

*The Teleology of Care:
Reinventing International Health, 1968-1989*

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Abstract

In the six year period from 1968-1973, a cascade of international social, intellectual, and political changes upended the postwar arrangement of multilateral lending. Sureties regarding the logic, process, and end results of development-oriented aid were questioned, abandoned, and replaced. The new ideas and institutional orientations that emerged, and were advanced over the remainder of the Cold War, posited the improvement of health in the developing world as an important policy goal. This new health programming was advanced in several institutions and shaped by varying perspectives on Cold War politics. This dissertation is a history of how these late Cold War intellectual and institutional transformations redefined the practice and goals of international health.

Each of the five chapters is a case study of different organizations in the field and approaches to addressing health. Chapter 1 examines how critiques of postwar foreign and development economics led to new policies to correct the social determinants of illness and poverty. Chapter 2 explores the intellectual underpinnings of the community health care that World Health Organization advanced in developing countries. Chapter 3 uses the story of institutional changes at the U.S. National Institutes of health to recount how biomedical research became an important means of countering changes in disease prevalence. Chapter 4 discusses how the Rockefeller

Foundation promoted instruction in clinical epidemiology as a means of managing scarce resources for health care. Chapter 5 analyzes how and why the World Bank began lending in health and erected its own Population, Health, and Nutrition Division.

In exploring these cases, this dissertation makes several claims. Previous scholars have depicted development and international health policies as a homogenous, monolithic force emerging from the West. However, I show that despite close interaction and exchange among elite leaders in the field, there were many different notions of health and development that were advanced at the same time. Second, concerns for equity became important at this time for both policy makers in international health and leaders of developing countries. However, in light of larger political concerns, international health conflated its moral and scientific norms, equating equity with efficiency.

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Abbreviations

CERTC	Clinical Epidemiology Research and Training Center
CEU	Clinical Epidemiology Unit
CMC	Christian Medical Commission
DDT	dichloro-diphenyl-trichloroethane
FIC	Fogarty International Center for Advanced Study in the Health Sciences
GNP	Gross National Product
HEW	U.S. Department of Health, Education, and Welfare
ILO	International Labor Organization
INCLEN	International Clinical Epidemiology Network
IOM	Institute of Medicine
NAS	National Academy of Science
NIEO	New International Economic Order
NIH	National Institutes of Health
OECD	Organization for Economic Co-operation and Development
OIR	Office of International Research, National Institutes of Health
PAHO	Pan-American Health Organization
PHC	Primary Health Care
PHN	Division of Population, Health, and Nutrition, World Bank
PHS	U.S. Public Health Service
PQLI	Physical Quality of Life Index
RECS	Division for Research in Epidemiology and Communications Science
RF	Rockefeller Foundation
SHS	Division for Strengthening Health Systems
WB	World Bank
WHO	World Health Organization
UN	United Nations
UNICEF	United Nations International Children's Emergency Fund

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Introduction

Early one morning in 1978, the residents of Campamento, Columbia gathered in the town center to await the arrival of a package from abroad. They had been told that their tiny village, located about three hundred kilometers northwest of Bogotá, had been selected for an experiment. They were to test a new medical device that may be given to thousands of other people around the world. With much fanfare, a helicopter touched down nearby, and eight workers carefully removed what looked a giant, coffin-like wooden crate from the cargo hold of the aircraft. A representative of the Pan American Health Organization (PAHO), the regional branch of the World Health Organization (WHO), exited the helicopter to supervise the final step of the delivery. Everyone circled around as the crate was opened; inside the box were three books and what looked like a tabletop with a large pole and an opaque screen connected to it. The PAHO representative explained that this device, a battery-powered portable x-ray machine, was a type of “appropriate technology” specifically designed to operate in their rural village. Rather than have the residents travel to a distant hospital or wait for the Columbian government to built an expensive clinic, the residents could manage their own health in Campamento. The three manuals in the crate, he continued, would aid in this process: the first explained how to operate the machine; the second discussed how to develop and read x-rays; and the third gave pictorial examples of how to diagnose common problems like broken bones and tuberculosis. No doctor was needed, the PAHO official assured; anyone could be trained to use this device.¹

¹ Philip E S Palmer, “A Basic Radiological Unit WHO’S System,” *IAEA Bulletin* (Summer 1986) 43-5, Philip E S Palmer, “Appropriate Technology for Diagnostic Imaging in Small Hospitals,” *British*

The portable x-ray machine was the direct result of two events. In 1974, Halfdan Mahler, the Director General of WHO, established a program for the development of health technologies that were “appropriate” for rural settings.² Later that same year, PAHO officials met with representatives from the International Atomic Energy Commission in Washington, D.C. to discuss ways of making x-ray machines mobile, easy to use, and suitable for rural settings.³ This collaboration was one of many efforts of the time to redesign expensive technologies from the West for broader use in the developing world. Though the choice of translating the x-ray machine, an ostensible symbol of high-tech hospital-based care, might appear unusual, this type of endeavor was central to the practice of international health in the 1970s. A major concern during this decade was that the structures of health care in developing countries neither reached a majority of their populations nor focused on the most pressing health needs. Those who worked in international non-governmental organizations and UN bodies believed that the norms and practices of health aid needed reevaluation to address new and longstanding problems. This self-criticism set off a process of reinvention that came to define overseas development assistance at this time. This dissertation, a history of the field of international health during the second half of the Cold War, is a study of such efforts. It will examine how the meanings, practices, and institutional arrangements of

Medical Journal (Clinical Research Edition) 288, no. 6428 (May 12, 1984) 1435-1437 The manuals are Thure Holm and Phillip E S Palmer, *The WHO-BRS Manual of Radiographic Technique* (Geneva World Health Organization, 1984), Phillip E S Palmer, *The WHO-BRS Manual of Darkroom Technique* (Geneva World Health Organization, 1984), Philip E S Palmer, *The WHO-BRS Diagnostic Manual for Primary Care Physicians* (Geneva World Health Organization, 1984)

² World Health Organization, “Study of Alternative Approaches to Meeting Basic Health Needs of Populations in Developing Countries,” May 3, 1974, p. 10, WHOA, SHS/Reg Adv 74/WP 15 Throughout this dissertation, abbreviations used for archival sources are defined in the bibliography

³ Palmer, “A Basic Radiological Unit WHO’s System,” 43

the multilateral aid for health changed from earlier iterations. The period of analysis begins in 1968 when global political and economic instability led development planners to question and revise the norms and goals of multilateral aid. It ends in 1989 when the end of the Cold War, a loss of confidence in state-led health provisioning, and new concerns for HIV/AIDS and human rights ushered in new evaluations of the goals of international development assistance.

