year Plan*, Chapter 32, para 38–43. Quoted from para 40.
49 Raja, *The Building of the Nation's Health*, 23.
50 Rajkumari Amrit Kaur, "Problems Before India's Minister of Health," Broadcast, All India Radio n.d. Printed in *People's Health*, III, 9, June 1949, 419–421, quoted from 420.

lying condition for the unabated presence of tuberculosis in India and saw "the complete absence of environmental hygiene and sanitation" in rural India as "a sine qua non of ill health."[51]

Kaur's articulation of the virtues of social medicine was overshadowed, however, by her enthusiasm for advanced medicine and the technology-based solutions offered by modern science and western donors. One of Kaur's major achievements was the establishment of the All India Institute of Medical Sciences (AIIMS), which would, she argued, provide not only "first class post-graduate training" but also "facilities for the highest type of research." While she did hope that AIIMS would teach social pathology "every bit as much" as clinical pathology and even quoted Henry Sigerist in this context, it remained crucial to her that India "did not lag behind the advanced countries of the world, where such dynamic progress has, of recent years, been made in modern medicine."[52]

Kaur was not only enthusiastic about new and advanced forms of medical technology, she was also a champion of technical assistance from abroad and a central figure in international health collaboration after World War II.[53] At the Ministers Health Conference in 1950, when Nehru had reminded the gathering of the benefits to be derived from social medicine, Kaur found it relevant to remind the ministers of the potential in international assistance. Over the last two years, she informed her audience, India had received assistance from WHO and UNICEF for programs to control tuberculosis, malaria and venereal disease and to improve maternal and child health.[54] In 1950 she was elected president of the World Health Assembly, and she spoke regularly with reverence of both the WHO and UNICEF and their role as donors. Addressing the fourth World Health Assembly in 1951, she urged that the WHO be given a larger budget, because the developing countries were "pining for more programmes and more help."[55] When the foundation stone of AIIMS was laid – thanks to a large donation from New Zealand through the Colombo Plan – Kaur declared that when-

51 Rajkumari Amrit Kaur, "Social Service Through the Ages," in *Selected Speeches and Writings of Rajkumari Amrit Kaur*, ed. G. Borkar (New Delhi: Archer Publications, 1961), 336. Sand was recognized as a prominent figure in the development of the doctrine of social medicine.

52 Rajkumari Amrit Kaur, "A Dream Come True," in *Selected Speeches*, 278–282.

53 Amrith has convincingly argued that India assumed an important role as both primary testing ground and showcase for the technical assistance provided through UN-related organizations. Amrith, *Decolonizing International Health*, 13.

54 Rajkumari Amrit Kaur, "Address to the Third Health Ministers' Conference," *People's Health*, IV, 12, September 1950, 501.

55 Rajkumari Amrit Kaur, "On International Co-operation," in *Selected Speeches*, 264.

ever "we need the services of medical personnel from abroad we shall not hesitate to welcome their collaboration and their help in our endeavour."[56] In 1961, she looked back at a decade of WHO and UNICEF assistance in tuberculosis control and expressed her gratitude for the "knowledge made available to us from other countries" and the help given by WHO, UNICEF, and the International Union against Tuberculosis.[57]

With her enthusiasm for the assistance available through international donors came support for the uniform, techno-centric solutions on offer. Kaur was an ardent advocate of the mass BCG vaccination programme and confronted both publicly and privately the significant opposition that met this endeavor.[58] She similarly embraced the application of DDT against malaria, which received massive bilateral funding from the United States.[59] In 1956 – one year after the World Health Assembly had voted to eradicate the disease – she told the Central Council of Health that it was important to shift the ambition from malaria control to eradication. Due to the emergence of resistance, Kaur explained, "we should put in an all-out effort to completely eradicate malaria within the next few years." Once again the issue for Kaur was that India could not afford "to lag behind" the rest of the world in the most spectacular public health program of the post war decades.[60] If the Bhore Committee had expressed reservations towards the "magic wand" of modern medicine, Kaur did not share them. To her, the "essential requirements" within India, to which the WHO could contribute, were modern facilities for the production of DDT and penicillin. It was not entirely unjustified, therefore, that Kaur's unreserved embrace of the solutions offered by

56 Kaur, "A Dream Come True," 280.

57 *Proceedings of the Eighteenth Tuberculosis and Chest Workers Conference. Held in Bangalore, January 1962*, 15–16.

58 The opposition to Mass BCG vaccination was multifaceted, but included accusations that mass vaccination betrayed the vision of social medicine. See Christian W. McMillen and Niels Brimnes, "Medical modernization and Medical Nationalism: Resistance to Mass Tuberculosis Vaccination in Post-Colonial India 1948–55," *Comparative Studies in Society and History* 52, no. 1 (2010); Christian W. McMillen, *Discovering Tuberculosis. A Global History 1900 to Present* (New Haven: Yale University Press, 2015), 91–109; Brimnes, *Languished Hopes*, 148–182.

59 From 1952, the United States provided half the funding of the malaria program. Between 1950 and 1973 public sector assistance from the United States to anti-malaria programs were more than ten times higher than to water supply. Jeffery, *Politics of Health*, 194–200.

60 Rajkumari Amrit Kaur, "On the Role of the Central Council of Health," in *Selected Speeches*, 240–241.

international agencies caused one of her critics to dismiss her as the "dupe of the WHO and the UNICEF."[61]

The transformation in India's approach to health – from being the social goal of community development to becoming an instrument in the state's pursuit of economic growth – also manifested itself in the central document outlining the official ideology of development and progress in India in the 1950s: the second Five Year Plan from 1956. Like its predecessor, the second plan pointed back to and elaborated on several ideas staged by the Bhore Committee, but it did so more modestly. The lofty rhetoric inspired by social medicine found in the introduction to the chapter on health in the first plan was substituted by a short, factual introduction listing five priorities, of which only the fourth – "an active campaign for environmental hygiene" – invoked the vision of the Bhore Committee.[62] Water supply and sanitation no doubt continued to be deemed important – the second plan proposed to more than double the funds – but it was perhaps significant that it was now treated towards the end of the chapter and appeared as a problematic program. The plan concluded that the attempt to secure safe water and proper sanitation in the first plan period had been unsuccessful, due to lack of staff, materials, and organization. In rural areas, the plan asserted, efforts had "become purely construction projects with little public health education of the villagers in the need for and use of sanitary facilities."[63] There was a need for an increased supply of iron pipes, a better organization and improved training facilities for public health engineers and sanitary inspectors. The second plan's chapter on health also addressed nutrition, but in much less detail than the first plan.

If the second plan appeared ideologically less committed to the views of the Bhore Committee, but retained several of its recommendations, the techno-centric hopes aired in the first plan were consolidated in the sections on malaria and tuberculosis. The plan presented the malaria program, begun in 1954, with an exclusive focus on DDT spraying, and noted that the first year of the program had reduced the number of cases by 20 million. It further contended that it was possible to get malaria under control before resistance would become a problem,

61 The critical voice belonged to the prominent South Indian political veteran of the nationalist movement and former chief minister of Madras, C. R. Rajagopalachari. Quoted in Brimnes, *Languished Hopes*, 169.

62 Planning Commission, Government of India, Second Five Year Plan, Chapter 25, para 1, accessed 7 May 2021, https://niti.gov.in/planningcommission.gov.in/docs/plans/planrel/fiveyr/welcome.html.

63 Planning Commission, *Second Five Year Plan*, paras 47–50, quoted from 48.

and discussed the transition of the program into its "maintenance phase."[64] In relation to tuberculosis, BCG vaccination remained the top priority, but the plan now also took note of the potential of another of the "magic bullets" of the 1950s: antibiotics. The emergence from the 1940s of drugs effective against tuberculosis meant that an actual cure for tuberculosis was imaginable and gave the word "treatment" a significantly different meaning than it had carried in the report of the Bhore Committee. The plan noted the new possibility to have "a large number of tuberculosis patients treated in their homes" and the extension of clinics for the distribution of drugs to these domiciliary patients became, therefore, increasingly important.[65] As a sign of the increased importance of vertical campaigns against specific diseases, the share of funds allocated to the control of communicable diseases within the overall budget for health-related items almost doubled from just over a sixth to nearly a third.[66]

India's war against disease

In 1957 the Ministry of Health published *Health in Independent India. A Decade of Progress* to celebrate the achievements in health reached during the new nation's first decade of existence. In order to provide a more lively account for a broader audience than the usual dull report, the Ministry engaged C. Borkar, an external writer with "an open mind". Borkar's account was, of course, inherently loyal to the government reports and plans, which it often paraphrased, but it wrapped up their content in the language of a military campaign. This narrative brought to the English reading Indian public a vision, which gave priority to narrow but spectacular campaigns yielding measurable results.

Health in Independent India contained short introductions by Nehru and Kaur. Nehru's message was similar to the one he had given to the Health Minister's Conference in 1950. Health did not merely mean the curing of disease, but also its prevention. Hospitals were necessary, but the broader "public health approach" even more important; and a war on disease was essentially a war "on

64 Planning Commission, *Second Five Year Plan*, paras 32–34.

65 Planning Commission, *Second Five Year Plan*, paras 36–42, quoted form 38. The references to domiciliary treatment is in itself an illustration of techno-centric optimism. The efficacy of domiciliary treatment with antibiotic drugs against tuberculosis was not clinically established until 1959. See Amrith, *Decolonizing International Health*, 150–156; Brimnes, *Languished Hopes*, 183–209.

66 Jeffery, *Politics of Health*, 156–157. While funds for "water and sanitation" also grew their shared of the planned outlay remained at roughly a third.

poverty and all its evil brood." Yet, Nehru did take notice of the increased importance of the single disease campaigns that had received so much attention within India's health policy since independence. While the broader and most important programs were being implemented "some special attention has necessarily to be paid to the curative aspect as well as to the elimination of various painful diseases, which affect large numbers of people and either kill them or disable them." Highlighting malaria and mentioning tuberculosis, he noted that Borkar's account would "indicate the progress made in this general attack on these diseases and the grand strategy that has been employed in this campaign."[67] Kaur did refer to the Bhore Committee as the point of departure for India's approach to health, and she noted with satisfaction how actual achievements – particularly the number of new medical institutions – had surpassed the recommendations of the Committee, but she also emphasized the campaigns against specific diseases. She found it inevitable that Borkar's account read "almost like a war book" because India was "really fighting a total war against man's common enemies of disease and ill-health caused by various factors. Many of the diseases, which were once considered uncontrollable, are not only being controlled, but are on the way to being completely eradicated."[68] This was a vision that was hard to find in the documents written just a decade earlier.

Borkar's main text also paid tribute to the report of Bhore Committee, and listed as the main causes for ill health in colonial India insufficient nutrition, environmental factors and lack of medical facilities. By 1947, this state of affairs "called for an all-out war on disease" and – in Borkar's narrative – the Indian nation had answered that call positively.[69] When Borkar turned to the "grand strategy" of this war, initiatives based on modern technology moved to center stage. Nutritional deficiencies were to be met by increased production and technological short-cuts, such as powdered milk and added vitamins, while the most important diseases were to be curtailed – perhaps even eradicated – by the three "magic bullets" of the period: DDT, BCG, and antibiotics. In the attempt to introduce modern technology to fight disease, India expected useful assistance from a range of donors including UN-agencies, the Rockefeller Foundation, and the government of the Soviet Union.[70]

Borkar devoted part III of his account to "Campaigns and Operations," and now the vertical single-disease campaign also came into the spotlight. After two

67 C. Borkar, *Health in Independent India. A Decade of Progress* (New Delhi: Ministry of Health, Government of India: 1957), vi–vii.

68 Borkar, *Health in Independent India*, xv–xvi, quoted from xix.

69 Borkar, *Health in Independent India*, xv–xvi, 32–35, quoted from 35.

70 Borkar, *Health in Independent India*, 50–56.

chapters on medical research, Borkar turned to India's number one enemy, malaria. While pre-independence efforts had changed little, the introduction of DDT had demonstrated a remarkable effect and eradication was now in sight. The malaria national program had reduced morbidity to a quarter within three years, and Borkar ended the chapter on this particular battle of the great war on the high note quoted at the beginning of this article: malaria was likely to be "wiped out" in the near future.[71] The fight against tuberculosis appeared less triumphant and was presented as a more drawn out contest against "guerillas." Preventive vaccination with BCG and domiciliary treatment – hopefully with new and powerful antibiotics – were the main planks in the program. Much had been done, but much also remained to be done. Referring to the situation in Denmark, where tuberculosis hospitals were closing down due to lack of patients, Borkar assured that this could happen in India too, if the "heartening progress already achieved" was sustained.[72]

Part III also considered the efforts to improve water supply and sanitation, a field that did not fit so easily with the overall triumphant military narrative. Despite the high ambitions declared a decade earlier, Borkar offered a story characterized by neglect, mistakes, "lack of timely support on the part of the State Governments," and "flagging enthusiasm of the local bodies." Some hope was instigated through a recent "National Water Supply and Sanitation Plan," but Borkar had to vaguely conclude that India was trying to do in 20 years what took 150 years in America, adding a determined "We can do it."[73] Nutrition – equally difficult to incorporate in the epic storyline of battles – was presented mainly in terms of surveys conducted, but the silver lining in this field was the successful and UNICEF-supported distribution of powdered milk to schoolchildren.[74]

If broad horizontal interventions were overshadowed by the more spectacular interventions targeting one disease at a time with powerful, modern technology, maternal and child welfare represented at least one broad field central to social medicine, which yielded measurable and promising results. In less than a decade, infant mortality in independent India had been reduced almost as much as during the final 36 years of colonial rule.[75] This was a rare success,

71 Borkar, *Health in Independent India*, 57–59, 86–94, quoted from 93–94.

72 Borkar, *Health in Independent India*, 95–105, quoted from 105. Borkar did not comment that the disappearance of tuberculosis in Denmark was achieved without recurrence to vaccine and drugs. The main explanation was an increased standard of living.

73 Borkar, *Health in Independent India*, 113–122, quoted from 115 and 122.

74 Borkar, *Health in Independent India*, 125–135.

75 Borkar, *Health in Independent India*, 157–63, quoted from 163.

which resonated with the vision of social medicine so forcefully advocated by the Bhore Committee. A decade later, this vision was still alive, but the attention had shifted towards the spectacular successes that appeared to derive from the type of vertical, techno-centric campaign, against which the Committee had warned.

Concluding remarks

The transformation from social medicine to techno-centric public health analyzed here is not surprising, but parallel to developments in other parts of the world, where they have been particularly well documented in studies of international organizations.[76] To look at this transformation from the Indian perspective is instructive for at least two reasons. First, India represented the largest post-colonial ground for the application of ideas in health promotion and disease control. Second, the report of the Bhore Committee was one of the clearest expressions of the mid-century vision of social medicine, which came to be so severely challenged in the 1950s.

The Indian case shows how visions inspired by social medicine and techno-centric promises co-existed throughout the period under investigation. The report of the Bhore Committe contained embryonic elements of techno-centrism, while Borkar's popular account of the epic battle against disease did acknowledge the importance of areas prioritized by the Committee. What happened between 1946 and 1957 was that the center of gravity shifted from improved sanitation and nutrition to the eradication of malaria and control of tuberculosis. This shift did not happen as a sharp break, but through a continuous process where techno-centric hopes gradually overshadowed the vision inherent in social medicine and rural hygiene.

Three explanations have been offered to understand this transformation in international health: post-war health emergencies, major technological advancements, and cold war rivalry. India did certainly face a massive post-partition emergency, which immediately jeopardized the Bhore Committee's carefully crafted plans for a healthier India, but at least as important was the longer-

76 While DDT based attempts of eradicate malaria and mass BCG vaccination are two major examples, which took place in most parts of the world (except that Africa was never part of the "global" malaria eradication effort), other examples from the 1950s include anti-yaws campaigns in Haiti and Indonesia, and UNICEF's attempt to encounter malnutrition with dried skim milk. See Cueto, Brown and Fee, *The World Health Organization*, 94–95; Packard, *A History of Global Health*; Jennifer M. Morris, *The Origins of UNICEF, 1946–1953* (Lanham: Lexington Books, 2015), 69–89.

term "emergency" of continued poverty.[77] India was compelled to adopt a health strategy that would work under severe financial restrictions. Spraying with DDT and mass-vaccination were significantly cheaper than building a robust health infrastructure that reached even the remotest communities. The impact of the cold war in India was ambiguous. While the ruling Congress Party in 1954 committed itself to "a socialist pattern of society" and both the Bhore Committee and Raja explicitly took inspiration from the Soviet Union, the country eagerly accepted American assistance in malaria control (also) intended to keep communist influence at bay.[78] Most important was, I would argue, the sheer availability of new technological remedies. These remedies were technologically available due to scientific advances, but they were also institutionally available due to the nature of international organizations and bilateral technical assistance. In India in the 1940s and 1950s, it was inconceivable not to invest a lot of hope in their successful application. Development, and the improved community health that was supposed to come with it, was difficult to achieve, but "conquering" specific and important diseases appeared to be easier. If the Bhore Committee had attempted to bury the magic wand, it was simply too alluring not to unearth it again and hope it could kick-start the desired process of development.

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77 Amrith, *Decolonizing International Health*, 79–83; Sanjoy Bhattacharya, *Expunging Variola. The Control and Eradication of Smallpox in India 1947–77* (Delhi: Orient BlackSwan 2006), 13–32.

78 For admiration of and inspiration from the Soviet Union. See *Report of the Health Survey and Development Committee,* II, 10–12, 339–341; Raja, *The Building of the Nation's Health*, 13, 34. For American use of assistance in public health to prevent communist expansion, see Packard, *A History of Global Health*, 112–114; Cueto, Brown, and Fee, *The World Health Organization*, 87–90. In the 1950s and 1960s the United states provided 107 million USD as health-related technical assistance to India. About 80 % of these funds were earmarked for anti-malaria programs. Grants in rupees under the "Public-Law 480" scheme were similarly dominated by funds for anti-malaria purposes. Jeffery, *Politics of Health*, 194–197.

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Gilberto Hochman

Between God and rifle: Catholic Church, development and health in 1950s Brazil

> He waits for it patiently. But the rain is a long time coming, and might not even come; when it does, it's a scant rain, a pitiful rain. . . And so he plants and hopes God will send more. Forsaken as always in his life, bitterly disillusioned. . . betrayed. . . it would be no surprise if the Brazilian peasant were not to pick up a hoe to work but a rifle, to protest.
> (Juscelino Kubitschek, President of Brazil)

I Introduction

Rain, crops, God, hoe, rifle. Words that evoke nature, expectations, resignation, tension, and rebellion. These were part of the vocabulary of the 1955 presidential campaign in Brazil, a country that had 70% of its population living in rural areas. These words were penned by the one who would be elected president that year: the doctor, politician, and former mayor of the city of Belo Horizonte and former governor of the state of Minas Gerais, Juscelino Kubitschek de Oliveira (1902–1976). After having his election challenged, including by a military uprising that led to the decree of State of Siege, Kubitschek took office on 31 January 1956, in a country still politically unstable and in economic crisis.[1]

During his campaign, candidate Kubitschek announced a program for health and medical-social assistance. This was a rarity in Brazil's long history as a republic and short experience as a democracy, initiated in 1946 and terminated in 1964 with a military coup. Only a few times had the topics of health and assistance received much if any notice in campaign platforms or overall government planning.[2] In his sector program, the future president of the republic avowed that the spotlight would remain on rural endemic diseases, which had headed Brazil's sanitary agenda since the 1910s. Added to these would be leprosy and tuberculosis (all of them encompassed under the title "mass diseases"), along with then emerging illnesses in Brazil, like cancer and heart diseases. Kubitschek's prime objective was to disassociate Brazil from the embarrassing descriptor "an immense hospital," a term coined in 1916 by doctor Miguel Pereira,

1 Maria Victoria Benevides, *O governo Kubitschek: desenvolvimento econômico e estabilidade política, 1956–1961* (Rio de Janeiro: Paz e Terra, 1979).

2 Maria Valéria J. Pena, "Saúde nos planos governamentais," *Dados- Revista de Ciências Sociais* (1977): 69–96.

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the president of the National Academy of Medicine. After all, as the future president put it, in the mid-twentieth century, "Brazil isn't only disease."[3]

This chapter deals with the relations between public health policy and development programs in Brazil in the 1950s. The focus is on the role of the powerful Brazilian Catholic Church in the creation of a development program for the Northeast region by the Kubitschek administration. Reducing regional inequalities, modernizing agriculture, and fighting poverty and hunger were considered crucial to contain the rural exodus and growing communist influence. The central issue is to discuss how the leading political and social actors in Cold War Brazil understood the possibilities and limits of development programs and public health campaigns to improve the living and health conditions of the rural population without facing structural problems: the concentration of land ownership and labor exploitation conditions.

In this electoral program, Kubitschek, or JK, as he became known, proposed the simultaneous fight against endemic diseases in the rural world and what he understood as their causes: poverty, hunger, and illiteracy. This articulation subordinated the control and even eradication of these diseases to clear goals: the recovery of the sick, illiterate, and malnourished rural man and his transformation into a healthy rural worker and to incorporate new territories into the capitalist dynamic, thereby refashioning unhealthy, non-productive regions into areas ready for agricultural production.[4] Although previous administrations had submitted development plans post-World War II, Kubitschek's proposals broke new ground by incorporating the idea of the need to break the "vicious cycle of illness and poverty."[5] JK's diagnosis blamed the cyclical drought in the Northeast region, the routine reproduction of illiteracy and poverty in rural areas, and the absence of public power actions. Furthermore, he criticized what he understood as the contemplative and condescending vision of the rural population towards its ailments by the "men of the coast," that is, of the political and economic elites.[6] Since the end of the nineteenth century, one of the few

3 Gilberto Hochman, "'Brasil isn't only Disease': Juscelino Kubitschek and the Search for a New Image of Brazil," *Translating the Americas* 3 (2015): 87–108, accessed 30 July 2021, doi: 10.3998/lacs.12338892.0003.003; Juscelino Kubitschek, *Programa de saúde pública do candidato* (São Paulo: L. Nicollini, 1955), 32–33.

4 Hochman, "Brasil isn't only Disease," 100.

5 Gunnar Myrdal, "Economic Aspects of Health," *WHO Chronicle* 6 (1952), 203–218; Charles E. A. Winslow, *Lo que cuesta la enfermidad y lo que vale la salud* (Washington: Organización Mundial de la Salud, Oficina Sanitaria Panamericana, Publicaciones Científicas, v.16, 1955).

6 Kubitschek, *Programa de saúde pública*, 7–8.

ways out for this population was to abandon rural areas, particularly those in the Northeast, for urban centers.

Despite this novelty in an election campaign, the government program for economic development – the Targets Plan – did not directly deal with health and social policies in its 31 goals, nor in the choice of sectors to be favored by the public and private investment: energy production; transportation; food production and distribution; basic industries; and education and technical training.[7] The "synthesis goal" of the Target Plan would be to construct a new federal capital: the city of Brasília, which, inaugurated in April 1960, symbolized national integration with its monumental modernist architecture built in Central Brazil and far from the coast.[8] In the project of carrying out "fifty years in five," the motto of his government, industrialization and the modernization of agriculture would be the engines of change in a Brazil that was still rural and "underdeveloped," according to post-war terminology. For Kubitschek, the increase in agricultural production would also be a response to the problem of hunger and malnutrition, denounced in Brazil by the physician, nutrition expert and political activist against hunger Josué de Castro (1908–1973). His influential book *Geography of Hunger*, originally published in 1946 and translated to English in 1951, with numerous reprints and translations, had an important impact on the international debate on agriculture and nutrition.[9] He coined one of the most significant expressions about the Brazilian development dilemma: "Bread or Steel."[10] From the developmentalist perspective of the new government, the investments in industrialization and agriculture modernization should create jobs and income, would enable the population to stay in rural areas and increase food production with positive impacts on health, nutrition, and living conditions. Investments in "steel" would produce "bread" was the response to the dilemma outlined by Josué de Castro.

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7 Rafael Ioris, *Transforming Brazil: A History of National Development in the Postwar Era* (New York: Routledge, 2014); Celso Lafer, *JK e o programa de Metas (1956–61): processo de planejamento e sistema político no Brasil* (Rio de Janeiro: Editora da FGV, 2002).

8 Vânia Maria Losada Moreira, *Brasília: a construção da nacionalidade: um meio para muitos fins, 1956–1961* (Vitória: Edufes, 1998).

9 Francisco de A. G. de Vasconcelos, "Josué de Castro e a Geografia da Fome no Brasil," *Cadernos de Saúde Pública* 24 (2008), 2710–2717, accessed 28 June 2021, doi: 10.1590/S0102–311X2008001100027; Maria L. Galluzzi Bizzo, "Ação política e pensamento social em Josué de Castro," *Boletim do Museu Paraense Emílio Goeldi*, Ciências Humanas 4 (2009): 401–420, accessed 28 June 2021, doi: 10.1590/S1981–81222009000300004.

10 Josué de Castro, *The Geography of Hunger- the Brazilian Dilemma: Bread or Steel* (New York: Monthly Review Press, 1977 [1946]).

However, a development program in a country with an immense territory and still predominantly rural population faced serious obstacles. In addition to the scarcity of private financing and the difficulties with public spending, the most significant obstacles lay at the foundations of the social order and Brazilian politics, in particular the concentration of land ownership—the "latifúndio," the local and political bosses and patronage and the exclusion of rural workers from social and political citizenship. The latter were not reached by the social protection mechanisms that had been existing for urban workers in the most important economic sectors and public servants since the 1930s. Moreover, they were excluded from political participation. The right to vote and be elected was forbidden to the illiterate, a condition of a large part of the rural population. This situation led to the disenfranchisement of 50% of the Brazilian population, according to the 1950 Census.[11] From a political perspective, the parliamentary base supporting the JK administration was heterogeneous and had representatives of large landowners, labor, and industrial leaders, which hindered negotiations and bolder public policies. While Kubitschek was elected by a centrist party, the vice president, João Goulart (1919–1976), was from the Brazilian Labor Party rooted in urban unionism and was viewed with suspicion by the military and conservative politicians.[12] On the other hand, political movements for agrarian reform and labor rights emerged in confrontation with the status quo. In the context of the Cold War, they were associated with communism, perceived as a threat to national security, and often violently repressed by governments and large landowners.[13] The aspiring capitalist modernization in the post-war Brazilian democratic experience found its political as well as structural limits.

Any development and health programs for rural areas in Brazil in the 1950s would require mediators—both institutions and individuals who were rooted in Brazilian society and lived in a large part of the national territory. In particular, according to the 1950 Census, 93.5% of the Brazilian population declared themselves Roman Catholic Apostolic. This paper presents the political initiatives, still hardly explored by the literature on health and on development, of one of the most critical mediators; the Brazilian Catholic Church. The literature dedicated

11 Angela de Castro Gomes, "População e Sociedade," in *Olhando para Dentro, 1930–1964*, ed. Angela de Castro Gomes (São Paulo: Objetiva, 2013), 56.

12 Maria Victoria de Mesquita Benevides, "*O governo Kubitschek*," in *O Brasil de JK*, ed. Angela de Castro Gomes (Rio de Janeiro: Editora FGV, 2002).

13 Bernardete Wrublevski Aued, *A Vitória dos Vencidos: Partido Comunista Brasileiro e Ligas Camponesas-1955–1964* (Florianópolis: Editora da UFSC, 1986).

to Church-State relations has not analyzed the development dimension[14] very much at all, though with some exceptions.[15] The bibliography on the history of developmentalism in Brazil recognizes this role but does not elaborate on it analytically. The voluminous autobiography of Kubitschek and his biographers mention very little about his involvement with Northeastern bishops on this issue[16] and the bibliography on health completely ignores it. However, more than just mediators in the relationship between State and society, the clergy and lay sectors of the Catholic Church saw the opportunity to participate in the improvement of health and living conditions of the population and in constructing an alternative to liberal and socialist poles.

This involvement would be important in public health issues. Kubitschek's first important decision shortly after his inauguration was the creation of the National Department of Rural Endemic Diseases (DNERu) in March 1956. Unifying several national services established in 1941, the new department was intended to fight the so-called diseases of the countryside like malaria, Chagas disease, verminosis, yaws, endemic goiter, schistosomiasis, leishmaniasis, and trachoma. These diseases were presented as obstacles to development and it was believed that they could be removed with the new "weapons" available in the armory of the public health such as DDT, sulfates, chloroquine, and penicillin through vertically centralized sanitation interventions.[17] The Kubitschek administration had tensions in the understanding of the relationship between health and development. JK claimed that "it is enough to give an injection," understanding that specific sanitary problems could be targeted apart from social, economic, and environmental changes. Nevertheless, at the same time, he understood that "it was not enough to fight diseases."[18] The new department, which became the leading

14 Scott Mainwaring, *The Catholic Church and Politics in Brazil, 1916–1985* (Stanford: Stanford University Press, 1986); Márcio Moreira Alves, *A Igreja e a Política no Brasil* (São Paulo: Editora Brasiliense, 1979).

15 Cândido P. F. de Camargo, *Igreja e Desenvolvimento* (São Paulo: Cebrap, 1971); Christian J. Schallenmueller, "Tradição e Profecia: o pensamento político da Conferência Nacional dos Bispos do Brasil (CNBB) e seu contexto social e intelectual (1952–1964)" (MA diss., University of São Paulo, 2011).

16 Juscelino Kubitschek, *50 anos em 5*, vol.3: Meu caminho para Brasília (Rio de Janeiro: Bloch Editores, 1974), 53–56; Cláudio Bojunga, *JK: o artista do impossível* (Rio de Janeiro: Objetiva, 2001).

17 Randall Packard and Peter Brown, "Rethinking Health, Development, and Malaria: Historicizing a Cultural Model in International Health," *Medical Anthropology* 17, no. 3 (1997): 181–194, accessed August 24 2021, doi: 10.1080/01459740.1997.9966136; Gilberto Hochman, "Brasil isn't only Disease," 90.

18 Juscelino Kubitschek, "Programa de saúde pública do candidato," 25, 33.

public health structure under the Kubitschek administration, was associated with the pursuit of development but only in a secondary way. This tension will be present in the proposals that emerged along with the developmentalist activism of the Northeastern Catholic Church.

There is no pre-1950s record in Brazilian history of such direct and public institutional involvement of the Catholic Church with wide-ranging government policies. Bishops and religious figures ever more likely to influence, pressure, and dialogue with the political and economic power out of public scrutiny, and challenged by the post-1945 democratic experience, began to demand the overcoming of underdevelopment and offered to share diagnoses, collaborate in the formulation of policies, and support their implementation in rural Brazil.

II The Brazilian Catholic Church embraces development

After Kubitschek's election and inauguration, the Catholic Church intensified its mobilization to promote the Northeast region's development, which then held 32% of the Brazilian population and was considered the poorest in the country, marked by the semi-arid climate and major seasonal droughts. This was a region whose electorate had turned its back on Kubitschek in the 1955 election, which added to the Church's political weight as an actor and mediator given its presence throughout the region. Historically plagued by drought, the Northeastern elites complained about the lack of attention they were given in contrast to the attention given to the south and southeast regions. The bishops and priests were pressed by poverty, disease, hunger, and the increasing reality of migration to cities in southeastern Brazil.

This new role of the Church responded to the national and international environment of the post-World War II that included a more social justice orientation of the Vatican, in particular since the publication of the Encyclical *Quadragesimo Anno* (Pius XI, 1931) issued 40 years after a pioneer Encyclical of a social nature, the *Rerum Novarum*. An important novelty was the creation of new organizations of the Brazilian Catholic Church and lay movements. The most important one was the creation in October 1952 of the National Conference of Bishops of Brazil (CNBB) to politically articulate the top of the Catholic hierarchy and greatly influenced by the bishops and archbishops of the Northeastern region.[19] This or-

19 Iraneidson Santos Costa, "Os Bispos Nordestinos e a Criação da CNBB," *Interações- Cultura e Comunidade* 15 (2014): 109–143, accessed 10 July 2021, doi: 10.5752/P.1983–2478.2014v9n15p109.

ganizational and political drive gained regional importance with the creation in 1955 of the Latin American Episcopal Conference (CELAM). After the first meeting took place in Rio de Janeiro in mid-1955, organized by the CNBB, the CELAM would become the progressive pole of the Catholic Church in the next two decades.

In the field of ideas, the so-called "Catholic developmentalism" or "development theology" derived from French Catholic humanism, in particular from the "Economy and Humanism" movement.[20] Led by the French Dominican and philosopher Louis-Joseph Lebret (1897–1966) who lived and worked in Brazil, these concepts animated Catholic lay movements. From this perspective, development should not only mean economic growth but should, above all, promote social integration, solidarity, and improvement in the quality of life of workers as part of Christian values.[21]

An essential and structuring dimension of this Catholic engagement is that it incorporated scientific and technological knowledge as a fundamental and universal lexicon for desired social changes and allowed the prelates to dialogue with engineers, doctors, educators, journalists, agronomists, economists, and sociologists who worked in universities, in the state bureaucracy, private companies, the press, and international agencies. Science began to be understood by these sectors of the Church as fundamental to a better knowledge of rural communities and underdevelopment areas where it had been intended to intervene.[22] Using science also meant trusting in the introduction of techniques and technologies to create income, increase food production, and improve public and individual health practices. Based on research and specialized knowledge, the diagnosis of rural Brazil's problems and the discussion of alternatives to overcome them technically qualified the Catholic Church and lay movements to intervene in public policies, cooperate with governments, and mediate the relationship between programs and populations. In particular, this applied to cooperation with the bureaucrats, engineers, and agronomists of the National Department of Works to Combat Droughts (DNOCS), the main, largest, and longest-lived agency

20 Alfredo Bosi, "Economia e humanismo," *Estudos Avançados* 26, no. 75 (2012): 249–266, accessed 15 June 2021, doi: 10.1590/S0103–40142012000200017.

21 José Henrique A. de Godoy, "A práxis de Lebret: economia humana, desenvolvimentismo católico e a industrialização do Nordeste," *Religião & Sociedade* 36, no. 2 (2016): 188–219, accessed 2 June 2021, doi: 10.1590/0100–85872016v36n2cap09.

22 Cândido Procópio F. de Camargo, *A Igreja e desenvolvimento*; Thiago da Costa Lopes, *Em busca da comunidade: ciências sociais, desenvolvimento rural e diplomacia cultural nas relações Brasil-EUA (1930–1950)* (Rio de Janeiro: Editora Fiocruz, 2020).

operating in the Northeast region since 1909 and with the public health doctors and officials of the campaigns against rural endemic diseases.[23]

On the other hand, the scenario of the Global Cold War in the mid-1950s demanded changes. Events such as the Chinese Revolution, the Korean War, the decolonization in Asia and Africa, and the creation of the Non-Aligned Movement had repercussions in Latin America and, particularly, in Brazil, a faithful ally of the United States in the region. Traditional pastoral action was pressured by an increasingly complex, increasingly competitive, and democratic society, with new and renewed political actors—in particular, due to the growth of organizations – the Peasant Leagues— demanding labor and social legislation and, mainly, demanding agrarian reform and the end of the unproductive "latifúndio." The Brazilian Communist Party (PCB), illegal and clandestine since 1947, was a great concern given its growing influence in rural areas[24] and the significant presence of the Communists among intellectuals, cultural, scientific circles.[25] Agrarian reform had become an unavoidable issue in the national debate, and the CNBB sought to support an intermediate path between what was understood as statist socialism and economic liberalism to overcome national problems.[26]

Catholic priests and bishops perceived the urgency of their political engagement in fighting droughts, improving the health and living conditions of the population and organizing Catholic workers' unions to dispute with the communists.[27] They responded to the "red peril" by supporting both immediate and structural actions for regional development. Thus, Kubitschek's election with a platform centered on overcoming underdevelopment was a unique opportunity for Catholics to dispute, in the field of ideas and practices, the paths to change in rural Brazil. The Brazilian bishops, in particular those from the dioceses of the Northeast, joined with government officials and specialists to diagnose problems and elaborate and sustain public policies that promote development. They be-

23 Eve E. Buckley, *Technocrats and Politics of Drought and Development in Twentieth-Century in Brazil* (Chapel Hill: UNC Press, 2017).

24 Mario Grynszpan and Marcus Dezemone, "As esquerdas e a descoberta do campo brasileiro: Ligas Camponesas, comunistas e católicos (1950–1964)," in *As Esquerdas no Brasil (1945–1964)*, vol. 2, ed. Jorge Ferreira and Daniel Aarão Reis (Rio de Janeiro: Civilização Brasileira, 2007), 209–236.

25 Marcos Napolitano, "Esquerdas, política e cultura no Brasil (1950–1970): um balanço historiográfico," *Revista do Instituto de Estudos Brasileiros* 58 (2014): 35–50, accessed 10 July 2021, doi: 10.11606/issn.2316–901X.v0i58p35–50.

26 Schallenmueller, "Tradição e Profecia," 30–40.

27 Mario Grynszpan and Marcus Dezemone, "As esquerdas e a descoberta do campo brasileiro."

lieved that this would reduce regional inequalities, keep the population in the countryside, contain the migratory movement to the cities like Rio de Janeiro and São Paulo, and fight communism. The *favela* ("slum"), the symbol of urban poverty, was seen as the most perverse result of the underdevelopment and was the focus of attention for Catholic priests and laypeople.

From the 1930s, sectors of the Brazilian Catholic Church had become increasingly involved in the promotion of techniques and technologies to improve food production, especially that of a family nature. The Church had always had a central role in education, but now it was associated with technical education including hygiene, seen as a way to improve standards of living in the rural world. To this end, one of the initiatives was the "Ruralist Weeks" (Semanas Ruralistas), meetings that spread throughout Brazil over two decades and brought together farmers, religious and government officials, and specialists in the interior cities to exchange ideas, and training on agricultural knowledge and technologies.[28] During these meetings, popular health courses were offered by local doctors, nurses, and representatives of the Ministries of Education and Health or even by parish priests. Initially, they were supported and financed by philanthropic societies, municipalities, and the private sector and then by public and even international bodies such as the Inter-American Affairs Association (IAAA) led by Nelson Rockefeller. In the 1950s, the United States Information Agency (USIA) collaborated with some of these events. From 1950 onwards, the meetings led by the dioceses become rehearsals for cooperation between the Catholic Church and government bodies and had their organizational and population mobilization bases in the parishes. They also offered an opportunity for priests and experts from different fields to conduct surveys and research on rural communities, their social and cultural characteristics and problems.[29]

Catholic bishops and priests were also directly involved in government policies such as the National Campaign for Rural Education (CNER), created in 1952 and aimed at adult literacy, hygiene practices, and improving the infrastructure of schools and teaching, an area in which the Church traditionally had great influence and tensions with public education policies. In 1955, the CNBB signed an agreement with the Ministry of Agriculture to disseminate information and assistance to farmers, courses for training priests and deacons in agricultural production and livestock, and support the "Ruralist Weeks" in the following years.

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28 Ramon F. de Souza, "As Semanas Ruralistas do Brasil: Igreja Católica e Desenvolvimento," *Outros Tempos: Pesquisa Em Foco- História* 17, no. 30 (2020), 244–267, accessed 10 May 2020, doi: 10.18817/ot.v17i30.809.

29 Ramon F. de Souza, "As Semanas Ruralistas do Brasil," 255–266.

An inflection point was the "Ruralist Week" held in September 1950 in the city of Caxambú, under the coordination of the Diocese of the Campaign, that included 71 parishes in the south of the state of Minas Gerais, at that time coincidentally governed by Kubitschek. The event was organized by the Diocese, the Ministry of Agriculture, the Ministry of Education and Health, and the Rural University of Minas Gerais to bring together priests, farmers, and rural teachers. Training courses, lectures, and meetings were held which, based on knowledge about the region and its population, generated proposals to improve agricultural production, education, and rural health and, above all, to discourage migration to urban centers.[30]

At the end of the event, the bishop of the Diocese of Campanha, D. Inocêncio Engelke, published a pastoral letter under the expressive title "With us, without us or against us, the rural reform will happen." The "Campaign Declaration" is considered the first public manifestation of a Catholic bishop favoring agrarian reform.[31] Concerned with maintaining the church's social bases, D. Inocêncio demanded the extension of social legislation to rural workers, better land distribution, credit, training of Catholic community leaders, medical and social care assistance, and education. The control of the exodus to cities and the growth of slums, spaces seen as conducive to anti-Christian ideas, required concrete actions. The church that had lost the urban working class was now in danger of permanently losing the peasants to the communists: "...the agitators are coming to the countryside. If they act intelligently, they won't even need to challenge anything. It will be enough for them to comment on the reality, to expose the situation in which rural workers live or vegetate."[32]

He advocated a "Christian land reform," i. e., in stages and without rupturing the social order, pacifically, respecting and consecrating the individual property but offering substantial changes to the rural worker and peasants. Thus, the priority should be the distribution of public land, not affecting directly the large, often unproductive rural property that was the basis of local power. The extension of individual property and the social rights was considered essential to the recovery of the humanity of the rural worker and maintenance of social stability. The 1950 Declaration claimed for this rural worker the "social agrarian jus-

30 Ibid.

31 Abdias V. de Carvalho, "A Igreja Católica e a Questão Agrária," in *Igreja e questão agrária*, ed. Vanilda Paiva et al. (São Paulo: Edições Loyola, 1983), 68–109; Nilmar de Sousa Carvalho, "O Social Catolicismo e a sua atuação no Meio Rural na Segunda Metade do Século XX no Brasil," *Faces de Clio* 5 (2019), 116–124, accessed 10 May 2021, doi: 10.34019/2359–4489.2019.v5.28716.

32 Dom Inocêncio Engelke, "Conosco, sem nós ou contra nós se fará a reforma rural (MG 10/09/1950)," *Pastoral da Terra* (São Paulo: Edições Paulinas, 1977), 46–47.

tice": land, education, credit, medical and hospital care and pension for work-related accidents and old age.[33]

In the following years, there would be other manifestations of Catholic priests and lay movements for greater access to land and its less unequal distribution, especially in dioceses in the Northeast. These voices were amplified by the creation of the CNBB and by growing demands for collaboration between the so-called "temporal and spiritual powers" for development and the reduction of injustices.[34]

The CNBB dealt with agrarian reform in several of its 1950s documents, which meant the recognition by the Catholic hierarchy that it was "in theory, timely and necessary to undertake a reform in the current conditions in which rural life is processed in Brazil, particularly regarding the ownership and use of land and the livelihoods of rural populations."[35] During the 1950s, land reform became an issue that was present in almost all meetings of the CNBB and lay Catholic movements.

The next sections analyze the role of the Brazilian Catholic Church represented by its institutional arm, the National Conference of Bishops of Brazil, and by the movement of bishops from the Northeast under the leadership of D. Hélder Câmara (1909–1999). Dom Hélder was a priest of northeastern origin, auxiliary bishop of Rio de Janeiro, and general secretary of the CNBB (1952–1964) and the most influential bishop in Latin America in the second half of the twentieth century.[36] In Rio de Janeiro, D. Hélder started a project in 1955 to improve the housing conditions of the most impoverished populations, particularly those living in *favelas*, many of whom came from the Northeast. His main objective was the urbanization of the slums and the construction of housing complexes and for this he sought public funding and philanthropic initiatives. However, it would be an incomplete and palliative solution if the precarious material conditions that encouraged rural exodus were not changed, particularly the so-called "drought polygon," the geographical name of the semi-arid climate area that includes a large part of the Northeast region. Along with Lebret, Hélder Câmara was an ex-

33 D. Inocêncio Engelke, "Conosco, sem nós ou contra nós se fará a reforma rural. (MG 10/09/1950)," 51.

34 Abdias V. de Carvalho, "A Igreja Católica e a Questão Agrária"; Osmir Dombrowski, "A opção pelo Estado: um estudo sobre o envolvimento da Igreja," *Cadernos do CEAS* 223 (2006), accessed 15 June 2021, doi: 10.25247/2447–861X.2006.n223.p41%20-%2054.

35 CNBB, "A Igreja e a reforma agrária (Conclusões Gerais da II Assembleia Ordinária da CNBB, 1954)," *Pastoral da Terra* (São Paulo: Edições Paulinas, 1979), 78–79.

36 Nelson Piletti and Walter Praxedes, *D. Hélder Câmara: O Profeta da Paz* (São Paulo: Contexto, 2008).

ponent of Catholic progressivism in the 1950s and 1960s when he became one of the important opposition voices against the military dictatorship.[37]

In a world "colonized by the development discourse,"[38] some factors allowed for the rapprochement between the Church and the Brazilian State on new foundations: a government with a modernizing program, but with the contested election, the Communist threat, disease and poverty in rural areas, the democratic dynamics, the social doctrine of the Church, and the new organizations of the Brazilian clergy.

This confluence of ideas and political agendas led to an official working meeting between Catholic clergy, politicians, and government institutions' directors and officials to formulate public policies for regional development. It was the first Meeting of the Bishops of the Northeast (IEBN), which was held in the city of Campina Grande, in the interior of the State of Paraíba, in May 1956, five months after Kubitschek took office. It was the first and the most important because it was inaugural, with broad public repercussion, and presented concrete proposals. Three years later, in May 1959, one year before the presidential election, the second Meeting of the Bishops of the Northeast (IIEBN) would take place in the city of Natal, capital of Rio Grande do Norte, in which an assessment of the agreed-on programs from three years earlier would be made. The President of the Republic, governors, and politicians from the region attended both meetings, in very different political and economic junctures, that generated recommendations and proposals, bills, and presidential decrees.

These meetings promoted by the Northeastern bishops, especially the first one, make it possible to understand the Church's proposals for regional development, the place of public health, and its articulation with the federal government in the 1950s. Furthermore, the Catholic clergy transformed its actions to overcome underdevelopment in pastoral activity, connecting Christian faith and social mission. This initial involvement influenced the most progressive Catholic thought and action strains in the 1960s and 1970s in Latin America.

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37 José H. Artigas de Godoy, "A práxis de Lebret: economia humana, desenvolvimentismo católico e a industrialização do Nordeste," *Religião & Sociedade* 36 (2016): 188–219.

38 Arturo Escobar, *Encountering Development: The Making and Unmaking of the Third World* (Princeton and N.J: Princeton University Press, 1995), 5, 142.

III When the bishops met the president: a plan for the development of the northeast

Weeks before his inauguration, Juscelino Kubitschek traveled to the United States of America and to Europe and had an audience with Pope Pius XII on 19 January 1956. In it, the Pope praised the proposal of "economic and industrial development of Brazil... to raise economic and social standards of living of the underprivileged classes." However, given the "uncertainties of the present hour," development should be associated with a Christian spiritual elevation "preventing or curbing antagonisms and class struggles."[39] Pius XII expressed the Vatican perspective that was already reverberating in Brazilian Catholicism, both among lay people and religious clergy, about a Christian path to development that was an alternative to communism and economic liberalism.

In early 1956, the CNBB moved to obtain commitments from the federal government to the Northeast region. To this end, dioceses were mobilized to gather data and information about their social conditions in their respective parishes – much of this information was collected and systematized from the former Ruralist Weeks. Strategically, D. Hélder Câmara asked the Archbishop of Diamantina, Kubitschek's birthplace, for data collected in the Ruralist week held in 1955. In the north of the State of Minas Gerais, the city of Diamantina was located within the so-called "drought polygon" and marked by rural exodus and demands for modernization.[40]

The mobilization of the CNBB produced an unprecedented event, that is, the convening for 21–26 May 1956 of a meeting of northeastern bishops, technicians, and leaders of public agencies operating in the region to analyze the problems and seek solutions to lessen the effects of drought and "depopulation" and overcome underdevelopment. Two preparatory meetings were held in May at the "Palácio do Catete," seat of the Presidency of the Republic so that diagnoses and proposals could guide the discussion and be presented at the end of what would be the first Meeting of Northeastern Bishops (IEBN). The president's direct involvement in supporting the Meeting would have made it possible to obtain in a few days "all the data that the bureaucracy would take months to provide," declared D. Hélder Câmara. The main criticisms of the northeastern bishops

39 Speech by Pope Pius XII on the occasion of the visit of the President-elect of the United States of Brazil His Excellency Juscelino Kubitschek de Oliveira, accessed 2 April 2021, https://www.vatican.va/content/pius-xii/pt/speeches/1956/documents/hf_p-xii_spe_19560119_presidente-brasile.html.

40 Ramon F. de Souza, "As Semanas Ruralistas do Brasil."

voiced by Câmara were the weight of the federal bureaucracy, the lack of data for planning, and the lack of coordination among the countless bodies that operated in the region. Behind this critical consensus regarding bureaucratic slowness, there was a veiled warning to the newly inaugurated president who, until then, had been little concerned with the problems of the Northeast. The main objective of the Meeting would be to present a proposal that would imply better articulation of the different Ministries, avoiding the dispersion of scarce resources to, as reported by a newspaper in Paraíba, "add experts and funds for enterprises capable of attracting and keeping in the region the Northeasterners."[41] There was an understanding that urban poverty, expressed in the phenomenon of the slum that so concerned the CNBB, was largely fueled by the exodus of northeastern people resulting from the drought. This cycle should be interrupted, according to bishops, by planning, investing, and coordinating public policies.

The days of the meeting would coincide with the consecration of the new bishop of Campina Grande, and there would also be simultaneous meetings of Catholic workers and students and of rural Catholic movements. The leading role of the Meeting would be the Archbishops and bishops of the dioceses of the Northeast, and the choice of the city of Campina Grande was exemplary for its objectives. With 100,000 inhabitants in the interior of the State of Paraíba, the city was one of the largest of the drought polygon and experienced all the main problems found there, such as poverty, verminosis, irregular water supply, and precarious electricity supply. Throughout May, local and regional newspapers published news about the chronic lack of water in the city, which might even cause disruption to the Meeting. Hence, they pressured governments to work towards solving the problem.[42] A journalist from Rio de Janeiro who had traveled to cover the event wrote in the most influential weekly magazine: "There is no running water and the power plant could stop without harming the city: the lighting it provides is not enough to make a newspaper. The miserable beggars, coming from all over the region, fill the busiest streets."[43]

The promise that the extension to the city of energy produced by the region's only hydroelectric plant would soon be inaugurated and water collection and distribution systems would be installed encouraged religious, politicians, and government experts to extend these benefits to other parts of the region. There was also the expectation of the creation a line of credit for small and medium-sized farmers and for workers in order to enable local food production.

41 O Norte, 10 May 1956, 1.
42 O Norte, 5 March 1956, 8; O Norte, 5 May 1956, 1.
43 Manchete, 7 July 1956.

Thus, Campina Grande could be also a pilot project with potential demonstrative effect.

At the preparatory meetings in Rio de Janeiro, themes considered fundamental to be debated were chosen: planning and investments; agriculture, rural credit, colonization; social and educational services, including health and hygiene; electrification in the Northeast made possible by the Hydroelectric Company of the São Francisco River, the first public company for the production and transmission of electricity in the country founded in 1945; and the definition of an immediate execution program. The only topic listed directly linked to who called the meeting was "The Church in the face of the problems of the Northeast." The agreed-on focus of the meeting was around concrete actions, in the short and long term, for the regional economy that would improve the population's living conditions, curbing the phenomenon of rural exodus.[44] During the second half of May, Campina Grande became the center of political attention in the Northeast and even the country. In addition to the event's participants, politicians, religious, and journalists from all over the country converged and it was necessary to "host some delegations in private homes or improvised places."[45] The Ministry of Agriculture sent a large delegation with technicians and directors from its main services, as well as directors of state banks and experts of important departments of the Ministry of Health. Others attendees included bodies dedicated to colonization and immigration, social assistance services, and military engineering, in addition to governors, mayors, deputies, and senators of the Republic. In addition, newspapers reported on the presence of representatives of the American Embassy. The city was the seat of an "exhibition that brings together all the holders of the region's dioceses, to debate the problems of the drought polygon, especially the rural exodus."[46] For a newspaper in Rio de Janeiro, it was a meeting of "exceptional significance," and given the importance and scope of its program, it was not "of a merely regional or restricted character."[47] The expectations of the bishops and politicians were great, as President Kubitschek had committed to "...announce, personally, in Campina Grande, the articulation of various federal services that will add technicians and funds

44 The documents of the IEBN were published in 1960. IEBN, *I Encontro dos Bispos do Nordeste (Campina Grande- Maio de 1956)* (Rio de Janeiro: Serviço de Documentação-Presidência da República, 1960).

45 A União, 22 May 1956, 3.

46 Jornal do Brasil, 25 May 1956, 11.

47 Jornal do Comércio, 24 May 1956, 3.

for undertakings capable of attracting and retaining people from the Northeast."[48]

There were six intense days of study group meetings and informal conversation with the presence of Archbishops and bishops of the dioceses of the northeast region, as well as dioceses of the States of Minas Gerais and the Federal Capital, CNBB leaders, directors and officials of government departments, and politicians. The public health problems were part of the discussions. The malariologist and director of the DNERu, Mario Pinotti, who later become Minister of Health (1958–1960), talked to the press about the campaigns against endemic diseases and the ambitious plan of the administration to eliminate these health scourges of the Northeast within three years' time:

> ...to cooperate in this great work with medicines, hospitalization of patients, accommodation, transport, personnel, and technical assistance. In this way, it will seek to collaborate with the other services that are now intertwining for the defense of the Northeastern, so punished by the severe and merciless endemics diseases that are rife in the region. In order to have an idea of the situation in the Northeast, suffice it to say that the DNERu is carrying out a campaign there to fight malaria, bubonic plague, yellow fever, schistosomiasis, and worms in general. In fact, however, the DNERu will intensely collaborate with this extraordinary commitment, intensifying the fight against the two very serious diseases that devastate almost the entire Northeast: yaws and trachoma.[49]

Related to yaws, an endemic disease with a strong incidence in the poorest areas, Pinotti stated that at least 200,000 cases were detected in the region. This disease would make it impossible for "thousands of Brazilians to work because their most frequent injuries are located on the feet and hands." Moreover, it could be treated, in his words, "with just one dose of penicillin," like a magic bullet, and without having to make changes in the living conditions of the affected populations.[50] To face these endemics diseases, the new department would work with 28 specialized units, both stationary and mobile, to build a public health network throughout the endemic area of the Northeast.[51]

Bishop Dom João Batista Muniz declared his hope with the activities that DNERu would carry out against trachoma after the Campina Grande meeting: "The region of Cariri [State of Ceará], which for 200 years has been a factory for the blind, will be visited by public health doctors, who will visit around

48 O Norte, 10 May 1956, 1.

49 Jornal do Comércio, 28–29 May 1956, 5.

50 Érico da Silva Muniz, *Basta Aplicar uma Injeção? Desafios e Contradições da Saúde Pública nos Tempos de JK (1956–1961)* (Rio de Janeiro: Editora Fiocruz, 2013).

51 Jornal do Comércio, 28–29 May 1956, 5.

100,000 patients."[52] According to the bishop, trachoma was brought by European and Asian immigrants, settling in that region and spreading rapidly. However, still in his words, in a few months, "at the mercy of mass medications, with antibiotics and sulfa drugs ... Cariri would have its sufferings extinguished."[53] From there, the fight would extend to rural areas across the country, he stated. He enthusiastically called for the active search of the diseased: "...do not wait for the almost blind person to come to us looking for a medicine."[54]

26 May, the last day of the Meeting, was marked by the arrival of Juscelino Kubitschek in the city and by the closing ceremony broadcast by different radio stations, and with the presence of the national press attracted by the president's unprecedented trip to the interior of the state of Paraíba. Speeches were given at the ceremony by José Américo de Almeida, writer, political leader, former minister, and former governor of Paraíba, Dom João Vicente Távora, known as "bishop of the workers," the auxiliary bishop of Rio de Janeiro and who, like Dom Hélder, was of northeastern origin, and one of the founders of the Catholic Youth Workers movement (JOC) in Brazil. The Bishop of Campina Grande, Dom Otávio Aguiar, read a message from Pope Pius XII. At last, President Juscelino Kubitschek delivered his speech. During the following weeks, daily newspapers and weekly magazines from all over the country provided news and analyzed the IEBN.

Almeida's speech, praising the president and the bishops for the historic initiative, focused on the theme of rural exodus and food inflation caused by the fall in agricultural production, drawing attention to the fact that the proposals presented by the bishops were feasible. However, he stated: "it is evident that, alone, the bishops will be able to do nothing for the benefit of the collectivities, if the strong support of all does not support them, including the constituted powers, the people, the press and the radio. Otherwise, everything will remain on the ground only of the beautiful theories."[55] Dom João Távora presented the justifications for an institution such as the Catholic Church to formulate public policies, an action that had always been criticized by Catholics and conservative politicians and which appeared in the news. For him, the Church did not interfere in any area but presented itself to collaborate with governments insofar as it understood that the technical and administrative requirements to promote development would go beyond the government institutions. The Church would be an el-

52 Diário Carioca, 17 November 1956, 11.
53 Ibid.
54 Ibid.
55 Diário de Pernambuco, 8 June 1956, 12.

ement of mediation and facilitation as well of training rural leaders who were able to "preach the love of the land and fight for the land to be provided with cultural, economic and social elements that ... would make it possible to mitigate the constraints that provoke the rural exodus."[56] These new leaders would also compete with those linked to the left-wing parties and movements that gained prominence since, as the bishop recognized, little had been done for rural workers, tenants, and small farmers.[57]

The statement by D. Hélder Câmara, the principal organizer of the EBN and political articulator of the Catholic Church, was a general presentation of the proposal of the bishops of the Northeast, of which he was the main rapporteur. Entitled the "Declaration of the Bishops of the Northeast" and signed by 19 prelates, it was an unprecedented commitment of the Brazilian Catholic Church to the idea of development, which was accompanied by a powerful document of detailed proposals for fighting drought, rural electrification, modernization of infrastructure for agriculture, financial support for rural producers, and incentives for industrialization.[58] This document contained arguments that presided over the actions of the CNBB in the mid-1950s, proposals for action, and criticisms of public authorities. The first of these was the defense of the Church's participation in matters of "material order," and its concern with not directly intervening in public policies but acting in defense of social reforms. Based on papal encyclicals, the reforms would be capable of establishing a climate of "Justice and Fraternity" and an equitable redistribution of material goods existing in human communities.[59]

The document contains a "fatherly warning to economists," including those of the JK administration. The Declaration presented harsh criticism of economic development programs that "have as their ultimate objective the increase in real income, through increased productivity."[60] This criticism was based on the Church's social doctrine, and central in "Catholic development," that denounces the concentrating effects of economic development that generated "an undignified and humiliating exploitation of the human person and nature" and produced the discord between "privileged and deprived" even with a global increase in wealth.[61] It would have generated conflicts that thus opened space for the advancement of socialism.

56 Gazeta de Notícias, 30 May 1956, 8.
57 Ibid.
58 *I Encontro*, 29–69.
59 *I Encontro*, 65.
60 *I Encontro*, 35.
61 *I Encontro*, 36.

The issue of access to land appears in the document as one of the crucial factors to "keep the man with his family in his environment" as 80% of the economically active population in the countryside would work on "other people's land."[62] The bishops detail the alternative use of public lands, particularly those around the dams and engineering works against droughts, and colonization projects with the displacement of population to more fertile areas in the Northeast that were underutilized. The most important criticism was that public works and land ended up benefiting large landowners, especially those in the sugar agribusiness, one of the bases of regional economy and political power. The document dared to demand more humane treatment for workers in the sugarcane industry, almost all of them seasonal, and the use of part of the mill lands, established in more fertile areas, for family farming. But the bishops recognized the structural limits to changes in the rural world: "the idea is to encourage the land to be owned by those who cultivate and work it, with their families, although we recognize that it is difficult, in the current circumstances, for this principle of social justice to be applied, in the specific case of the sugarcane economy."[63]

Dom Hélder reiterated the view of Rio de Janeiro's favelas as having their roots in the "rural evil," that is, in the exodus of the northeastern population resulting from poverty and drought. The issue of this "diaspora" was central to northeastern prelates' political and pastoral practice. It was an element, not just rhetorical, for spreading the understanding of the interdependence between the social problems that afflicted urban centers on the coast and in the Southeast of Brazil with poverty in the countryside. A Brazil that was modernizing and industrializing would be threatened by the negative consequences of the "swelling of cities" and "rural depopulation": violence, family and social breakdown, promiscuity, disease, hunger, and communism.[64]

The lack of planning of actions by governments in the Northeast is the most critical point considered by the bishops. A lack of knowledge of the regional reality due to lack of studies and information, a lack of experts dedicated to understanding the complexity of the regional economy, lack of coordination between the different spheres of government, pulverization of scarce resources in countless projects, programs limited to combating effects and not causes, as well as clientelism and corruption are pointed out as obstacles to any good intention, in addition to "looking to the Northeast," as the CNBB secretary-general had

62 *I Encontro*, 37.
63 *I Encontro*, 39.
64 Jornal do Brasil, 20 May 1956, 9; Tribuna da Imprensa, 29 May 1956, 2.

urged the president to do a regional plan with greater coordination of federal agencies operating in the field.

The culmination of the closing ceremony was the presidential speech. It was a response to the Declaration of the Bishops of the Northeast, making it clear to the audience that he had not come "to Campina Grande to announce miracles, nor to launch promises that cannot be fulfilled."[65] In his long speech, Kubitschek addressed the role of the Catholic Church, praising the bishops, the Catholic laity, and, in particular, D. Helder, who he said harmoniously combined "contemplation and action."[66] Furthermore, Kubitschek spoke about his vision of the Northeast and its problems and about "the dangerous unevenness of living standards between Northeast and South."[67]

The president reiterated that a State-Church cooperation would enable the conjugation of two action fronts, "the urbanization of slums and service to rural people."[68] He fully incorporated the understanding of church sectors about favelas/migrations as representing two sides of the same coin. To break this vicious cycle and "keep man in the land," governments and private initiative should solve the two main deprivations of the Northeast, water and electricity.[69] His intention to transform a part of the Northeast into "another State of São Paulo," the most industrialized state of Brazil, necessarily involved the solution of these two problems. This solution would only be viable, reinforced JK, with the "unavoidable need for integration between the various organizations that work in the Northeast."[70] Until then, the actions were marked by the "dispersion of resources" and "dispersion of forces" between federal, state, and municipal agencies and private companies, as well by emergency responses for humanitarian crises when major droughts occur. He called for the Church to appeal to "the men of money" in the region to invest in it. A topic that had been debated in Brazil ever since 1950 was the limits of the public resources to promote development.[71] Coordination, planning, and financing mechanisms were presented as commitments by the president for a development plan for the period of 1957–1960, starting with a pilot experience in Campina Grande.

The proposals contained in the "Declaration of the Bishops of the Northeast" for emergency action and immediate execution were transformed into more than

65 *I Encontro*, 14.
66 *I Encontro*, 12.
67 *I Encontro*, 20.
68 *I Encontro*, 17.
69 *I Encontro*, 19.
70 *I Encontro*, 25.
71 *I Encontro*, 21.

a dozen decrees, administrative measures, and allocation of resources. D. Hélder Câmara was directly involved in the definition of these measures that dealt with coordination between federal agencies, access to water, electrification, social services, and the creation of colonization and intraregional immigration centers, the latter as mechanisms for accessing public land and rural cooperatives. They were undoubtedly the most comprehensive proposals for the region since the beginning of the Republic in 1889. They were announced on national radio broadcast by the President of the Republic one week after his return from Campina Grande.

As a whole, the immediate responses to the demands of the Catholic Church still took place within the traditional framework of government intervention in the region. In particular, the so-called "drought industry" was a powerful obstacle, namely the bureaucratic structures and the economic and political interests that profit with the public works against the droughts since the early twentieth century.[72] In the case of the rural northeast, the improvement of health conditions was associated with the access to water and land, a central demand of the bishops that would promote improvements in the medium term. Of the 19 decrees proposed by the bishops and signed by Kubitschek following the Meeting, only one directly involved the Ministry of Health: the creation of five Migration Posts to take care of the health of migrants moving towards cities of the Southeast region and where medicines and clinical and laboratory assistance would be provided. Another four decrees involved health services indirectly in the constitution of Colonization Nuclei. All of these decrees demanded coordination between the National Institute of Immigration and Colonization (INIC) and the National Department of Rural Endemic Diseases (DNERu). The campaign against endemic diseases announced by the director of DNERu and debated during the IEBN was not mentioned in the closing speeches or in the documents and decrees. At this point the prevailing perspective emphasized vertically centralized sanitation interventions that were directed by technology and that focused on resolving specific sanitary problems apart from social and economic changes. According to this perspective, that was hegemonic in international health agencies, the control or eradication of communicable diseases would help to remove certain diseases which hindered the development in the short run, but promoting development was not seen as the a goal of the public health. However, there was tension with another perspective that understood socioeconomic development as a prerequisite for bettering public health, that in some demands includes a better land distribution.

72 Buckley, *Technocrats and Politics of Droughts*, 8–10.

There are absences and omissions in the 1956 meeting and in the platform drawn up by the bishops and by the Brazilian government. Not only were organized rural workers omitted from the resolutions and from the meeting itself as a relevant political actor; in addition, no discussion about right to vote for rural workers and peasants were registered. Nonetheless, the land reform as part of a development program was present in the final declaration and the demands for government and the National Congress actions: "It is not possible... that, living in contact with the rural populations of the Northeast, we can forget a word about the severe problem that represents, in our region, the poor distribution of land ownership, and, consequently its use, not yet in conditions to satisfy the interests of the community."[73]

Kubitschek transformed this immediate result of the Catholic Church's political movement into the propaganda of its commitment to the development of the region. In his radio address, JK ended by saying that he had fulfilled "...the promises made" and that "these decrees... were concrete practical acts" and would be the basis of a "Plano Nordeste (Northeast Plan)."[74] All newspapers highlighted the immediate results of the Bishops' Meeting. Some were more enthusiastic while others pointed out the current economic difficulties to sustain the actions, and the more oppositionist press denounced the electoral use of the initiative. Nonetheless, all agreed that "Mr. Kubitschek opened better paths for the Northeast region."[75] At the end of the year, the government created the Working Group for Northeast Development (GTDN) to discuss and elaborate a development plan, directed by the economist Celso Furtado (1920–2004), the leading thinker on development in Latin America and associated with The Economic Commission for Latin America (ECLA or CEPAL).

In November 1958, JK returned to Campina Grande to finally inaugurate the water supply service he had promised in May 1956. This was another moment of his administration, with the construction works of the new capital in progress and with the political and economic challenges to implement his Targets Plan. On the other hand, during the same year the Northeast region faced one of the most extensive droughts of the decade, causing a humanitarian crisis with the displacement of thousands of people to coastal cities and state capitals.[76]

73 *I Encontro*, 47.

74 *I Encontro*, 126.

75 Diário de Pernambuco, 30 May 1956, 3.

76 The Presidency of the Republic published a propaganda pamphlet with JK's speeches in 1956 and 1958, followed by an address by the Minister of Roads and Public Works celebrating the commitments made to the bishops and the population. Serviço de Documentação, *Campina*

The construction of Brasilia, promised to be inaugurated in 1960, attracted large contingents of unemployed and landless workers and drought scourged families from the Northeast that reinforced the need of Migration Posts along the roads with social and health services. The feeling of "Mission Accomplished" in 1958 in bringing water to the largest city of drought polygon indicated a maintenance of a traditional pattern to be followed in terms of public services and works. But the protection of the population from cyclical droughts claimed a regional economic development plan demanded by the bishops yet to be presented in full. The growing political tensions in rural areas from the actions of rural workers' organizations, especially with the struggle for agrarian reform and the recurrent drought crisis, made the need for more structural responses urgent in the vision of progressive sectors of the Church and the developmentalist economists of the government.

In the field of health, the JK administration launched in 1958 the Malaria Eradication Campaign (CEM) following the World Health Organization (WHO) recommendations.[77] This program mobilized a large part of the Ministry of Health's resources but did not directly dialogue with the regional development initiatives that emerged from the cooperation between Church and the government. Malaria would be elected "the obstacle" to development that, it was believed, could be removed within a short period with the use of antimalarials drugs and insecticides with residual action without intervening in the so-called social determinants of the disease. This same restricted perspective of the relationship between health and development was adopted in campaigns against other rural endemics announced in Campina Grande such as hookworm (antiparasites drugs), yaws (penicillin), endemic goiter (iodized salt), and trachoma (sulfa drugs).

Despite all its limits, the Campina Grande Meeting and its immediate results changed the terms of the development agenda of the Northeast in the 1950s. It was a political victory for the articulation led by sectors of the Catholic Church at a crucial moment in the Brazilian democratic experience and at the beginning of the mandate of a president elected with the platform of industrialization and modernization. This alliance between the Catholic Church and the Kubitschek administration responded to different ideas, interests, and pressures in the regional, national and international context. When it entered the public debate of-

Grande: Missão Cumprida (Rio de Janeiro: Serviço de Documentação, Presidência da República, 1960).

77 Gilberto Hochman, "From Autonomy to Partial Alignment: National Malaria Programs in the Time of Global Eradication, Brazil, 1941–61," *Canadian Bulletin of Medical History* 25, no. 1 (2008), 201–232, accessed 20 September 2021, doi: 10.3138/cbmh.25.1.161.

fering proposals and its mechanisms of social and political mediation, the bishops also placed themselves as observers and evaluators of the government's performance. As D. Hélder Câmara declared on the occasion, "Juscelino will do it, and the clergy will be vigilant."[78]

Epilogue

In May 1959, the Brazilian Catholic Church organized the II Meeting of the Bishops of the Northeast (IIEBN) in the coastal city of Natal, capital of the State of Rio Grande do Norte.[79] The diocese of Natal was the most progressive of Brazil and ever since 1945 had been engaged in the discussion of "underdevelopment" problems and solutions that were within reach of pastoral action.[80] With the presence of Kubitschek, the meeting was intended to evaluate what had been accomplished since the first meeting in a context of much more tension in rural Brazil. As an epitome of this process of interaction between the Church and the Kubitschek administration, the government presented what it called "Operation Northeast," a complex and articulated regional development plan proposed by the GNDT. This plan was the basis for the most important institutional and political achievement: the creation in December 1959 of a regional development agency, the Superintendence for the Development of the Northeast (SUDENE), linked to the Ministry of Economy and initially directed by the economist Celso Furtado. There was political resistance to creating a large development agency by congress members linked to traditional economic sectors in the Northeast and federal agencies established in the region such as DNOCS. The role of the bishops, in particular D. Hélder Câmara, was influential in the creation of SUDENE.[81]

In 1959, the agrarian reform would be an unavoidable theme. Despite adopting the same collaborative approach, the meeting in Natal took place in a political and social context that was much more contentious, both at home and abroad. It happened just over a year after the presidential elections and five months after the victory of the Cuban Revolution that inaugurated a new

78 Manchete, 9 September 1956, 48.

79 *II Encontro dos Bispos do Nordeste (Natal-Maio de 1959)* (Rio de Janeiro: Serviço de Documentação, Presidência da República, 1959).

80 Cândido Procópio F. de Camargo, *Igreja e desenvolvimento*.

81 Celso Furtado, *O Nordeste e a saga da Sudene (1958–1964)* (Rio de Janeiro: Contraponto/Centro Internacional Celso Furtado de Políticas para o Desenvolvimento, 2009); Celso Furtado, *A Fantasia Desfeit*a (Rio de Janeiro: Paz e Terra, 1989, 2nd ed.), 33–80.

phase of the Cold War in Latin America. This was particularly due to the rural workers' movement in the Northeast, where the agrarian reform banner was gaining momentum and political density, becoming a relevant and divisive issue on the national political agenda. While official documents underscored continued Church and government cooperation, the Second Meeting saw many evaluations of the initiatives engendered at the first, and these were not always positive. At the end of the meeting, a new "Declaration of the Bishops of the Northeast" was presented.[82] It was a more forceful document on the agrarian question and more explicit, albeit careful, in criticizing the plans agreed upon and not carried out by the government. The "Natal Declaration" pointed out actions in education, sanitation, and health along the same lines as those in Campina Grande, indicating that they would be the most structural actions such as industrialization, modernization of agriculture, and land redistribution. The greatest advance was the creation, from the experiences of more progressive dioceses, of education and literacy programs using radio, including health education, which would point to the possibility of electoral and political inclusion of the rural population.[83]

The history of the Brazilian Catholic Church's unprecedented involvement with development programs in the second half of the 1950s reveals the political and social tensions in Cold War Brazil and the ongoing debates on overcoming underdevelopment, particularly in the search for reducing regional inequalities. Moreover, the health program of the Kubitschek administration and the developmental activism of the bishops of the Northeast region bear and unveil tensions between two positions: one was characterized by a more circumscribed understanding of the relationship between health and development, clearly associated with the eradication of malaria and the control of rural endemics. The other position offered a broader perspective that recognized the need to face the social determinants of diseases and health, including demands for structural reforms. These tensions were present in the international health organizations and were part of the disputes over the direction of Brazilian development in the early 1960s.

There were growing fears about a more radical agrarian reform ("by law or by force") and the increasing of the violence against the Peasant Leagues and rural workers' unions. The position of prelates as mediators of agrarian conflicts and as guarantors of a development program became increasingly difficult. Moreover, the agrarian reform imagined by the Northeastern Bishops itself

82 Declaração dos Bispos do Nordeste, in *II Encontro dos Bispos do Nordeste*, 17–33.
83 Declaração dos Bispos do Nordeste, in *II Encontro dos Bispos do Nordeste*, 19.

began to be perceived as similar to that of the communists by the landowners and conservative politicians. The creation of a regional development agency was, in a sense, the realization of the demands of the bishops since 1956 and a routinization of the development practices that reconfigured their relations with the federal government. The scenario for the next five years would be one of instability and political and social conflict. For many, the future would bring tragic days, with more rifles and less contemplation, and the end of democracy in 1964.

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Xun Zhou

Triumph or tragedy: unintended consequences of political planning and social engineering in Maoist China

Using the Maoist anti-schistosomiases campaign as case study, this chapter explores the complex and dynamic relationships between politics and health. It argues that utopian solutions linking health to absolute political goals are bound to frustrate and disappoint those most directly affected. The centralized approach to people's health, as seen with the anti-schistosomiases campaign, was neither politically effective nor it was feasible. Furthermore, it had long-term negative consequences on the environment and, by extension, on human health.

Politics and health in the People's Republic of China

In modern China, politics and health are inextricably linked. From the onset of the Chinese revolution in the early twentieth century, both in its nationalist and its communist stages, public health objectives had been an integral part of revolutionary ideology linked to the survival of China and of social changes. The overwhelming poverty in China, mirrored by the poor hygiene and health of the Chinese population, signaled China's backwardness to the world. China was the "sick man of Asia" in so many ways. Revolutionaries and social reformers in and outside of China, including Western medical missionaries, believed that improving the health and medical care of the Chinese people would therefore open the door for modernization.[1] Although Mao Zedong, who became the supreme leader of the Chinese Communist Party (CCP), believed that only Communism—not Christianity or any other religion—could bring the ultimate healing to his sick country, he also understood from very earlier on in his revolutionary

1 For further readings see Bu Liping, *Public Health and the Modernization of China, 1865–2015* (Abingdon and New York: Routledge, 2017); John Z. Bowers, William J. Hess, and Nathan Sivin, eds., *Science and Medicine in Twentieth-Century China: Research and Education* (Ann Arbor: University of Michigan Center for Chinese Studies 1982); AnElissa Lucas, *Chinese Medical Modernization: Comparative Policy Continuities, 1930s–1980s* (New York: Praeger, 1982).

https://doi.org/10.1515/9783111015583-009

career that public health work could be utilized as a tool to win the support of the masses and that hygiene discipline could simultaneously be employed as means to "improving" individual bodies, hence turning the peasant into the soldier or the ideal mass fit for the revolutionary cause.[2] In 1933, when he was still a young communist branch leader faced with heavy criticism from the CCP central leadership, Mao urged his comrades—the CCP cadres in Jiangxi—to attend to ordinary people's everyday health needs:

> Many people suffer from boils and other ailments. What are we going to do about it? All such problems concerning the well-being of the masses should be placed on our agenda. ... We should convince the masses that we represent their interests, that our lives are intimately bound up with theirs. We should help them to proceed from these things to an understanding of the higher tasks which we have put forward, the tasks of the revolutionary war, so that they will support the revolution and spread it throughout the country, respond to our political appeals and fight to the end for victory in the revolution.[3]

After the CCP seized power in 1949 and established a strong centralized communist state, the People's Republic of China (PRC), health played an outsized role in the internal politics of the new state. Throughout the Mao era, public health work came to be one of the central means of impacting and influencing the "masses." Public health campaigns were political campaigns, and, at the same time, the CCP leadership understood the propaganda power of promises of healing and health.[4] Health also appeared in complex ways to define the PRC globally.