International health, as a term, a practice, and a field, eludes straightforward definition. Since the creation of transnational quarantine regulations in the mid-nineteenth century, programs to improve health or combat disease across political borders have included a heterogeneous arrangement of actors, institutions, and ideas attendant to an ever-changing mixture of problems.⁴ The norms of who is involved, where they act, and to what ends, has shifted over time. The popular, romantic image is of physicians attending to the sick in exotic, often tropical locales. This representation, however, misconstrues and overlooks a multiplicity of actors and motivations. Businessmen, sanitarians, politicians, bankers, and countless others have all played influential roles in shaping the type of activities and ideas used to address health and disease internationally.

At its core, international health is often politics by other means. What disease and health issues get addressed, and who addresses them, are reflections of the predominant political sensibilities and economic imperatives of the time. This is evident

⁴ Global health, the contemporary successor to international health, began to be identified as such in the early 1990s. This dissertation primarily deals with international health, as it was called by its practitioners. While mid-nineteenth century quarantine regulations are identified as the modern beginning of international health, fifteenth century Italian states also practiced quarantine regulations for the safety of trade. For further discussion, see Theodore M. Brown, Marcos Cueto, and Elizabeth Fee, "The World Health Organization and the Transition from 'International' to 'Global' Public Health," *American Journal of Public Health* 96, no. 1 (January 2006): 62-72.

in countless interventions over the past one hundred and fifty years. In the late nineteenth century, for example, Western imperialists sought to curb the massive burden of infectious tropical diseases that hampered their expansion of international trade, consolidation of colonial possessions, and acquisition of natural resources in Asia, Africa, and Latin America. During the Great Depression, by contrast, fears of labor riots in the colonies led to improvements in housing and sanitation for workers.⁵ In exploring the history of international health, this dissertation will define the “field” as activities to directly or indirectly improve health or eliminate disease in colonial environs, in developing countries, or in uniquely transnational settings that span multiple countries at once.⁶ Nonetheless, as this dissertation will show, at every point in its history, the precise boundaries of what constitute international health have been in flux, directed by a mix of competing constituencies, political concerns, and understandings of disease and health.

In spite of, or perhaps because of this fact, many historians have explored the activities and ideologies of international health. Most accounts have focused on the mid-nineteenth to mid-twentieth century, covering topics like the disease eradication campaigns of the Rockefeller Foundation, the medical classification of colonial subjects, or the founding of WHO.⁷ These histories have emphasized many claims that this

⁵ Michael Worboys, “The Discovery of Colonial Malnutrition between the Wars,” in *Imperial Medicine and Indigenous Societies*, ed David Arnold (Manchester: Manchester University Press, 1988) 203-23

⁶ As will be explored, the “field” of international health has been defined more by sets of problems than a pre-ordained, formal professionalization

⁷ 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), John Farley, *Bilharzia: A History of Imperial Tropical Medicine* (New York: Cambridge University Press, 1991), Warwick Anderson, *Colonial Pathologies: American Tropical Medicine, Race, and Hygiene in the Philippines* (Durham: Duke University Press, 2006), Amy L. S. Staples, *The Birth of Development: How the World Bank, Food*

dissertation will build upon: that institutional structures and bureaucratic politics shape the interpretation and operationalization of ideas and technologies; that the norms of what counts as “international” shape activities and vice versa; and that notions of disease constantly shift according to political, social, and epistemological concerns.⁸ Also, science studies scholars who write about international health and development have revealed how changing boundaries of political governance and technical expertise has shaped what is considered legitimate, scientific knowledge.⁹

When historians study the history of international health in the late Cold War, they have focused on a limited set of topics and ideas. The 1970s is described as a low point in international participation. WHO was the predominant institutional actor, and it promoted the eradication of smallpox and a style of comprehensive basic (i.e., “horizontal”) health services called primary health care. This latter issue is the main topic that most historians of this period address. They focus on how the concept of primary health care was first presented to the world at an international conference in

and Agriculture Organization, and World Health Organization Have Changed the World, 1945-1965 (Kent, Ohio: Kent State University Press, 2006), Marcos Cueto, *Missionaries of Science: the Rockefeller Foundation and Latin America* (Bloomington: Indiana University Press, 1994), Anne-Emanuelle Birn, *Marriage of Convenience: Rockefeller International Health and Revolutionary Mexico* (Rochester, NY: University of Rochester Press, 2006)

⁸ These works have also shown how attempts to “modernize” a people can be contested on the ground through the rejection or augmentation of “universalized” scientific practices with local cultural morays. However, this dissertation will only focus on the initial policy making process. Randall M. Packard, *The Making of a Tropical Disease: A Short History of Malaria* (Baltimore: Johns Hopkins University Press, 2007), Frederick Cooper and Randall Packard, *International Development and the Social Sciences: Essays on the History and Politics of Knowledge* (Berkeley: University of California Press, 1997), Sunil S. Amrith, *Decolonizing International Health: India and Southeast Asia, 1930-65* (New York: Palgrave Macmillan, 2006)

⁹ James Ferguson, *The Anti-Politics Machine: Development, Depoliticization, and Bureaucratic Power in Lesotho* (Minneapolis: University of Minnesota Press, 1994), James C. Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed* (New Haven: Yale University Press, 1998), Richard Rottenburg, *Far-Fetched Facts: A Parable of Development Aid* (Cambridge: The MIT Press, 2009)

1978 at Alma Ata, Kazakhstan, USSR. This high profile meeting, which promoted the slogan of “Health for All by the Year 2000,” is framed as a political victory for developing countries that were pushing for greater equality in international relations. This narrative then contrasts these efforts to the work of the Rockefeller Foundation and UNICEF in the early 1980s. These two organizations, as the story goes, pushed a rival top-down disease focused (i.e., “vertical”) program of “specialized primary health care” that governments embraced over WHO’s own flailing program. A chief concern in these narratives is to explore the political motivations of WHO officials.¹⁰

This dissertation will redefine this period by highlighting the significance of a wider range of people, organizations, and ideas to the practice of international health. Other historians have overlooked how the late Cold War had a large and heterogeneous set of institutions interested in international health. Some of these constituencies, like the Rockefeller Foundation and WHO, had longstanding experience in international health activities; others like the World Bank, the International Labor Organization and the National Institutes of Health were formally engaging in this area for the first time. Scholars have also failed to appreciate just how closely the values and activities of these institutions were shaped by the global political, social, and economic transformations that defined the late 1960s through the early 1980s. Prolonged American military action in Vietnam and global economic recessions in 1968 and 1969 left many in the foreign aid communities feeling that their early postwar promises of rapid economic

¹⁰ See especially Elizabeth Fee, Marcos Cueto, and Theodore M Brown, “WHO at 60 Snapshots from Its First Six Decades,” *American Journal of Public Health* 98, no 4 (April 2008) 630, Theodore M Brown, “Celebrating the World Health Organization,” *American Journal of Public Health* 98, no 4 (April 2008) 585, Brown, Cueto, and Fee, “WHO and the Transition from ‘International’ to ‘Global’ Public Health ” There will be several other historical works that I will position this dissertation against. These will be discussed in individual chapters as particular topics arise

improvement for the developing world would not be fulfilled as quickly as originally anticipated. In the early to mid 1970s, new and deeper recessions, high inflation, oil shortages, and global famine only intensified anxieties. For international health officials, these developments, along with the persistent failure of postwar malaria eradication efforts, translated into intense and introspective searches for new activities that might curb the disease burdens and social risks exacerbated by unpredictable changes in the global economy.¹¹

As this dissertation will show in detail throughout its chapters, the response to this historical context was manifest in two field-wide trends. The first was a variety of different policies that promoted health as part of a constellation of social factors that could contribute to socioeconomic change. This was seen, for example, in theoretical explorations of how health, nutrition, population, and economic development could lead to their mutual improvement. It was also present in the administration of health care delivery as one element in a broader “system” of national planning.

The other trend in response to the broader political changes of the 1970s was the promotion of greater quantification and rational management of health-based interventions. The inability to quickly spur economic growth in developing countries and “steer the economy” through recessions suggested that more quantitative metrics might help restore predictability and surety to overseas aid. New programs in international health emphasized cost-benefit analyses, the formal organization of health care, and the linking of curative and preventative health services to a country’s overall disease burden.

¹¹ The prolonged economic stagnation and high inflation rates were christened as “stagflation” during the 1970s.

International health was also shaped by key postwar political, social, and ideological developments that have largely been overlooked in other works. One influence central to the worldview of this field has been the rise of the postwar social sciences. Sociology, economics, statistics, and systems management reoriented older colonial norms of observation, analysis, and evaluation of disease. In this new framework, international health emphasized rational planning, quantitative indices of evaluation, and comparable models of social change.

And more so than in the early postwar decades, international health in the 1970s and 1980s became a major public venue for the projection and reflection of Cold War détente and recurring battles to “win hearts and minds.” The field at one moment advanced Western interests and market expansion while at other times highlighted the success of Soviet socialized medicine or Chinese barefoot doctors. But international health was also a space for developing countries to challenge the East-West bifurcation and express their own demands beyond limited UN venues. The numerous thematic conferences and public discussions on population (1974 World Population Conference at Bucharest), health (the 1978 International Conference on Primary Health Care), and trade and development (the 1974 call for “New International Economic Order”) prioritized new social concerns for health and wellbeing as part of the Cold War battles of North vs. South.

In situating international health in these political, social, and historical contexts, this dissertation asks several questions. In the late Cold War, what sorts of issues were considered problems that international health could address? What sorts of social values, political interests, and institutional concerns shaped the identification of problems, the

creation of interventions, and the evaluation of success? What sort of knowledge was considered useful for each of these steps, and how was it created and validated?

Throughout this time, there were countless well-funded efforts in every part of the globe to shape peoples' health and change the prevalence of disease. This dissertation will not try to select one set of projects or one region over another; instead, it will focus on the initial process of policy making that happened in the elite boardrooms of international organizations based in New York City, Geneva, and Washington, D.C. These spaces were populated by Westerners who, with the exception of occasional trips, largely spent their time analyzing developing countries from afar. This policy making was different than the "on the ground" implementation; nonetheless, it was an equally significant method of translating and trying to combine together conflicting institutional norms, political obligations, and personal proclivities.¹²

This dissertation selects five cases to gain insight into international health policy creation, and to highlight the major institutional, ideological, and pedagogical developments of the field in the late Cold War. Each account investigates one of the traditional approaches to addressing health in an international context: correcting social determinants, improving healthcare delivery, collecting biomedical knowledge, tracking epidemiological disease prevalence, and managing fertility. These cases, each of which occupy a chapter, are not five randomly chosen, unrelated phenomena that all happened to occur at roughly the same time. Rather, they were interlocking developments that influenced each other and can explain broader orientations in the field.

¹² Charles E. Rosenberg, "Anticipated Consequences: Historians, History and Health Policy," in *History and Health Policy in the United States: Putting the Past Back In*, ed. Rosemary Stevens, Charles E. Rosenberg, and Lawton R. Burns (New Brunswick: Rutgers University Press, 2006), 13-31. Also, an investigation of this process will also reveal the broader changes in the practices of aid distribution.