Between 1949 and 1983—for more than 30 years—the CCP leadership made eradicating diseases and improving the health of the entire population a central pillar of its policies.[5] By the beginning of the 1980s, the official Chinese statistics, based on the 1981 census, showed that life expectancy had increased from around 40 years in 1949 to close to 70 years, although Banister and Preston's

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2 Charles P. Cell, *Revolution at Work –Mobilization Campaigns in China* (New York: Academic Press, 1977), 44–46; M. Foucault, *Discipline and Punish: The Birth of the Prison* (London: Penguin, 1995), 135.

3 Mao, "Be Concerned with Well-Being of the Masses," in *Selected Works of Mao Tsetung*, vol. 1 (Peking: Foreign Language Press 1965), 147–152.

4 For a case study, see Nianqun Yang, "Disease Prevention, Social Mobilization and Spatial Politics: The Anti Germ-Warfare Incident of 1952 and the 'Patriotic Health Campaign'," *The Chinese Historical Review* 11, no. 2 (Fall 2004): 155–182. For further reading, see Zhou Xun, *The People's Health: Health Intervention and Delivery in Mao's China* (Montreal: McGill-Queen University Press, 2020).

5 For further readings see David M. Lampton, *The Politics of Medicine in China: The Policy Process, 1949–1977* (Boulder, CO: Westview Press 1977); Sheila M. Hillier and J.A. Jewell, *Health Care and Traditional Medicine in China, 1800–1982* (London & Boston: Routledge & Kegan Paul, 1983).

study suggests the latter number was overstated.[6] A few years later, analyzing anthropometric data and morbidity patterns, the Nobel Prize-winning economist Amartya Sen concluded that "China has achieved a remarkable transition in health and nutrition."[7] In his keynote address to the fifty-second World Health Assembly on May 18 1999, Sen cited Maoist China and the Indian state of Kerala as positive examples to make the argument that political will and a state-sponsored program of "skilful social support of health care, education, and other relevant social arrangements" were key to health improvement, and that better health would in turn contribute to economic growth.[8] Even before Sen's assessment, in the "Long 1970s" and in the context of the Cold War, the People's Republic of China was also most identified by many international health stakeholders as a "positive deviant" in achieving better health outcomes with limited resources. Along with the Barefoot Doctor program, the PRC's anti-schistosomiasis campaign was widely cited around the world as evidence of the country's purportedly superior primary healthcare system. Like Sen, many observers argued that the CCP's political will was a key to the PRC's success story.[9]

While the CCP's political vision and ability to mobilize the masses may have contributed to an improved healthcare system and, ultimately, to overall better health, e. g., longer life expectancy and reduction in infant mortality, political factors have also had unintended yet truly negative consequences for the people's health. On 8 May 1958, speaking at the Second Session of the Eighth Communist Party Congress, Mao announced that the PRC would make the superhuman breakthrough to achieve the Great Leap Forward by "mak[ing] the high mountain bow its head; mak[ing] the river yield the way."[10] The utopian project

6 Banister, J. and S. H. Preston, "Mortality in China," *Population and Development Review* 7, no. 1 (1981): 98–110.

7 Jean Drèze and Amartya Sen, *Hunger and Public Action* (Oxford: Clarendon Press; 1989), 204.

8 Amartya Sen, "Health in Development," *Bulletin of the World Health Organization* 77, no. (1999): 619–624. Also see Amartya Sen, "The Economics of Life and Death," *Scientific American* 268, no. 5 (1993): 40–47, accessed 12 July 2021, http://www.jstor.org/stable/24941476.

9 For examples see Victor and Ruth Sidel, "Barefoot in China, the Bronx, and Beyond," in *Comrades in Health: U.S. Health Internationalists, Abroad and at Home*, ed. Anne-Emanuelle Birn and Theodore M. Brow (New Brunswick, NJ: Rutgers University Press 2012), 119–133, doi.org/10.36019/9780813561226–010; Joshua Horn, *Away with All Pests: An English Surgeon in People's China* (London and New York: Monthly Review Press, first paperback edition, 1971 [1969]). For further reading, see Zhou, "chapter 9," in *The People's Health: Health Intervention and Delivery in Mao's China*.

10 Mao Zedong, "The First Speech May 8, 1958," *Speeches at The Second Session of the Eighth Party Congress*, accessed 11 August 2021, https://www.marxists.org/reference/archive/mao/selected-works/volume 8/mswv8_10.htm.

of the Great Leap Forward that aimed to transform China into an industrial superpower and ultimately the first country on earth to enter communism—the superior form of modernity—led to the worst famine in human history. It lasted for four years between 1958 and 1962 and claimed tens of millions of human lives as well as causing a massive loss of wildlife. At the same time, the program of transforming the Chinese countryside into a "disease free socialist garden" through health improvements and by conquering diseases,[11] as seen in the internationally acclaimed anti-schistosomiasis campaign, also had unplanned and lasting negative consequences for the environment and hence for the people's health. As this chapter demonstrates, in a massive drive to eradicate schistosomiasis, which was viewed as integral to end rural poverty, the application of molluscicides, as well as the use of radical engineering interventions such as land reclamation to kill snails, damaged the natural ecosystem. Such physical changes in the environment also conflicted with the system for water conservation, contributing to the severe flooding that still haunts the residents of the impacted regions along the Yangtze river and its flood plain. At the same time, human exploitation of the environment, as part of the agricultural expansion that aimed to end rural poverty and conquer diseases such as schistosomiasis, exposed the wider population to the disease and increased the number and geographic distribution of those becoming ill from it.

Eradicating schistosomiasis and the "socialist upsurge in the Chinese countryside"

Interrelated with the predominant agricultural way of life, especially for rice-growing farmers in rural China, "schistosomiasis japonica" (schistosomiasis hereafter) has been endemic in many of the rice-growing regions along and south of the Yangtze River. Historically, the disease had evoked widespread fear in these regions. In the first half of the twentieth century, social reformers, many of whom were Western trained public health experts, linked the disease to infertility and hence a major contributing factor for under population and poor productivity, which were perceived as the underlying causes of China's rural poverty. Chen Fangzhi was a graduate of the Imperial Tokyo University's Medical

11 Ke Qingshi, "劳动人民一定要做文化的主人 [The Labour Mass Must Become the Master of Culture]," *Red Flag Magazine*, no. 1 (1958): 28–32; "渭河岸上一朵花——甘肃武山县大柳树村的变迁 [The Transformation of Big Willow village in Gansu province's Wushan county]," *People's Daily*, October 1958, 10.

School who became the first director of the Nationalist Ministry of Interior's Sanitary Department and who later headed the Nationalist Ministry of Health's Central Hygiene Laboratory in Shanghai. He, for instance, labelled schistosomiasis "the disease of national humiliation" (国耻病). According to him, it injured China's national economy as well as people's livelihoods, and argued that controlling schistosomiasis should be a "shared responsibility" for every Chinese person.[12]

Immediately upon the founding of the PRC in 1949, schistosomiasis was elevated to one of the most serious diseases that needed to be combated. At the time, Jin Baoshan (known outside of China as P. Z. King), a graduate of Johns Hopkins School of Public Health who went on to pioneer preventative medicine and lead public health work for the Republic of China (ROC) as well as serving as the Director General of the National Health Administration during World War II, estimated that nearly 20 million people throughout rural China were infected with schistosomiasis.[13] Using varied and incomplete Chinese data, however, Willard H. Wright, the head of Tropical Diseases Division at the USA National Institutes of Health and a member of the newly founded WHO's Study-Group on Bilharziasis in Africa, gave a much higher number of nearly 33 million.[14] Viewed as vital to the national security, and to the productivity and the military manpower of the new state, fighting schistosomiasis came to stand for fighting for socialism in the PRC. The national anti-schistosomiasis campaign linked medicine and public health work with the ongoing legitimization of the new order. Furthermore, as schistosomiasis was a disease which afflicted people in many parts of the underdeveloped world, it was thought that it would bring prestige to the new communist state as well as to Chinese scientists if the PRC were the

12 一九四九年三月陈方之为浙江地方病防治所抄在现阶段抢救血蛭病步骤之商酌 [Chen Fangzhi's Suggestion Regarding the Current Procedure for Emergency Treatment of Schistosomiasis (1950–1)], J166–003–001, 1–2, 12.

13 Jin Baoshan, 地方病在广大农村的重要性 [Endemic Diseases in Rural Countryside], 大众医学 *Popular Medicine*, no. 2 (1950): 37–39.

14 Willard Wright, "Bilharziasis as a Public Health Problem in the Pacific," *Bulletin of World Health Organization* 2, no. 4 (1950): 583. Writing in 2006, Professor Yuan Hongchang of the School of Public Health at Fudan University, a renowned expert in schistosomiasis control in the PRC, maintained that the actual numbers of infection between 1949 and 1950 remained largely a "mystery": the infection figures varied from 20 million to 50 million, due to incomplete and often unreliable data at the time. See Yuan Hongchang, "新中国建立前及初期我国血吸虫流行情况 [Schistosomiasis Prevalence Prior to and in the Early Years of the PRC]," in中国血吸虫病防治历程与展望 – 纪念血吸虫病在中国发现一百周年文选 [*The PRC's Schistosomiasis Control and Prospect*], ed. Wang Delong (Beijing: Zhongguo weisheng chubanshe, 2006), 54–55.

first country to eliminate it. In other words, to succeed in this medical and public health challenge that "Western" experts had failed was a prize worth trying for.[15]

As time went on, the political importance of the disease grew. Towards the end of 1955, as Mao was mounting the "Socialist High Tide" to bring the socialist revolution (Mao called it a "socialist storm" 社会主义大风暴) to the Chinese countryside and to transform the "poor and blank land" into the "pest free" socialist garden, he and the State Council singled out schistosomiasis to be eradicated. It was also argued that the disease resulted from the traditional way of life. So, bringing a socialist cultural revolution to the Chinese countryside would entail eradicating schistosomiasis by changing the "prevailing custom and habit" (移风易俗). The national goal was to eradicate it in seven years. This did not happen, however. Firstly, scientists questioned the feasibility. Upon reading the official statement concerning the eradication plan, Su Delong, an Oxford trained epidemiologist who had gained experiences in schistosomiasis control during the war years and had been assigned as the scientific expert to lead the official campaign, commented: "wild boasting." He even confronted Mao and warned the chairman that eradicating the disease within seven years was implausible. Su's warning was ignored, however, and he was personally attacked for expressing doubt and for having a "bureaucratic attitude."[16] On the other hand, during the first decade of the PRC, central economic and political planning was dragged out in a chaotic and disorderly fashion across the country. As with many other aspects involved in centralization, the central authority's sense of urgency with regard to eradicating schistosomiasis caused the local responses to the complexities of the hasty implementation of such a colossal public health campaign to be fragmented and often contradictory. So, the picture that emerged was that as soon as they encountered the wide variety of human experiences of health, disease, and, indeed, changing politics, the great plans on paper were transformed into makeshift solutions that bore little or no resemblance to the original political project.[17]

To consolidate state control over the management and distribution of agricultural resources, the party introduced a number of campaigns across the countryside, ranging from grain procurement (state monopoly over grain distribution)

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15 See Zhou, "Chapter 2," in *The People's Health: Health Intervention and Delivery in Mao's China*. See also Miriam Gross, F*arewell to the God of Plague: Chairman Mao's Campaign to Deworm China* (Oakland CA: University of California Press, 2016), 43–61.

16 Shanghai Medical University Department of Epidemiology & Shanghai Medical University Archive, eds., 苏德隆教授论文选集 [*Selected Academic Essays of Professor Su Delong*], (Tianjin: Tianjin Science and Technology Press 1995), 1.

17 Zhou, "Chapter 2," *The People's Health: Health Intervention and Delivery in Mao's China*.

to developing agricultural co-operatives and improving agricultural productivity. The rural administrative machinery was constantly overburdened by these new programs. Due to the shortage of trained personnel, grassroots cadres often had to at least make attempts at multitasking. In addition to leading schistosomiasis control, public health cadres had to implement other public health programs, from the enforcement of "new-style" medicalized childbirth to engaging villagers in the Patriotic Health Campaign (1952), to helping with mass immunization and combatting seasonal infectious diseases, as well as supporting army recruitment work and enforcing the New Marriage law. They were also dragged into implementing the party's core rural policy of supporting agricultural collectivization and grain procurement work.[18] Juggling their multiple tasks, besides having little experience in disease control and a limited amount of time and resources, many focused on completing each task rather than systematically implementing the state policy. Planning was thrown out the window and responsibility was pushed around as if in a ball game. In some cases, when cadres resented what they were asked to do they came up with makeshift solutions. In several villages in Zhejiang province, for instance, with no time to mobilize the villagers to catch snails, local cadres spent the government-allocated schistosomiasis prevention funds to purchase enough snails to meet the snail elimination quota.[19]

As of the last months of 1957, however, with the advent of the Great Leap Forward, the utopian project aimed at transforming China into an industrial superpower on a par with the United Kingdom and, eventually, into the first communist country in the world, there was an even greater political demand to speed up the goal of eradication by eliminating the vector snails. Land reclamation and irrigation schemes, known as environmental control interventions, were favorable methods used to bury, and hence kill, the snails or to kill snails by destroying the habitat. Such measures were recommended by a team of Japanese experts led by Komiya Yoshitaka who were invited by the PRC's chief administrator, Premier Zhou Enlai, to help China eradicate schistosomiasis.[20] It was hoped that

18 Ren Jixian, 一个老血防战士的心愿 [A Former Schistosomiasis Control Soldiers' Wish], in *Send off the God of Plague: Schistosomiasis Control in Jiaxing*, ed. Hua Li, Jiaxing Historical Sources vol. 4 (Beijing: Keji Chubanshe, 1995), 139.

19 Zhejiang Provincial Health Bureau's Investigative Report on Zhejiang's Schistosomiasis Control, J166–003–009, 6 March 1953, 4.

20 Yoshitaka Komiya, "A Recommendatory Note for the Control Problem of Schistosomiasis," *Japanese Journal of Medical Science and Biology* 10 (1957): 461–471, accessed June 15, 2022, doi: 10.7883/yoken1952.10.461. For detailed study on the Komiya Mission, see Iijima Wataru, "Farewell to the God of Plague: Anti-Shistosoma japonicum Campaign in China and Japanese Colonial Medicine," *The Memoirs of the Toyo Bunko* 66 (2008): 59–64..

such control measures could also be combined with agricultural development and management of water resources, hence increasing the amount of agricultural land and improving the irrigation system as well as accelerating growth in fishery production. On the other hand, the Japanese experts also warned their host about the challenge of controlling the disease in a country as vast as China whose topography varied greatly.[21] Nevertheless, the prospect of more land for agricultural cultivation and better irrigation systems that would enable China to achieve an agricultural leap and eventually attain the utopian goal of becoming the first "communist paradise" on earth that would be simultaneously disease free was irresistible to the PRC leadership.[22]

Eradicating schistosomiasis was of great political importance. Mao and the PRC's other top leaders, such as Zhou Enlai, determined that the country should achieve this superhuman public health breakthrough via political will and mass participation as well as via science. The latter would mean "doing away with the mysterious notions about science" and "combining scientific research with technological revolution and the mass campaign."[23] While Ke Qingshi, the party leader in charge of the official eradication campaign, exclaimed that "we must take science seriously," science had to serve the higher political (i.e., ideological) goal.[24] On behalf of the State Council, Zhou Enlai decreed that all local authorities in the endemic regions had to incorporate schistosomiasis control into their yearly plan for agricultural and water conservation work for 1957.[25] In the last quarter of 1957, braving the freezing cold weather, the Great Leap Forward began with a massive drive to divert the water from the south to irrigate the arid yellow earth in the north as well as to control floods in the south. By January 1958, the official estimate was that over 100 million people in China were mobilized to take part in the Great Leap water conservation campaign. Between 1958 and 1962, in Hunan province's Dongting Lake and Jiangxi province's Poyang Lake, two of the worst endemic regions along the Yangtze, more than 110,000 mu (18,121 acres) of marshland were reclaimed. In the Dongting Lake along,

21 Komiya, "A Recommendatory Note for the Control Problem of Schistosomiasis."

22 Felix Wemheuer, *A Social History of Maoist China: Conflict and Change, 1949–1976* (Cambridge: Cambridge University Press, 2019), 120.

23 Lin Yang, "Here's to Better Health," *Peking Review*, no. 3 (20 January 1959): 12–14.

24 The CCP Central Committee's Nine-Man Schistosomiasis Control Committee, "Comrade Ke Qingshi's Summary Speech at the Second National Meeting on Schistosomiasis Control" (printed in April 1956), Conference Document no. 1 [internal publication].

25 国务院关于消灭血吸虫病的指示 (1957) [The State Council's Edict to Eradicate Schistosomiasis, April 1957], 4–25 December 1963, Sichuan JC 133–450, 10–12.

the total amount of cultivable land increased from 5,360,000 mu in 1954 to 7,190,000 mu.[26]

Contrary to the claim of the PRC's political planners, however, having more land for agricultural production did not bring economic improvement for the rural villagers. The increased effort of reclaiming pestilential lands for agricultural production turned out to be a public health as well as environmental catastrophe. Land reclamation and water conservancy work exposed hundreds, indeed thousands, of healthy laborers to the disease when such projects were carried out with little or no protection for those who participated in them, as this occurred during and immediately after the Great Leap Forward (1957–1962). Earlier on, Chen Huxin, the expert who had led the pilot study of controlling schistosomiasis by reclaiming the marshes for agricultural cultivation during the South Dongting Lake Reconstruction project between 1953–1956, had warned about the dangers of exposing a large number of previously fit and healthy laborers, mostly imported from non-endemic regions with zero resistance to the disease, to the risk of infection. Against such massive risk, Chen advised that it was necessary to wait until all the snails had been destroyed before the reclaimed land could be cultivated for agricultural use. He also urged all local authorities to regard the protection of laborers against infection as imperative when planning land reclamation and water conservation projects as well as agricultural work.[27] His warning was largely ignored, however. Weighing the political risk of failing to fulfill the water conservation and land reclamation quota handed down from above against the health risk of laborers, local authorities often gave priority to the former as its failure would lead to the loss of their position of power or chance of promotion and cause their region to receive fewer resources from the State Council. On the other hand, due to the severe shortage of cotton (all cotton produced was procured by the state, mainly for export) and rubber, local authorities could not supply enough of the fabric needed to make

26 几年来各地国营农场职工发生血吸虫病急性感染的一些情况[Reports about Acute Schistosomiasis in States Farms Around the Country in Recent Years], 4–15 December 1963, Sichuan JC133–450, 59; Bian Hongxiang, "Preliminary Study on the Reclamation Problems in the Dongting Lake Area," *Acta Geographica Sinica* 40, no. 2 (June 1985): 135–139.

27 Chen Huxin, "洞庭湖区域自然环境的改造在消灭血吸虫病中的意义 [Eradicating Schistosomiasis by Controlling the Environment in the Dongting Lake]," *Chinese Journal of Preventative Medicine* 5, no. 2 (1957): 73–74.

protective socks and leg wrappings as well as rubber shoes for all the workers laboring in the contaminated water or paddy fields.[28]

Land reclamation and increased agricultural activities entailed more agricultural workers being exposed to the disease, and more frequently. During the Great Leap Forward, with 33 state farms being built on newly reclaimed land, more than 30,000 workers, many of them from non-endemic regions, as well as an increasing number of livestock, were drafted to Hunan and Jiangxi provinces to work on these new, sometimes makeshift farms.[29] Schistosomiasis was the new plague for these farm employees and their families. Official statistics show that during 1960 and 1961 more than 4,000 workers from 20 different state farms suffered acute infection in that year alone, among them more than 170 workers from state farms in Hunan province who died of schistosomiasis.[30] In addition, large numbers of livestock were infected and died of the disease. In one state farm in Jiangxi province, for example, in 1960 the farm procured more than 1,100 fine wool sheep from Wenquan county in Xinjiang autonomous region, bordering Kazakhstan. In less than a year, nearly 92% became infected with schistosomiasis and died. In another state farm in Jiangxi province, 52 farm oxen out of the total number of 135 became infected and subsequently died.[31] In 1949, an official estimate showed that the cultivable land in Jiangxi province's Yujiang county was 12,468 mu, and that the total number of infections amongst farming oxen was 571 (out of 14,303). By 1957, the cultivable land increased to 33,757 mu and the number of infected farming oxen more than doubled to 1,356 (out of 16,142). The morbidity rate was 8.4 per every hundred oxen compared to 3.9 percent in 1949. The number of infections amongst rural residents also rose from 8,100 in 1949 to 13,450. The morbidity in 1957 was 20.3 percent (13,450 cases of infection out of the total number of 66,210 villagers) compared to 14.20 percent in 1949 (8,100 cases of infection out of total number of 57,066 villagers).[32] Even after the official declaration of eradication in 1958, which was backed by data that showed a drastically decreased number of snails,

28 除害灭病工作情况简报[Summary Report of Disease Prevention and Eradication], no. 5 (8 April), January–October 1959, Sichuan JC133–2684, 3–4; no. 14, 30 June, 5–6; no. 2, 20 September, 6.

29 "Reports about Acute Schistosomiasis in States Farms around the Country in Recent Years," 4–25 December 1963, Sichuan JC133–450, 59; Summary Report of Disease Prevention and Eradication, January–October 1959, JC133–2684, no. 5 (8 April): 3–4; no. 14 (30 June): 5–6.

30 "Reports about Acute Schistosomiasis in States Farms around the Country in Recent Years," 4–25 December 1963, Sichuan JC133–450, 59.

31 Ibid., 60.

32 *Jiangxi province Yujiang County Schistosomiasis Control Annals* (Yujiang, 1984), 12, 25.

human and animal morbidity rates continued to rise steadily each year for the next decade and more.[33]

Eliminating snails by land reclamation was extremely costly and wasteful. In Jiangxi and Anhui province, for instance, 10 million prime agricultural laborers were diverted to from their farming duties to help clear snails from 11 counties, leaving only elderly people to attend fields.[34] In a number of southern provinces, such as Guangdong, there were also reports that land reclamation work had exacerbated the ongoing shortage crisis.[35] In addition, the environmental control method by reclamation was into conflict with the system for water conservation, contributing to severe flooding as well as causing alkalization of the soil. Land reclamation caused siltation and reduced the lake size, which in turn decreased the lakes' flood storage capacity. Land reclamation and siltation, as well as the construction of levees, also restricted flood discharge capacity, causing the flood levels to rise even higher.[36] Studies of the Dongting Lake by local researchers showed that land reclamation had sped up the siltation process, and it in turn caused reduction of lake storage and flood discharge capacity. Between 1956 and 1977, the lake size shrunk by an average of 40 cubic kilometers per year. By 1998, the size of the Dongting Lake had shrunk from 22.667 hm^2 in 1954 to 9.2 hm^2, and the drainage capacity fell from 30.11% to 8.7%. In the meantime, the flood level rose on average by one meter, reaching a peak of 3.7 meters.[37] As the flooded area enlarged, so did the frequency of the flood, causing a serious drain on local economy.[38]

Furthermore, agricultural intensification, when it was coupled with land overuse (i.e., deforestation, land reclamation, and overgrazing), also damaged

33 Ibid., 38.

34 "News and Notes," *Chinese Medical Journals* 77 (1958): 103.

35 血吸虫病防治工作情况简报 [Schistosomiasis Control Summary Report], no. 35, 14 January 1959, Sichuan JC133–2684 (January–October 1959).

36 Min Qian, "Study on the Floods on the Poyang Lake in the 1990s," *Journal of Lake Science* 14, no. 4 (December 2002): 323–330; Zeng Tao et al., "The Dongting Lake Floods and its Future," 水利水电科技进展 [*Advances in Science and Technology of Water Resources*], 24 no. 1 (February 2004): 7–10; Mao Dehua, "Comprehensive Assessment and Analysis on the Risk Degree of Flood – Waterlogged in the Dongting Lake Region," *Journal of Natural Disasters*, vol. 10, no. 4 (November 2001): 104–105.

37 Mao Dehua, "Assessment and Analysis of Flood – Waterlogged Condition in Dongting Lake region," *Journal of Natural Disasters* 9, no. 3 (August 2000): 49; Bian Hongxiang, "Preliminary Study on the Reclamation Problems in the Dongting Lake Area," 135–139.

38 Min Qian, "Study on the Floods on the Poyang Lake in the 1990s," 329–330; Mao Dehua, "Comprehensive Assessment and Analysis on the Risk Degree of Flood – Waterlogged in the Dongting Lake region," 104–105; Bian Hongxiang, "Preliminary Study on the Reclamation Problems in the Dongting Lake Area," 137–139.

soil quality by causing land degradation, increased drought, and water logging, which in turn damaged agricultural productivity. Historically, the lakes on the Yangtze river had been major sources of water for the agricultural population living in the area, and there had rarely been any risk of water shortage. The increased land reclamation activities since the late 1950s led to a reduction of storage capacity, and drought became a new threat to these regions in addition to floods. In the 1960s and 70s, the local farmers faced severe annual spring droughts when they needed water the most for planting. In 1972, the drought was so severe that the local population living along the Dongting Lake had limited to no access to even drinking water.[39] Some villagers walked more than 20 kilometers to buy water while others had to dig more than 150 meters deep to find water.[40]

At the same time, increased amounts of ditches were built to connect the natural wetland and reclaimed agricultural land, and this changed the natural wetland hydrology by increasing the flow of water into and pass wetlands. As result, less water was retained by the wetlands. On the other hand, when it rained, excess rainwater led to the escalating problem of waterlogging, particularly in ditches and those unclaimed (decreased in size) wetland areas, then creating the new ideal environment for snails as well as mosquitoes to become quickly propagated. Unplanned, excessive reclamation as was undertaken during the Great Leap Forward period and during the Maoist anti-schistosomiasis campaign also had a serious impact on the lakes' ecosystem. Such schemes aimed at destroying the snail habitat also reduced the size of the lakes. While they succeeded in reducing the number of snails, they also reduced the number of other aquatic species living in these lakes. Chinese sturgeon, one of the world's oldest and biggest freshwater fishes, for instance, has become nearly extinct. Despite efforts to regulate overfishing and to encourage breeding, the problem persisted. One reason was the shrinking in lake size that led to habitat loss and endangered their survival. As a case study conducted in 1993 by local researchers Li Jingbo and Deng Luojin shows, land reclamation activities on the Dongting Lake after the 1950s, partly carried out as a measure to control schistosomiasis, not only damaged the lake's eco-environment but also led to the loss of invaluable biodiversity. As a result, the amount of fish—vital economical revenue and food source for the local population—decreased by more than half in

39 Bian Hongxiang, "Preliminary Study on the Reclamation Problems in the Dongting Lake Area," 136–137.

40 Xinhua News Agency and Ministry of Water Conservation Propaganda Dept., 水水水, 新华社记者眼中新国水利事业 [*Journalistic Coverages of Water Issues and Water Conservation in the PRC*] (Beijing: Ministry of Water Conservation Chubanshe, 2012).

less than 30 years. In addition, the expansion of agricultural activities led to an increase of water pollution through the use of fertilizer and other forms of polluting run-off.[41] The lake's pollution has become a serious health threat to human and aqua lives in the region. This was a truly vicious circle. By the beginning of 1970s, due to strong opposition from water conservancy and agriculture departments, such methods of controlling snails by land reclamation were gradually abandoned.[42]

Attacking snails with lethal chemicals

When reclamation initiatives ceased, snails quickly repopulated the reclaimed land, hence spreading the disease to humans and livestock who relied on the same contaminated water for livelihood. The authorities switched to killing the snails using molluscicides. As the following section shows, the switch to the chemical control method further damaged lake eco-systems in the affected regions, with long-lasting negative consequences on the environment and on human and animal health. Known as the chemical control method, killing snails with molluscicides was a favored intervention globally and endorsed by the WHO after the World War II, despite many shortcomings and confusions over its safety and efficacy.[43] In their 1957 recommendation to the Chinese host, the Japanese experts were against its use, arguing that NaPCP and other similar molluscicides were highly toxic and might "increase the resistance of vector snails." They also warned that the chemical was soluble in water and that the creeks of the Yangtze delta region could be easily contaminated by it: "In those areas the inhabitants often culture fish in creeks and sodium pentachlorphenate was proved to be poisonous for fish in a concentration of one ppm [1 ppm = 1 mg

41 Li Jingbao and Deng Luojing, 洞庭湖滩地围垦及其对生态环境的影响 [Land Reclamation and its Effects on the Eco-Environment of the Dongting Lake], *Resources and Environment in the Yangtze Valley* 2, no. 4 (1993): 342–343.

42 Mao Shoubai, ed., *Biology and Pathology Schistosomiasis and its Prevention*, 703–704; Mao Dehua, "Ecological and Environmental Problems and Their Causing Mechanisms in the Dongting Lake Wetland," *Journal of Glaciology and Geocryology* 24, no. 4 (August 2002): 446, 487–489.

43 E. Paulini, "Bilharziasis control by application of molluscicides: A Review of its Present Status," *Bulletin of World Health Organization* 18 (1958): 975–988. For further reading see John Farley, *Bilharzia: A History of Imperial Tropical Medicine* (Cambridge and New York: Cambridge University Press 1991), 269–285.

per litre]. There exists the danger to human beings because the inhabitants in these areas usually drink creek water."[44]

Awareness of its health and environmental risks did not preclude the use of this easier and comparatively cheaper method, as immediate successes were vital for the political status of the PRC leadership. Eyeing the crown of being the first in the world to eradicate schistosomiasis, the relevant authorities and some experts sought out molluscicides as the 'magic bullet' for getting the job done. Experts such as Su Delong also saw the chemical control method as a better suited strategy for China as it was economically more viable, at least in the short run. Although spraying molluscicides can effectively kill the intermediate snail host, sodium pentachlorphenate (NaPCP) and other similar molluscicides are highly soluble in water. The toxicity remained for many months or even years, as recent studies show, and continue to harm human and animal health well after the initial application.[45]

Bearing this in mind, on many occasions Su Delong stressed the importance of training villagers to take special precautions when spraying.[46] In the desperate rush to eliminate snails, however, the very real concerns over human and animal health were regularly compromised due to the severe shortage of trained personnel to carry out or supervise the spraying. In the suburbs of Shanghai, the local authority of the schistosomiasis control model county Qingpu, for instance, gave an order to spray everywhere, irrespective of the warning to avoid spraying near residential areas and animal barns.[47] A similar "spray everywhere" program was carried out in nearby Jiangsu province, where 16 schistosomiasis control cadres were reported in 1964 to have suffered severe toxic poisoning after continuously handling NaPCP for several days without any protective measures.[48] Further in-

44 Yoshitaka Komiya, "A Recommendatory Note for the Control Problem of Schistosomiasis," *Japanese Journal of Medical Science and Biology* 10 (1957): 466–467.

45 Dai Jianrong, Huang Mingxi and Zhu Yinchang, "灭螺药物的研究进展 [An Evaluation of Development of Molluscicides]," *Chinese Journal of Schistosomiasis Control* 12, no. 3 (2000): 189–191; Li Kun et.al, "Distribution Characteristics and Potential Risk of CBs in Aquatic Organisms from Typical Epidemic Areas of Schistosomiasis Prevalence," 环境科学 [*Environmental Science*] 36, no. 10 (October 2015): 3866–3871; Tan Da, Zhang Jianbo, "Estimates of PCP-Na Consumption in Districts and Provinces in China by the Top-down Calculation Method," 环境污染与防治 [*Environmental Pollution and Prevention*] 30, no. 3 (2008): 18–21.

46 Su Delong, "How to Eliminate Snails with Calcium Arsenate" (lecture notes presented at Fudan University, Fudan University's School of Public Health archive, file number RM008–08, 10 July 1958), 2.

47 "County Level Schistosomiasis Control Cadres Reporting on Local Opinions," Shanghai B242–1–1315, 1961, 128.

48 Mao Shoubai, ed., *Biology and Pathology*, 709.

land, in Sichuan province's Mianyang county in the southwest, many female sprayers were asked to carry out spraying barefoot in the paddy fields over an extended period. Some subsequently vomited repeatedly, while others fainted after inhaling too much of the toxin. In Mianyang county's Mawei Commune, seeing their skin peeling off, villagers became extremely frightened. In shock, they began to scream and threw away the spraying guns as they ran out of the village and paddy fields. Here, villagers often complained that molluscicides killed more crops and grass than snails. Without any grass to eat, cows and pigs also died of starvation, adding further stress to the ongoing famine. The locals began to view snail control work as directly contributing to the local famine, and they called those public health cadres in charge of schistosomiasis control "life snatchers."[49]

There were also frequent reports of people becoming ill or even dying after ingesting fish poisoned by the chemical. The problem of food poisoning after eating contaminated fish was widespread at the time due to the increasing starvation caused by the famine. In Zhejiang province's model county of schistosomiasis control, Jiaxing, some communes planned to solve the labor shortage problem by carrying out spraying during the rainy season when farming work was suspended. Due to the rise in water level, however, snails crawled out from the canals where NaPCP had been applied. At the same time, floods transported dissolved chemicals downstream into sections of river used for breeding fish and a huge number of fish were poisoned as a result.[50] Despite frequent reports of NaPCP poisoning, its application continued. As late as 1985, cases of death by NaPCP poison relating to the local schistosomiasis control work were reported in Yunnan Province's Dali region.[51] Across China, skin lesions were also a common ailment among the sprayers. In severe cases, they led to skin cancer. Even after the introduction of government guidelines banning the use of NaPCP in the early 1990s, local authorities continued to mix it with the less toxic niclosamide (more widely known as Bayluscide or by its tradename Bayer 73), partly because its high toxicity produced quicker results in killing snails.[52]

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49 绵阳县血防干部思想情况 [Some Ideological Issues Among Schistosomiasis Control Cadres in Mianyang county], January–November 1962, Sichuan JC133–2811, 14–18.

50 嘉兴县净湘公社血防试点工作简报 [News Bulletin of Schistosomiasis Control Experiment Work in Jiaxing county's Jingxiang Commune], 1963, Jiaxing 102–001–031, 102–103.

51 Shoubai, *Biology and Pathology*, 709.

52 Li Kun et al., "Distribution Characteristics and Potential Risk of CBs in Aquatic Organisms from Typical Epidemic Areas of Schistosomiasis Prevalence," *Environmental Science* 36, no. 10 (2015): 3866–3867.

As mentioned earlier, NaPCP is highly soluble in water, and its toxicity can remain for many months, and even years. According to the most recent published list of unsafe foods by the PRC State Administration for Market Regulation (2020), fish harvested from the schistosomiasis-endemic Hunan province contained a level of NaPCP that made them unsafe for human consumption.[53] Even more alarming is that according to the Center for Disease Control in Jiangsu, a harmful level of NaPCP is also found in locally produced beef as well as in duck and goose meats. This is because the paddy fields, water ponds, and grasslands where the poultry and animals regularly grazed and drunk water have been contaminated with NaPCP in a continuous effort to control schistosomiasis.[54] NaPCP (HCB) and DDT are also widely detected in the surface sediments from the Xiang river, the second largest tributary of the Yangtze and the largest river into the Dongting Lake. A joint study by Fudan University and the Chinese Academy of Science attributed this to the continuous efforts to control schistosomiasis and malaria with NaPCP and DDT in these regions. The study concluded that the high volume of organochlorine pesticides (OCPs) in the sediments from the Xiang River likely had an adverse biological effect on organisms living in the and by the river.[55]

It is also worth noting that the Great Leap Forward's drive to irrigate the ever-expanding agricultural land and to power the rapid industrialization by building more dams in this part of the Yangtze also had other health consequences. More agricultural land and more construction projects also entailed unrestricted deforestation. Intensive agricultural practice, irrigation, and dam building as well as deforestation not only caused long-term damage to the environment through alkalization and waterlogging of the soil but also increased malaria transmission through an explosive growth of the mosquito population. In 1962, still in the midst of the massive famine crisis, many provinces along or south of the Yangtze River experienced some of the worst epidemics of malaria in recent history. Sichuan province's Rong county, for example, had a total population of

53 "Edict Regarding Food Risks," accessed May 22, 2021, http://gkml.samr.gov.cn/nsjg/spcjs/202006/t20200605_316255.html.

54 "The Amount of NaPCP in Meat," accessed May 22, 2021, http://news.xhby.net/js/yw/202008/t20200820_6773804.shtml.

55 Yuanyuan Li and Tian Lin et al., "Distribution and Sources of Organochlorine Pesticides in Sediments of the Xiangjiang River, South-central China," *Environmental Monitoring and Assessment* 185 (2013): 8861–8871, doi:10.1007/s10661–013–3218-z.

820,000. In 1962, about 180,000 cases of malaria were reported.[56] Throughout China, in 1962, the official estimate of malaria morbidity surpassed ten million people. Almost all provinces rampaged by the malaria outbreak were also the worst endemic schistosomiasis regions.[57] Spraying DDT was an intervention widely applied to control malaria by killing the vector mosquitoes.