The first case study explores the way that concepts of health became important in new explanations about the social determinants of planned economic change. This process is told through the story of how several international development organizations began promoting what was called the “Basic Human Needs” approach. In the late 1960s, the logic of economic development widened from capital-intensive industrial development to include the promotion of human capital and the distribution of benefits of economic growth, especially for the poor and marginalized. The Basic Human Needs strategy focused on correcting the social determinants of poverty by improving education, nutrition, and healthcare. Though ultimately not implemented widely as a policy, basic human needs shaped and reflected the broader norms of both economic development and international health.

The second case study explores the infusion of social science planning methods into the administration of healthcare delivery. It is told through an overlooked part of the initial creation of primary health care at WHO. As Western style hospital care was critiqued for being too expensive and ill-suited for developing country populations, WHO began promoting low-cost, decentralized basic health services in rural and urban settings. This approach infused postwar cybernetic practices with small scale experiments in community health care that medical missionaries were promoting. This hybrid practice came to organize health services as systems that could be rationally managed from afar.

The third case examines the way that laboratory based biomedical research became an important space for training international health practitioners and tracking the incidence of transnational diseases. This story is told through the creation of the

Fogarty International Center at the National Institutes of Health. In the late 1960s and early 1970s, American government scientists came to see experimental research as important preparation for dealing with the social and epidemiological uncertainties of international health. These individuals also came to support coordinated transnational research as a way of addressing the roots of a poverty perpetuated by infectious diseases.

The fourth case is paired with the third case, and looks at another style of professionalization in international health that was promoted in the late Cold War. It explores the way the Rockefeller Foundation, the organization that defined early twentieth century international health, came to fund training in clinical epidemiology as a necessary and significant tool for reorganizing the misallocation of resources in healthcare delivery. This philanthropy argued that professional education oriented around population health could help developing country health officials rationally manage care according to the most prevalent diseases.

The fifth case analyzes how and why the World Bank began lending in health and erected its own Population, Health, and Nutrition Division in 1979. Population control had been a personal obsession of Robert S. McNamara, the President of the World Bank in the 1970s. As population research came to frame the improvement of health as a prerequisite for fertility control, the Bank began to strategically fund health to improve its persistently moribund population programming. It also expanded its formal lending for health in order to organize the large and often unwieldy developing country health budgets, as well as to integrate social concerns into the Bank's standardized project design process. Personal papers, policy statements, institutional memoranda, and interviews are all employed to construct these narratives.

In exploring these cases, this dissertation will make three claims. The first concerns the sociology of the production and institutionalization of knowledge. Unlike nearly any other time in the history of international health, the late Cold War period was dominated by a handful of organizations whose leaders all closely interacted with each other. They sat on each other's advisory boards, consulted for each other, and regularly met at elite private conferences. As will become evident in several chapters, this reality allowed for an exceptional transmission of ideas across institutional boundaries. Useful policy emerged from a cross fertilization of knowledge that originated in different organizational settings.¹³ Planners at the Rockefeller Foundation and the World Bank, for example, would share their practices with each other, applying each other's ideas in their own organization; the new hybridized projects would not be identical, but they would be similar enough such that each would be acceptable to the other. The knowledge underpinning how and why a particular intervention worked was neither solely from one setting or the other.¹⁴ This phenomenon was in contrast to how others have described "development" and the institutional arrangement of postwar international organizations. Development was not a singular, hegemonic force projected from the West and renegotiated only when put in contact with local values on the ground.¹⁵ Rather, there were many "developments" that came from different vantage points and were meant to apply in different circumstances. Such hybridity also applied

¹³ Steven Epstein, *Inclusion: The Politics of Difference in Medical Research* (Chicago: University of Chicago Press, 2009), 90-3

¹⁴ This hybridity, in part, is why there are multiple cases of policy formation for this dissertation to cover, there was not one single response coordinated across all of the institutions at this time

¹⁵ Escobar has described the totalizing hegemony of development. See Arturo Escobar, "Power and Visibility: Development and the Invention and Management of the Third World," *Cultural Anthropology* 3, no. 4 (November 1988): 428-443

to the institutional structures of international health organizations. They were not silos whose norms and practices were set at their establishment and did not change.¹⁶ These institutions were fundamentally reconfigured during the late Cold War; they combined old and new ideas from internal and external sources, trying to address the changing socioeconomic and epidemiologic demands.

The hybrid character of knowledge in international health at this time was particularly evident in two situations. The first was how notions of holism and the interconnectedness of social determinants came to underpin many of the policies for healthcare management and the mitigation of social risks. New programs emphasized an interdependence of social factors, where improvement of health or nutrition could positively impact other material circumstances in the life of an individual or a nation as a whole.¹⁷ This was a framework that prioritized integrating social determinants together to produce a harmonious system that could also be evaluated on its own. This trend was evident in the analyses and decision making in both policy making and management practices.

What at first glance in hindsight looks like shared, field-wide understandings of health in its social context were in fact many slightly different practices, and slightly different, hybridized holisms. While underlying norms arose from collaboration and exchange, each organization had its own aspirations. In the settings of the late Cold War international health, holism meant: accounting for a broad range of social determinants

¹⁶ Staples' account of the early history of UN technical organizations sets them on a path dependent course. See Staples, *The Birth of Development*.

¹⁷ Charles E. Rosenberg, "Holism in Twentieth Century Medicine," *Our Present Complaint: American Medicine, Then and Now* (Baltimore: Johns Hopkins University Press, 2007), 146.

that contributed to poverty (discussed in chapter one); rational management of all the activities involved in health care delivery (chapter two); coordination of global networks for knowledge discovery about disease (chapter three); management of a country's healthcare resources in light of its overall disease burden (chapter four); and the ability to interchange health interventions according to predefined outcomes for a country's overall development plan (chapter five). Each of these perspectives subscribed to understandings of the interdependence of health and other social factors, but did so in different ways.