Studies also showed that the unrestricted use of chemicals over a long period of time damages the quality of the soil. For instance, copper salts and other molluscicides that kill snails and fish also destroy nitrogen-fixing algae (BGA). The latter is recognized as one of the bio-fertilizers necessary to keep the rice paddies fertile. After applying copper salts and other molluscicides repeatedly over time, the BGA was destroyed, and thus the quality of the soil of the rice paddies deteriorated.[58] In China and during the Great Leap Forward famine, in the light of the ongoing food shortage as well as a severe labor shortage, an increasing number of local authorities began to resist the method of controlling snails with molluscicides. Some rejected it outright on the ground that it would damage the quality of soil and thus decrease the agricultural yield.[59] The work of controlling snails with molluscicides was further hampered by the supply shortage that was a result of the collapse of the overall nationwide distribution system during the famine, as well as poor management at the local level.[60] Goods perished or were degraded at transport depots because there were not enough trains, trucks, boats, or workers to move them. An increasing number of train robberies, triggered by the famine crisis, also prevented molluscicides from being delivered to their destinations in time for the control work.[61] The other national problem

56 Zhou Zaoxi, "Malaria Eradication in County Rong, Sichuan," in *Malaria, A Publication of the Tropical Programme of the Wellcome Trust*, ed. A.J. Knell (Oxford: Oxford University Press 1991), 80.

57 省委除害灭病办公室关于防病治病工作的计划，总结，报告，指示 [Sichuan Provincial Party Committee Disease Eradication Office's Plan, Evaluation, Report and Edict on Disease Prevention and Treatment], February–December 1962, Sichuan JC133–449, 71–73; Sun Luo, "岳阳市疟疾防治五十年 [Malaria Control in Yueyang in the Past 50 Years]," *China Tropical Medicine* 2, no. 3 (August 2002): 354–355.

58 Norman Levine, "Integrated Control of Snails," *American Zoologist,* 10, no. 4 (1970): 579–582; P.A. Roger, "Blue-Green Algae in Rice Fields, their Ecology and their Use as Inoculant" (paper presented at the Proc. Consultants Meeting, FAO/IAEA Joint Project, Vienna, 11–15 October 1982).

59 "County Level Schistosomiasis Control Cadres Reporting on Local Opinions," Shanghai B242–1–1351, 1961, 128.

60 "Summary Report of Disease Prevention and Eradication," no. 16, 31 July 1959, Sichuan JC 133–2684 (January–October 1959), 5–6.

61 For prevalence of train robberies during the Great Leap famine, see Frank Dikötter, *Mao's Great Famine: The History of China's Most Devastating Catastrophe, 1958–62* (London: Blooms-

was simply the lack of access to available containers to store and transport the chemicals. As a result, the demand for molluscicides far exceeded the supply.[62]

With molluscicides in short supply, local authorities were encouraged to practice "self-reliance." This meant coming up with local solutions to eliminate snails that required little or no financial input from the state. From its inception, the PRC's anti-schistosomiasis campaign was a crusade that involved the masses. In the context of the Great Leap Forward, communities, including grassroots schistosomiasis institutions in affected regions, were further encouraged to come up with technical solutions or local innovations to eliminate snails. Bio-pesticides were widely promoted, such as an oil emulsion extracted from croton seeds and a paste made of *camellia oleosa*, as they were claimed to have produced some success in reducing snail populations. *Camellia oleosa* is a plant found throughout southern China. Traditionally, fishermen and villagers in parts of China used it as a poisonous bait to stun fish and shellfish. Prior to the introduction of commercial soap, rural villagers also used it as a sanitizer to wash their hands and hair. To kill snails required using large quantity of high dose *camellia oleosa* paste (rather than using it as a poison bait at lower doses). The overuse of *camellia oleosa* paste also killed a huge quantity of fish, shellfish, and water plants. Since many villagers relied on fish and shellfish for food and since water plants were an important source of fertilizer, it is understandable that the method was unpopular. In laboratory tests, the oil emulsion of croton (at 4–8 g/㎡) achieved a similar success in killing snails as NaPCP (1 g/㎡). In the field, especially when covering a large area, its efficacy was much smaller, as uneven temperature and moisture often led to the denaturation of the herb oil emulsion. It was also even more harmful to human and animal health than *camellia oleosa* paste. A few grams of it could cause severe diarrhoea, and even fatalities. Traditionally, it was an abortifacient, well known for causing miscarriages. At the time of an escalating famine crisis, with malnutrition and infertility being two of the most widespread health risks, many rumors accused croton oil of being a cause of the problem. There were also reports of villagers who suffered skin ailments after handling it. Thus, instead of viewing it as a beneficial intervention, villagers regarded it as just one more health risk.

bury 2010), 155–162; Zhou Xun ed., *The Great Famine in China, 1958–1962: A Documentary History* (New Haven and London: Yale University Press 2012), 127–130.

62 "Summary Report of Disease Prevention and Eradication," no. 16, 31 July 1959, Sichuan JC 133–2684 (January–October 1959), 5–6.

Furthermore, it, too, was constantly in short supply, since it was expensive and labor intensive to produce by hand.[63]

Still, the political goal of eradication could not be questioned. In the meantime, local authorities, with the help of experts, were compelled to come up with new cost-effective innovations. One innovation was using toxic industrial chemical waste—such as a residual of calcium carbamide and a sodium salt of coal tar acid and phenol—to get rid of snails by poisoning their habitat. In addition to reducing snail populations, the method was utilized as a means of recycling the excessive industrial waste. Since the goal was to control schistosomiasis by eliminating snails with industrial waste, such as the residual products of calcium carbamide or the sodium salts resulting from coal tar acid, little attention was paid to what a safe quantity would be or even how the products should be applied. As a result, the actual amounts used and their application procedure varied from location to location. In general, to eliminate snails, it required at least one kilogram of such a chemical mix for every square meter of area. But in many affected regions, in a haste to eliminate snails, the amount used far exceeded what was recommended. Writing in the 1980s, Mao Shoubai, the PRC's foremost authority on schistosomiasis control, discouraged such measures, as "they harm human and animal health, damage the quality of soil, and pollute water. There are more drawbacks than benefits. Such measures cannot be recommended."[64]

As such undertakings were always focused on short-term gains, either because of political pressure from above or because of the resultant social and economic gains among officials in charge of implementation as well as those who participated in disease eradication, little or no attention was given to the longer-term consequences. Not only did the chemical control method cause harm to the environment and to human and animal health, but the environmental control method of draining swamps and marshes to reclaim low and flooded land, as mentioned earlier, also had long-lasting negative consequences on the environment.

Another widely applied environmental control measure employed by the Chinese in the late 1950s and 1960s was burning grass to roast the snails and destroy their habitat. Burning the grass that grew on the banks of small creeks and ditches as well as decimating the reeds in the lake regions was initially pro-

63 Brian Maegraith, "Schistosomiasis in China," *The Lancet* 1, no. 7013 (25 January 1958): 208–214; Mao Shoubai, ed., *Biology and Pathology Schistosomiasis and its Prevention*, 721; 嘉兴县血防站 一九五五年年度工作总结 (12 January 1956) [Jiaxing County Schistosomiasis Control Station's Report of 1955 Schistosomiasis Control Work], Zhejiang J166–003–026 (1956), 6.

64 Mao Shoubai ed., *Biology and Pathology Schistosomiasis and its Prevention*, 717.

moted by experts and the relevant political authorities as a simple and cost-effective way of reducing the snail population. While the method was reported to have achieved some success, it turned out to be more time consuming and labor intensive than killing snails with bio-pesticides made from plants. More importantly, its efficacy was unreliable as it depended on the season and topography. Furthermore, it destroyed reeds, bushes, grass, and other vegetation, all of which were necessary to a healthy lake ecosystem. For villagers living in the lake regions, reeds were also a source of vital economic revenue. Traditionally, reeds were used as building materials, as the raw materials for making weapons, tools, and musical instruments, as well as being fashioned into paper. During the Great Leap Forward and the subsequent famine, trees, bushes, and grass were all in high demand as they were essential substances for keeping starving animals alive, as well as fuel for local iron and steel production, and in everyday use as fertilizer. One grassroots cadre in south-western China remembered that, in 1958, after a campaign to kill snails by burning grass, the two brigades involved lost 44,000 kilos of bio fuel as result.[65] It is not surprising, therefore, that many villagers in these regions resisted applying such methods.[66] A 2016 study by a team of researchers from the PRC and Australia also suggests that continuous open-field biomass burning, sometimes over several days—as was done to reduce the snail population—caused severe air pollution with the attendant risks to public health and a potentially adverse impact on the climate.[67]

Conclusion

The anti-schistosomiasis campaign was the centerpiece of the PRC's public health campaign. This campaign was officially launched in 1955, when Mao was mounting the "Socialist High Tide" to bring a socialist revolution to the Chinese countryside. The central party leadership declared the national goal to eradicate the disease and said it would be achieved within seven years, by the end of the Second Five Year Plan. Land reclamation and irrigation schemes were methods used to bury and hence kill the vector snails. This not only proved extremely costly and wasteful, but these schemes also ran into conflict with the system for water conservation, contributing to severe flooding as well as causing alkalization of the soil. The subsequent switch to killing the snails using molluscicides

65 Interview with Su in Xichang, May 2015.

66 Mao Shoubai ed., *Biology and Pathology Schistosomiasis and its Prevention*, 726.

67 Chen Jianmin et al., "A Review of Biomass Burning: Emissions and Impacts on Air Quality, Health and Climate in China," *Science of the Total Environment* 579 (February 2017): 1000–1034.

further damaged the ecosystem, with long-lasting negative consequences on the environment. At the same time, needless to say, the devastating famine resulting from the Great Leap Forward further complicated the earlier eradication initiatives. In fact, towards the end of the Great Leap Forward famine in the early 1960s, the morbidity rate was sharply on the rise. In the meantime, famine-related oedema, gynaecological problems, and child malnutrition became even more widespread in the countryside. Unable to cope with the crisis, the PRC's rural health system collapsed. In the face of diminishing returns, in order to control the collapse of the public health system, ever more authoritarian and centralized methods came into play. With increasing desperation and despite the official claims, to the contrary, officials saw the promised goal of schistosomiasis eradication, and the rural utopia it was to help create, slipping away from them.[68]

To address the failure, reporting at a national schistosomiasis control conference in 1962, the Vice Chair of the Nine-man Subcommittee on Schistosomiasis Control Wei Wenbo laid the responsibility for the campaign's overall failure on the "error of misjudgement" and on poor leadership on the ground.[69] In his widely cited study *The Politics of Medicine in China* (1977), political scientist David Lampton argues that "[l]ike a leading character in a Greek tragedy, [the PRC]'s mobilization system had a tragic flaw; there were no individuals charged with objectively evaluating the progress which was, or was not, being made."[70] Later, in a 1984 evaluation of the Chinese campaign, Kenneth Warren discredited the earlier Chinese strategy of eradication as not only too costly and ineffective but also harmful to the people's health.[71] Warren, the Director of Health Science at the Rockefeller Foundation, was in favor of "good healthcare at low cost" and advocated for Selective Primary Health. In the early 1980s, he led an international team to the PRC to conduct a study on schistosomiasis mortality in the rural Anhui province, a marshy region along the Yangtze river. As an expert on schistosomiasis, Warren favored controlling the disease with chemotherapy. According to him, using newer single-dose, oral, non-toxic chemotherapeutic agents – Praziquantel – in treating the disease simply cost less than attempts to eliminate snails. He used the PRC's anti-schistosomiasis campaign as his counter ar-

68 For further reading see Zhou, *The People's Health*, 136–166.

69 "Transcript of Comrade Wei Wenbo's Speech at the Schistosomiasis Control Work Meeting)," in 关于防治血吸虫病工作的报告 [Report on Schistosomiasis Control Work], Sichuan JC 133–447 (April–December 1962), 2–3.

70 David Lampton, *The Politics of Medicine in China*, 118.

71 Kenneth Warren et al., "Morbidity in Schistosomiasis Japonica in Relation to Intensity of Infection: A Study of Two Rural Brigades in Anhui Province, China," *The New England Journal of Medicine* 25, no. 309 (1982): 1533–1539.

gument. He argued that the Chinese approach of involving the rural masses to kill the snails by burying old canals and digging new ones was too costly and ineffective in controlling the disease, at least for the interim period.[72] In subsequent years, the post-Mao PRC government abandoned the earlier integrated eradication strategy and implemented the morbidity control strategy intended to reduce the prevalence and intensities among local populations and livestock in the lake regions along the Yangtze.[73] This also coincided with the World Health Organisation (WHO) expert consultation committee changing its strategy and objective from controlling snails and the environment to reducing morbidity and mortality by focusing on chemotherapy and health education.[74]

Between 1992 and 2001, with a loan from the World Bank, the PRC government introduced the chemotherapeutic intervention favored by Warren as the key strategy to reducing the rate of human infection and the intensity of schistosomiasis. An official study evaluating the program suggests that as a consequence of this the number and morbidity of cases of the disease were reduced by half in several endemic regions.[75] For the next decade, the PRC government published the Schistosomiasis Prevention and Control Regulation, which resulted in the implementation of a more comprehensive strategy for disease control. Such controls ranged from the construction of lavatories with running water to the institution of drug treatment and health education.[76] The introduction of this new national schistosomiasis control program also coincided with the modernization of agriculture in China, with the reduction in the number of agricultural workers through mechanization and with the simultaneous urbanization and the moving of displaced rural workers into the ever-expanding industrial centers that has occurred since the end of the twentieth century. With the coter-

72 Warren et al., "Morbidity in Schistosomiasis Japonica in Relation to Intensity of Infection," 1533–1539.

73 Zhou Xiaolong et al., 我国血吸虫病防治历程与监测 [Schistosomiasis Control and Surveillance in the PRC], in中国血吸虫病防历程与展望 [*The PRC's Schistosomiasis Control and Prospect*], ed. Wang Delong (Beijing: Renmin weisheng chubanshe 2006), 61–62.

74 WHO, "The Control of Schistosomiasis: Report of a WHO Expert Committee" (paper presented at the meeting held in Geneva, 8–13 November 1984) (Geneva: World Health Organization 1984), 82, accessed 15 June 2022, https://apps.who.int/iris/handle/10665/39529.

75 Chen Xianyi et al., "Schistosomiasis Control in China: The Impact of a 10-year World Bank Loan Project (1992–2001)," *Bulletin of the World Health Organisation* 83, no. 1 (2005): 43–48. Also see Xiao-Hua Wu, Ming-Gang Chen, and Jiang Zheng, "Surveillance of Schistosomiasis in Five Provinces of China Which Have Reached the National Criteria for Elimination of the Disease," *Acta Tropica* 96, no. 2–3 (2005): 276–281.

76 J. Xu et al., "Evolution of the National Schistosomiasis Control Programs in the People's Republic of China," *Advances in Parasitology* 92 (2016): 11–12, doi.org/10.1016/bs.apar.2016.02.001.

minous shift of agricultural land being contracted to individual households, a greater number of villagers also switched from growing labor-and water-intensive crops such as rice to cash crops like tea, medicinal herbs, fruits, or vegetables. While a combination of sanitary interventions and Praziquantel drug therapy have undoubtedly contributed to the decrease in the number of infected people in the endemic regions, as John Farley pointed out for Japan's ability to mitigate the disease which had little to do with elaborate control schemes, rather, it was a decrease in agricultural activities as well as improved standards of living and hygiene that had brought it about.[77] In China too, the shifts in the means and modes of agricultural production had a much greater effect in the overall reduction of schistosomiasis. These shifts in agricultural practice radically decreased the proportion of people and farm animals engaged in agricultural activities as well as the acreage taken up by rice paddies. The farmers' working hours were also shortened, and the resulting overall improvements in the standard of living were at the core of the upgrading of the people's health.[78] The depopulation of rural regions and the mass abandonment of agriculture also radically reduced the incidence and prevalence of what were actually primarily rural diseases, such as schistosomiasis. By 2016, official published statistics showed that all endemic regions had achieved control of the infection, with the number of infected people falling by 97.7 percent in 2013 compared to 2005. The infection rate of livestock dropped by 96 % in 2013 compared to 2005.[79]

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77 Farley, *Bilharzia*, 300.

78 Interview with Professor Gu Xueguang in Chengdu, Sichuan province, 11 September 2014; interview with Tang in Danlin CDC, Sichuan province, 14 October 2014.

79 Y. Yang et.al., "Integrated Control Strategy of Schistosomiasis in The People's Republic of China: Projects Involving Agriculture, Water Conservancy, Forestry, Sanitation and Environmental Modification," *Advances in Parasitology* 92 (2016): 237–268, doi: 10.1016/bs.apar.2016.02.004.

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Marta E. Szczygiel

Mechanization of night soil disposal in postwar Japan

The World Health Organization has recently estimated that approximately 829,000 people in low- and middle-income countries die each year as a result of inadequate water supply, poor sanitation and unsatisfactory hygiene arrangements, and that poor sanitation is directly linked to 432,000 of these deaths.[1] The establishment of more effective methods of waste disposal has been an integral part of global campaigns to reduce the incidence of water- and food-borne diseases since the mid-nineteenth century and, in the process, the introduction of flushable latrines and sewer system has become a key development goal and an indicator of "modernity."[2] With flush toilets we do not really think about what happens with our waste – we simply do our business, flush, and go on with the rest of the day. Thus, for the majority of those living in developed countries, flushable latrines have minimized the nuisance associated with the disposal of excreta.

India launched its program to provide toilet access to all its citizens (via the Swachh Bharat or Clean India Mission) in 2014 and China initiated a "toilet revolution" in rural areas in 2015.[3] Japan, on the other hand, has had universal access to improved sanitation – facilities that hygienically separate human excreta from human contact – since the 1990s.[4] Moreover, the country is the world's largest Official Development Assistance donor in the water and sanitation sector, committing financial support of 5.933 million US dollars in 2014–2018.[5] However, Japan's reign as the "toilet superpower" started only by the end of the 1980s. Before then, the main way to dispose of human waste was to empty domestic night soil storage tanks with vacuum trucks (or vacuum cars, as they are called in

1 WHO, Sanitation. Key Facts, www.who.int/news-room/facts-sheets/detail/sanitation, accessed 19 June 2022.

2 Anthony J. McMichael, "The urban environment and health in a world of increasing globalization: issues for developing countries," *Bulletin of the World Health Organization*, vol. 78, no. 9 (2000): 1117–1126.

3 Xiaoqin Zhou et al., "Review of Global Sanitation Development," Environment International 120 (2018): 246–261.

4 "DataBank: Millenium Development Goals," The World Bank, accessed 15 June 2021, https://databank.worldbank.org/source/millennium-development-goals/Series/SH.STA.ACSN.

5 "ODA Safe Water and Sanitation Statistics," Ministry of Foreign Affairs of Japan, accessed 15 June 2021, https://www.mofa.go.jp/mofaj/gaiko/oda/bunya/water/statistic.html.

https://doi.org/10.1515/9783111015583-010

Japan), and then transport the contents to the night soil treatment facilities. This "collect-transport-treat" system was developed in the 1950s to replace the manual disposal of night soil and improve public health conditions.

In this paper, I will highlight the trajectory of mechanization of night soil disposal in postwar Japan to introduce this often-forgotten step in Japan's transition from manual disposal to the present high-tech methods. The case of Japan seems both exceptional and characteristic of the way excreta disposal has been tied to modern understandings of development and modernization: exceptional because of its scope and pace, as it was achieved in a relatively short time, and characteristic because, eventually, Japan adopted the pipe system which had come to embody modernity in Western countries. This paper will, therefore, analyze the considerations which led pertinent stakeholders to opt for or against different methods at various points in time. Rather than a linear story of modernization, the resulting narrative is one of trial and error, often improvised reactions to various combinations of demographic, political, cultural, technological, geographical, and environmental factors.

Traditional disposal methods

Night soil collecting in Japan started in the twelfth century to improve agricultural production. By the seventeenth century it had become so important for farmers that, in 1649, the Tokugawa shogunate proclaimed that "farmers should build the toilet with a roof over near the main house, so that even if it rains night soil will not dilute and waste."[6] Soon, the demand for fertilizer had progressed to the point that farmers began visiting towns to collect night soil for their crops, initially in return for vegetables, but, by the mid-Edo period (1603–1868), it was collected by professionals and sold to farmers for money and silver.[7] This system, later known as nōson kangen ("returning [excrement] to rural areas"), was primarily a profitable business, but it also served another purpose: it kept the cities clean. Susan Hanley argues that comparing the sanitary conditions of eighteenth-century Edo (now known as Tokyo) and those of Paris or London at the

6 Heibonsha sekai rekishi jiten henshūbu, *Sekai rekishi jiten* 22 [World history lexicon 22] (Tokyo: Heibonsha, 1955), 333.

7 Susan B. Hanley, "Urban Sanitation in Preindustrial Japan," *Journal of Interdisciplinary History* 18, no.1 (1987): 1–26; David L. Howell, "Fecal Matters: Prolegomenon to a History of Shit in Japan," *In Japan at Nature's Edge: The Environmental Context of a Global Power*, ed. Ian J. Miller, Julia Adney Thomas, and Brett L. Walker (Honolulu: University of Hawai'i Press, 2013), 137–151.

time, the Japanese capital turns out more favorably.[8] Thus, when the Filth Cleaning Law was established in 1900, it made municipalities legally responsible for maintaining public cleanliness, but explicitly excluded human excrement from the list of waste to be cleaned. The handling of human waste remained a landlord's responsibility most likely because it was seen as a valuable resource.[9]

The rapid urbanization following the First World War resulted in a surplus of human waste in cities, while seasonal demand for night soil and low prices of chemical fertilizers lowered the demand for night soil.[10] Consequently, urban areas were faced with the problem of what to do with their waste. In Tokyo, for example, instead of receiving money for their waste, house owners had to pay for the night soil collection for the first time in 1918.[11]

In 1930, changing attitudes toward excretory practices and use of night soil led to a revision of the Filth Cleaning Law, so that handling of human waste now fell under municipal management. In 1932, Tokyo ultimately covered all districts within its jurisdiction. The city facilitated shipment of night soil to distant farms using oxcarts, trucks, and ships but, unable to deal with all of the waste, it started to dispose of it into the sea the same year.[12]

It is important to note that not every city had problems with human waste collection. For example, one 1933 report from Sendai states that out of 25,039 surveyed houses not a single one had to pay for human waste disposal, while 20,716 were paid for their waste and 4,323 had it disposed of for free.[13]

Nonetheless, the post-World War I period marked the transition of night soil from a valuable commodity to a public health threat.

Night soil, if improperly processed, could transmit gastrointestinal parasites to human bodies. In 1918, the Home Ministry commissioned stool examinations

8 Hanley, "Urban Sanitation."

9 Shigeru Mizoiri, "Meiji zenki no haikibutsu kisei to obutsu sōjihō no seiritsu [Legislation of the Filth Cleaning Law and regulations on waste in the early Meiji period]" (PhD diss., Waseda University, 2006).

10 Kayo Tajima, "The Marketing of Urban HumanWaste in the Edo/Tokyo Metropolitan Area: 1600–1935" (PhD diss., Tufts University, 2005).

11 Japan Association of Drainage and Environment, *Gomi no bunka, shinyō no bunka* [*Culture of Waste, Culture of Night Soil*] (Tokyo: Gihōdō Shuppan, 2006), 71–72.

12 Ministry of the Environment, Waste Management and Recycling Department, Waste Managing Division, and Japan Environmental and Sanitation Center, *Reiwa gannendo shinyō shori gijutsu, shisutemu ni kan suru aakaibusu sakusei gyōmu hōkokusho (jōkan)* [*Report on the Creation of Archives of Night Soil Treatment Technology and System in the First Year of Reiwa (first volume)*] (Tokyo: Ministry of the Environment, 2020), 24.

13 Japan Association of Drainage and Environment, *Toire kō, shinyō kō* [*Remarks on toilets and night soil*](Tokyo: Japan Association of Drainage and Environment, 2003), 60–61.

in every part of the country. The results, based on data collected from 1922 to 1926, showed that parasite eggs could be found in 73.8% of the population. Consequently, the government enacted the Parasitosis Prevention Law in 1931. The law included periodic stool examinations, especially at schools and workplaces, health education, and treatment of human waste or dissemination of improved privy vaults.[14] Improved privy vaults had two entrances: one for defecation and the other for collection of night soil. The tank was separated into three to five spheres – feces fell into the tank and, as it was accumulating, the older lot was pushed into the next sphere. It took approximately three months for excrement to finally reach the opening for collection, which was sufficient time for bacteria and parasite eggs to die.[15]

Such preventive methods seemed to be working, as the parasitosis rate dropped to 41.1% in 1941.[16] However, the Pacific War took its toll on Japan. Wartime mobilization resulted in the breaking of the night soil distribution networks, which consequently led to the city of Tokyo being "attacked by excrement."[17] In this dire state, the Allied occupation of Japan began in 1945.

Sanitation under occupation

The usage of night soil was the "greatest single sanitation problem" the occupiers faced.[18] Crawford F. Sams, head of the Supreme Command for the Allied Powers' Public Health and Welfare (PH&W) program, saw the use of night soil as chiefly responsible for dysentery and other enteric infections in Japan: "In a land where untreated human excrement ... is habitually used on the land for fertilizer, the causative organisms are spread on the fields and then spread to uninfected persons through vegetables or other foods that are grown on the ground and normally eaten uncooked. They are also spread to all of the surface streams and shallow wells when rains wash the fertilizer into these streams or wells."[19]

14 Isao Tada, "Nihon ni okeru kiseichū bōatsu to sono tokushitsu [Parasite Control in Japan and its Characteristics]," *Tropical Medicine and Health* 36, Supplement 3 (2008): 49–50.

15 Japan Toilet Association, *Toiregaku daijiten* [*Lexicon of the Toilet Studies*] (Tokyo: Kashiwashobō, 2015).

16 Tada, "Nihon ni okeru kiseichū," 50.

17 Paul Kreitman, "Attacked by Excrement: The Political Ecology of Shit in Wartime and Postwar Tokyo," *Environmental History* 23, no. 2 (2018): 342–366.

18 Supreme Commander for the Allied Powers, *History of the Non-military Activities of the Occupation of Japan: Public Health Vol. 19* (Tokyo: SCAP, 1952), 74.

19 Crawford F. Sams and Zabelle Zakarian, *Medic: The Mission of an American Military Doctor in Occupied Japan and Wartorn Korea* (Armonk, N.Y.: M.E. Sharpe, 1998), 92.

However, in their analysis of the public health reforms in occupied Japan, Aldous and Suzuki note that "[n]owhere was the American tendency towards derision more apparent than in the case of night soil."[20] Indeed, as *Life* magazine proclaimed in 1945: America is "a nation that judges other nations by their plumbing."[21] Many of the American claims regarding Japan's sanitary standards, such as Sams' statement from his 1948 *Report on Sanitary Teams* that "the idea of sanitation... is entirely new to the Japanese,"[22] are nothing more than propaganda. It is true, however, that during the war regulations regarding storage and treatment of night soil were relaxed, but it was because of war devastation and not some innate aversion to hygiene. On the contrary, the Japanese pre-war water purification standards "compare[d] favourably with those in the United States."[23] Nonetheless, the 1949 Home Ministry statistics report that 73.1% of the population had parasite eggs in their stool.[24] Thus, by the end of the 1940s, Japan's parasitosis rate was at the 1920s level, before any form of prevention was implemented, and inadequate treatment of night soil was to blame.

Therefore, Allied General Headquarters (GHQ) faced a problem: on one hand, night soil could become a major public health problem but, on the other, it was needed to fertilize the crops. In the postwar period, Japan was not only extremely poor, but it also experienced severe food shortages, so "there was no prospect of Japan being able to discontinue the use of night soil for fertilizer in the near future."[25] Consequently, rather than immediately discard the practice, the PH&W's Preventive Medicine Division urged Japanese officials to reinstate prewar educational and publicity programs for the construction of "sanitary privies" and storage vaults.[26] At the same time, PH&W together with the Natural Resources Section "encouraged the domestic production and use of chemical fertilizers to replace night soil"[27] and by 1949 Japan managed to restore production to the prewar levels.[28] Having a cheaper and easier way to handle an alternative to night soil, farmers preferred to use chemical fertilizers. This, in turn, led to a new problem: what to do with excrement? The transition of

20 Christopher Aldous and Akihito Suzuki, *Reforming Public Health in Occupied Japan, 1945–52: Alien Prescriptions?* (New York: Routledge, 2012), 110.

21 Suellen Hoy, *Chasing Dirt: The American Pursuit of Cleanliness* (New York, Oxford: Oxford University Press, 1955), xiii.

22 Aldous and Suzuki, Reforming Public Health, 109.

23 Ibid., 113.

24 Tada, "Nihon ni okeru kiseichū," 50.

25 SCAP, *Public Health Vol. 19*, 74.

26 Aldous and Suzuki, Reforming public health, 112.

27 Ibid., 111.

28 Kreitman, "Attacked by Excrement," 357.

night soil to literal (human) waste facilitated the way to the elimination of excreta from everyday life via mechanization of night soil collection and its treatment.

Mechanization of the night soil collection

From 1947, GHQ issued multiple requests to the Headquarters for Economic Stabilization, a government authority responsible for postwar economic recovery, to resolve the problem of night soil. Prompted by such pleas, the Natural Resources Section released the Recommendation Regarding Sanitary Treatment of Night Soil Resources in 1950. This written recommendation provided an outline for the mechanization of the night soil collection and treatment processes.[29]

In 1949, the Natural Resources Section designed the first vacuum vehicle. The vehicle manufactured by the Kurogane company was basically an upgraded version of an auto-tricycle. These three-wheeled vehicles based on motorcycles had been developed in Japan in the early 1930s, but the Kurogane innovation was additionally equipped with a vacuum pump to collect night soil.[30]

The Natural Resources Section failed to sell its vacuum vehicle to the governments of Tokyo and Osaka, so it decided to target smaller municipalities. The section made an offer to Kudō Shōhachi, a newly appointed head of the Cleansing Department of Kawasaki city. At the first meeting, Kudō could tell that the innovation was not functional and initially declined the offer. However, when the Natural Resources Section contacted him again to show the improved version, he felt pressured to buy at least one vehicle, even though the tricycle looked almost the same as the first time.[31]

In April 1950, a vacuum vehicle arrived in Kawasaki. As expected, it was not much use. First, the engine of the vacuum pump was very small for this type of work: it had only five or six horsepower, so it would overheat almost instantly. The vehicle itself was very heavy because the steel plate of the tank was one centimeter thick, so it could not even ride up a slope, not to mention mountainous areas.[32]

Another problem was the hose's length: it was only two meters long, which was not enough to reach toilet tanks in narrow streets where a car could not fit.

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29 Ministry of the Environment and Japan Environmental and Sanitation Center, Reiwa gannendo shinyō shori gijutsu, 10.

30 Masayoshi Murano, *Bakyūmu kā wa erakatta!* [Vacuum Cars were Amazing!] (Tokyo: Bungei Shunjū, 1996), 40–41.

31 Ibid., 14–15.

32 Ibid., 41–42.

Moreover, the diameter of the hose was 30 centimeters. As soon as it started sucking in, because of the insufficient engine power, the hose would collapse obstructing the airflow, making it practically impossible to function.[33]

Finally, when the tank was full, the collected liquid would topple from one side to the other, causing the trailer to shake. As the tank and the vehicle were only provisionally connected, there was a danger of the trailer disconnecting from the vehicle because of these vibrations.[34]

Therefore, the vacuum vehicle prototype was faulty, but it was a step in the right direction. Having the Kurogane vehicle at hand, the chief of the Cleansing Department of Kawasaki city knew what had to be fixed for it to work. Thus, when Toyota released a one-ton small truck, Kudō thought they could use it. Together with Takahashi Masajirō, an engineer from Inuzuka car remodeling factory, he decided to build a functioning night soil collecting vehicle.[35]

As the new vehicle would be based on a small truck and not a motorcycle, the engine was significantly stronger. Moreover, there was no separate trailer, so there was no danger of it disconnecting from the front. Thus, what needed improvement was the tank and hose.

Instead of a one centimeter-thick steel plate the Kawasaki city's version opted for a plate that was only 3.2 millimeters thick. Moreover, the tank's shape was changed: originally it was round, but that made it too high when put on a car, so the improved version had an oval tank. The final improvement of the tank was a partition panel installed to prevent the collected waste from moving around during transportation.[36]

As for the hose, first, it needed to be longer. However, longer does not always mean better: a 40 meter hose weighed about 50 kilograms. Extra kilograms would decrease the vehicle's durability and become a heavy burden on the workers. Thus, Kawasaki city compromised at a standard 15 meter-long hose with an option to connect additional hoses when necessary. Furthermore, the diameter of the hose was changed from 30 centimeters to only 5 centimeters.[37]

With the above improvements, the new functioning version was released in 1951 under the new name of vacuum car. In Kawasaki city, where it originated from, vacuum cars began operating on a larger scale in 1953.[38] However, the rest of the country was rather slow to realize the potential of mechanized

33 Ibid., 42.
34 Ibid., 43.
35 Ibid., 45–46.
36 Ibid., 48.
37 Ibid., 51–53.
38 Ibid., 71.

waste collection. First, buying a vacuum car was quite expensive. Second, manual night soil collectors objected to the transition as they were afraid they would lose their jobs. In protest, many went on strikes.

For example, the city of Sapporo in Hokkaido bought three vacuum cars as early as in 1952. To protest the mechanization, collectors stopped working for about one month, resulting in the city literally overflowing with excrement. However, instead of caving in, the city officials made it obligatory for collectors to obtain a driver's license within one year. This way, they slowly began to change their transportation methods: from horse carts to auto-tricycles, then to trucks, which finally paved the way to the wide-scale application of vacuum cars.[39]

Therefore, although collectors were opposed to mechanization at first, once they tried vacuum cars it was hard to imagine going back to the manual way. Below is the testimony of a night soil collector from Tokyo, Takasugi Kihei:

> I bought a vacuum car in 1961. It was expensive (about 250,000 yen), so I sold land to get the money. At that time, the hoses of vacuum cars were not vinyl like now, but made from gum and heavy, so I would put it on my shoulders to carry. If a house was in the back of an alley, I would connect some hoses and use them. When you are not used to it, you cannot suck in [the waste] easily. But once you get used to it, I think there is no greater thing because it collects night soil in the blink of an eye and keeps the night soil vault clean [author's translation].[40]

Moreover, waste collection using vacuum cars was not only easier and more time-efficient compared to the manual one, but also cheaper. Table 1 compares costs of manual and mechanical night soil collection in the first five years of vacuum cars operation in Kawasaki city.

Table 1: Costs of manual and mechanized waste collection in Kawasaki.[41]

	1952	1953	1954	1955	1956
Manual collection (yen)	187*	183	190	191	208
Mechanized collection (with vacuum cars) (yen)	145	143	130	105	96
Rate of manual collection (%)	64	40	33	20	16

39 Ibid., 104–105.

40 Akio Ishii, "Shinyō no kumitorigyō no hanashi [Talk about night soil collection business]," in *C&G*, ed. Japan Society of Material Cycles and Waste Management (Tokyo: Japan Society of Material Cycles and Waste Management, 2007), 17.

41 Murano, *Bakyūmu kā wa erakatta!*, 86.

Table 1: Costs of manual and mechanized waste collection in Kawasaki. *(Continued)*

	1952	1953	1954	1955	1956
Rate of mechanized collection (%)	36	60	67	80	84

*The given amount stands for one *koku* (approximately 180 liters) of waste. The cost of buying the equipment is included in expenses for vacuum car collection.

Once a vacuum car was full, it had to empty its tank and then resume work. In order to increase efficiency, in 1956 a "parent-child operating method" was applied. When a small vacuum car, the child in this metaphor, became full, it would drive to a prearranged place where a big vacuum car, the parent, was already waiting. The big vacuum car could store the content from three small cars and then transport it to its final destination: night soil treatment facility, villages to utilize it as fertilizer, or to the ports for sea disposal. The problem with this method was, however, that it worsened the traffic – imagine four trucks going back and forth, especially in big cities such as Tokyo. This is why the parent-child method was short-lived.[42]

The relay method was introduced as an alternative to the parent-child method in 1957. Stations with relay tanks were created throughout the collection area. When small vacuum cars became full, instead of driving many kilometers to final disposal places, they would go to those stations and pour the collected night soil into relay tanks. Then, when those tanks became full, a big vacuum car made exclusively for this task would collect night soil from relay tanks and transport it to the final disposal facilities. This method is still used in areas that rely on vacuum cars for night soil collection.[43]

Thus, by the end of the 1950s, the mechanization of the night soil collection was gaining momentum. Vacuum cars limited contact with actual human waste for collectors, made the collection process faster and less smelly, ergo limiting the visibility of shit in the public sphere. To improve the public health conditions, however, not only the collection but primarily the treatment of night soil required mechanization.

42 Ministry of the Environment and Japan Environmental and Sanitation Center, Reiwa gannendo shinyō shori gijutsu, 113.

43 Ibid., 114.

Mechanization of the night soil treatment

What happened with night soil collected by vacuum cars? The most ideal solution would be to process it in a night soil treatment facility, but in the postwar period, these did not have the capacity to treat all of the collected waste. Therefore, some portion would be sent to farms and used as fertilizer, while the rest would be disposed of in the sea. Sea disposal, however, came with significant side effects.

Disposal of night soil into the sea started in 1932 in Japan.[44] By the end of WWII, however, resulting from a shortage of chemical fertilizers, night soil was again necessary to fertilize the crops. Moreover, Japan suffered from shortages of materials, so the military requisitioned the Musashi-maru ship that was used for disposal of human waste, and consequently, sea disposal halted in 1944. Unsurprisingly, the production of excrement did not stop, so people had to dispose of it on their own. This led to people dumping waste directly into urban water bodies, and soon "the moss on the riverbank at Asakusa turned a golden color."[45]

Sea disposal of night soil resumed in 1950. Tankers were required to dump the waste as far as possible from the shores, but due to the reverse flow, much of it returned to the bays. To save on fuel, some contractors even broke the rules and dumped untreated human waste into adjacent waters causing "yellow waves."[46] Since 1954 laws regulating sea disposal had been enacted, but it stopped completely only in 2007.[47]

Thus, in the 1950s the issue of night soil treatment became a pressing one. Japan's solution was twofold: the creation of on-site wastewater treatment and night soil treatment facilities.