The second case of a hybrid nature to knowledge in late Cold War international health involves perceptions of the role of health in socioeconomic change. The title of this dissertation, *The Teleology of Care*, plays upon a special facet of the fundamental expectations of economic development. One can see this characteristic in the way the term "development" is used in biology. As Richard Lewontin explains in *The Triple Helix*, "The term *development* is a metaphor that carries with it a prior commitment to the nature of the process. Development . . . is literally an unfolding or unrolling of something that is already present and in some way preformed. It is the same word that we use for the process of realizing a photographic image. The image is already immanent in the exposed film, and the process of development simply makes the latent image apparent [emphasis original]."¹⁸ In a similar fashion, the norms of economic development also assign a *telos*, but it is overlaid on the global political economy. This worldview ascribes a causality and sequentiality for social change that carries with it expectations of desirable outcomes. However, the very logic of what counted as

¹⁸ Richard Lewontin, *The Triple Helix: Gene, Organism, and Environment* (Cambridge: Harvard University Press, 2002), 5.

legitimate problems, interventions, and goals – the *telos* itself – is also a historically specific norm. The very inclusion of health into the policies of development assistance reorders the norms of how socioeconomic change happens, and what it should look like. However, there was not one, homogenous worldview for how health would shape development and vice versa; rather, there were many sets of ideas that arose through the permeable exchange of ideas across institutions. Improving health as an end of development meant everything from restoring individual productivity to ensuring quantifiable predictability to social improvements.

An examination of changing understandings of the processes of development leads to the second claim of the dissertation. The second half of the Cold War was notable for the rise of new ways of evaluating health and development projects. Since the late nineteenth century, the politically motivated planning of the modernization of the global South consisted of two practices: haphazard generalizations of anecdotes “in the field,” and careful study of the “rhythms, patterns, and laws” of the long term socioeconomic change that already happened in the West (i.e., “the lessons of history”).¹⁹ Planners and politicians believed that, with the right policies and resources, the process of Westernization could be repeated in obvious patterns around the world. This “historical” planning, however, became supplemented by different varieties of “ahistorical” planning in the 1970s. During this decade, new evaluative measures and socioeconomic circumstances fostered a type of worldview based upon abstract

¹⁹ Charles Gore, “The Rise and Fall of the Washington Consensus as a Paradigm for Developing Countries,” *World Development* 28, no. 5 (2000): 794. Gore’s development paradigms seem to happen outside of history and with little reference to decade specific changes. He also overlooks how changes in funding for health and other social sciences are significant. I will show how it was historically specific developments of the 1970s that shaped the creation of the “ahistorical” perspective.

performance goals that had little connection to historical examples. Such a perspective was acceptable at the time: the global economy did not seem to follow any of predictable patterns, and former colonial lands had multiple disease patterns and population levels in ways never seen before. In this context, new tools emphasized models and measurement that were not oriented toward evaluating the replication of the patterns of the West. Rather, in the interests of scientific-like efficiencies, these “ahistorical” practices strove for arbitrarily chosen abstract, quantitative targets. Success, if achieved, was evaluated not by comparison of one context to a global standard in the West, but by clusters of data points that could reveal a well-organized realization of pre-defined metrics.

The third claim, and central argument of this dissertation, concerns the normative goals of international health. In projects ranging from poverty eradication to healthcare delivery, Western planners pushed for policies that promoted equity by attending to the health needs of whole populations and not just elites. As representatives from developing countries finally began asserting their own demands at this time on the global stage, they framed these imperatives for equity as political empowerment. However, as it has often done throughout its history, the technocratic organizations of international health equated its moral goals with its scientific ones; in the context of the institutional and epistemological transformations of the late Cold War, normative goals of equity were conflated with changing scientific norms of efficiency.

To substantiate these claims, the first chapter explores the Basic Human Needs Approach. Chapter two follows by examining the norms of primary health care. The third chapter investigates international biomedical research through the rise of the

Fogarty International Center. This is followed with a chapter on clinical epidemiology at the Rockefeller Foundation. The final chapter focuses on population control and the World Bank. The dissertation concludes with an epilogue of the legacies of this period in early twenty-first century global health.

Chapter 1
Health, an Agent of Change:
Development Economics and the Basic Human Needs Approach

Introduction: “The Beam in Our Eyes”¹

During his 1974 Nobel Prize lecture, Swedish economist Gunnar Myrdal stressed that the dissolution of Western imperialism following World War II was not simply a change in political relations, but also a revolution in expectations. One of the most startling effects of this transformation was the public realization of the massive socioeconomic disparities throughout the newly decolonized world. As Myrdal explained, the colonial system could no longer “[serve] as a protective shield for consciences in Western developed countries.” The depravity of “backwards” regions, which had once been taken for granted, suddenly became a political concern for all world leaders.² Inactivity and ignorance were replaced with discussion of the growing gap between rich and poor within countries and across continents. Analysis of this widespread poverty underpinned much of the research Myrdal conducted to earn him the Nobel Prize. In fact, beginning in 1957 he spent ten years solely focused on studying the economic trends and fiscal policies of South and Southeast Asia. His research was published in 1967 as *The Asian Drama: An Inquiry into the Poverty of Nations and the Challenge of World Poverty*.

¹ Gunnar Myrdal, *Asian Drama: An Inquiry into the Poverty of Nations* (New York: Pantheon, 1971).

² Assar Lindbeck, ed., “Gunnar Myrdal,” in *Nobel Lectures, Economics, 1969-1980* (Singapore: World Scientific Publishing Company, 1992), http://nobelprize.org/nobel_prizes/economics/laureates/1974/myrdal-lecture.html; see also Odd Arne Westad, *The Global Cold War: Third World Interventions and the Making of Our Times* (New York: Cambridge University Press, 2007), 94.