On-site wastewater treatment: Jōkasō

Jōkasōu, literally a "purification tank," is a Japan-invented domestic wastewater treatment device installed in areas where there is no access to sewers. The big-

44 Takako Tamagawa, "Sengo fukkō toshite shinyō shori [Sewage Disposal as Urban Reconstruction in the Post-War Japan]," *Journal of Nagoya Gakuin University* 52, no. 2 (2015): 180.
45 Kreitman, "Attacked by Excrement," 351.
46 Ministry of the Environment and Japan Environmental and Sanitation Center, Reiwa gannendo shinyō shori gijutsu, 84.
47 Ibid., 90.

gest difference between septic tanks and jōkasō is that effluent from septic tanks requires additional treatment, while effluent from jōkasō can be discharged on-site to public water bodies.[48] Sludge from jōkasō still needs to be processed in a night soil treatment facility, but on-site release of effluent makes the collection less frequent.

Jōkasō date back to the beginning of the twentieth century. By the end of the Meiji period (1868–1912), upon Western influence, flush toilets began to appear in Japan. Cesspools were built to collect flushed waste, but because a lot of water was used to flush, they had to be emptied often. Also, transportation of such wastewater was problematic. Consequently, based on the 1920 Urban Building Law and partial revision of the Filth Cleaning Law, upon obtaining permission from the prefectural governor, blackwater, meaning wastewater from toilets that contains fecal matter and urine, treated in "filth treatment tanks" (previous terminology for jōkasō) could be disposed into public water bodies such as ditches or rivers.[49]

The prototype of jōkasō was created in 1911 – it was a septic tank with a secondary treatment using trickling filters.[50] In 1921, Tokyo Metropolitan Police Department promulgated the first Water Tank Toilet Regulations Regarding the Management of the Domestic Filth Treatment Tanks, and soon other prefectures did the same.[51]

The word jōkasō appears for the first time in the 1944 *Standards for Hygenic Facilities in Building Sites*. The document covered the standard construction of jōkasō, probably anticipating their popularization.[52] However, in war-devastated Japan people did not have the money for the installation of such expensive equipment. But by the end of the 1960s, Japan was experiencing a period of

48 Ministry of the Environment, *Night Soil Treatment and Decentralized Wastewater Treatment Systems in Japan* (Tokyo: Ministry of the Environment, 2019), 8.

49 Ministry of the Environment and Japan Environmental and Sanitation Center, Reiwa gannendo shinyō shori gijutsu, 70–71.

50 A trickling filter is "is a non-submerged fixed bed reactor consisting of highly permeable packing media in which aerobic condition is maintained via diffusion, forced aeration, natural convection or splashing. Rania Ahmed Hamza, Oliver Terna Iorhemen and Joo Hwa Tay, "Advances in biological systems for the treatment of high-strength wastewater", *Journal of Water Process Engineering* 10, (2016): 128–142.

51 Ibid., 71–72.

52 Ibid., 73.

high economic growth. As people were becoming wealthier, they finally could afford flush toilets and millions of jōkasō were installed throughout the country.[53]

However, the jōkasō described above is now called the "tandoku-shori jōkasō." *Tandoku* means single and *shori* means treatment – the name reflects the fact that this type of jōkasō treated only black water, while untreated greywater – wastewater that comes from sinks, washing machines, bathtubs and showers – was discharged directly into the environment. Typically, greywater contains higher BOD (Biological Oxygen Demand) concentrations than blackwater. This means that, even though night soil was treated so it would not pose a public health threat, effluent from single-treatment jōkasō was actively adding to water contamination.[54]

Night soil treatment facilities

Prerequisites for the night soil treatment technology were that it had to: (a) be capable of treating night soil exclusively; (b) be capable of killing parasite eggs and pathogenic bacteria; (c) improve the odor and appearance of night soil; and (d) produce safe fertilizer.[55] First, sludge from toilet vaults and jōkasō would be transported to a night soil treatment facility. After being treated up to the required level of quality, the effluent would be discharged into rivers and public water bodies. The excess sludge left after dewatering could be used as fertilizer or disposed of at landfills.[56] Postwar facilities used three main types of treatment processes: anaerobic, chemical, and aerobic methods.

Anaerobic treatment method

In the 1950 *Recommendation Regarding Sanitary Treatment of Night Soil Resources*, anaerobic digestion treatment was already named as the optimal method for Japanese conditions.[57] Anaerobic digestion is generally considered to be an economical and environmentally-friendly technology for treating various forms of

53 X.M. Yang et al., "History and Current Situation of Night Soil Treatment Systems and Decentralized Wastewater Treatment Systems in Japan," *Water Practice and Technology* 5, no. 4 (2011): 1–18, doi:10.2166/wpt.2010.096, accessed 2 May 2021.

54 Ministry of the Environment, Night Soil Treatment, 4–5.

55 Ibid., 3.

56 X.M. Yang et al., "History and Current Situation of Night Soil."

57 Tamagawa, "Sengo fukkō toshite shinyō shori," 181.

organic waste, including sewage sludge. As the name suggests, the process takes place in the absence of oxygen and it produces biogas, which is generally composed of 48–65% methane, that could be used for power generation.[58]

To secure the required treatment levels for the effluent to be released, secondary treatment was necessary. In the beginning, the trickling filter method was applied as the secondary treatment. However, to increase efficiency and improve maintenance problems, an activated sludge process became the more popular secondary treatment from the early 1960s.[59]

Right before the release of the said *Recommendation*, in 1949, the Japanese government started building the Sunamachi plant in Tokyo that applied the anaerobic digestion method. To secure capital for the construction, the Ministry of Health and Welfare included digester tanks and incinerator plants in the budget plan and applied for a state subsidy for the first time in 1951. The answer from the Ministry of Finance, however, was negative. Upon claims from the cities, the subsidy program for night soil treatment facilities was finally admitted in 1953. Consequently, the construction of digester tanks accelerated: for example, until 1953, the Sunamachi plant managed to build only five tanks, but by 1957 the number increased to 20. With 20 operating tanks, the first night soil treatment plant in Japan managed to treat about 25% of municipal waste in Tokyo.[60] In 1956, the *Standard Structure of Anaerobic Digester Tank* that provided municipalities with a concrete development plan was released. Consequently, from 1958 anaerobic digestion treatment became the main night soil treatment method until 1975.[61]

Although the anaerobic digestion method was cost-effective and eco-friendly, it came with some major disadvantages. First, the anaerobic digester tanks were quite big and thus required a lot of space, while Japan is not necessarily known for an abundance of land. Second, supernate fluid used in the process smelled bad, and flies would gather around the trickling filters used in the secondary treatment.[62] Third, about 30 days were required to finish the process.[63]

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58 Farida Hanum et al., "Treatment of Sewage Sludge Using Anaerobic Digestion in Malaysia: Current State and Challenges," *Frontiers in Energy Research* 7, no. 19 (2019), accessed 2 May 2021, doi: 10.3389/fenrg.2019.00019.

59 Ministry of the Environment, Night Soil Treatment, 15.

60 Tokyo Bureau of Public Cleaning, *Tōkyō to sōji jigyō hyakunenshi* [*One Hundred Years of Public Cleaning Works in Tokyo*] (Tokyo: Tokyo Metropolitan Government, 2000), 600–661.

61 Ministry of the Environment and Japan Environmental and Sanitation Center, Reiwa gannendo shinyō shori gijutsu, 279.

62 Ibid., 160.

63 Ibid., 208.

Especially because of odors and "visual pollution" caused by night soil treatment facilities using anaerobic treatment, the building of such plants was faced with protests from the people living nearby.[64]

Consequently, research into other treatment methods started. As was mentioned above, in 1953 the subsidy program for night soil treatment facilities was launched, but at that time it was only applied to the anaerobic digester tanks. In 1961, however, treatment methods besides the anaerobic one became eligible for government subsidy.[65] This paved the way for the development of chemical treatment and aerobic treatment methods.

Chemical treatment method

The chemical treatment method was considered as an option upon the release of the *Recommendation Regarding Sanitary Treatment of Night Soil Resources* in 1950. However, compared with the anaerobic method, it was more expensive and required more energy, so the latter method was promoted as the optimal one for Japan.[66] As the name suggests, the method relies on chemical reactions to separate solids from the liquid using a coagulant.

Even though chemical treatment had not been applied on a wider scale at the beginning of the 1950s, research on this method continued. First, sodium alginate was used as a coagulant, but it was too expensive. Then, from the middle of the 1950s, coagulants such as hydrated lime or iron salt were applied, but even if the treated water looked clean, the pH or BOD levels were too high for it to be discharged. To reach an adequate treatment level, a secondary treatment method was required.[67]

The biggest advantage of this method was the short treatment time – about 10 days compared to 30 needed for anaerobic treatment. With this in mind, the first night soil facility applying the chemical treatment method was built in December 1957 in Shimizu city, which now became a part of Shizuoka city.[68]

After the 1961 decision to subsidize the construction of night soil facilities using methods other than the anaerobic one, many facilities relying on chemical

64 Tokue Shibata, *Nihon no seisō mondai: gomi to benjo no keizaigaku* [*Japan's Cleaning Problem: Economy of Waste and Toilet*] (Tokyo: Tōkyō Daigaku Shuppankai, 1961), 127–128.
65 Ministry of the Environment and Japan Environmental and Sanitation Center, Reiwa gannendo shinyō shori gijutsu, 211.
66 Ibid., 208.
67 Ibid., 210.
68 Ibid., 210.

treatment were built in many parts of the country. However, their popularity was short-lived and no new chemical treatment facility has been built since 1967.[69] The reason for that was the development of a new process: the aerobic treatment method.

Aerobic Treatment Method

As already mentioned, the most popular night soil treatment applied in Japan until the 1960s was the anaerobic digestion method. This method was not enough to reach adequate treatment levels on its own, so secondary treatment using trickling filters was necessary. From the beginning of the 1960s, however, the activated sludge method began to preempt the trickling filter method. Following research, it was discovered that during the activated sludge process, the organic matter decomposed even faster in the presence of oxygen than in anaerobic conditions. Thus, the activated sludge process was applied to the primary treatment, changing the anaerobic process into an aerobic one.[70]

Application of the aerobic treatment method solved two major problems of the anaerobic treatment night soil facilities: "visual pollution" and odor. On the other hand, aerobic treatment consumed more energy and offered a low extraction rate of nitrogen, causing nitrogen pollution in the water to which effluent would be released. Moreover, the process created large volumes of sludge – about 50 % more compared to the anaerobic methods – thus extra countermeasures had to be employed to prevent the overflow of suspended solids (SS).[71]

Therefore, each night soil treatment method developed in postwar Japan had its pros and cons, and the newer methods were applied to fix their predecessors' problems. The anaerobic treatment method was the most economical one, but the facilities were big and smelly, and the treatment process took about 30 days. The chemical method shortened the treatment time to 10 days, but it was more expensive. Finally, the aerobic treatment solved issues of "visual pollution" and odor, but the process had a low nitrogen extraction rate and created excessive SS.

In 1966, *Guidance for Maintenance and Management of Night Soil Treatment Facilities* was published. The Guidance set technical standards for night soil fa-

69 Ibid., 213.

70 Ibid., 227.

71 Yasumoto Magara, Daisaku Sugito, and Kentaro Yagome, "Design and Performance of Night Soil Treatment Plants," *Water Pollution Control Federation* 52, no. 5 (1980): 921, 914–922.

cilities applying the aforementioned treatment methods, but the emphasis was put solely on the processing capacity. This was in line with the postwar priorities which, to reiterate, emphasized that the night soil treatment technology had to: (a) be capable of treating night soil exclusively; (b) be capable of killing parasite eggs and pathogenic bacteria; (c) improve the odor and appearance of night soil; and (d) produce safe fertilizer.[72] And, from the public health point of view, it was enough: in 1966, when the Guidance was released, the parasite eggs in stool samples could be found in only 9.9% of the population.[73] This was a significant decrease from the 1949 parasitosis rate of 73.1%,[74] thus it can be said that Japan's efforts to protect the nation from night soil-related hazards were a success. Nonetheless, soon the country's approach to night soil treatment proved shortsighted, as it led to the emergence of another problem: environmental crisis.

Environmental pollution

In the 1960s, environmental pollution became a big problem in Japan.

In 1965, Minamata disease, a neurological disease caused by severe mercury poisoning, broke out along the banks of the Agano River in Niigata Prefecture. Three years later, after a 55-year investigation, the Ministry of Health and Welfare issued a statement admitting that the *itai-itai* disease was caused by cadmium poisoning. What caused the outbreaks of both diseases was industrial pollution of the water bodies. Consequently, the public demanded stronger regulations securing water quality and in 1970 the Water Pollution Control Law was enacted to strengthen the regulation of the wastewater from commercial facilities. Since then, domestic wastewater became the main source of water pollution.[75] Thus, Japan's night soil treatment strategy had to change from an emphasis on public health only to one that considered the environment as well.

Regarding on-site wastewater treatment, in the 1980s a new type of jōkasō, called "gappei-shori jōkasō," was developed. *Gappei-shori* means combined treatment and, as the name suggests, the new version could treat both black and greywater, whereas the single-treatment jōkasō could process only blackwater. In 1983, the Jōkasō Act was enacted and in 1987 the national subsidy pro-

72 Ministry of the Environment, Night Soil Treatment, 3.

73 "Kiseichū yobōkai, [Parasite prevention committee]," The Archives of Infectious Diseases History, accessed 23 April 2021, https://aidh.jp/archives01/japc/.

74 Tada, "Nihon ni okeru kiseichū," 50.

75 Ministry of the Environment, Night Soil Treatment, 4.

gram for combined-treatment jōkasō started. Finally, in 2001 it became forbidden to install new single-treatment jōkasō.[76]

As for the night soil treatment facilities, by the end of the 1970s, they employed advanced wastewater treatment methods. Advanced wastewater treatment describes any process designed to produce an effluent of higher quality than normally achieved by secondary treatment processes, or containing unit operations not normally found in secondary treatment.[77] In 1976, a new method combining aerobic treatment and biological denitrification treatment called the two-stage activated sludge process obtained permission for implementation.[78] Currently, this method is known as the standard denitrification treatment. As research into the advanced wastewater treatment methods progressed, the high-load denitrification treatment and membrane separation high-load denitrification treatment developed.

As of 2019, 91.7 % of the Japanese population uses some kind of wastewater treatment, while 79.7 % is connected to the sewer system.[79] This means that even now a significant percentage of the population relies on night soil treatment facilities. Even though the vast majority of the processes applied in those facilities are of the advanced treatment type, anaerobic and aerobic methods are still used (see graph 1).

Therefore, it was only from the 1980s that Japan's night soil treatment approach started to include the environment. This differentiation of standards for public health and environmental protection is transparent in *The Basic Environment Law*. The law established two kinds of Environmental Quality Standard relating to water pollution: environmental water quality standards for human health and environmental water quality standards for protecting the living environment. The latter set standards for BOD and COD (chemical oxygen demand).[80]

76 X.M. Yang et al., "History and Current Situation of Night Soil."

77 Wisam Al-Rekabi, Qiang He, and Wei Qiang, "Improvements in Wastewater Treatment Technology," *Pakistan Journal of Nutrition* 6 (2007): 106, 104–110, accessed 2 May 2021, doi:10.3923/pjn.2007.104.110.

78 Ministry of the Environment and Japan Environmental and Sanitation Center, Reiwa gannendo shinyō shori gijutsu, 228.

79 "Reiwa gannendomatsu no osui shori jinkō fukyū jōkyō ni tsuite [Regarding Spread of the Wastewater Treatment in Population in the First Fiscal Year of the Reiwa Period]," Ministry of Land, Infrastructure, Transport and Tourism, last modified 4 September 2020, https://www.mlit.go.jp/report/press/mizukokudo13_hh_000455.html.

80 "Environmental Quality Standards of Japan," Ministry of the Environment, accessed 23 April 2021, https://www.env.go.jp/en/standards/.

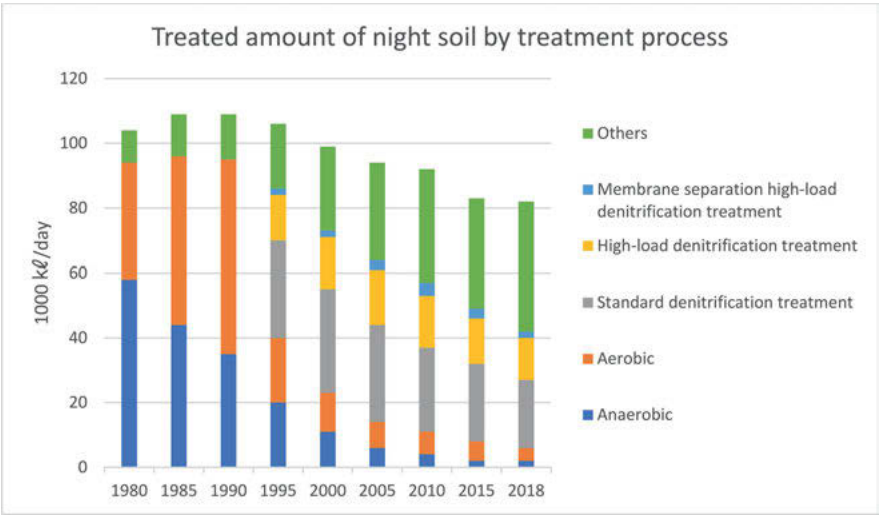

Figure 1: Present-day treatment of night soil in night soil treatment facilities. Based on data available at Ippan haikibutsu shori jittai chōsa kekka [Survey Results of the Current State of Municipal Waste Disposal], Ministry of the Environment, accessed 2 May 2021, https://www.env.go.jp/recycle/waste_tech/ippan/.

In 2018, the total achievement rate of BOD/COD environmental standard was 89.6%, with the achievement rate in lakes being as low as 54.3%.[81]

Conclusion

This paper has explored the mechanization of night soil disposal in postwar Japan. In the background of this process is the transition of excreta from a valuable resource to a health hazard, which had started before WWII, but was amplified during the occupation. Thus, in the planning of mechanization, emphasis was put on public health, notably by implementing night soil treatment that would kill parasite eggs and pathogenic bacteria. The collection was mechanized by the use of vacuum cars, while mechanization of treatment developed twofold: via single-treatment jōkasō for on-site treatment and night soil treatment facilities. The latter included anaerobic, chemical, and aerobic treatment methods. By

81 Hiroyasu Kawashima, "Updates on Domestic Wastewater Management in Japan" (paper presented at the 16th WEPA Annual, Online, 1 March 2021).

the end of the 1960s, Japan's night soil strategy seemed successful regarding its goal of improving public health – the parasitosis rate in the Japanese population fell below 10 %. On the other side of this success, however, was the deteriorating situation of the country's environment, especially water pollution.

When the *Water Pollution Control Law* was enacted in 1970 to strengthen the regulation of the wastewater from commercial facilities, domestic wastewater became the main source of water pollution. Consequently, Japan began enacting stricter regulations aiming to improve wastewater treatment. These led to the development of combined-treatment jōkasō which treated both black and greywater, and advanced wastewater treatment methods that offered better denitrification levels. In other words, since the 1970s, Japan's approach to night soil disposal changed from a public health-centric strategy to a more environmentally friendly one.

Currently, Japan uses its knowledge and technology to support developing countries in water and sanitation improvement. As the world's biggest ODA donor in this sector, Japan promotes the "collect-transport-treat" system as an alternative to the costly piped solutions. Thanks to the country's trial-and-error experiences, Japan's initiatives in other countries are set to protect not only public health, but also the environment. However, as we continue to face new challenges such as water shortages, the question of what to do with human excreta is ever so pressing. Next-generation solutions are emerging, such as a toilet system without connections to centralized water, sewers, or electrical supplies, that still removes pathogens from human waste and recovers valuable resources such as energy, clean water, and nutrients. A case in point is the "Reinvent the Toilet Challenge" developed by the Bill and Melinda Gates Foundation.[82] In this light, we just might be on the verge of yet another toilet revolution that will completely reshape what constitutes pooping in a modern way.

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82 Bill and Melinda Gates Foundation, Reinvent the toilet challenge: a brief history. https://www.gatesfoundation.org/our-work/programs/global-growth-and-opportunity/water-sanitation-and-hygiene/reinvent-the-toilet-challenge-and-expo.

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Martin Gorsky and Christopher Sirrs

The World Bank's advocacy of user fees in global health, c.1970–1997: more ideology than evidence?

Introduction

In the postwar period the prime international body responsible for development aid has been the World Bank. Like the International Monetary Fund (IMF), the Bank was created at the Bretton Woods Monetary Conference in July 1944 as an instrument of post-war financial recovery.[1] It has several subsidiary institutions, of which those relevant to health are: the International Bank for Reconstruction and Development (IBRD), established 1944, which facilitates loans to states on commercial terms; the International Finance Corporation (IFC), 1956, which channels loans to private sector organizations; the International Development Association (IDA), 1959, which makes grants and zero- or low-interest loans to poor countries, from a fund composed of triennial "replenishments" by wealthy member states; and more recently Bank trust funds which it manages on behalf of corporate or philanthropic donors.[2] At the outset, the intention had been that the World Bank Group would take the lead with economic development lending within the United Nations (UN) family. In practice though, US negotiators insisted on its operational independence.[3] By the 1950s the "reconstruction"

1 Devesh Kapur, John P. Lewis, and Richard Webb, *The World Bank: Its First Half Century*, Volume 1 (Washington, D.C: Brookings Institution, 1997), 57–84.

2 Katherine Marshall, *The World Bank: From Reconstruction to Development to Equity* (Hoboken: Taylor & Francis, 2008), 24–39; Janelle Winters and Devi Sridhar, "Earmarking for Global Health: Benefits and Perils of the World Bank's Trust Fund Model," *British Medical Journal* 358 (2017): j3394.

3 Hans Wolfgang Singer, "An Historical Perspective," in *The UN and the Bretton Woods Institutions: New Challenges for the 21st Century*, ed. Paul Streeten, Khadija Haq, Richard Jolly, and Mahbub ul Haq (London: Palgrave Macmillan Limited, 1995), 7–25, at 23; Richard Jolly, "The UN and the World Bank: Collaboration Toward Stronger Global Governance?" in *Routledge*

Martin Gorsky, Centre for History in Public Health, London School of Hygiene and Tropical Medicine, Martin.Gorsky@lshtm.ac.uk
Christopher Sirrs, Department of History, University of Warwick, Christopher.Sirrs@warwick.ac.uk

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aspect of its remit had given way to "development," and its de facto separation from the UN meant it pursued its own agenda. Before turning to the main theme of this essay, the Bank's lending for health, we begin by summarizing its understanding of "development" and the place of social welfare within its conceptualization.

Standard accounts identify four phases of evolving ideas at the Bank.[4] In the 1950s and 1960s a "trickle-down" view prevailed, in which economic modernization must come first, with welfare goods like health emerging subsequently as a benefit of growth. This, it must be stressed, was rather different from the meanings of "development" and its cognates ("mise en valeur," *Ethische Politiek*) in the interwar colonial settings where it originally took shape. For its early British, French, and Dutch protagonists, health and education were inseparable from broader efforts to lift economic growth, though assessments vary as to whether this was driven by legitimation, productivism, or moral obligation.[5] Not only were such concerns alien to the bankers' mentality, they also had little in common with nascent theory in development economics about how growth could be stimulated in "third world" nations. This turned on such ideas as a "big push" of infrastructural investment, a dash for "import substitution" in economies geared to agrarian exports, and a concerted effort to reorient labor markets to industry.[6] Early Bank lending therefore prioritized "roads, railways, ports and power sta-

Handbook on the UN and Development, ed. Thomas G. Weiss and Stephen Browne (London: Routledge, Taylor & Francis Group, 2021), 198–209.

4 Ravi Kanbur and David Vines, "The World Bank and Poverty Reduction: Past, Present and Future," in *The World Bank: Structure and Policies*, ed. Christopher Gilbert and David Vines (Cambridge: Cambridge University Press, 2000), 87–107.

5 David J. Morgan, *Colonial Development* (London: Overseas Development Institute, 1964), 14–15; Stephen Constantine, *The Making of British Colonial Development Policy, 1914–1940* (London: Frank Cass, 1984), 10–11, 181, 188, 205, 217–219, 259; Bernard Porter, *The Lion's Share: A History of British Imperialism 1850 to the Present*, 6th ed. (London: Routledge, 2021), 180–184, 221–224, 245; Christophe Bonneuil, "Development as Experiment: Science and State Building in Late Colonial and Postcolonial Africa, 1930–1970," *Osiris* 15, Nature and Empire: Science and the Colonial Enterprise (2000): 258–281; Robert Cribb, "Development Policy in the Early 20th Century," in *Development and Social Welfare: Indonesia's Experiences under the New Order*, ed. Jan-Paul Dirkse, Frans Hüsken, and Mario Rutten (Leiden: KILTV Press 1993), 225–245.

6 Paul N. Rosenstein-Rodan, "Problems of Industrialisation of Eastern and South-Eastern Europe," *The Economic Journal* 53, no.210/211 (1943): 202–11; Raúl Prebisch, *The Economic Development of Latin America and its Principal Problems* (New York: United Nations Dept. of Economic Affairs, 1950); W. Arthur Lewis, *The Theory of Economic Growth* (London: George Allen and Unwin, 1954).

tions" as the foundations of growth, with social goods left to bilateral aid or other UN agencies.[7]

This then gave way in the 1970s to the era of "poverty lending," which was marked by a broadening of the loan portfolio to include smaller scale rural projects addressing more directly the persistent deprivation of the agrarian poor. There was mounting evidence that the growth thus far achieved was insufficient to generate the social goods required by expanding populations, and this personally touched the Bank's new President Robert McNamara.[8] Development theory was also shifting. On the one hand the role of human capital as a prerequisite of development came under discussion and, although contested, began to gain acceptance.[9] On the other, evidence was emerging that policies which brought small rural producers access to credit and technology could be a path to growth.[10] By the early 1980s this phase came to a close due to a combination of changing political winds and the theoretical ascendancy of the "Washington consensus."[11] The result was a reversion to trickle-down assumptions, though now a new approach would be taken to fostering growth and funding welfare. The oil price shocks and the debt crisis afflicting many poorer nations empowered the Bank to attach to their loans more stringent requirements for macroeconomic reforms. These reflected the increasing influence of the argument that development would be better achieved by abandoning statist planning and boosting the private sector.[12] This new dispensation persisted until the 1990s, when once again the importance of human capital as a condition of growth was accepted, and the role of the state in guaranteeing macroeconomic security given more prominence.[13]

Where was lending for health in all this? The initial emphasis on power and transport infrastructure extended by the 1960s to include water and drainage

7 Kapur, Lewis and Webb, *World Bank*, 109, 114–115.

8 Kapur, Lewis and Webb, *World Bank*, 215–220.

9 Theodore W. Shultz, "Investment in Human Capital," *American Economic Review* 51, no.1, (1961): 1–17; Selma J. Mushkin, "Health as an Investment," *Journal of Political Economy* 70, no.5, part 2: Investment in Human Beings (1962): 129–157.

10 James P. Grant, "Development: The End of Trickle down?" *Foreign Policy* 12 (1973): 43–65; Dudley Seers, "The Meaning of Development," *IDS Communication Series* 44 (Institute of Development Studies: 1969).

11 Kapur, Lewis, and Webb, *World Bank*, Vol. I, 321–338; Kanbur and Vines, "World Bank and Poverty Reduction," 91–92.

12 Howard Stein, *Beyond the World Bank Agenda: An Institutional Approach to Development* (Chicago: University of Chicago Press, 2008), 21–22, 30–32.

13 Kanbur and Vines, "World Bank and Poverty Reduction," 92–95.

projects, but these were not intended primarily to advance health.[14] In the 1970s the Bank began making loans for disease prevention and health services, but only as subsidiary elements of initiatives aimed at agriculture, population control or improved nutrition.[15] However, in 1980 it changed course and began direct lending for health, from which point it grew to be a major actor whose financial clout conferred significant influence over policy.[16] Time-series data on international aid for health are available from the 1990s, allowing comparison of the Bank's contribution with other donors (the WHO, other UN bodies, bilateral aid, philanthrocapitalists, public/private partnerships). This suggests that during the 1990s the IBRD and IDA together accounted for on average 13.5% of the total funding transferred internationally for health purposes, exceeding (from 1994) the sum channeled through the WHO, the UN agency nominally responsible for health.[17]

The specific concern of this article is to interrogate what has become a conventional wisdom in the historiography of global health. This asserts that in the 1980s and 1990s the cause of health in poor countries was set back by structural adjustment programs imposed by the Bank and the IMF.[18] These made loans conditional on macroeconomic restructuring, which included *inter alia* the removal of protective tariffs and currency devaluations to stimulate international trade, and the reduction of state expenditure and taxation levels to foster a greater role for private enterprise. At the macro-level, cuts in social expenditure diminished the health workforce, while at the micro-level the Bank advocated the introduction of out-of-pocket payments – "user fees" – for health services and more private provision. This commoditized a hitherto public realm and resulted

14 Kapur, Lewis, and Webb, *World Bank*, Vol. I, 86, 109–120, 141, 166–168, 199–202.

15 Kapur, Lewis, and Webb, *World Bank*, Vol. I, 234–235, 253–254.

16 Kent Buse, "Spotlight on International Organizations: The World Bank," *Health Policy and Planning* 9 (1994): 95–99.

17 Calculated from Institute for Health Metrics and Evaluation (IHME). "Channels of Development Assistance for Health, 1990–2019," Seattle, WA: IHME, University of Washington, 2021, http://www.healthdata.org/fgh, accessed 6 May 2021.

18 Kamran Abbasi, "The World Bank and World Health: Under Fire," *British Medical Journal* 318, no.7189 (1999): 1003–1006; Randall M. Packard, *A History of Global Health: Interventions into the Lives of Other Peoples* (Baltimore: Johns Hopkins University Press: 2016), 259–264; Marcos Cueto, Theodore Brown, and Elizabeth Fee, *The World Health Organization: A History*, Global Health Histories (Cambridge: Cambridge University Press, 2019), 247–252; Stein, *Beyond the World Bank Agenda*, 207–248; Rick Rowden, *The Deadly Ideas of Neoliberalism: How the IMF has Undermined Public Health and the Fight Against Aids* (London: Zed Books, 2013), 144–159; more broadly: Eric Toussaint, *The World Bank: A Critical Primer* (London: Pluto Press, 2007), 253–260.

in a diminution of access to effective treatments. Thus, critics argue that the Bank's policy turn, which the portmanteau term "neoliberalism" well captures, proved damaging to the health of the world's poor.[19]

We want to revisit this episode to understand better why the World Bank chose to adopt an approach which has since attracted such opprobrium. After all, its research arm contained many highly qualified economists working to strengthen the evidence base for health lending, while its staff were recalled as "very compassionate and very dedicated."[20] Is it therefore sufficient to account for its behavior as "...based more on ideology than evidence"?[21] To explore this question, we will trace the trajectory of the Bank's thinking about health. This does not lead us to a substantially revisionist conclusion on the implementation and outcomes of the policy, which are well-documented. However, as well as highlighting the intellectual continuities and empirical bases that guided the actions of health sector staff, we also want to deepen understanding of the institutional discourses and politics which constrained them. We begin with a note on conceptual assumptions and methods before elaborating on the critical historiography. A central section gives a chronological account of health policy development since the Bank's inception, and we then set out our analysis.

Conceptualization and methods

How should we approach the historical analysis of international organizations? The principal/agent model is helpful, for as institutions created by their member states (the principals), UN bodies function over time as agents that fulfil an agreed purpose.[22] To what extent though are they able to act independently of the principals as circumstances evolve? Scholars from the realist tradition in political science think the answer is very little. They see international organizations as continuously in the sway of the strongest member states, which initially meant

19 Asa Cristina Laurell and Oliva Lopez Arellano, "Market Commodities and Poor Relief: The World Bank Proposal for Health," *International Journal of Health Services* 26, no.1 (1996): 1–18.
20 World Bank Group Historian's Office, Oral History Program (WBOHP), Transcript of interview with Ernest Stern, 16 and 29 December 1994, 5 January 1995, 43.
21 Anne-Emanuelle Birn, Yogan Pillay, and Timothy H. Holtz, *Textbook of International Health. Global Health in a Dynamic World*, 3rd ed. (Oxford: Oxford University Press, 2009), 58.
22 Darren Hawkins, David Lake, Daniel Nielson, and Michael Tierney, "Delegation Under Anarchy: States, International Organizations, and Principal–Agent Theory," in *Delegation and Agency in International Organizations*, ed. D. Hawkins, D. Lake, D. Nielson, and M. Tierney (Cambridge: Cambridge University Press, 2006), 3–38.

the colonial powers, alongside the USA and Soviet Union.[23] Others prefer to emphasize the degree of autonomy which they accrue. This is partly due to their institutional existence as bureaucracies whose staff cultivate a genuinely transnational outlook, developing strategies to mediate the demands of dominant nations.[24] Partly it reflects the nature of global policy challenges, which expose the "complex interdependence" between member states on issues such as the environment, crime, migration, trade, and health security.[25] This latter view is anchored in the functionalist analysis developed in the 1940s, which held that the mid-century crisis of depression and world war had revealed the inadequacy of the Westphalian sovereign nation to avert disaster.[26] Hence the need for a United Nations and its special agencies to guarantee peace and prosperity.

With respect to the World Bank, we broadly follow the realist interpretation, for the influence of the United States has been repeatedly observed.[27] Headquartered in Washington, the Bank's President is nominated by the US, and has traditionally been an American citizen, drawn from banking (eight), US politics (four), business (one), and medicine (one). In the period discussed here, the United States held one-sixth of the votes on the Bank's Executive Board, in which it exercised a veto power over special decisions; the Board's US Director member could also control which loans or policies came forward for approval.[28] America's role as the largest source of IDA replenishments, whose contributions provided a pro rata gauge for other countries, conferred further leverage. Though nominally Article IV of its Charter precluded political considerations in Bank lending decisions, there were thus various examples of alignment with US foreign policy goals, such as loans made to Nicaragua under Somoza and to Suhar-

23 Hans Morgenthau, *Politics Among Nations: The Struggle for Power and Peace* (New York: A.A. Knopf, 1948); Mark Mazower, *No Enchanted Palace: The End of Empire and the Ideological Origins of the United Nations* (Princeton: Princeton University Press, 2009).

24 Michael Barnett and Martha Finnemore, *Rules for the World: International Organizations in Global Politics* (Ithaca: Cornell University Press, 2004); Nitsan Chorev, *The World Health Organization between North and South* (Ithaca: Cornell University Press, 2012); Peter M. Haas "Introduction: Epistemic Communities and International Policy Coordination," *International Organization* 46, no.1 (1992): 1–35.

25 Robert Keohane and Joseph Nye, *Power and Interdependence* (Boston: Longman, 2011).

26 David Mitrany, "The Functional Approach to World Organization," *International Affairs* 24, no.3 (1948): 350–363.

27 Catherine Gwin, "U.S. Relations with the World Bank: 1945–1992," in *World Bank*, ed. Kapur, Lewis, and Webb, Vol. I, 195–274; Robert Hunter Wade, "US Hegemony and the World Bank: The Fight over People and Ideas," *Review of International Political Economy* 9, no.2 (2002): 201–229.

28 Ngaire Woods, "The Challenges of Multilateralism and Governance," in *The World Bank: Structure and Policies*, ed. C. Gilbert and D. Vines (Cambridge: Cambridge University Press, 2000), 132–156, at 133–134.

to's Indonesia, or refused to Allende's Chile and Vietnam in the 1970s.[29] This is not to caricature the Bank as the creature of the United States, which has always accepted those multilateral features which made it a vehicle for soft power. These include the financial independence of the IBRD, which borrows on capital markets and generates its own profits, and the in-house research capacity, which provides technical authority for projects.[30] Indeed, research staff remembered they "...weren't worried about the US ... part of what was interesting about being in the Bank, ... was how well could you become ... an international person and forget about where you're from ...."[31] Overall though, on a spectrum running between the constraints of a powerful principal and the freedom of autonomous agency, we situate the Bank closer to the former.

The research methods we employ are principally documentary investigation. Major policy papers and reports are easily available online through the Bank's digital archive, while many findings of its researchers are published in open academic journals. For grey literature, such as project reports, and primary sources like office consultations, draft policy papers, and project correspondence, we visited the Bank's archive in Washington and requested that material be declassified for consultation. This process appeared unproblematic, though we note the Bank continues to classify sensitive material, for example alluding to continuing donor-recipient relationships. In addition, we draw on a number of oral history interviews, some conducted by ourselves and some published online in the Bank's oral history collection. Our sample is small but includes some key actors whose positions at the Bank are described in the relevant footnotes. Informed consent was obtained for those we held and use of direct quotations was subject to our interviewees' approval.

The critical historiography

There are several planks to the critique of the Bank's past approach to health financing and delivery, and an extensive evaluative literature that examines the

29 Robert Fleck and Christopher Kilby, "World Bank Independence: A Model and Statistical Analysis of US Influence," *Review of Development Economics* 10, no.2 (2006): 224–240; Woods, "Challenges of Multilateralism," 138, 145–146; Gwin, "U.S. Relations with the World Bank," 252–259.

30 Woods, "Challenges of Multilateralism," 137–144.

31 Interview: John Akin with Martin Gorsky, 29 May 2019; Akin is Professor of Health Economics at UNC Chapel Hill, which he joined in 1973; he was senior economist in the Bank's Department of Health, Nutrition and Population, 1985–1987, when he co-authored *Financing Health Services*.

outcomes of its policy recommendations. One element is the argument that the Bank introduced an overly economistic way of knowing about global health, privileging the influence of trained economists rather than public health experts.[32] This, critics claim, led to proposals that were insensitive to need and to notions of universal human rights that had hitherto guided UN organizations. Moreover, whereas the early health policy papers had accepted arguments about market failures in medical services, this influence faded before that of public choice economics and its emphasis on state failure.[33] The new direction was particularly significant because it problematized the recent consensus forged by the WHO and UNICEF, announced at the Alma Ata conference (1978), that "Health For All By the Year 2000" would be achieved through extending access to primary healthcare. Typically, the Bank's changing course is charted through key policy documents of the 1980s and 1990s.