The problems of income inequality, corrupt governance, and exponential population growth appeared on nearly every page of this massive, three volume study. However, for Myrdal, these challenges were compounded by a more insidious dilemma: the systematic misdiagnosis of the problems of poverty by the newly appointed postwar guardians of modernization – development economists. This "beam in our eyes" as Myrdal called it, was the politically expedient and short-sided attempt of his own tribe – economics – to create technical programs for foreign aid and industrialization without connecting policies to social realities on the ground.³ He noted that the reliance on simplistic statistical models to predict the impact of capital investments and national growth rates overlooked the pervasive socioeconomic inequalities present in places like India, Pakistan, and the rest of the newly decolonized world.

The criticisms of *The Asian Drama* spared no target. The technical reports of postwar development institutions such as the World Bank appeared to serve the interests of powerful elites, rather than the masses on the ground. Foreign consultants swooped in to design massive economic programs with little understanding of local cultures. Myrdal also thought money was funneled to ostentatious infrastructure projects instead of welfare programs.⁴ But *The Asian Drama* did not simply highlight and denounce opportunism; it critiqued the very underlying epistemology of development economics. The sudden creation and redirection of the social sciences to the developing world did not happen spontaneously or through a "great sense of . . . altruism."⁵ It arose from a

³ Myrdal, *Asian Drama*, 3.

⁴ *Ibid.*, 93.

⁵ *Ibid.*, 5.

Cold War political climate oriented toward financially expanding new markets and “winning the hearts and minds” of new potential allies. This agenda shaped the very categories of problems and progress that development economists used in their depoliticized quantitative analyses. For Myrdal, development “*theory is no more than a correlated set of questions to the social reality under study*” What must be emphasized is that *all knowledge, and all ignorance, tends to be opportunistic*” [emphasis original].⁶

The Asian Drama was noteworthy for two reasons. First, historians and development specialists both stress that it was one the first postwar texts to illuminate poverty as a transnational problem on its own, rather than as a byproduct of broader agendas of increasing national growth rates.⁷ Second, the text was one of the first in postwar development economics to analyze relationships between health and development. Early in the text, Myrdal noted that “no inquiry into the poverty of nations could hope to be complete without a study of the quality of men’s lives. And the two basic elements in this are health and education.”⁸

⁶ Ibid , 13

⁷ See especially Arturo Escobar, “Power and Visibility Development and the Invention and Management of the Third World,” *Cultural Anthropology* 3, no 4 (November 1988) 428-443, David C Engerman, “The Romance of Economic Development and New Histories of the Cold War,” *Diplomatic History* 28, no 1 (January 2004) 23-54, Irma Adelman, “Growth, Income Distribution and Equity-oriented Development Strategies,” *World Development* 3, nos 2&3 (March 1975) 67-76, Francis Brewis, “Bibliography on Health Planning in Developing Countries,” July 1, 1975, IDSA, Staff Papers, Occasional Guides no 10, record 3859, Paul Krugman, “The Fall and Rise of Development Economics,” 1994, <http://web.mit.edu/krugman/www/dishpan.html>, Deepa Premnath, “The Meaning of Development the Evolution of the Basic Needs Perspective and its Roots in Classical Liberal Thought” (M A Thesis, University of Southern California, 2001), Frederick Cooper and Randall M Packard, *International Development and the Social Sciences Essays on the History and Politics of Knowledge* (Berkeley University of California Press, 1997), Nick Cullather, “The Third Race,” *Diplomatic History* 33, no 3 (June 2009) 507-512, E Wayne Nafziger, “From Seers to Sen The Meaning of Economic Development,” WIDER Research Paper (2006), Richard Jolly et al , *The Power of UN Ideas Lessons from the First 60 years A Summary of the Books and Findings from the United Nations Intellectual History Project* (New York United Nations Intellectual History Project, 2005), See especially Richard Jolly, interviewed by the author, August 2009

⁸ Myrdal, *Asian Drama*, 353

In the histories of postwar international health, development economists are often treated as background characters in comparison to WHO officials or physicians leading disease eradication campaigns. This framing is the product of two trends: a failure to fully appreciate how perspectives on the relationship between health and development might be historically contingent; and a concordant practice of characterizing economists as one-dimensional Cold War soldiers who only view health as a strategic means of opening new markets.⁹ However, when studying development economists like Myrdal, one sees otherwise; he notes in the chapter entitled “Health” in *The Asian Drama*, that “efforts to prevent and cure disease will increasingly require reforms in the fields of nutrition, sanitation, and hygiene, and an increase in the supply of properly trained medical personnel” (emphasis original).¹⁰

Through the criticisms of Myrdal and other economists and policy makers, development economics underwent a substantial revolution in thinking in the 1970s. Most of the field’s major assumptions about the underpinnings of economic growth, the role of social services, and the significance of poverty were all questioned. Many longstanding practices were deemphasized in favor of new ideas that focused on identifying and correcting social disparities, and illuminating the links between poverty eradication and development. This chapter argues that concerns for the health and physical wellbeing of the poor became important aspects of this new development framework, and that this new worldview, in the context of political changes of the

⁹ See especially Theodore M Brown, Marcos Cueto, and Elizabeth Fee, “The World Health Organization and the Transition From ‘International’ to ‘Global’ Public Health,” *American Journal of Public Health* 96, no 1 (January 2006) 62-72

¹⁰ Myrdal, *Asian Drama*, 370

1970s, also reshaped many ideas, practices, and institutional orientations of international health.¹¹

This chapter will explore renewed concerns for social determinants in development economics and international health through the rise of a popular development ideology of the time, the “Basic Human Needs Approach” (also simply known as “Basic Needs”). This policy focused on eradicating poverty in the developing world and making the poor more productive through targeted interventions to improve social factors like health, education, and housing.¹² Though it was one of many programs to curb extreme depravity, its story illustrates larger changes in norms and useful knowledge about development. At a time when policymakers blamed massive global population growth on “overly successful” public health ventures that decreased mortality, the Basic Needs Approach framed the improvement of health as an important contributor to eliminating poverty and thereby fostering equitable development. According to John Knowles, President of the Rockefeller Foundation in the late 1970s, this positive portrayal helped international health receive “a higher position on the ladder of priorities in the LDC’s [least developed countries] and among the various funding agencies.”¹³

¹¹ In fact, the historical transformations of international health covered in the other chapters also drew many ideas from these very changes in development economics. Additionally, the orientations of international health through the first decade of the twenty-first century still closely resemble many of the foundational attitudes of the 1970s.

¹² Paul Streeten, *First Things First: Meeting Basic Human Needs in the Developing Countries* (New York: Oxford University Press, 1981), 5.

¹³ John Knowles, “Thoughts on Health, Population, and Development,” December 1, 1978, pg. 5, RFA, RF, Group 3 2, Series 900, Box 58, Folder 317.

Reducing poverty and targeting the social determinants of poor health and inequality were not new ideas. They were central, for example, to an interwar colonial medicine concerned with restless natives.¹⁴ The 1970s, however, was the first time they became primary policy objectives of both international health and development. This prioritization was the product of frustrations with earlier failed policies and new anxieties. Postwar programs targeting economic growth and disease control did not have the predicted impact. This, combined with concern about the political and social effects of global recessions, translated to policies like Basic Human Needs oriented to social conditions and employment.

The Basic Needs Approach became promoted as a key development policy in powerful organizations like the World Bank, US Agency for International Development (the foreign-aid wing of the State Department), and the United Nations. The broad institutional support for this worldview grew out of the fact that many leaders of development agencies, think tanks, and academic centers knew each other and interacted within the close knit international bureaucratic circles of Geneva, New York City, and Washington, D.C. These figures included: Robert McNamara (President of the World Bank), Mahbub ul-Haq (Director of Policy Planning & Policy Review at the World Bank), Paul Streeten (economist at the World Bank), and Hollis Chenery (Vice-President for Development Policy at the World Bank); Dudley Seers and Richard Jolly (both development economists at the Institute for Development Studies at the University of Sussex); James Grant (President of the Washington based think tank the Overseas Development Council); and Carl Taylor (Director of the Division of

¹⁴ Dorothy Porter, "How Did Social Medicine Evolve, and Where Is It Heading?," *PLoS Med* 3, no. 10 (October 24, 2006): e399; Amartya Sen, interviewed by the author, July 2010.

International Health at the Johns Hopkins School of Hygiene and Public Health). This institutional and policy environment, framed within the politics of the 1970s, created a historically specific interpretation of the meanings and linkages of social determinants.

The first part of this chapter explores the established postwar orthodoxies of development economics – the practices and ideas that international health and development would eventually try to reform. The second part describes the disillusionment with development within the field and in the general public that arose at the end of the 1960s. This section also explores how this perceived failure precipitated internal criticism and reevaluation in the field. The new ideas that arose during this introspection, especially from development economists Gunnar Myrdal and Dudley Seers, moved away from the older, narrow focus on wealth accumulation to frame development as a human-centered growth.¹⁵ The third section looks at the larger historical context and implications for the critiques of Seers and Myrdal.

The fourth section in the chapter describes the multisited origins of the Basic Needs policy. Early in the 1970s, policy makers at the UN, government officials in Argentina, economists working through the International Labor Organization, and planners at the World Bank all separately but simultaneously drew upon the new orientation in development economics to articulate a range of ideas about poverty. Many of these suggestions would collectively be known as the “Basic Human Needs Approach.” This part of the chapter then unpacks the role of health in the Basic Needs program. This policy utilized health to explain the political and structural disparities that contributed to poor access to services, unsanitary environments, and

¹⁵ John McHale and Magda Cordell, “Meeting Basic Human Needs,” *Annals of the American Academy of Political and Social Science* 442 (March 1979): 14.

unemployment. Health became a key aspect of a development framework that focused on “a broad upward movement of social standards” concerned with both equity and quality of life.¹⁶

For many in multilateral aid, policies like Basic Human Needs that rejected narrow priorities for overall economic growth had several implications. One of the more prominent ones was the search for alternate metrics to measure social change. The fifth section of this chapter examines a key but failed program that development and international health specialists tried to popularize in both fields and more broadly in the 1970s: a non gross national product (GNP) based metric for social progress called the Physical Quality of Life Index (PQLI). The PQLI serves as a valuable way of connecting themes in this chapter: the nature of social determinants, possibilities for intervention, and notions of success. The final section in this chapter concludes by analyzing some of the ideological and institutional changes in international health resulting from the rise of new development economics practices based on Basic Human Needs.

Part I: “Stages of Growth”

We must embark on a bold new program for making the benefits of our scientific advances and industrial progress available for the improvement and growth of underdeveloped areas.

-Harry S. Truman, Inaugural Address, 20 January 1949¹⁷

¹⁶ Francis Brewis, “Bibliography on Health Planning in Developing Countries,” 1

¹⁷ Harry S Truman, “Inaugural Address,” 20 January 1949, *Public Papers of the Presidents Harry S Truman, 1949* (Washington, D.C., 1964), 114

In answering the question of why health concerns became important in development economics in the 1970s, one should first answer the question of why health wasn't important earlier. The basics of economics from Adam Smith onwards had, to some degree, always been concerned with human welfare, longevity, and interpersonal connections.¹⁸ Why such matters were not present in early instantiations of development necessitates briefly examining the highly political postwar roots of two groups—modernization theorists and development economists. There was some overlap between the two camps, and the terms “modernization” and “development” were used interchangeably. However, through the mid 1960s, modernization theorists had more significant intellectual and political influence.¹⁹

Though it is easy to forget in the endless reams of technical documents, development at its core has always been a political process. It has reflected changes in the way the West saw itself and its relationship with developing countries.²⁰ Part of the historic power of development is how it crystallized explanations for why the United States succeeded in gaining economic, political, and military dominance over much of the world in the aftermath of World War II.²¹ This vision made development political in the image, values, and institutions that were deemed desirable to perpetuate around the

¹⁸ Amartya Sen, interview by the author, July 2010

¹⁹ Modernization is a contentious term whose very existence is often called into doubt. However, in describing the term in the context of twentieth century development economics, it can be defined as a process of social change for peoples, institutions, nation-states and the globe writ-large involving a greater reliance on scientific methodologies, industrial technologies, systematic bureaucratic processes, and rationalized modes of thought. This definition is necessarily incomplete and in fact is debated as part of this chapter.