Within this critical literature a frequently cited Bank text is *Financing Health Services in Developing Countries* (1987), co-authored by John Akin, Nancy Birdsall, and David de Ferranti, and building on earlier working papers by the latter.[34] Despite appearing somewhat after the structural adjustment period began it is held to have crystalized the new philosophy, substituting an "unrequited commitment" to neoclassical rigidities for the more culturally sensitive institutional economics that preceded it.[35] The authors' opening claim was that the "... common approach to health care in developing countries has been to treat it as a right of the citizenry" with "free services to everyone. This approach does not usually work."[36] Scanning the existing situation, they stressed the inequitable distribution of public services, privileging urban areas and wealthier citizens over the rural poor. State systems also evinced allocative inefficiency, in that they were inadequately financed and biased to expensive institutions rather than cost-effective prevention, or primary care.

They then gave an analysis of willingness to pay that turned on the concept of health as a commodity. Curative services were deemed to be private goods, which carried no externalities that merited subsidy. "Individuals are generally

32 Stein, *Beyond the World Bank Agenda*, 10–14, 21–22, 37–38, 214; Kelley Lee and Hilary Goodman, "Global Policy Networks: The Propagation of Health Care Financing Reform since the 1980s," in *Health Policy in a Globalizing World*, ed. Kelley Lee et al. (Cambridge: Cambridge University Press, 2002), 97–119.

33 Rowden, *Deadly Ideas of Neoliberalism*, 144–152.

34 Stein, *Beyond the World Bank Agenda*, 214–219.

35 Stein, *Beyond the World Bank Agenda*, 219, 236–246.

36 John Akin, Nancy Birdsall, and David de Ferranti, *Financing Health in Developing Countries: An Agenda for Reform* (Washington, D.C.: World Bank, 1987), 3.

willing to pay for direct, largely curative care with obvious benefits to themselves ... The financing and provision of these private types of health services should be shifted," and governments "should consider instituting modest charges...".[37] Conversely, preventive services such as immunization or sanitation were public goods, whose reduction of communicable diseases would be beneficial to all. Since "consumers" were "...reluctant to pay directly for programs and services which benefit society as a whole," these merited tax funding.[38] Thus, reform programs should include the decentralization of public health services, the introduction of health insurance and user charges, and the encouragement of private providers.

Critics of the Bank's ongoing support for markets in healthcare also cite the World Development Report (WDR) 1993, *Investing in Health*, led by Dean Jamison. They situate it principally as a milestone in the economization of global health, relinquishing languages of rights and state responsibility in favor of a human capital justification, in which development investment would undergird the skilling and productivity of labor.[39] It also revolutionized cost-effectiveness analysis, unveiling the "global burden of disease" and an accompanying metric that jointly gauged morbidity and mortality, the Disability Adjusted Life Year. Inspiring distrust from some because it subjected human life to valuation, for others, amongst them Bill Gates, its evidence base proved inspirational.[40] The WDR also consolidated the Bank's pluralist vision of healthcare financing, encouraging private health insurance and private sector finance and delivery of services. With respect to user fees however, it was quite nuanced, modifying the earlier advocacy now that negative outcomes of charging were becoming apparent. In the text Jamison "...was trying to damn it with no praise," noting that fees were a poor source of revenue generation, and could deter utilization if ineptly constructed.[41] Only in 1997 did the Bank draw a clearer line beneath the experi-

37 Akin, Birdsall, and de Ferranti, *Financing Health*, 2, 4.

38 Akin, Birdsall, and de Ferranti, *Financing Health*, 2.

39 Laurell and Arellano, "Market Commodities and Poor Relief"; Ayo Wahlberg and Nikolas Rose, "The Governmentalization of Living: Calculating Global Health," *Economy and Society* 44, no.1 (2015): 60–90; Mario Hernández-Álvarez et al., "Universal Health Coverage and Capital Accumulation: a Relationship Unveiled by the Critical Political Economy Approach," *International Journal of Public Health* 65, no.7 (2020): 995–1001.

40 Wahlberg and Rose, "Governmentalization of Living"; Vincanne Adams, "Metrics and the Global Sovereign," in *Metrics: What Counts in Global Health*, ed. Vincanne Adams (Durham: Duke University Press, 2016), 19–56; Nature editorial, "In praise of Gates," *Nature* 425, 435 (2003), doi:10.1038/425435a.

41 Interview: Dean Jamison with Martin Gorsky, 11 September 2019; Jamison was employed at the Bank in 1976–1988, initially as an education economist and subsequently as manager of

ment, in a strategy paper influenced by the pragmatic and historically informed Alexander Preker. This warned against "blind faith in the market" as the panacea for health care financing, and advocated maximizing prepayment through tax or insurance "to avoid the equity and efficiency problems associated with extensive reliance on user charges."[42]

There has been a substantial literature since the 1980s examining the results of the Bank's prescriptions. With respect to the introduction of patient charges, there is a consensus that these proved to be barriers to access.[43] For example, a systematic review of 2004 drew on 84 African studies, concluding that "... application of user fees reduces utilization, particularly of poorer households."[44] A 2011 Cochrane Review used rigorous quality appraisal to winnow down to 16 articles whose quantitative results were synthesized. This revealed that the introduction of charges precipitated a 28%–50% fall in services use, while their removal heralded 30%–50% increases.[45] The anticipated efficiency improvements were also unfulfilled: higher administrative costs diminished net revenue gains from fees, and new inefficiencies were incentivized, such as excessive prescribing. And because it was particularly the poorest households that user fees deterred, prior inequities remained in place. Not all findings were negative: when combined with quality improvement payment could be accompanied by raised utilization in limited settings. Yet on balance policy failure seems clear.[46]

Consensus is less certain in the scholarship examining the broader impact of structural adjustment programs (SAPs) on health. This comes with several caveats: it is not easy to disentangle the effects of SAPs on social expenditure

its Health, Nutrition and Population Division; he was Professor of Education and Public Health at UCLA 1988–2006, when he was lead author on the World Development Report 1993; World Bank, *Investing in Health* (New York: Oxford University Press, 1993), 11, 57, 118.

42 World Bank Human Development Network, *Sector Strategy: Nutrition and Population* (Washington: IBRD, 1997), 8–9.

43 Barbara McPake, "User Charges for Health Services in Developing Countries: A Review of the Economic Literature," *Social Science and Medicine* 36, no.11 (1993):1397–1405; Lucy Gilson, "The Lessons of User Fee Experience in Africa," *Health Policy and Planning* 12, no.4 (1997): 273–285, 275.

44 Guy Hutton, "Is the Jury Still Out on the Impact of User Fees in Africa? A Review of the Evidence from Selected Countries on User Fees and Determinants of Health Service Utilisation," *East African Medical Journal* 81, no.4 (2004): S45–S60.

45 Mylene Lagarde and Natasha Palmer, "The Impact of User Fees on Access to Health Services in Low- and Middle Income Countries," *Cochrane Database of Systematic Reviews* 4, no.4 (2011): 4, 10–12.

46 Gilson, "Lessons of User Fee Experience," 279–280.

from those which would anyway have followed the economic tribulations that necessitated borrowing; most studies do not distinguish the impact of the Bank's conditionalities from those of the IMF, whose macroeconomic requirements may have left little room for manoevre, or indeed from the preferences of borrower governments; some writers also detect a tendency for external academic research to produce more critical results than studies commissioned by the Bank and IMF. Results can also vary according to the timeframe and the metrics selected. That said, a synthesis commissioned by WHO in 2001 located 28 empirical studies of which 29% found positive health outcomes, 35% negative, and 32% a mix with positive and negative facets.[47] More recent analysis tracking public expenditure on health under SAPs has found that this actually rose in sub-Saharan African nations, though not in Asia and Latin America.[48] However, with respect to outcomes, measured through child mortality and life expectation, results were negative.[49]

In any event, there followed a strong reaction against these policies. On the one hand there was a normative push to reassert the ethical basis of rights to health in underpinning universal coverage, especially in Latin America where the debate over state provision has great political salience.[50] On the other was official acceptance that prior strategies had failed.[51] Introducing the WHO's *World Health Report 2010, Health Systems Financing*, the then Director General Margaret Chan characterized "... continued reliance on direct payments, including user fees, as by far the greatest obstacle to progress."[52] More emotively, Rob Yates of the UK's Department for International Development observed that "more than 3 million child deaths could have been averted over the past 20 years had

47 Anna Breman and Carolyn Shelton, *Structural Adjustment and Health: A Literature Review of the Debate, its Role-Players and Presented Empirical Evidence*. Commission on Macroeconomics and Health: CMH Working Paper Series. Paper No. WG6: 6, 2001, 12.

48 Alexander Kentikelenis, Thomas Stubbs, and Lawrence King, "Structural Adjustment and Public Spending on Health: Evidence from IMF Programs in Low-Income Countries," *Social Science & Medicine* 126 (2015): 169–176.

49 Breman and Shelton, *Structural Adjustment and Health*; Michael Thomson, Alexander Kentikelenis, and Thomas Stubbs, "Structural Adjustment Programmes Adversely Affect Vulnerable Populations: A Systematic-Narrative Review of their Effect on Child and Maternal Health," *Public Health Reviews* 38, no.13 (2017): 1–18.

50 Laurell and Arellano, "Market Commodities"; Anne-Emanuelle Birn, Laura Nervi, and Eduardo Siqueira, "Neoliberalism Redux: The Global Health Policy Agenda and the Politics of Cooptation in Latin America and Beyond," *Development and Change* 47, no.4 (2016): 734–759.

51 Emilie Robert and Valéry Ridde, "Global Health Actors No Longer in Favor of User Fees: a Documentary Study," *Globalization and Health* 9, no.1 (2013), doi:10.1186/1744–8603–9–29.

52 Margaret Chan, "Message from the Director-General," in *World Health Report 2010. Health Systems Financing: The Path to Universal Coverage* (Geneva: WHO, 2010), vi–vii, at vi.

fees not been charged ... Intuitively, we should have known ... that taking money from poor people when they are sick is not a good idea."[53] The strength of this counter-reaction sharpens the question of how the Bank arrived at its earlier position.

The World Bank and health: towards direct lending

Part of the answer lies with long-run continuities in thinking at the Bank. Despite the absence of direct lending for health projects in its early years, the relationship between health services and economic growth was discussed from the start. It figured in the Bank's very first development mission, to Colombia in 1949, and several others in the 1950s to assist governments in planning, in which Keynesian thought and welfare concerns were prominent.[54] The health advisers were not economists, but public health experts, including, for Colombia, such progressive figures as Joseph Mountin and Hector Abad Gomez.[55] Mountin was Assistant Surgeon-General in the US Public Health Service, where he advocated for medical care as public provision, and had testified to Congress about the "highly inequitable cash barrier" of American user fees and the inadequacy of voluntary insurance.[56] Abad Gomez would become a leading social medicine advocate for Colombia, championing human rights and developing pioneer community health programs in Medellin.[57] Their report was the first by the Bank to articulate a human capital argument that poor health "means not only failure to reach maximum productivity, but also a direct drain on wealth and resources."[58]

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53 Rob Yates, "Universal Health Care and the Removal of User Fees," *The Lancet* 373, no. 9680 (2009): 2078–2081.

54 Michele Alacevich, "The World Bank and the Politics of Productivity: The Debate on Economic Growth, Poverty, and Living Standards in the 1950s," *Journal of Global History* 6 (2011): 53–74; Michele Alacevich, *The Political Economy of the World Bank: The Early Years* (Stanford: Stanford University Press, 2009), 43.

55 World Bank, *The Basis of a Development Program for Colombia* (Washington, D.C.: IBRD, 1950), xiii–xiv.

56 Milton Roemer, "Joseph W. Mountin, Architect of Modern Public Health," *Public Health Reports (1974-)* 108, no.6 (1993): 727–735, at 732.

57 Luis Zea-Bustamante, "Héctor Abad Gómez Como Educador Popular. Un Acercamiento a su Vida, Obra y Discursos," *Revista Facultad Nacional de Salud Pública* 35, no.2 (2017): 179–185; for his cinematic biography see "El Olvido que Seremos (Memories of my Father)," dir. Fernando Trueba, 2020.

58 World Bank, *Development Program for Colombia*, 168–207, quote at 168.

This suggests the Bank was initially open to health as part of its remit. Indeed, an internal 1956 synthesis of its early missions noted consensus that "disease prevention" should be "top of the list" in development thinking.[59] Its early rapporteurs were untroubled by abstruse debate about whether better health was a necessary precursor to growth or a trickle-down outcome of economic development. Instead they posited an interlocking relationship: "Because of adverse economic conditions their health is poor and because of poor health their economic output and efficiency are low. This vicious circle has to be broken."[60] Their recommendations were textbook social medicine: governments should concentrate resources on preventive programs through vaccination, insecticide spraying, health education, fresh water, and sanitation, and while rural health centers were desirable, states should emphatically not support costly hospital services due to inefficiency and opportunity costs.[61] Such motifs would long run through Bank thinking.

However, they did not translate into direct assistance in the 1950s and 1960s, when only water and sanitary infrastructure could attract Bank loans. Residual New Deal social concerns were quickly expunged in favor of lending for production, a goal which commanded political consensus and Wall Street approval.[62] "Damn it," Vice President Robert Garner said in 1951, "We can't go messing around with education and health. We're a bank!"[63] Such neglect of health services financing was common across the UN, although one agency, the International Labor Organization (ILO), pressed for entitlement to health coverage under its Social Security Convention, debated between 1947 and 1952. ILO officials lobbied for the new WHO's support, allying with several European social medicine figures involved in planning its remit.[64] These efforts failed and the ILO's convention was watered down, with the WHO committing only to a study and advisory

59 K. Varvaressos, and R. Zafiriou, The Reports of the Bank's General Survey Missions: A Synthesis, IBRD, March 5 1956, 290–291; missions to Colombia, Guatemala, Cuba, Nicaragua and Turkey, Ceylon (Sri Lanka), Nigeria, Jamaica, British Guiana, Iraq and Surinam. World Bank Archive (WBA).

60 Varvaressos and Zafiriou, Bank's General Survey Missions, 291.

61 Varvaressos and Zafiriou, Bank's General Survey Missions, 290–299.

62 Alacevich, "Politics of Productivity," 61–67; Alacevich, *Political Economy of the World Bank*, 134–136.

63 Quoted in Alacevich, *Political Economy of the World Bank*, 129.

64 Martin Gorsky and Christopher Sirrs, "The Rise and Fall of 'Universal Health Coverage' as a Goal of International Health Politics, 1925–1952," *American Journal of Public Health* 108, no.3 (2018): 334–342.

role on health services.[65] Instead its early decades concentrated on major "vertical" disease programs against smallpox and malaria.[66] The unspoken consensus was that responsibility for "horizontal" programs providing curative health facilities resided with the nation state, whose sovereignty extended also to matters of financing and eligibility.

Three drivers of change would impel the Bank in the 1970s towards direct loans for health: a growing awareness of the health implications of its infrastructure lending; collaboration with WHO in the West African Onchocerciasis Control Program; and provision of health services as an aspect of population policy. The first of these refers particularly to fresh water and sewerage projects, which became more numerous in the 1970s when they were seen as both promoting growth and ameliorating poverty.[67] In the fiscal year 1969 there were five such infrastructure projects, predominantly providing fresh water, and amounting to US$34.6 million loans or credits. By 1978, this had risen to 17 water/sanitation projects worth US$305 million, of which half had sewerage components.[68] Though the cost-benefit calibration of such investment was dogged by confounders, there was broad consensus that it reduced the burden of waterborne diseases and hence improved health; this in turn must foster development by increasing labor productivity, enhancing irrigation, attracting industry to rural locations, and so on.[69] Other development lending that was increasingly understood to have integral health components included housing programs incorporating health centers, education schemes supporting medical training, and agricultural settlement projects in which new health facilities induced participation.[70]

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65 Martin Gorsky and Christopher Sirrs, "Universal Health Coverage as a Global Public Health Goal: the Work of the International Labour Organisation, c.1925–2018," *História, Ciências, Saúde-Manguinhos* 27, S1 (2020): 71–93.

66 Packard, *A History of Global Health*, 133–179.

67 Christian McMillen, "'These Findings Confirm Conclusions Many Have Arrived at by Intuition or Common Sense': Water, Quantification and Cost-effectiveness at the World Bank, ca. 1960 to 1995," *Social History of Medicine* 34, no.2 (2009): 351–374.

68 World Bank, *Health Sector Policy Paper* (Washington, D.C.: World Bank, March 1975), 48; the source does not specify whether the figures for loans and credits per fiscal year are expressed as current or constant prices. Assuming the former then it should be borne in mind that this was a period of high US$ inflation (71%, 1965–75, see https://www.usinflationcalculator.com/) and thus the real increase was substantially less.

69 Jeremy Warford and Robert Saunders, *Village Water Supply: Economics and Policy in the Developing World, IBRD* (Baltimore: Johns Hopkins University Press, 1976), 31–85.

70 World Bank, *Health Sector Policy Paper*, 1975, 49–55.

Similar assumptions about the interdependency of health improvement and economic development informed the Onchocerciasis Control Program, which would run from 1974 to 2002. Aiming substantially to reduce river blindness in (initially) seven West African states, this aligned the WHO, the United Nations Development Program, and the UN's Food and Agriculture Organization with the Bank, which acted as fundraiser and trustee of the finances. It began as an environmental intervention, with larvicide spraying to eradicate the insect vector, though its ultimate success hinged on mass drug distribution.[71] At the outset the Bank's involvement was justified as reclaiming some 65 million hectares of fertile land, and resettling healthy bodies for agricultural labor. Although an accurate cost-benefit analysis would once again prove elusive for its economists, the program signaled a conceptual leap for the Bank in acknowledging health improvement as part of its remit.[72]

However, it was the third driver, population control, which provided the wedge through which its engagement with health services really began. The first intimation had been in 1969 with a family-planning proposal for Indonesia, including training for medical and paramedical personnel and the expansion of health facilities.[73] Then in 1970 came a US$2 million loan to Jamaica, to build a 150-bed extension to Kingston's Victoria Jubilee Hospital for maternity care, alongside ten rural clinics and training facilities for medical and paramedical personnel.[74] Its rationale was not couched in equity, social rights, or humanitarian terms. Instead the aim was to restrain fertility, which was deemed an impediment to growth in an environment of rural unemployment and excess low-skilled labor. Lying-in mothers would be "especially receptive to information about family planning programs."[75]

What explains this new direction? The proximate cause was concern with "the population problem," particularly on the part of the Bank's new President, Robert McNamara. Awareness had grown that high birth rates could quickly undo any improvements nurtured in poor countries by driving down per capita gains in productivity. The potential of "rampant population growth" to sabotage

71 J. Bump, B. Benton, A. Sékétéli, B. Liese, and C. Novinskey, *Defeating Riverblindness: Thirty Years of Success in Africa* (Geneva: World Health Organisation, 2004).

72 Janelle Winters, "Constructing Success in Global Health: The World Bank and the Onchocerciasis Control Programme in West Africa" (PhD diss., University of Edinburgh 2020), 111–149.

73 UNDP, WHO, and IBRD, *Indonesia – Report of a UN-WHO-IBRD Family Planning Mission*, 27 April 1970.

74 WBA IBRD, "Report and Recommendation of the President to the Executive Directors on a Proposed Loan to Jamaica for a Population Project," 4 June 1970, 3–4.

75 "Proposed Loan to Jamaica," 3–4.

the development project was not just an economic challenge for McNamara, but "an even more dangerous and subtle threat to the world than thermonuclear war…".[76] Such views were shared across other UN agencies and by USAID, the main channel of American bilateral aid, prompting a policy discourse concerned with restraining fertility.[77] The Bank's engagement with population lending hinged mostly on strategies to change behaviors by disseminating knowledge and techniques. However, the availability of "post-partum family planning at health facilities" was seen as crucial, as was safer maternity care; this was the door that opened the way to lending for services.[78]

Behind this narrow issue though were more fundamental changes at the Bank under McNamara's Presidency (1968–81). Widely regarded as its most charismatic leader, he had been appointed after a controversial career. Following managerial success at Ford Motors as part of the new breed of operational researchers, he was one of the "Whizz Kids" brought into the Kennedy White House as Defense Secretary, where he remained as the increasingly unpopular Vietnam War escalated.[79] His standing would suffer in 1971 when the leaked Pentagon Papers revealed the administration had systematically misled the public about the war. Some thought that "… coming to the Bank he wanted to set things right… in terms of his reputation…", and his tenure was certainly marked by dynamic change.[80] He substantially expanded its capital base and lending capacity, established its research function under senior economist Hollis Chenery, and set about diversifying the range of its activities in ways that aligned more closely with other UN agencies.[81] He also appointed as Director of Policy Planning the

76 Robert McNamara, *Address to the Massachusetts Institute of Technology by Robert S. McNamara, President*, World Bank (Washington D.C.: IBRD, 28 April 1977), 3.

77 Matthew Connelly, *Fatal Misconception: The Struggle to Control World Population* (Cambridge: Belknap Press, 2008), 276–326.

78 WBOHP Interview with Nancy Birdsall, 23 September 1992, 7–8; Birdsall joined the Bank as a researcher in the Development Economics Department, 1979–1982; she was Senior Economist, Country Policy Department, 1982–1984 then Chief, Policy & Research Division, Population, Health & Nutrition Department, 1984–1987, when she co-authored *Financing Health Services*; she was subsequently Executive Vice President at the Inter-American Development Bank, 1993–1998.

79 Patrick Allan Sharma, *Robert McNamara's Other War. The World Bank and International Development* (Philadelphia: University of Pennsylvania Press, 2017), 17–25.

80 Interview: Susan Foster with Martin Gorsky, 20 May 2019; after serving in the Peace Corps in Africa, 1973–1976, Foster joined the Bank as a Young Professional and Project Economist in the Population, Health and Nutrition Department, 1979–1985; she was seconded to WHO's Essential Drugs Program in Geneva, 1985–1989; Michael Goldman, *Imperial Nature, The World Bank and Struggles for Social Justice in the Age of Globalization* (Yale: Yale University Press, 2005), 74.

81 Sharma, *Robert McNamara's Other War*, 30–43, 50–53.

Pakistani economist Mahbub ul Haq, who would be instrumental in placing poverty reduction on the agenda.[82]

Thus the rethinking of the Bank's position on health services was part of a larger reorientation of ideas about international policy towards development. The ILO had led the way, initiating a series of country studies which advanced the argument that aid strategies thus far had failed to meet the "basic needs" of the populations they sought to serve.[83] The dash for economic growth measured in statistics of productivity or capital formation proved to have neglected conditions under which poorer people lived and worked. The ILO's response was its "World Employment Program" which aimed to steer technical and financial assistance to training and jobs for all.[84] McNamara embraced this new course in his 1973 Nairobi speech, which evoked a moral case for expanding public services.[85] Empirical heft followed in *Redistribution with Growth*, a collaboration between Chenery and economists from Britain's Institute of Development Studies. This presented evidence that growth in development settings had been unevenly distributed, with the bottom third seeing little gain. To rectify this neither "laissez-faire" nor "socialist instruments" alone were sufficient; instead "elements of both systems are needed."[86] This meant policies geared to improvement for small farmers and the informal urban sector, and attention to social goods. Health and education numbered among these needs, but were seen also to "often make a greater contribution to improving labor productivity than do most alternative investments."[87] Starting points were the "anti-poor" bias in existing government expenditure, and the need for cost-effective policies such as mass immunization, sanitary improvement, and training of paramedics.[88]

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82 WBOHP Interview: Mahbub Ul-Haq with Robert Asher, 3 December 1982, 1–4, 11–13; Ul-Haq joined the Bank as a lecturer in 1966; he was Senior Adviser, Economics Department, 1971–1972; Director, Policy Planning and Program Review Department, 1972–1982; he was subsequently Finance Minister of Pakistan, 1985–88.

83 Interview: Richard Jolly with Martin Gorsky, 3 October 2019; Jolly joined the Institute of Development Studies in 1969 and was its Director, 1972–1981; he was Deputy Executive Director of UNICEF, 1982–1995, and co-authored *Adjustment with a Human Face*, 1987.

84 Gerry Rodgers, Eddy Lee, Lee Swepston, and Jasmien Van Daele, *The International Labour Organization and the Quest for Social Justice, 1919–2009* (Geneva: ILO, 2009), 186–194.

85 WBA "Address to the Board of Governors. Robert S. McNamara, Nairobi, Kenya September 24, 1973," 7–8, 23–24.

86 Hollis Chenery, M. Ahluwalia, C. Bell, J. Duloy, and R. Jolly, Institute of Development Studies: University of Sussex, *Redistribution with Growth* (New York: Oxford University Press, 1974), xvii.

87 Mahbub ul Haq, "Foreword," in *First Things First: Meeting Basic Human Needs in the Developing Countries*, by Paul Streeten (Oxford: World Bank, 1981), viii.

88 Chenery et al., *Redistribution with Growth*, 148–151.

McNamara duly embraced this basic needs agenda, "institutionalizing" it at the Bank, where lending on "poverty projects" like rural roads, water supplies, primary schooling, and health took off.[89]

These changes provide the context in which the Bank's move to direct lending for health occurred. The process had two steps. An initial *Health Sector Policy Paper* in 1974/5 laid out the options of either continuing with the current lending patterns, but attending more closely to health impacts within population, nutrition or infrastructure projects, or carving out a specific category of health programs. Though accepting that "activities in the field of population have led it into a much more direct concern with health," McNamara at first rejected the latter proposition, probably because USAID objected to the Bank intruding on its terrain.[90] However, momentum was now building and, during the three years from 1 July 1976 to 30 June 1979, Bank assistance ran at US$188 million for health components of agricultural, rural development, education, and population projects.[91] The formation of a Population, Health, and Nutrition Department (PHN) in October 1979, followed by a second health policy paper in 1980, heralded the move to direct lending.[92] The designated areas included the prevention of infectious diseases, capacity for planning, the training of community health workers (CHWs), essential drugs supplies, maternal and child health, and primary healthcare.[93]

What argumentation was advanced in these documents? The lead author of both was the economist Frederick Golladay, alongside (in 1980) the medically trained development expert Bernhard Liese.[94] As noted, there was allusion (al-

89 Rob Konkel, "The Monetization of Global Poverty: The Concept of Poverty in World Bank History, 1944–90," *Journal of Global History* 9 (2014): 276–300; Martha Finnemore, "Redefining Development at the World Bank," in *International Development and the Social Sciences: Essays on the History and Politics of Knowledge*, ed. Frederick Cooper and Randall Packard (Berkeley: University of California Press, 1997), 204.

90 World Bank, *Health Sector Policy Paper* (Washington, D.C.: World Bank, March 1975), 48–50; WBOHP Interview: Bernhard Liese with Charles Ziegler, 9, 17 April 2008, 5.

91 World Bank, *Health Sector Policy Paper*, 2nd ed. (Washington, D.C.: World Bank, February 1980), 56–57.

92 Also key to thinking was: Frederick Golladay and Bernhard Liese, *Health Problems and Policies in the Developing Countries*, World Bank Staff Working Paper No. 412 (Washington, D.C.: World Bank, August 1980).

93 World Bank, *Health Sector Policy Paper*, 1975, 3–5, 40–47; World Bank, *Health Sector Policy Paper*, 1980, 8, 63–64.

94 WBOHP Interview: Bernhard Liese with Charles Ziegler, 5; Liese joined the Bank as a public health specialist in 1976; he was Deputy Division Chief, 1980–1985, then Senior Public Health Specialist, 1985–1990, in the Population, Health and Nutrition Department/ Division; he was then Director, Health Services Department, 1990–2000.

beit uncredited) to Arrow's seminal discussion of market failures that legitimize the intercession of states or third-party insurers.[95] However, this was a marginal aspect of the texts, which are most striking for their interdisciplinarity and empiricism. Much space was attached to setting out the main disease threats to poor countries, in a more loosely sketched precursor to the 1990s "global burden of disease" approach, which in turn bore methodological similarities to the system planning initiatives pursued since the 1960s by the WHO.[96] Historical demography also loomed large. There was awareness of arguments about the limited contribution made by medical technologies to the European mortality decline begun in the 1870s, and the greater importance of nutrition and preventive strategies. A key influence was the "Preston curve," a cross-national comparison of the relationship between GDP growth and improved life expectation. This was held to show that income growth alone accounted only for a small proportion of health gains, which "were indeed largely due to advances in health care."[97] Also rehearsed were the human capital arguments about health as "productive investment" integral to the development process. The twin themes of equity and cost effectiveness guided the discussion of problems and solutions.[98] Spatial inequities between rural and urban areas were highlighted, and the unjust compounding of urban advantage by the access which middle-class users enjoyed to state-funded services, notably central hospitals. Cost effectiveness dictated a switch away from these areas, and towards preventive programs, rural primary care, and CHWs.

Although the Bank argued that it had a distinctive contribution to make through its analytical capacity, it is striking how convergent these ideas were with broader currents in international organizations.[99] The critique of hospital biomedicine in poor countries (first articulated at the Bank in the early 1950s) was now widely accepted by thinkers at WHO, UNICEF, and the Christian Medical Commission, which spoke for religious providers. Models of rural primary healthcare, from India to Colombia to China, were much discussed as the pref-

95 World Bank, *Health Sector Policy Paper*, 1975, 29–31; World Bank, *Health Sector Policy Paper*, 1980, 34–36.

96 World Bank, *Health Sector Policy Paper*, 1975, 6–14; Martin Gorsky and Christopher Sirrs, "From 'Planning' to 'Systems Analysis': Health Services Strengthening at the World Health Organisation, 1952–1975," *Dynamis* 39, no.1 (2019): 205–233.

97 World Bank, *Health Sector Policy Paper*, 1975, 14–24; Golladay and Liese, "Health Problems and Policies," 22–25, quote at 23.

98 World Bank, *Health Sector Policy Paper*, 1975, 4, 60–62; Golladay and Liese, "Health Problems and Policies," i, 81–83.

99 World Bank, *Health Sector Policy Paper*, 1980, 8, 58.

erable strategy.[100] In 1977 the WHO announced its goal of Health for All by the Year 2000, and in 1978 convened the Alma-Ata Conference on Primary Health Care, at which Liese and Golladay presented some results from the Bank's "health components" projects.[101] The Alma Ata Declaration saw WHO and UNICEF commit to universal primary healthcare. This would entail "low-tech" and less costly medical treatment, the engagement of communities with local services, and the use of partially trained medical auxiliaries, CHWs, and even the cooption of traditional healers.[102] The Bank explicitly followed this conception of primary healthcare, as universally available essential care, delivered through socially acceptable methods to address diseases endemic to the community. It would span promotion, prevention, cure, and rehabilitation, and would also encompass education, food supply, water, and sanitation.[103] Thus while the tenor of its writing may have lacked the moral imperative that suffuses some of the Alma Ata texts, its analysis and prescription were the same.

The Bank and health financing in the 1980s

Before returning to examine the changes and continuities discernible in the Bank's later health policy positions, the changing context of the 1980s needs to be set out. Ronald Reagan's presidency (1981–89) had launched with a domestic agenda of deregulation and scaling back the state to stimulate "the magic of the marketplace."[104] Abroad it pursued a neo-conservative line towards the United Nations, expressing hostility towards certain policies at UNESCO and the WHO which it deemed hostile to US national interests, and even withholding some UN budget contributions between 1985 and 1988.[105] The opposition of postcolonial member states in the representative polities of the UN agencies was an-

100 Kenneth Newell, *Health by the People* (Geneva: World Health Organization, 1975); John Bryant, *Health and the Developing World* (Ithaca: Cornell University Press, 1969); Socrates Litsios, "The Christian Medical Commission and the Development of the World Health Organization's Primary Health Care Approach," *American Journal of Public Health* 94, no.11 (2004): 1884–1893; see also World Bank, *Health Sector Policy Paper*, 1975, 39–40.

101 WBOHP interview: Bernhard Liese, 12–14.

102 Marcos Cueto, "The Origins of Primary Health Care and Selective Primary Health Care," *American Journal of Public Health* 94, no.11 (2004): 1864–1874.

103 World Bank, *Health Sector Policy Paper*, 1980, 17.

104 Gwin "U.S. Relations with the World Bank," 231, citing speech by Reagan to World Bank, 1983.

105 Seymour M. Finger, "The Reagan-Kirkpatrick Policies and the United Nations," *Foreign Affairs* 622 (1983): 436–457.

other grievance for America, still the leading donor (recently declassified archives have exposed Reagan's racist disdain towards African delegates).[106] The administration therefore began to treat the Bank as a more conducive instrument of international aid policies, over which it would now exert direct influence. This was manifest in the appointment of McNamara's successor, Alden Clausen, ex-President of Bank of America, who, like the US Treasury, was unsympathetic to poverty lending.[107] Clausen also brought in as chief economist Anne Krueger, an adherent of the rational choice school who had contributed the notion of rent-seeking to the chorus of theorizing about state failure. She rapidly asserted "thought control" over the research department.[108]

The Bank's changed direction was quickly translated into development policy. The 1981 Berg Report on strategies for sub-Saharan Africa signaled the desire to abandon the preferred approach of the "New International Economic Order," which the UN had embraced in 1974. This had, inter alia, prioritized tariffs and state planning to encourage industrialization in the newly independent nations through import substitution. Premised on the certainty that African socialism had failed, Berg argued the Bank should now favor open markets and trade liberalization, relying on commodity production to nurture growth and a lower tax burden to stimulate the private sector. As for health services, it should switch to "industrial insurance" and "user fees for public services…".[109] This policy mix would be disseminated through "structural adjustment programs," a Bank concept begun under McNamara which attached to loan agreements "conditionalities" related to fiscal policy and public spending.[110] The Bank was able to impose such terms widely following the debt crisis, which began in Mexico in 1982 and then spread to many African and Latin American states. Its cause lay partly in the exuberant lending by Western banks (including Clausen's), when the economic deterioration following the oil price rises of the mid-seventies should have urged caution. Arguably this imposed unfair retribution on the global South, not only insisting on loan repayments from poor countries, but also ad-

106 Tim Naftali, "Ronald Reagan's Long-Hidden Racist Conversation With Richard Nixon," *The Atlantic*, July 30, 2019, https://www.theatlantic.com/ideas/archive/2019/07/ronald-reagans-racist-conversation-richard-nixon/595102.

107 Kapur, Lewis, and Webb, *World Bank*, Vol. I, 331–344, esp. 338; Gwin, "U.S. Relations with the World Bank," 228–232.

108 Anne O. Krueger, "The Political Economy of the Rent-Seeking Society," *The American Economic Review* 64, no.3 (1974): 291–303; Kapur, Lewis, and Webb, *World Bank*, Vol. I, 1194.

109 World Bank African Strategy Review Group, *Accelerated Development in Sub-Saharan Africa: An Agenda for Action* (Washington D.C.: World Bank, 1981) (Berg Report).

110 Sharma, *Robert McNamara's Other War*, 138–157.

justing the terms of trade in raw materials to the advantage of the rich world. Discussion of debt relief quickly fell off the Bank's agenda.[111]

At the same time, the broader consensus sustaining the Alma Ata aspirations was fracturing. Cost projections for achieving universal access to comprehensive primary care were produced in 1979, concluding that the available combination of national resources and international aid was drastically insufficient.[112] Priority-setting and a gradual process would be needed, as the small print of the Declaration had acknowledged.[113] Thus was born "selective primary health care," which concentrated on cost effective interventions such as immunization programs, and oral rehydration therapy to drive down infant diarrhea. Donor organizations fell in behind UNICEF which spearheaded this new direction, to the dismay of the WHO leadership, which viewed it as retreat "right back to square one."[114] The Bank though firmly endorsed the call for realism.[115] As one interviewee recalled, "... this was a wonderful idea the whole Alma Ata thing, but it was not based on the real scarcity of resources... You go to a health center ... there's probably not a doctor there, there's probably no drugs ... the pipe dream of providing everything relative to that reality was very stark...".[116]

If this was the policy context of *Financing Health Services*, it also reflected new empirical understandings of health care in poor countries. One key element was the realization of the scale of pre-existing out-of-pocket payments for health, which signaled the potential for user fees to be redirected to improve services.[117]

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111 Stein, *Beyond the World Bank Agenda*, 63–65; Kapur, Lewis and Webb, *World Bank*, Vol. I, 603, 609–611, 621–624, 647–650.

112 Julia A. Walsh and Kenneth S. Warren, "Selective Primary Health Care: An Interim Strategy for Disease Control in Developing Countries," *New England Journal of Medicine* 301, no.18 (1979): 967–974.

113 Carl Taylor and Richard Jolly, "The Straw Men Of Primary Health Care," *Social Science and Medicine* 26, no.9 (1988): 971–977, at 972.

114 Halfdan Mahler, "Primary Health Care Comes Full Circle," *Bulletin of the World Health Organization* 86, no.10 (2008): 747–748.

115 David de Ferranti, "Paying for Health Services in Developing Countries: A Call for Realism", *Health care – Who Pays? World Health Forum* (Geneva: World Health Organization, 1987 [1984]), 37–43.

116 Interview: John Akin.

117 Golladay and Liese, "Health Problems and Policies," 15–17; WBA 30159498, Alun Griffiths and Melissa Mills, "Health Sector Financing and Expenditure Surveys in Developing Countries: Towards a Methodology" (January 1982); David de Ferranti, "Background Information for Analysis of Financing and Resource Allocation Issues in the Health Sector and Project Works," December 1983. Population, Health and Nutrition Department technical notes, no. GEN 23 Washington, D.C.: World Bank Group, http://documents.worldbank.org/curated/en/404691468914735087/

This had been revealed in household expenditure surveys undertaken for example in the Philippines (1975), Rwanda, Bangladesh, South Korea (1976), and Senegal (1981). Surprisingly, these showed on average a fourfold excess of private over public expenditure on health. In South Korea for example, private health spending was 87% of the total, and in Senegal "close to three times the State health budget."[118] These figures were accepted as conventional wisdom by the WHO in discussions about how Health For All could be achieved.[119] The assumption was that much private spending represented traditional self-medication and that "attempts could be made to harness it more effectively."[120] WHO's chief economist already assumed that "... community sharing of the cost of primary health care ... together with community participation in the decision-making process, (could) be considered very favourably ...".[121] The new findings underpinned this. Even avowedly social democratic experts like Brian Abel-Smith recommended the imposition of user charges for urban hospitals to release public resources for rural primary care.[122]

The other set of findings which apparently confirmed the acceptability of charging concerned price elasticity of demand. If it was the case that demand for health services was highly responsive to price fluctuations, then the introduction of user fees might have an undesirable effect on utilization. However, fieldwork in Malaysia (1982), Mali (1983), and the Philippines (1986) suggested that hypothesis apparently was incorrect. This research took the form of econometric analysis using survey data to establish the key determinants of health-seeking behavior, with independent variables that modeled ease of access, cost, household income, severity of illness, and so on. Counter-intuitively, the results found there was widespread willingness to pay fees for health services, and that house-

Background-information-for-analysis-of-financing-and-resource-allocation-issues-in-health-sector-and-project-work.

118 Griffiths and Mills, "Health Sector Financing"; WBA 1046758, memo Jeremy Warford and Afsaneh Mashayekhi to John Evans, "Health Financing Study Back-To-Office Report," 15 October 1981.

119 Lee Howard, *A New Look at Development Cooperation for Health Study of Donor Policies, Programmes, and Perspectives in Support of Health for All by the Year 2000* (Geneva: World Health Organization, 1981), 23.

120 Griffiths and Mills, "Health Sector Financing," 34.

121 V. Djukanovic and E. P. Mach, eds., *Alternative Approaches to Meeting Basic Health Needs in Developing Countries* (Geneva: World Health Organization, 1975), 99.

122 Brian Abel-Smith with Alcira Leiserson, *Poverty, Development, and Health Policy* (Geneva: World Health Organization, 1978), 80–81.

hold demand was inelastic to price.[123] A later critique of such models was mounted on methodological grounds, highlighting the insufficient account they took of quality.[124] Others attacked their predication on individual utility maximization regardless of institutional and cultural setting, arguing that any ensuing assumptions about willingness to pay fees ought to be properly trialed.[125] Yet neither critique became current until after the prohibitive effects of user fees had become evident.

Thus Bank economists like Birdsall, Akin, and de Ferranti could feel they were grounding their turn towards charging upon a solid empirical base, and building on a consensus that, if properly used, fees could address equity concerns by leveraging resource flows to the most needy areas. This though was not the sole purpose of the 1987 document. It was conceived primarily as a general synthesis of existing thinking that would act as "guidance for the people in the field as to things to think about, things to look at, things to try…".[126] It evolved from three prior texts, a policy brief (1981) and two internal overviews (1983, 1985) in which the ideas crystallized. The final draft was not primarily intended by the authors to emphasize user fees in preference to other strategies, but rather to reorient state expenditure away from urban, hospital medicine, as Bank documents had long urged.

That said however, it does seem that the position on charging hardened up as the drafts developed. Oral reminiscence recalls de Ferranti as "… a pretty pragmatic guy … He wasn't particularly pro or con, but he had a very strong view that user fees … couldn't cover more than 10/15/20% of recent levels of cost. So … it was not the answer…".[127] Thus, "…in the 87 paper [i.e. *Financing Health Services*] an argument in favor of user fees was a little surprising coming from Dave …".[128] A hint as to what might have happened can be found in a senior staff review of the 1983 text:

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123 Peter S. Heller, "A Model of the Demand for Medical and Health Services in Peninsular Malaysia," *Social Science and Medicine* 16, no.3 (1982): 267–284; J.S. Akin, C.C. Griffin, D.K. Guilkey, and B.M. Popkin, "The Demand for Adult Outpatient Services in the Bicol Region of the Philippines," *Social Science and Medicine* 22, no.3 (1986): 321–328; Nancy Birdsall, François Orivel, Martha Ainsworth, and Punam Chuhan, *Three Studies on Cost Recovery in Social Sector Projects* (Washington: World Bank, 1983).

124 Anne Mills, "Leopard or Chameleon? The Changing Character of International Health Economics," *Tropical Medicine and International Health* 2, no.10 (1997): 963–77.

125 Stein, *Beyond the World Bank Agenda*, 214–219.

126 Interview: John Akin, 11.

127 Interview: Dean Jamison, 13–14.

128 Interview: Dean Jamison, 14.

> ... It was felt that distortions resulting from financing services by other means (e. g., taxes) should be emphasized more, and that the opportunity cost of not providing services ... should also be stressed. ... [T]he clear consensus of the meeting was that the paper was too cautionary, and that a more positive statement be made in favor of user charges...[129]

While this archival snippet is insufficient to gauge the final influence of senior members of the Bank's hierarchy on *Financing Health Services*, it does illuminate the conditions in which it was produced.

Discussion

We have argued thus far that it is reductive to ascribe the Bank's evolving policy to health system finance as wholly driven by ideology, or by cleaving to a particular school of economic thought. Clearly the turn of the United States towards a neoliberal political economy did furnish the context, but we have also emphasized the continuities with earlier ideas, the compatibilities with broader currents of international thought, and the empirical grounding of the 1987 report. That said, it is possible to imagine other lines of argument about health lending which an international bank acting for the United Nations might have pursued.

The Bank could have behaved differently as a multilateral actor. A more emollient position towards sovereign debt recovery might have been adopted, which balanced the moral hazard risks of write-off against the culpability of imprudent Western lending.[130] That this was conceivable is demonstrated by the later episode of debt forgiveness by the G8 in 2005.[131] Meanwhile, global efforts systematically to document and increase the flows of aid for health, which the WHO had tentatively begun in 1981, were not pursued, and only resumed in the 1990s.[132] By 1987 it was also clear that SAPs were having detrimental social effects, not least through the research of development economists who had earlier championed the "basic needs" agenda. Founded on investigation of ten country cases, UNICEF's *Adjustment with a Human Face* included sections on

129 WBA 30159498, Luis de Azcarate, Director, Country Projects Department (CPD), and Jeremy Warford, Chief, PHNPR, "Staff level review: Health sector financing: an overview of the issues," 11 January 1984.

130 Gwin, "U.S. Relations," 233–238; Richard Peet, *Unholy Trinity: The IMF, World Bank, and WTO* (London: Zed Books, 2009), 144: only after 1996 did substantive debt relief begin.

131 Owen Dyer, "G8 Cancels Debt of the World's Poorest Countries," *British Medical Journal* 330, no. 7505 (2005): 1407.

132 Howard, *New Look at Development Cooperation*.

health system impacts of declining government expenditure.[133] Its evidence showed that user fees hurt the most needy by reducing take-up of preventive services which were seen as less urgent; it therefore recommended community funding, the use of village health workers, and targeting of resources.[134] Yet even by 1995, user fees remained "essential," with the Bank's argumentation still relying on the survey evidence about existing private expenditures, though now with the added justification that charges and prices were essential preliminaries for insurance systems and private provision.[135] A contiguous debate was also underway in the wake of Alma Ata in which the Bank might have acted differently. This had become acrimonious, with proponents of universal PHC condemning the "selective" turn as a "counter revolution."[136] However, others (including some Bank officials) envisaged a middle way, in which the "vertical/horizontal" dichotomy could be bridged by using investment in immunization, ORT, and infant health programs as a focused means of building local services.[137]

Comparative studies of health systems in both advanced industrial nations and in poorer settings might also have modified the Bank's position on "state failure." The predominantly taxation-based models operating in countries like Britain, New Zealand, and Sweden were broadly cost-effective, incorporating equitable population-based distribution methods and achieving health outcomes ranging from average to world-leading.[138] Social insurance nations, with Germany the *locus classicus*, demonstrated that an activist state could drive the creation of savings funds that could be small, community-based, and partic-

133 Per Pinstrup-Andersen, Maurice Jaramillo, and Frances Stewart, "The Impact of Government Expenditure," in *Adjustment with a Human Face: Volume 1. Protecting the Vulnerable and Promoting Growth*, ed. Giovanni Andrea Cornia, Richard Jolly, and Frances Stewart (Oxford: Clarendon Press, 1987), 73–89.

134 Giovanni Andrea Cornia, "Social Policy-making: Restructuring, Targeting and Efficiency," in *Adjustment with a Human Face*, ed. Cornia, Jolly, and Stewart, 165–182.

135 R.P. Shaw and Charles C. Griffin, *Financing Health Care in Sub-Saharan Africa Through User Fees and Insuranc*e (Washington, D.C: World Bank, 1995), 3, 10, 13–53.

136 Kenneth Newell, "Selective Primary Health Care: the Counter Revolution," *Social Science and Medicine* 26, no.9 (1988): 903–906.

137 Interview, Bernhard Liese, 25–26; Carl Taylor and Richard Jolly, "The Straw Men of Primary Health Care," *Social Science and Medicine* 26, no.9 (1988): 971–977.

138 Rudolf Klein, *The New Politics of the NHS: From Creation to Invention* (Abingdon: Radcliffe, 2006); Robin Gauld, *Revolving Doors: New Zealand's Health Reforms* (Wellington, New Zealand.: Institute of Policy Studies and Health Services Research Centre, Victoria University of Wellington, 2001); Odin Anderson, *Health Care: Can There Be Equity? The United States, Sweden and England* (New York: Wiley, 1972).

ipatory.[139] Conversely, the nation which had given most latitude to "free enterprise" financing, the United States, was by now manifesting the greatest difficulties of cost-control, patchy coverage, and poor population health indicators.[140] America's own historical record from the 1940s also provided survey evidence that doctors' charges deterred utilization.[141] This though, was not on the Bank's agenda. Other instructive examples came from socialist and social democratic nations. Prior to Salvador Allende's overthrow, Chile had implemented a system grounded in social medicine, scaling up coverage through insurance and social security, prioritizing prevention and embedding community control.[142] Maoist China had created a system of rural health insurance, using a mix of paramedical and traditional practitioners to extend services (though this was all starting to crumble following economic liberalization).[143] Cuba had exported its own successes by sending medical personnel to work in needy countries, and a similar ethic of communist solidarity was evident in Hungary.[144]

In sum, there were alternative ways of framing the discussion, both with respect to the state as arbiter of financing, and to the Bank's multilateral role within global health. To understand better why these were not adopted, we want to close with a more speculative discussion, which shifts from the intellectual history of health economics to consider the formative importance of the Bank as an institution. Conceptually, this implies a sociological perspective, which foregrounds the organizational environment in shaping the choice of ideas and

139 Till Bärnighausen and Rainer Sauerborn, "One Hundred and Eighteen Years of the German Health Insurance System: Are There Any Lessons for Middle- and Low-Income Countries?" *Social Science and Medicine* 54, no.10 (2002): 1559–1587.

140 Brian Abel-Smith, "Who Is the Odd Man Out?: The Experience of Western Europe in Containing the Costs of Health Care," *The Milbank Memorial Fund Quarterly. Health and Society* 63, no.1 (1985): 1–17.

141 National Opinion Research Centre, 1944, cited in Hadley Cantril and Mildred Strunk, *Public Opinion, 1935–1946* (Princeton: Princeton University Press, 1951), 439, para 11.

142 Vicente Navarro, "What Does Chile Mean: An Analysis of Events in the Health Sector Before, During and After Allende's Administration," *The Milbank Memorial Fund Quarterly Health and Society* 52, no.2 (1974): 93–130; Esteban Hadjez-Berrios, "A Socio-Psychological Perspective on Community Participation in Health During the Unidad Popular Government: Santiago de Chile, from 1970 to 1973," *Journal of Health Psychology* 19, no.1 (2014): 90–96.

143 AnElissa Lucas, *Chinese Medical Modernization Comparative Policy Continuities, 1930s–1980s* (New York: Praeger, 1982); Jane Duckett, *The Chinese State's Retreat from Health: Policy and the Politics of Retrenchment* (London: Routledge, 2011).

144 Dora Vargha, "Technical Assistance and Socialist International Health: Hungary, the WHO and the Korean War," *History and Technology* 36, no.3–4 (2020): 400–417.

the language in which they were expressed.[145] It assumes that economic understandings are not derived from a universal rationality, but rather are grounded in the specificities of social organization in which individuals operate.[146] The boundaries of the possible are shaped by prevalent values and linguistic discourse which together predispose actors to behave in the way they do. The analytical school this has initiated undertakes participant observation to map organizational practices, social values, and the predispositions that result. Here we propose only tentative suggestions which may deepen our understanding of these factors.

What kinds of individuals articulated the emergent field of international health economics at the Bank? Global health financing generally, and at the Bank particularly, was increasingly the purlieu of trained economists, and this "shrinking" of what Liese called the "multi-cultural kind of professional features" tended to exclude perspectives drawn from field experience, the public health disciplines or political philosophy.[147] Nonetheless, even our small interview sample included backgrounds in engineering, medicine, epidemiology, philosophy, literature, and economic history in addition to pure economics. They conceived of their careers as part opportunistic, part motivated by intellectual curiosity and part by altruism. Such social commitment was often grounded in the formative context of 1960s America, with the reforms of the Great Society, the ethos of the Development Decade, the activities of the Peace Corps, and the salutary impact of Vietnam. The Bank's working atmosphere was remembered as anything but conformist: "... a bunch of very strong-headed people, highly educated, huge amount of PhDs ... just not an easy group...".[148] Subjective recall emphasized the combative process by which decisions were reached: "We had all sorts of health views ... within our department. The real debates and trying to convince each other went on there much more than in the higher echelons of the Bank..."[149] Also countering this image of "the Bank" as monolith should be added the distinction between the research staff in Washington and the country officers overseeing projects in the field.

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145 Mark Granovetter, "Economic Institutions as Social Constructions: a Framework for Analysis," *Acta Sociologica* 35, no.1 (1992): 3–11.

146 Pierre Bourdieu, Richard Nice, and Loïc Wacquant, "Making the Economic Habitus: Algerian Workers Revisited," *Ethnography* 1, no.1 (2000): 17–41; Pierre Bourdieu, *The Logic of Practice* (Cambridge: Polity Press, 1990), 42–65.

147 Interview, Bernhard Liese, 49–50; Lee and Goodman, "Global Policy Networks," 112–113.

148 Interview, Susan Foster, 6.

149 Interview, John Akin, 5.

That said though, there were relatively few academic centers which nurtured the scholarship that fed into international health economics.[150] In the United States, Harvard, Yale, MIT, Wisconsin, Michigan, and UNC Chapel Hill were prominent, while in Britain there was the Institute of Development Studies at Sussex, the LSHTM, and Oxford. Within this Anglophone milieu, American perspectives predominated in the 1980s: "...the Bank being located in Washington ... at the time the influence of American academic thinking was a lot stronger... if there was a model ... it was much more private sector ...".[151]

There could be two modes through which organizational environment shaped this intellectual predisposition. First there were embedded assumptions transmitted through an individual's personal experience. As one interviewee put it: "the health system you're accustomed to frames how you think... In the US ... a very individualist motivation ... the hate of state intervention ...".[152] Behind this perception of national political culture lies the long history of America's distinctive path in social welfare. In the 1910s it had rejected mandatory health insurance on the Bismarck or Lloyd George models, then excluded health coverage from the New Deal reforms in the 1930s. Thus, unlike Europe, it had not marched towards universalism in its post-war settlement. With the state's absence, commercial and non-profit insurers entered the field, though by the 1960s their limited reach necessitated the creation of Medicare, a payroll based social security system covering older people, and Medicaid, a residual tax-funded arrangement. Much debate has ensued about why this road was taken, with explanation ranging from national character to the weakness of the labor movement, to the role of race in politics, to the power of vested interests, to the innate impediments to progressive change in US governing structures.[153] Regardless of cause, the result was to inculcate a particular set of values which ran deeper than gut preference for the market. Here for example is one key actor, center left in World Bank terms, recalling debates with Gro Harlem Brundtland, then Director General of WHO, about how best to achieve equity in health systems:

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150 Anne Mills, "Reflections on the Development of Health Economics in Low- and Middle-Income Countries," *Proceedings of the Royal Society B: Biological Sciences* 281, 1789 (2014) 1–9.
151 Interview, Susan Foster, 5.
152 Interview: Anne Mills with Martin Gorsky and Christopher Sirrs, 19 March 2019, 14–15; Mills is a health economist based at the LSHTM since 1979; she is currently Professor of Health Economics and Policy, and its Deputy Director and Provost; she consulted widely for the World Bank and the WHO, and was a member of WHO's Commission on Macroeconomics and Health, 2001.
153 Inter alia: Paul Starr, *The Social Transformation of American Medicine* (New York: Basic Books, 1984); Jill Quadagno, *One Nation, Uninsured: Why the U.S. Has No National Health Insurance* (New York: Oxford University Press, 2006); Colin Gordon, *Dead on Arrival: The Politics of Health Care in Twentieth-Century America* (Princeton: Princeton University Press, 2003).

> ... the fundamental question there is why should the state use scarce state resources to pay to have a broken leg of the son of a well-off man, if that well-off father is both willing and able to pay ... Why should they pay for the rich kid? ... that basically was what was the US approach to healthcare finance, which on the surface I think it's much more equitable than the British... But it seems increasingly clear that the US system of health care finance excludes many from coverage while encouraging growth of unproductive expenditures.[154]

The second, related, factor was the dominant critique from public choice economics of the state as provider of social goods. This was still riding high in 1994 when Deepak Lal invoked the tendentious historical analysis of Britain's Institute of Economic Affairs to disparage statist health systems.[155] Key themes were the tendency of bureaucrats to maximize their own position, and neglect of the public interest in governmental welfare giveaways to the median voter. Nancy Birdsall approvingly recalled how Chief Economist Anne Krueger had steered research to a more "market-oriented" approach: "... she was sort of like Friedrich Hayek modified, bringing Hayek to the Bank. A heavy emphasis on government tendency to be rent seeking ... a lot of style and views on trade liberalization: all of that to the good."[156]

This sense of "excitement" around the capacity of the private sector was boosted by "a new round of market fundamentalism" in the early 1990s, following the collapse of Soviet Communism.[157] Thus the disputatious atmosphere of Bank policy-making was also bounded by shared values: "... look at their backgrounds ... they're mostly economics PhDs from elite universities, there's a remarkable degree of intellectual homogeneity ... you can see that instinctive bias towards private sector solutions ...".[158]

From the perspective of a British economist used to a more eclectic palate of health financing approaches this narrowed the terms of debate:

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154 Interview, Dean Jamison, 23–24; Richard Lane, "Dean Jamison: Putting Economics at the Heart of Global Health," *Lancet* 382 (7 December 2013): 1871.

155 Deepak Lal, *The Role of the Public and Private Sectors in Health Financing* (Washington, D.C: World Bank, 1994); the IEA work on which it drew was based on questionable assumptions about the scale and sustainability of nineteenth century friendly societies as voluntary forms of social insurance. For further discussion, see M. Gorsky, "Friendly society health insurance in nineteenth-century England," in M. Gorsky and S. Sheard, eds., *Financing medicine: the British experience since 1750* (Abingdon: Routledge), 147–164; and Bernard Harris, "Social Policy by Other Means? Mutual Aid and the Origins of the Modern Welfare State in Britain During the Nineteenth and Twentieth Centuries," *Journal of Policy History* 30, no.2 (2018): 202–235.

156 WBOHP Interview with Nancy Birdsall, 4 October 2006, and 3 January 2007, 23.

157 Interview, Birdsall, 21.

158 Interview, Dean Jamison, 17, and personal communication 12 June 2021.

> ... they were bringing in these young economists who were very pro user fees and ... believed in insurance models ... I remember arguing about all the complexities of introducing charging systems and whether the income is worth it ... the effort engaged in actually getting people enrolled ... For a long time, no one looked in the Bank ... at government expenditure and tax. ... it sort of became unacceptable to talk about increased government expenditure on health. It had to be user fees or insurance...[159]

In sum, while it is possible to argue that the Bank's ideas about international health financing were grounded in hard data and scientific analysis, it is also the case that they excluded other areas of discussion. We suggest that the reasons for this are institutional, arising from the location, both physical and intellectual, in Washington, and the constraints which that imposed on personnel and discourse.

Conclusion

In his seminal lecture on ideological bias in social science, Joseph Schumpeter observed that most economists would accept that value judgment was inherent to their discipline, even if "... they find it only in others and never in themselves."[160] Clearly the actors under discussion here would stand by the empirical undergirding of the propositions they advanced. Equally, other scholars would characterize the economics of neoliberalism, *tout court*, as no more than "doctrine" and "belief system."[161] Therefore, as historians of ideas, any definitive claims we may make here to have parsed science from ideology are unlikely to convince. Instead, we have approached the question from a different perspective, asking how a particular set of ideas and truth claims became prominent at a given moment.

Our first argument is that a lineage can be traced from the Bank's earliest writings on health, to some positions it adopted in the mid-1980s, indicative of a consensus born of observation. The key components were an emphasis on preventive strategies with the broadest population reach, rather than curative medicine with its urban base, and an argument that better health was integral to development. The ensuing tension between the "productivity first" and the "basic

159 Interview, Anne Mills, 10, 19.

160 Joseph Schumpeter, "Science and Ideology," *American Economic* Review 39, no.2 (1949): 346–359, at 349.

161 David Harvey, *A Brief History of Neoliberalism* (Oxford: Oxford University Press, 2007 [2005]), 2; Pierre Bourdieu, "The Essence of Neoliberalism," trans. Jeremy Shapiro, *Le Monde Diplomatique* (December 1998), https://mondediplo.com/1998/12/08bourdieu.

needs" advocates was a recurrent theme within the Bank, and the economics of health as human capital remain a subject for debate. However, the authors of the seminal policy documents in the 1970s squared this circle, arguing for health expenditure both as a merit good – satisfying a "felt human need" to care for others – and as productive investment in the labor force.[162] Our second point is the compatibility of the Bank's position in the 1970s with broader currents in international health, as the WHO moved away from vertical programming and launched its drive to universal cover under primary healthcare. The common themes were investment in low-tech medicine, extension to rural areas, incorporating traditional healers, integrating health services expansion with agrarian and sanitarian development, and extending charges for those that could afford them, to free more public resources for effective targeting.

The 1980s undoubtedly brought a changed environment, in which the politics of Reaganism and the economics of debt recovery constrained debate. Here was ideology, and a reinstatement of post-colonial global hierarchy that was incompatible with the idealism of Alma-Ata. Nonetheless, continuities in health policy remained, in that a concern with spatial and social equity ran through the documents of the period. There was also an empirical basis to the shift to pluralism in health financing, which came from expenditure surveys revealing the prior extent of out of pocket payments, and the modelling of elasticity of demand for care. These emerged from what was still the limited corpus of international health economics, with the evidence which would later emerge for the deleterious human impacts on utilization still unavailable. A guiding imperative was also to spark activity in places which were extremely deprived, and where any new resource allocation was better than what had gone before.

However, we have also emphasized that the path taken shut out other perspectives and critiques, and failed to marshal a truly multilateral effort. To explain this we emphasized the particular institutional circumstances of the Bank, suggesting aspects of common outlook amongst its employees, as well as the tone set by its senior leadership, which circumscribed the discourse. Here our perspective endorses the arguments of scholars who identify a narrowly-based network of policymakers which by the 1980s came to dominate healthcare financing in global institutions. It also aligns with the observation that the Bank's reservoir of program expertise increasingly narrowed over time, with economics predominating over public health.However, it also differs in that it attends particularly to the geopolitics of influence at the Bank, and the implica-

162 World Bank, *Health Sector Policy Paper*, 1975, 25.

tions of control by the United States. Ultimately it reflects on the nature of American leadership in its late-twentieth century epoch of unipolar power.

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Marcos Cueto

The origins of social determinants of health and universal health coverage at the World Health Organization, 2005–2015

This paper will examine the beginnings of two health proposals that emerged simultaneously at the World Health Organization (WHO) in 2005 and began complementing one another while competing for pre-eminence in the global debate on the relation of health and development: Social Determinants of Health (SDH) and Universal Health Coverage (UHC). The first one was portrayed outside the realm of traditional medical interventions and sought to improve the living conditions of the poor; the latter was an intervention that emphasized a change in the scope and organization of health services. These two proposals became the latest reiteration of a long history of controversies regarding what should encompass health policies within the larger scheme of societal improvements, what their goals should be, and how they should be financed, or, in other words, how health should be integrated into the overall framework of social orders. The main argument of this paper is that during the period between 2005 and 2015, SDH and UHC encapsulated a competition in Global Health between a focus on environmental causes of health and a vertical focus on specific diseases.

At the beginning of the twenty-first century, the context of these two proposals was a moment of crisis and reinvention of neoliberalism that fed a process of boom and bust of SDH and a reductionistic version of UHC. The juxtaposition of the SDH and UHC, emerging almost at the same time and both related and in competition with one another, also illuminates the work of the WHO and how it was connected to competing conceptualizations of health as a component of development during a crucial period of the recent history of Global Health. Although the outcome of the relationship between the two is part of an ongoing process, it is important to understand the origins, early vicissitudes, and content of each one of them.

Background

Ever since its beginnings, international health work has oscillated between, on the one hand, a biomedical understanding of health as a physical entity expressing an interaction between the human body and disease-inducing pathogens

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and chronic ailments and, on the other, a social understanding of health as a reflection of social and economic conditions in a given society.[1] The second view ties both the concept and the practice of public health to socio-economic development as the driver of crucial factors determining health, such as living and working conditions, nutrition or social stratification. Over time, some events have stood out as highlights of this social approach, seeing health as a function of a broader set of developmental decisions. Doubtlessly, the most influential example—at least since the Second World War—was the Declaration of Primary Health Care (PHC), announced at the 1978 international conference jointly held by WHO and UNICEF in Alma Ata. Responding to the experience of health practitioners mainly in the Global South, it firmly positioned health within a comprehensive program of overall socio-economic development, universal access to and equitable coverage of healthcare made on the basis of need, articulation of treatment, prevention, promotion and rehabilitation and community participation in the definitions of needs and policy.[2] The Declaration took up ideas of central development debates, notably the New International Economic Order (NIEO), the Dag Hammarskjöld Report (DHR), and the Basic Human Needs Approach (BHN), and came about largely thanks to the energetic efforts of Halfdan Mahler, the charismatic Director-General of WHO whose commitment to health as a social right shaped WHO work for more than a decade.[3] However, much to Mahler's disappointment, the subsequent policies fell far short of these ideas, as international health efforts split into two strands. One strand favored selective primary healthcare, considered more affordable and realistic and focusing on vaccinations, breast feeding, and rehydration, while the other strand followed a broader concept of comprehensive primary healthcare, taking into account larger societal conditions.[4]

Meanwhile, several studies from the 1980s on health inequity expanded knowledge on the connection between health and social conditions. Although the term "inequity" was frequently confused with "health inequality," these studies began to establish a difference between the two. Health inequality was used to describe differences in the health of people—like the relationship between age

1 Iris Borowy, "Shifting between Biomedical and Social Medicine: International Health Organizations in the Twentieth Century," *History Compass* 12, no. 6 (2014): 517–530.

2 Marcos Cueto, "The Origins of Primary Health Care and Selective Primary Health Care," *American Journal of Public Health* 94, no. 11 (2004): 1864–1874.

3 Fernande A. Pires-Alves and Marcos Cueto, "The Alma-Ata Decade: the Crisis of Development and International Health," *Ciência e Saúde Coletiva* 22, no. 7 (2017): 2135–2144.

4 Lesley Magnussen, John Ehiri, and Pauline Jolly, "Comprehensive versus Selective Primary Health Care: Lessons for Global health policy," *Health Affairs* 23, no. 3 (2004): 167–176.

and disease—whereas health inequity was used to convey unfair, unjust, and avoidable health differences—like discrimination—that could be addressed by policy.[5] An important document that helped to establish the difference but relied on "inequality" was the UK report *Inequalities in Health*, known as the Black Report (the Scottish physician Douglas Black, President of the Royal College of Physicians, chaired the commission that produced the report).[6] The British Department of Health and Social Security commissioned the report in 1977 under the Labour government of James Callaghan, based on concerns that the NHS, created in 1948, had failed to eliminate health inequities. The report concluded that although nothing was wrong with the NHS and, in fact, overall health had improved in England, there were disparities between the health of privileged and disadvantaged social groups. These gaps had to do with income, education, housing, diet, employment, and working conditions. The report recommended reforms in the provision of education, housing, and social welfare, but Margaret Thatcher's Conservative government dismissed them.

The Black Report had an impact on public health scholars and practitioners in Europe, Canada, the United States, the United Kingdom, and in developing countries. One of the people who continued doing research in this field was Michael Marmot, professor of epidemiology and public health at University College London. In the 1980s, he led a famous study examining the mortality rates of British Civil Servants, finding a clear inverse correlation between employment grade and health status.[7] Collectively, these studies argued that the distribution of disease in the hierarchy, something Marmot called the "social gradient," was caused by acute inequities external to the health system, and that improving living conditions and reducing class inequality was the main way to solve these problems.[8]

Internationally, public health efforts shifted from a primarily social to a primarily biomedical conceptualization, and during much of the 1990s they were

5 Mariana C. Arcaya, Alyssa L. Arcaya, and S. V. Subramanian, "Inequalities in health: definitions, concepts, and theories," *Global Health Action* 25, no. 8 (2015), accessed 28 September 2021, doi: 10.3402/gha.v8.27106.

6 The report was published as P. Townsend and N. Davidson, eds., *Inequalities in Health: The Black Report* (Harmondsworth: Penguin, 1982). See also Alastair Mcintosh Gray, "Inequalities in Health. The Black Report: A Summary and Comment," *International Journal of Health Services* 12, no. 3 (1982): 349–380.

7 Michael G. Marmot et al., "Health Inequalities among British Civil Servants: The Whitehall II study," *Lancet* 337, no. 8754 (1997): 1387–1393.

8 Michael Marmot, Michael, and George Davey Smith, "Socio-Economic Differentials in Health," *Journal of Health Psychology* 2, no. 3 (July 1997): 283–296, https://doi.org/10.1177/135910539700200302.

dominated by large-scale disease control programs, such as the Global Fund to Fight AIDS, tuberculosis, and malaria. Created in 2002, the Global Fund was a health public-private partnership (PPP) with the aim of providing crucial funding and promoting innovative health strategies in the control of these three diseases. The Millennium Development Goals (MDG) which were established in 2000 prioritized the control of these diseases as targets to be achieved in 2015. In essence, it was conceived as a modernization program, designed both to improve the efficiency of health work by integrating private actors and to drastically reduce the impact of these three diseases which were believed to be holding back the economic development of many societies in the Global South. While the program reached more than four million people and invested immense sums, it soon became clear that its effectiveness was much diminished by a lack of general health infrastructure to tap into.[9] Like similar initiatives such as UNAIDS, Roll Back Malaria, and STOP TB, the Global Fund did not galvanize governments into establishing holistic health systems including comprehensive and balanced approaches of treatment and prevention. Instead, these PPPs became islands of modernity in understaffed and underfinanced health systems and resorted to supposed magic bullets (like antiretrovirals for AIDS, insecticide-treated bed nets [ITNs], and a system of drug distribution as part of Directly Observed Treatment (DOTS) for tuberculosis). Some experts questioned the wisdom (both in terms of health and development) of pouring more money into PPPs and programs of multinational agencies, while otherwise leaving low-income countries with inadequate health infrastructures and few human resources devoted to health and outdated equipment.[10]

This question related to the general concern in global health regarding the financial sustainability of health systems in developed and developing nations and the failure of the initial neoliberal economic reforms of the 1980s and 1990s to rationalize public health and improve health indicators. It was discovered that, contrary to the neoliberal belief that privatized health made healthcare more efficient, better financed, and more geared to the real health needs of a developing society, it actually resulted in bad working conditions for health workers, was frequently inefficient and more expensive than public services, and left many patients without healthcare. User fees (co-payments) also promoted by neoliberalism did not increase the budgets of public health systems as expected.

9 Johanna Hanefeld, "The Global Fund to Fight AIDS, Tuberculosis and Malaria: 10 years on," *Clinical Medicine* 14, no. 1 (2014): 54–57.

10 Celia Almeida, "Parcerias público-privadas (PPP) no setor saúde: processos globais e dinâmicas nacionais," *Cadernos de Saúde Pública* 33, Suppl. 2 (2017), accessed 15 August 2021, doi: 10.1590/0102–311X00197316.

Instead, they resulted in higher expenses, unaffordable for many poor people, and thereby increased inequality in access to good health services. Moreover, downplaying governmental regulatory responsibilities did not produce positive results in innovation and efficacy. In sum, many countries found that neoliberalism and the privatization of health services contributed to the persistence of weak health systems and poor health outcomes.[11]

Both the renewed attention to social determinants of health (SDH) and calls for universal health coverage (UHC) were reactions to disillusionment with years of neoliberal health practices. This response went beyond the health sector but also absorbed political debates regarding global developmental schemes at large. At the turn of the twenty-first century, increasingly outspoken anti-globalization movements such as ATTAC (*Association pour la Taxation des Transactions financière et l'Aide aux Citoyens*) blamed international corporations, bank conglomerates, the World Bank, and the World Trade Organization (WTO) for imposing a neoliberal social order that multiplied unemployment, encouraged environmental degradation, and shrank social programs. For the leaders of these movements, neoliberal reforms only made the rich richer, destroyed jobs, and promoted a form of privatization that did not improve people's health. They especially criticized trade liberalization, portrayed as unregulated and unfair trade with no trickle-down effects reaching the poor. Following a series of smaller events, the first major demonstration against globalization occurred in 1999, when angry and massive street protests led to the cancellation of the meeting of the WTO in Seattle. Thereafter, riots occurred at other international events, including the meetings of the richest countries in the world, known as the G-8.

These protests had an influence on several political leaders in developed and developing countries who advocated for a market economic system but understood and shared some of its criticism. Thus, they agreed that economic globalization increased social inequality, produced slow economic growth in poor nations, and widened the disparities between the global North and South, while they also saw free trade taking away jobs from rich countries. New center-right and center-left politicians who came to power at the turn of the twenty-first century in developed countries (like Tony Blair in the UK, Jacques Chirac in France, Gerhard Schröder in Germany, Junichiro Koizumi in Japan, and George Bush in the US) were convinced that some response had to be made to legitimate

11 Chris Holden, "Privatization and Trade in Health Services: A Review of the Evidence," *International Journal of Health Services* 35, no. 4 (2005): 675–689; Howard Waitzkin, Rebeca Jasso-Aguilar, and Celia Iriart, "Privatization of Health Services in Less Developed Countries: An Empirical Response to the Proposals of the World Bank and Wharton School," *International Journal of Health Services* 37, no. 2 (2007): 205–227.

criticisms of globalization and tried to revamp economic globalization, reinstate government intervention in some areas of society, and support multilateral agencies. They also began to support health funding as an investment rather than a cost.

This context led the UN and other specialized agencies, such as the WHO, to rethink their missions. The leaders of the WHO perceived an opportunity to promote comprehensive changes to health systems and address the relationship between health and development.[12]

An important effort in this direction was the Commission of Macroeconomics and Health, formed by the WHO in January of 2000 and chaired by Harvard economist Jeffrey Sachs, which discussed cost-effective interventions and the relevance of equity and primary healthcare.[13] It formed part of a process within the WHO of gradually increasing attention to health equity. Arguably, this process began with the WHO Equity Initiative set up in 1995, and it intensified under Director General Lee Jong-wook (hereafter Lee), head of the WHO between 2003 and 2006. During his short term (he died in early 2006, before completing his first term) Lee promoted several ambitious goals such as a revival of primary healthcare, a campaign to extend AIDS treatment to developing countries, a reduction of maternal and infant mortality, a commitment to address the health workforce crisis in developing countries, the construction of universal health systems, and a concern with the social dimensions of health and disease (the last two goals related to UHC and SDH).[14]

During his address to the World Health Assembly in May 2004, Lee announced his intention to establish a commission that would "gather evidence on the social and environmental causes of health inequities, and how to overcome them."[15]

12 J. Liden, "The World Health Organization and Global Health Governance: post-1990," *Public Health* 182, no. 2 (2014): 141–147.

13 World Health Organization. Commission on Macroeconomics and Health, Macroeconomics and Health, *investing in health for economic development: report of the Commission on Macroeconomics and Health* (Geneva: World Health Organization, 2001).

14 Marcos Cueto, Theodore M. Brown, and Elizabeth Fee, *The World Health Organization, a history* (Cambridge: Cambridge University Press, 2019), 301–302.

15 Jong-Wook Lee, address by the Director-General to the fifty-seventh World Health Assembly, A57/3, Geneva, Tuesday, 18 May 2004, 5.

The commission on social determinants of health

The appointment of the CSDH was a direct response to criticism of narrow health interventions promoted by disease-control PPPs. These interventions were perceived to overlook discrimination and place too much emphasis on technology, a small cadre of experts, cost-effectiveness, and managerial capabilities. When introducing the Commission, Lee used language that recalled Mahler's vision of primary healthcare, as he portrayed social determinants of health as part of a global effort to promote equity in a spirit of social justice.[16] He argued: "The Alma Ata goal of Health for All was right ... equitable access, community participation and intersectoral approaches to health improvement. These principles must be adapted to today's context."[17] Lee anticipated that the Commission would indicate ways to translate its findings into policy and demand of governments a regulatory environment that could support behavior change and healthy lifestyles.

The Commission on Social Determinants of Health was launched in Santiago, Chile, in March 2005, during the presidency of Ricardo Lagos, a social democrat with clear left leanings. The Commission's chair was Sir Michael Marmot. The 19 Commissioners were renowned professionals who came from all six WHO regions, had diverse backgrounds in public health, science, and politics, and little experience in working inside the WHO. Many were known for their progressive and egalitarian ideas, such as Giovanni Berlinguer from Italy, Pascoal Mocumbi from Mozambique, Ricardo Lagos from Chile, and Amartya Sen from India. Several (in addition to Mocumbi) came from Africa: Charity Ngilu, Kenya's education minister; Hoda Rashad, the director of the Social Research Center at the American University of Cairo; and Anna Tibaijuka of Tanzania, the director of the United Nation's Habitat organization.

Marmot saw a relationship between previous studies on health inequities and the egalitarian ideas of the Indian economist, Amartya Sen. According to Sen, freedom from want, illness, and poverty were essential for prosperous human development, defined as people's capabilities to fulfill their life choices. Economic growth was seen as a tool towards this goal rather than an end in itself or an instrument to improve traditional national indicators such as the GDP that

16 Jong-wook Lee, "Public Health Is a Social Issue," *The Lancet* 365, no. 9464 (2005): 1005–1006.

17 Jong-wook Lee, "Global Health Improvement and the WHO: Shaping the Future," *The Lancet* 362, no. 9401 (2003): 2083–2088.

meant little to marginalized people.[18] Marmot knew Sen, and both were critical of Sachs's conception of health that emphasized cost-effective health interventions in the interest of economic development and poverty reduction. Based on Sen's ideas, Marmot argued that health was an essential good that enabled individuals to function in society, and that governments should ensure all citizens' access to this good. The Commission's work represented an effort to give new life to a holistic version of primary health are contained in the 1978 Declaration of Primary Health Care and championed by the WHO. In that vein, Marmot and Lee envisioned the publication of the final report of the Commission in 2008, the thirtieth anniversary of the Alma-Ata conference and 60 years after the adoption of the WHO constitution.

The Commission had two secretariats: one in Geneva headed by Chilean physician Jeanette Vega, who managed the meetings, especially with UN agencies, and one in London where a team directed by Marmot concentrated on the scientific work. The collaborative process was based on lively debate, and if the rest of the commissioners proved Marmot wrong, he was willing to change his mind (unlike many health agencies where the director's word is considered gospel and other members merely rubberstamp it). Between 2005 and 2008, the Commission held consultations with representatives of civil society and NGOs, including the leftist People's Health Movement, which was the most important network of health activists and academic institutions from around the world, particularly from developing countries, and which was committed to comprehensive primary healthcare and the right to health.[19] It also carried out a series of studies and established nine knowledge networks of researchers and advocates on child development; employment conditions; globalization; health systems; urban environments; methods; gender; social exclusion; and public health priorities that enhanced the findings of previous work on social epidemiology, including the Black Report and Marmot's Whitehall Studies.[20] The Commission adopted some terms from Marmot's previous studies, such as the "social gradient," cited dramatic examples of global health inequities (such as the 43-year difference in life expectancy between Japanese and Sierra Leonean babies), and introduced a simple definition of social determinants: "the causes of the

18 Amartya Sen, *Development as freedom* (New York: Oxford University Press, 2001).

19 Ravi Narayan, "The Role of the People's Health Movement in Putting the Social Determinants of Health on the Global Agenda," *Health Promotion Journal of Australia* 17, no. 3 (2006): 186–188.

20 Alec Irwin and Elena Scali, *Action on the Social Determinants of Health: Learning from Previous Experiences: a Background Paper* (Geneva: World Health Organization, Secretariat of the Commission on Social Determinants of Health, 2005).

causes."[21] The definition conveyed the idea that poverty, stress, and discrimination—socioeconomic factors not targeted by health services—were the ultimate source of disease. These socioeconomic factors explained the main trends in morbidity and mortality.

The Commission's investigations can be summarized in three findings. First, while there had been improvements in health indicators and increases in life expectancy in most countries, there were considerable inequities between people from different social classes, ethnic backgrounds, and genders. Secondly, discrimination against some of these groups had increased and inequities had heightened. Thirdly, many of these inequities were related to social and economic conditions that promoted disease, chiefly: stress; social exclusion; weak educational systems; racial and gender discrimination; unemployment; lack of social support and good housing; addiction; unsafe water systems; food insecurity or bad nutrition practices; and poor transportation systems. Overall, the Commission found that the benefits of economic globalization were good but dramatically uneven, favoring the already rich and creating new social and health inequities. The policy implications of the work of the Commission were to improve the conditions in which people worked and lived, to diminish the discrimination of marginalized groups, and to promote equal opportunities and strong poverty reduction programs. In 2008, the final report of the Commission was issued using strong language (its opening phrase was "Social justice is a matter of life and death"). However, its recommendations failed to become overriding priorities for the WHO.[22]

Many medical doctors, neither cognizant of nor interested in social epidemiology, believed that the issue of social and economic inequities determining individual health status was vague and strange or difficult to incorporate into their daily clinical practice. They considered Marmot's demands for healthy living and working conditions to be politically motivated and impossible to meet. At the same time, many conservative politicians considered Marmot's ideas for more egalitarian societies to be fanning the flames of anti-globalization movements and close to socialism. The final report of the Commission was criticized as "ideology with evidence" (a phrase that Marmot actually liked).[23] *The Economist*

21 See Michael Marmot, introduction to *Social Determinants of Health*, ed. M. Marmot and R. Wilkinson (Oxford: Oxford University Press, 2nd edition, 2006), 1–5.

22 World Health Organization Commission on Social Determinants of Health, "Final Report of the Commission on Social Determinants of Health" (Geneva: WHO, 2008), 1.

23 Michael Marmot, *The Health Gap: the Challenge of an Unequal World* (London: Bloomsbury Publishing; 2015), 26.

published an article arguing that the report had some excellent ideas but was driven by a naïve egalitarian ideology that was "baying at the moon" in its attacks on global imbalances in the distribution of power and money.[24] The statement was probably related to a vague sentence of the report that said implementing the Commission's recommendations would require "changes in the operation of the global economy."[25]

Nevertheless, the Commission's report achieved what few WHO reports do—great visibility outside Geneva. Moreover, in some places the text facilitated a dialogue between scientists, socio-medical researchers, and policymakers. It was also part of a debate with activists who argued that the report was piecemeal, strong in its presentation of evidence but falling short in its policy recommendations, and did not provide a clear and structured roadmap of short-term and long-term changes to end economic exploitation. They also criticized what they considered the naïve assumption that providing rational evidence would prompt rational behaviors of politicians and companies. According to this interpretation, the report failed to recognize explicitly the hegemony of finance capital in the global economy that sustained unjust trade; did not emphasize enough the much-needed role of the state in influencing the social determinants of health; avoided recommending taxes to the rich to finance action on the social determinants of health; did not deal adequately with the unaccountable and unregulated greed of pharmaceutical companies; and presented good ideals but did not explain how countries could mobilize political forces against neoliberalism that was the ultimate source of social disparities.[26] The People's Health Movement—despite its participation in the debates of the Commission—went even further, demanding a reorganization of global health based on the recognition of aid for health from rich countries to developing nations as an obligation and reparation for past injustices.[27]

The Commission's final report had a modest launch in August 2008 and did not garner sufficient support within the WHO to overcome the skepticism surrounding it. Conditions were not favorable since the agency was then passing

24 "The Price of Being Well," The Economist, 28 August 2008, accessed 17 January 2020, www.economist.com/node/12009974.

25 WHO Commission on Social Determinants of Health, "Final Report," 54.

26 Carles Muntanera, et al., "Against Unjust Global Distribution of Power and Money: The Report of the WHO Commission on the Social Determinants of Health: Global Inequality and the Future of Public Health Policy," *Journal of Public Health Policy* 30, no. 2 (2009): 163–175.

27 Connie Musolino et al., "Global Health Activists' Lessons on Building Social Movements for Health for All," *International Journal for Equity in Health* 19, no. 116 (2020), https://doi.org/10.1186/s12939-020-01232-1.

through a period of considerable uncertainty. In May 2006, Lee had died unexpectedly; he had passed the midpoint of his term of office and was expected to run for re-election as director-general in 2007. Shortly after Lee's death, the Swede Anders Nordström, the WHO's assistant director-general for General Management, became Acting Director-General. Nordström was very cautious about previous and future engagements of the agency and began the process of preparing for the election of a new director-general by paying little attention to the promotion of the CSDH. In November 2006, the World Health Assembly approved the nomination by the Executive Board a few months earlier of Margaret Chan from Hong Kong. She was selected over Pascoal Mocumbi, an adamant supporter of primary healthcare and the CSDH. Chan built on her past experience in communicable disease surveillance and response and enhanced training for public health professionals.[28]

Marmot did not have a "good meeting" with Chan. She appeared uninterested in making the work of the Commission on the Social Determinants of Health a priority and did not fully grasp the dynamics of the Commission.[29] She also appeared to understand primary healthcare not as the center of health work—as proposed in Alma Ata and supported by Lee—but, rather, according to its more traditional meaning, as a first point of contact for clinical and preventive care. Chan allowed the work of the Commission on the Social Determinants of Health to continue but did not give it the prominence it had enjoyed under Lee. Nevertheless, Marmot did publish some works in the WHO Bulletin, the central journal of the agency.[30] In addition, some officers and country representatives worked hard to enhance its influence. After the report had been published, the CSDH dissolved and Vega was appointed Vice Minister of Health in Chile, leading the country's 13-step agenda for equity in health (and, in 2012, joining the Rockefeller Foundation as Managing Director of Health).

In the final 2008 report, Marmot introduced the idea of calling an international conference on social determinants, probably inspired by the 1978 Alma Ata Conference. Shortly thereafter, the idea was met with a positive reception and the help of northern European countries and Brazil. The latter had had a National Commission on Social Determinants on Health since 2006, backed by President Luiz Inácio Lula da Silva linked to the CSDH. Brazil provided three million dollars for the three-day Conference on Social Determinants of Health that

28 Marcos Cueto, Theodore Brown, and Elizabeth Fee, *A History of the World Health Organization* (New York: Cambridge University Press, 2019).

29 Michael Marmot, Interview with Marcos Cueto, London, 18 January 2017.

30 Michael Marmot, "Global Action on Social Determinants of Health," *Bulletin of the WHO* 89, no. 702 (2011), doi: 10.2471/BLT.11.094862.

took place in Rio de Janeiro in October 2011, attended by representatives of 120 countries. Although there was some tension between WHO headquarters officers and the Brazilian organizers, the meeting approved a Rio de Janeiro Political Declaration on Social Determinants of Health.

Arriving at the declaration involved some dissonance. According to the ex-minister of health, José Gomes Temporão, then head of Isags (South American Institute of Government in Health, which brings together the 12 South American countries), the declaration was timid, but it was necessary to arrive at a compromise with the delegations of Iran and Algeria as well as with representatives of conservative and right-wing governments who felt the original draft was too radical.[31] In subsequent years the term "SDH" was criticized. For some, it was not sufficient to challenge the economic and political interests in structural exploitation and social disparities; others believed the word "determinants" was too rigid in not acknowledging the relevance of individual and group resilience and even specific effective interventions. According to Gilles Paradis, for many public health workers the WHO report lacked clear operational directions to integrate SD in program and policy planning. Paradis also noticed a fear that the report was politicizing primary healthcare and retorted: "public health is and has always been about politics informed by evidence. We are agents of change for society and as such we are in the political arena."[32] In retrospect, these debates appeared immaterial since WHO headquarters soon lost interest in the Commission and its work.

In the following years, Marmot, without any ties with the WHO, worked with British Labour Prime Minister Gordon Brown (2007–2010) to organize a review on health inequalities in England. They published the report *Fair Society, Healthy Lives* in February 2010.[33] Marmot was later invited by the Regional Director of WHO Europe to conduct a review of Social Determinants of Health in the continent to publish a report two years later.[34]

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31 Denise Manchen, "Encontro da OMS no Rio termina com compromisso de enfrentar desigualdades," Folha de Sao Paulo, 21 October 2011, https://www1.folha.uol.com.br/equilibrioesaude/994591-encontro-da-oms-no-rio-termina-com-compromisso-de-enfrentar-desigualdades.shtml.

32 Gilles Paradis, "Social Determinants of Health: So What?" *Canadian Journal of Public Health* 100, no. 3 (2009): 164.

33 Michael Marmot et al., *Fair Society, Healthy Lives* (London, 2010), accessed 27 July 2021, http://www.instituteofhealthequity.org/projects/fair-society-healthy-lives-the-marmot-review/fair-society-healthy-lives-full-report.

34 World Health Organization Regional Office for Europe, WHO Commission on Social Determinants of Health (Copenhagen: World Health Organization Regional Office for Europe, 2012).

In 2014, the Lancet-University of Oslo Commission on Global Governance for Health, of which Marmot was a member, published a radical report that argued that addressing health inequities meant coming into conflict with powerful global and local actors who had vested interests in the perpetuation of inequality and discrimination in social exploitation, unjust trade, and climate deterioration among other issues.[35] The report highlighted the need for redistribution and political leadership and bluntly declared that any effective policy needed to address power asymmetries and vested interests. In short, while the first approach of the 2008 report of SDH presented the health-development connection as a call for reforming how societies organized health and social programs, the latter called for a decisive reform of societies themselves.

The efforts to maintain the message of SDH continued. The latest example was a Commission of 12 experts on Equity and Health Inequalities in the Americas, set up in 2016 by the Pan-American Health Organization and chaired by Michael Marmot. Its report, published in 2019, concluded, among other points: "Health equity should be a priority because it goes to the heart of the kind of societies we want. It is unacceptable that the prospect of living a dignified, fulfilled, healthy life is unequally distributed in society."[36] Meanwhile, WHO documents tended to coopt code words of the Commission's report, established a small unit with a few officers working with equity and social determinants, but did not create mechanisms to address social and health inequities or pursue the practical implications of Marmot's work.

In sum, after the publication of the 2008 report of SDH, WHO leadership shifted its attention regarding global public health elsewhere despite the fact that the discussion on the far-reaching effects on health inequalities would gain urgency.

Universal health coverage

The concept of Universal Health Coverage emerged around same time, with WHO health economists having used the term "Universal Coverage" since mid-2003.

35 See Ole Petter Ottersen et al., "The Lancet-University of Oslo Commission on Global Governance for Health, The Political Origins of Health Inequity: Prospects for Change," *Lancet* 383, no. 9917 (2014): 630–667.

36 Commission of the Pan American Health Organization on Equity and Health Inequalities in the Americas, *Just Societies: Health Equity and Dignified Lives* (Report of the Commission of the Pan American Health Organization on Equity and Health Inequalities in the Americas) (Washington, D.C.: PAHO: 2019).

Among them was Guy Carrin (1947–2011), a professor at the University of Antwerp and officer at the WHO who had published extensively on the economic and social aspects of social security since the 1990s. He was one of the most prominent health economists with neoliberal leanings who were becoming increasingly influential in the agency. Along with many other experts, he argued that bad management, unsound financial schemes, rapidly aging populations, and decreasing payroll contributions would soon make it impossible to afford traditional social security and national health systems.

Health economists increased their status within the WHO with the creation of a Department of Health System Financing (HSF) in 2003. The Department was created by the merger of two pre-existing units, one working on technical aspects of resource tracking, costing, evidence for health policies and priority setting, and the other one on health-financing policy. Lee had endorsed the Department in part because he was from South Korea, a country proud of its national health insurance that promoted the need of adequate financing and management. Health economist David B. Evans, who had been at the health agency since 1990, also strengthened the new Department. He later recalled that when UHC was first discussed with donors in Geneva the representative of an important unnamed institution stood up and said "this is a pipe dream, it's too far-fetched."[37] In the following years, Evans became Director of the Department of Health Systems Governance and Financing at WHO that was involved in UHC. The idea of UHC made progress thanks to two former Rockefeller Foundation officials who had a keen interest in health equity and health economics at the WHO. They were Ariel Pablos-Méndez, trained in medicine and public health, and Timothy Evans, trained in medicine and economics. In 2004, Pablos-Méndez led the Global Surveillance Project on Anti-Tuberculosis Drug Resistance, and then became director of knowledge management at the WHO. Tim Evans served as assistant director-general, heading the Evidence, Information, Research, and Policy Clusters and overseeing the production of the annual World Health Report.

In 2003, the WHO Executive Board approved a document entitled "Social Health Insurance" that was seen as a means to reach universal health coverage. The term "Social Health Insurance" was on the agenda of the 2005 World Health Assembly and was expected to be approved as a resolution.[38] Most members of

37 David Holmes, "David Evans: Putting Universal Health Coverage on the Agenda," *The Lancet* 384, no. 996 (2014): 2101.

38 World Health Organization, "Social Health Insurance Document EB114/1" (paper presented at the 114th session of Executive Board of World Health Organization, May 26, 2004), apps.who.int/gb/archive/pdf_files/EB114/B114_PT2-en.pdf, accessed 21 October 2020; World Health Organization, "Social Health Insurance, Report by the Secretariat" (paper presented at

the assembly committee that discussed the document did not like its title and sought alternatives. These included "sustainable health financing," "universal coverage," and "sustainable health financing and universal insurance coverage."[39] US representatives preferred "universal insurance coverage," but European countries and Brazil criticized this term because they considered it to mean the provision of medical services by a mix of private and public entities. They preferred a title that conveyed the idea of a state-supported universal public health system that would include everyone, even those working in the informal sector and illegal immigrants. Finally, the 2005 Assembly approved Resolution WHA58.33 with a long title: "Sustainable Health Financing, Universal Coverage, and Social Health Insurance." The resolution urged all member countries to establish prepayment financial contribution systems for healthcare and to plan the transition to universal coverage for their citizens to attain the MDGs and "Health for All." Also in 2005, the WHO published the policy brief *Achieving Universal Health Coverage: Developing the Health Financing System*, which argued in favor of reducing out-of-pocket payments and user fees that had been popular with the neoliberal health reformers of the 1980s.[40] Following this publication, the term "universal health coverage" (UHC) became commonly used, and "social health insurance" fell out of usage. UHC was going to protect the poor against the catastrophic and impoverishing consequences of co-payments.

Before 2005, health economists used terms such as UHC to refer to an extension of private insurance and social security systems to the majority of people in developing countries who were uninsured, and to the creation of a national health system in the only major industrial country that did not have one, the United States of America. After 2005, UHC conveyed three interconnected goals: first, coverage, or expanding high-quality health services; second, universality—providing access to these services to all; and third, making sure that accessing these services would not result in people falling into financial hardship or poverty. Initially, UHC supporters believed that a balance between these three goals was possible. Furthermore, some medical experts hoped that the "univer-

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the 114th session of Executive Board of World Health Organization, May 26, 2004), accessed 29 October 2020, apps.who.int/gb/archive/pdf files/EB114/B114_16-en.pdf.

39 WHO, fifty-eighth World Health Assembly, 16–25 May 2005, WHA58/2005/REC/3, (Summary Records of Committees and Reports of Committees, Geneva, 2005), accessed 25 November 2020, apps.who.int/iris/handle/10665/20399.

40 The 11-page document was intended for policymakers and was coauthored by Guy Carrin, Chris James, and David Evans, Achieving Universal Health Coverage: Developing the Health Financing System (Geneva: World Health Organization, 2005).

sality" goal of UHC could make it an entry point for the construction of integrated national health systems in which the state would play a prominent role. They believed that this could give everyone the same financial protection and access to the same range of high-quality services, regardless of employment status or ability to pay. It was an important distinction from the user-fees approach that was portrayed as a punishment of the poor.[41]

At around that time, Margaret Chan became new Director-General of the WHO (2007–2012). As with other candidates, her election was decided at the WHO's Executive Board. Chan had close competition with other contenders, including Mocumbi; Bernard Kouchner (the French founder of Médecins Sans Frontières); Kazem Behbehani, a senior WHO official from Kuwait; Elena Salgado, Spain's health minister; Shigeru Omi from Japan; and Julio Frenk, the Mexican health minister and former officer of the Gates Foundation. Most of them had probably supported the continuation of SDC but Chan had a different background and perspective on what the main goals of the agency should be. She was Chinese with strong links with American and European universities and a valuable experience in control of epidemics. In 1997, when Hong Kong was officially returned to China, she stayed on as director of Hong Kong's department of health, although many of her colleagues and relatives left. When she went to the WHO in 2005 as the agency's assistant director for communicable diseases, she also emphasized that she was raised in a system similar to that of the National Health Service of the UK, a claim that was used to explain her support of UHC.

It is important to note that the People's Government of the People's Republic of China that nominated and supported her could point to a remarkable rate of economic growth and was willing to compete for global leadership with the United States and Western Europe with significant donations. Under Chan, the WHO improved its finances, but the agency was still dependent on its extrabudgetary financial resources which comprised more than two-thirds of the total budget.[42] Initially, Chan pursued several non-controversial goals: promoting safer pregnancies, reducing the impact of childhood diseases, increasing immunization rates, and supporting the WHO reform process. After a few years in office, however, Chan was able to obtain more control of the WHO's headquarters and de-

41 Robert Yates, "Universal Health Care and the Removal of User Fees," *The Lancet* 373, no. 9680 (2009): 2078–2081.

42 Nirmala Ravishankar et al., "Financing of Global Health: Tracking Development Assistance for Health from 1990 to 2007," *The Lancet* 373, no. 9681 (2009): 2113–2124.

clared Universal Health Coverage the overarching objective and organizing principle of the agency.[43]

At that time, good health services were no longer seen as a luxury in poor countries. Hopes were raised that the WHO would move beyond the disease-focused model and support interrelated prevention, treatment, and rehabilitation services. Some, like Vega who was already at the Rockefeller Foundation, believed in a combination of UHC and the recommendations from the Commission on Social Determinants of Health. She and officers of the WHO also believed that good UHC programs could help to identify entry-points within existing health programs for interventions that addressed the social determinants of health.[44] From this perspective, UHC should be an umbrella for equitable and effective delivery of comprehensive health services and SDH should help to monitor progress in connecting health outcomes and coverage. However, Vega made a warning prediction: not implementing UHC alongside SDH increased the risk of concentrating on the former and following a narrow route.[45] But the moment was not propitious. For several reasons, the hopes for a holistic version of UHC began to wane and its content deemphasized SDH.

One factor was that in the wake of the financial crisis of 2008, global health was hit by stagnant or declining economies with rising unemployment, reduced government revenues, and limited spending on public health.[46] In 2013, the author of an article in *The Lancet* argued that the global financial crisis and subsequent austerity programs in high-income countries resulted in a flatlining of development assistance for health (DAH) that had been consistently growing since the 1990s. There was also a real fear that this assistance would decline and that funds would be limited to bilateral initiatives and not used to support the activities of multilateral agencies.[47] It was not only quantity of funding that was problematic but also the way in which these shrinking funds were used, as

43 Martin Gorsky and Christopher Sirrs, "Universal health coverage as a global public health goal: the work of the International Labour Organisation, c.1925–2018," *História, Ciências, Saúde-Manguinhos* 27 (2020): 71–93.

44 Erik Blas and Anand Sivasankara Kurup, eds., *Equity, Social Determinants and Public Health Programmes* (Geneva: World Health Organization, 2010).

45 Jeanette Vega and Patricia Frenz, "Integrating Social Determinants of Health in the Universal Health Coverage Monitoring Framework," *Revista Panamericana de Salud Publica* 34, no. 6 (2013): 468–472.

46 Margaret Chan, "The Impact of Global Crises on Health: Money, Weather and Microbes" (paper presented at the 23rd Forum on Global Issues, 28 March 2009), accessed 17 January 2020, www.who.int/dg/speeches/2009/financial_crisis_20090318/en/.

47 Dean Jamison et al., "Global Health 2035: A World Converging within a Generation," *The Lancet* 382, no. 9908 (7 December 2013): 1898–1955.

governments of rich countries were mainly interested in disease-control programs deployed in bilateral agreements, rather than in supporting broad initiatives of multilateral agencies. These changes happened within a global ideological shift to the political right and a revival of conservativism in many countries around the world. WHO officers feared that this shift would cause severe constraints on health spending and that any new plans for public health would have to be trimmed or shelved. In response to these concerns, the director-general convened a high-level consultation on the impact of the global financial and economic crisis. Ambitious proposals like SDH had to be postponed.[48] Implementation plans for UHC were similarly curtailed. As a result, there was a deterioration of sanitary infrastructure in rural and urban slums of poor nations and fewer comprehensive health programs for people not receiving medical services like undocumented immigrants.

Increasingly, debates focused on how ambitious new public health schemes could be financed. In response to an initiative by the British Prime Minister Gordon Brown and his Norwegian colleague Jens Stoltenberg, the WHO and World Bank set up a Taskforce on Innovative International Financing for Health Systems. The high-profile group, consisting of the heads of state of Liberia, Norway, and the UK, the heads of WHO and the World Bank, ministers from Australia, Ethiopia, France, Germany, Italy, and the Netherlands as well as several special advisers, met four times in 2008 and 2009. Its work demonstrated the difficulty even of defining how health expenditures should be defined, let alone what sums they should entail. While its recommendations drew attention to the need for substantial public financing on a global level, it shied away from bold proposals that would have linked global health funding to redistributive financing and truly innovative schemes.[49] A combination of criticism by powerful financial institutions and governments and the indifference of governments of rich and middle-income nations meant that these ideas were dropped from further discussions.[50]

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48 Kammerle Schneider and Laurie Garrett, "The End of the Era of Generosity? Global Health amid Economic Crisis," *Philosophy, Ethics, and Humanities in Medicine* 4, no. 1 (2009): 1–7.

49 David McCoy, "The High-Level Taskforce on Innovative International Financing for Health Systems," *Health Policy and Planning* 24, no. 5 (2009): 321–323; Robert Fryatt and Anne Mills, "Taskforce on Innovative International Financing for Health Systems: showing the way forward,"
Bulletin World Health Organization 88 (2010): 476–477.

50 George Russell, "UN World Health Organization Faces Plague of Tightwads," Fox News, 23 May, accessed 17 December 2019, www.foxnews.com/world/2011/05/23/exclusive-world-health-organization-faces-plague-tightwads.html.

By 2009, a belief that all efforts should concentrate on UHC was becoming the new mantra in global health, overcoming the attention paid to SDH by other actors. That year, a landmark article, co-signed by global health experts Laurie Garrett, A. M. R. Chowdhury, and Ariel Pablos-Mendez, entitled "All for Universal Coverage," argued that UHC would help reduce poverty, promote human rights, and sustain development in poor countries (Pablos-Mendez had left the WHO, returned to the Rockefeller, and in 2011 was appointed head of USAID's bureau for Global Health).[51] In 2011, the sixty-fourth World Health Assembly approved another resolution, WHA64.9, entitled "Sustainable Health Financing Structures and Universal Coverage," part of a package of five resolutions for strengthening health systems.[52] The WHO annual reports for 2010 and 2013 were devoted to UHC and entitled *Health Systems Financing: The Path to Universal Coverage* and *Research for Universal Health Coverage*.[53] The first report drew attention to the core financing for equitable and efficient health systems and considered, as possible financial sources for UHC, new donations, a special levy on large profitable companies, a currency transaction levy, a financial transaction tax, and so-called "sin taxes" on alcohol and tobacco. A conference on "Health Systems Financing – Key to Universal Coverage," convened by Germany on the occasion of the presentation of the "World Health Report 2010," gathered almost 30 ministers of health from all over the world plus other government officials, politicians, and a few NGOs. The meeting promoted the idea of UHC not as a package focused on a few diseases—as other vertical interventions did—but supported the idea of pooling funds to finance the program in order to improve three interrelated interventions: expanding the number of people covered, expanding the scope of health services, and reducing direct payments, such as user fees, of people that used these services.[54]

2012 was a momentous year for UHC. In January, delegates from 68 countries including front line health workers, ministers, and economists endorsed UHC in

51 Laurie Garrett, Mushtaque Chowdhury, and Ariel Pablos-Méndez, "All for Universal Health Coverage," *The Lancet* 374, no. 9697 (10 October 2009): 1294–1299.

52 World Health Assembly, Resolutions WHA64.6, WHA64.7, WHA64.8, WHA64.9, and WHA64.10 (summary records of committees of 64th World Health Assembly of World Health Organization, Geneva, May 16–24 2011, Geneva) [also available in WHA64/2011/REC/3], 338.

53 World Health Organization, World Health Report 2010: Health Systems Financing, Path to Universal Coverage (Geneva: World Health Organization, 2010).

54 German Federal Ministry of Health, "Draft Chairs' Summary" (paper presented at the International Ministerial Conference "Health Systems Financing – Key to Universal Coverage," 16 May 2011), http://www.forum-gesundheitspolitik.de/dossier/PDF/Abschlusserklaerung.pdf.

a ten-point Bangkok Statement on Universal Healthcare.[55] In April 2012, an international forum in Mexico with participants from 21 countries (including the US) issued a declaration on the need for increasing efforts to sustain progress towards UHC. The meeting insisted on getting rid of user fees and on the use of UHC for strengthening public health systems. At the time, the Rockefeller Foundation and Vega fully supported UHC and abandoned its previous emphasis on a balanced approach between SDH and UHC.[56] Margaret Chan made a decisive statement in May 2012 at the General World Assembly—where she was elected as head of the WHO for a second five-year term—supporting UHC in unmistakable terms: it was the "single most powerful concept that public health has to offer… a powerful equalizer" that would cement the progress made during the past few years.[57] At the end of 2012, the General Assembly of the United Nations adopted a resolution urging all countries to launch affordable UHC systems that covered all citizens. Finally, in 2013, at the sixty-sixth World Health Assembly, a passionate Jim Kim, the first non-economist to be president of the World Bank and former officer of the WHO, supported UHC not only as a tool for better health services, but for inducing social change and the improvement of living conditions.[58] Thanks to Kim, the World Bank undertook a series of country studies on "Universal Health Coverage for Inclusive and Sustainable Development" and published reports on 11 countries and a synthesis report mentioning there was a need to reduce disparities in access to affordable, quality care.[59] More recently, a conference organized by the WHO to commemorate primary healthcare that took place in October of 2018 in Astana (located in the same region of Alma Ata) had the telling subtitle: "From Alma-Ata towards universal health coverage and the Sustainable Development Goals."

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55 The Lancet, The Bangkok State on Universal Healthcare, *Editorial* (11 February 2012), https://doi.org/10.1016/S0140-6736(12)60212-8.

56 Judith Rodin and David de Ferranti, "Universal Health Coverage: The Third Global Health Transition?" *The Lancet* 380, no. 9845 (2012): 861–862.

57 Margaret Chan, "Universal Coverage Is the Ultimate Expression of Fairness" (Acceptance Speech presented at the sixty-fifth World Health Assembly, Geneva, 23 May 2012), accessed 11 January 2021, www.who.int/dg/speeches/2012/wha_20120523/en/index.html.

58 Jim Yong Kim, "World Bank Group President Jim Yong Kim's Speech at World Health Assembly: Poverty, Health and the Human Future" (speech, 21 May 2021), consulted 1 June 2021, https://www.worldbank.org/en/news/speech/2013/05/21/world-bank-group-president-jim-yong-kim-speech-at-world-health-assembly.

59 World Bank, Towards Universal Health Coverage by 2030 (Washington DC: World Bank Group, 2014); WHO and World Bank, Monitoring Progress towards Universal Health Coverage at Country and Global Levels: A framework, Joint WHO/World Bank Group Discussion Paper (Geneva: World Health Organization, 2013).

However, UHC has had its skeptics and critics. Initially, it was not clear how the concept was going to be implemented, especially among the self-employed, unemployed, and migrants. Some who supported UHC, like the international NGO Oxfam, believed that compulsory public financing was the only way to ensure universal healthcare in developing countries, that implementing UHC meant that wealthy people in rich and middle-income countries would subsidize services for the poor, and that it should be an overarching goal in the post-2015 development agenda (discussed since 2013 as part of new UN's sustainable development goals that were going to replace MDG). Oxfam also complained that different powerful actors and potential donors in developing countries preferred prepayment mechanisms—not so different from user-fees—as a means towards achieving UHC whilst avoiding financial responsibility.[60] Oxfam also criticized the fact that developed nations concentrated many financial resources on the military. Meanwhile, developing countries could not support true UHC unless a change in the international economic order imposed neoliberal policies that reduced the space of public services and undermined industrial and agricultural growth and fair trade. There was a tendency for UHC debates to focus on access to health insurance and a number of individual health services offered by public and private providers rather than promoting comprehensive public health systems. Another argument against a rapid implementation of UHC in poor nations was that these countries were too poor to afford and sustain comprehensive health systems. In addition, American organizations of physicians—steeped in a tradition of political resistance to universal health systems—regarded UHC as the state's intrusion into their professional activities.[61]

Disenchanted supporters published an article in 2015 complaining that despite a consensus on the relevance of UHC, there was little clarity on its definition, scope, or on the indicators for measuring progress towards it.[62] Although there was an initial aim to keep a balance between three central goals established in the meeting in the German conference "Health Systems Financing – Key to Universal Coverage," namely population coverage, financial protection, and ac-

60 Oxfam, "Universal Health Coverage: why health insurance schemes are leaving the poor behind," 9 October 2013, accessed 30 January 2021, https://www.oxfam.org/en/research/universal-health-coverage.

61 George Maddox, "America's Troubled Search for Universal Health Care," *Journal of Health Services Research & Policy* 15, no. 1 (2010): 56–58.

62 Gilbert Abotisem Abiiro and Manuela De Allegri, "Universal Health Coverage from Multiple Perspectives: A Synthesis of Conceptual Literature and Global Debates," *BMC International Health and Human* 15, no. 17 (2015), accessed 18 March 2021, doi: 10.1186/s12914-015-0056–9, https://bmcinthealthhumrights.biomedcentral.com/articles/10.1186/s12914–015–0056–9.

cess to health services, the second one received much more attention and the crucial issue of creating a global fund to support UHC was explored but never implemented. Some important issues, notably the incorporation of undocumented migrants in institutionalized public health systems, were never fully considered. Increasingly, it looked like UHC was a reductionist response to the aftermath of the economic crisis of 2008 and wrongly overemphasized health services over social determinants of health, in essence taking up cost-effective interventions similar to vertical disease-control programs whose rejection had formed the origin of the format.

Supporters of UHC tried to enlist Michael Marmot by getting him to declare the social determinants of health to be a subset of UHC, something that he resisted. Instead, Marmot countered that full access to health services was good and necessary, but, as an isolated intervention, would not reduce health disparities.[63] According to Marmot, social factors like location and ethnicity defined accessibility of health services, including cultural acceptability—defined in relation to the cultures of providers and patients—timeliness, appropriateness and quality of services; and transport costs to services. Marmot also asked a key question: how can an equality-inspired public good, such as UHC, flourish in societies where acute and unfair social inequalities are taken for granted? For one Indian researcher, UHC was a package that stemmed from a curative model like other vertical interventions. Instead of strengthening the full range of health services, UHC paid little attention to prevention and allowed too much initiative to private clinics. In short, it was the "Trojan horse" of neoliberalism.[64] As this criticism suggests, the term "universal" in UHC was understood as providing a few select services for the poor while many services remained with poorly regulated private providers.

Activists thought that PHC was broader and subsumed UHC (not the other way around), as suggested by the Conference of Astana of 2018. Brazilian scholars criticized the Declaration that resulted from the Conference for undermining the notion of comprehensive national health systems that was at the basis of the original idea of 1978 and the proposal of SDH and lamented that during the past

63 Michael Marmot, "Universal Health Coverage and Social Determinants of Health," *The Lancet* 382, no. 9900 (2013): 1227–1228.

64 Imrana Qadeer, "Universal Health Care: The Trojan Horse of Neoliberal Policies," *Social Change* 43, no. 2 (2013): 149–164.

decade UHC was shaped as selective health interventions to complement a reduction of the role of the state in public health.[65]

Final remarks

The parallel fates of SDH and UHC demonstrate the difficulties of finding a consensus on global schemes of health policies even when there is widespread agreement on the need for increased global responsibility in the field. This problem became especially apparent at the WHO after 2008. With fewer resources and political commitments available for global health, the work on SDH became a small unit at the health agency and did not achieve the prominence and centrality among multilateral agencies idealized by its founders, leading Marmot to carry his message to other institutions.

The obliteration of SDH at the WHO was inversely proportional to the rise of UHC focused on improving the performance of health services. As a result, a social engineering top-down effort and fragmented concept of development in the Global South was revived by major international agencies. The process tried, with little success, to reduce SDH to a subordinate element of UHC, as opposed to the original aim of Lee that both should work together and members of Marmot's Commission that SDH should actually be the umbrella that included UHC and other socio-medical interventions. This outcome meant also a subordinate role for health systems and workers that would not attach much importance to the improvement of living conditions as a key goal, focusing instead on good administration and limited approaches to the long-term sustainability of health services.[66] Leaving aside the role of health workers as promoters of social equality was taking away a key implicit goal of the Declaration of Alma Ata and the 2008 report of SDH that could be traced to a previous history of emphasizing the environmental causes of disease and criticizing the overemphasis on health services.

However, neither SDH nor UHC could be fully enforced outside the WHO in developing countries because they implied something rare: national laws and constitutions considering health a right of all citizens, residents, and migrants. There was also little effort for an international legal framework to provide

65 Lígia Giovanella et al., "From Alma-Ata to Astan: Primary Health Care and Universal Health Systems: An Inseparable Commitment and a Fundamental Human Right," *Cadernos de Saúde Pública* 35, no. 3 (2019), doi: 10.1590/0102–311X00012219.

66 World Health Organization and World Bank, Towards Universal Health Coverage; Monitoring Progress towards Universal Health Coverage (Geneva: WHO, 2014).

sound health systems in developing countries. Moreover, a two-tiered system began to emerge: whereas the broader term "universal health care" was often used for industrialized countries, "universal health coverage" was associated in developing countries with larger enrollment and a limited package of treatments for common diseases with effective low-cost interventions. This new meaning paid insufficient attention to the resilience of health systems in situations of emergency, such as epidemics. It also included vertical disease-specific interventions which meant a return to the fragmented and criticized disease control campaigns of the early twenty-first century.

At the same time, the debates showed a continuing tendency by stakeholders to treat health as an externality to development rather than an integrated component, something that could be separated from the large questions of socio-economic evolution by shifting the focus on the financing of healthcare services. The challenge of fully understanding health as an expression of social development, including all the inconvenient questions of social (in)equity, has a long history and, possibly, a long future. This episode, coming just before the outbreak of the Covid-19 pandemic, demonstrates both the vulnerability and the resilience of this question as one of the key issues of global development. It also created pending questions in global health: does an economic crisis, like the one of 2008, lead always to a separation of health from a vision on development? How should responses to health emergencies be intertwined with long-term social reform and the construction of equitable health infrastructures?

Cueto

Abiiro, Gilbert Abotisem, and Manuela De Allegri. "Universal Health Coverage from Multiple Perspectives: A Synthesis of Conceptual Literature and Global Debates." *BMC International Health and Human* 15, no. 17 (2015), accessed March 18, 2021, doi: 10.1186/s12914–015–0056–9; https://bmcinthealthhumrights.biomedcentral.com/articles/10.1186/s12914–015–0056–9

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