²⁰ Nils Gilman, *Mandarins of the Future: Modernization Theory in Cold War America* (Baltimore: Johns Hopkins University Press, 2003), 1-3

²¹ Michael Latham, “Modernization,” in *The Modern Social Sciences*, ed. Theodore Porter and Dorothy Porter (Cambridge: Cambridge University Press, 2003), 722

world. This process would also be political in the strategic decision making about which countries are selected for “improvement” and why.

As Michael Latham has described, this worldview “was also shaped by the experience, demands, and anxieties of an expanding Cold War struggle. Modernization, as both an intellectual theory and a political practice, defined a liberal, linear path to “progress” in contrast to dialectical and revolutionary frameworks. It presented America’s past as a blueprint for the world’s future and put history on America’s side.”²² Even with victory against Germany and Japan, a rising Soviet menace left many officials worried that destitution and political instability might foster a communist expansion. In order to contain the Soviet threat, Americans needed to “win the hearts and minds” of the newly decolonizing nations that were appearing throughout Asia and Africa. The best method, American officials reasoned, was to “develop” these nations along the same lines as the US and have them experience first-hand the superiority of the Western, democratic way of life. This practice would also create new global networks for trade that would create new markets for American products.

In this context, American social scientists began creating quantifiable models to diagnose, explain, and direct the course of global socioeconomic change. The framework for development involved “closely related, mutually reinforcing transformations in the forms of economic organization, political institutions, and central values that held societies together.”²³ As nations modernized, the logic went, they should possess a kind of economy, democracy, and liberal values that increasingly

²² Ibid.

²³ Ibid., 723.

reflected that of the United States. Unlike early twentieth century colonies, which were purposefully held in stasis, modernization advocated controlled change that could be accelerated by planners who would “pull the right levers” with interventions that could foster economic and political change to nullify communist tendencies.²⁴

The intellectuals who formulated the norms and policies of modernization split their time between Washington, D.C. and Cambridge, Massachusetts. The northern part of this axis had the most significant figures populating Harvard’s Department of Social Relations and MIT’s Center for International Studies. The sociologist Talcott Parsons directed the former center, while the latter was populated by economist Walt Rostow, political scientist Lucian Pye, and sociologist Daniel Lerner.²⁵ The southern part of the axis was a mix of American government institutions and new postwar international organizations; this group included the State Department, the Department of Defense, the World Bank, and the International Monetary Fund. More so than nearly any other text, Walt Rostow’s *Stages of Economics Growth: A Non-Communist Manifesto* characterizes the work of American modernization theorists.²⁶ The subtitle highlights underlying Cold War motivations: the goal was to reject Marxian teleologies of social change and show an alternate organizational logic and a social benefit to liberal, Western democracies and to mass consumption. According to Rostow’s models, fostering specific levels of savings per capita and industrial investment would create an economic “take-off,” whereby old resistances and economic patterns would be

²⁴ Cullather, “The Third Race,” 508-9.

²⁵ Gilman, *Mandarins of the Future*, 4-6.

²⁶ Walt W. Rostow, *The Stages of Economic Growth, A Non-Communist Manifesto* (Cambridge: Cambridge University Press, 1960).

discarded for new, idealized American practices. Like many other modernization theories of the time, Rostow's technocratic policies focused on spurring economic growth through increased savings, free markets, and private enterprise; in these explanatory frameworks, inequality was acceptable in the short term, as long as capital accumulation promoted industry.

The other group of academics central to Western efforts for global modernization was development economists. Though equally significant in their intellectual contributions, this group had far less political clout within the circles of academia and Western government offices. Development economics originated out of the practice of colonial economics, a style of macroeconomics largely focused on trade and commodity pricing, two chief concerns in the administration of resource-rich imperial lands. The Cold War political imperatives completely reoriented the field; economic growth in newly decolonizing nations became far more politically significant to Western national security.²⁷ Since this worldview dictated that countries needed to “progress” to avoid falling into communism, development economics, as it began to be called in the early 1950s, shifted from goals of stabilization to controlled change. As this new focus prioritized planned economic growth above all else, social considerations that were at least acknowledged in colonial contexts was completely abandoned.²⁸

Early postwar development economists were celebrated for the models they produced that resembled the practice of mainstream macroeconomics. The most prominent practitioners, all of whom have eponymous theories, include Sir Arthur

²⁷ Dudley Seers, “The Birth, Life, and Death of Development Economics,” *Development and Change* 10 (1979): 707.

²⁸ Amartya Sen, interviewed by the author, July 2010.

Lewis, Sir Roy Harrod, Evsey Domar, Paul Rosenstein-Rodan, Ragnar Nurkse, Sir Hans Singer, and Simon Kuznets. Like modernization theorists, there was a degree of permeability between academic departments and development banks; figures like Albert O. Hirschman bridged both worlds, and the University of Sussex's Institute for Development Studies sent many academics to consult for the World Bank and the International Labor Organization. Despite access to power and countless accolades, development economists were largely marginalized figures within the discipline of economics; neoclassical economists spurned them for not willingly following the push to make modeling more mathematical and resemble the clockwork theories of physics.²⁹

Despite disciplinary divisions and broader anxieties about communism, this development work as a whole embodied a remarkable sense of optimism. Americans in the early postwar period were largely confident in the values their country stood for, as well as the ability to use technology to improve people's lives. The social sciences in particular reflected a confidence in the technical ability to intervene, quantitatively predict growth, foster democracy, and quickly meet the development needs of a country, regardless of its politics, history, or geography.³⁰ In this way, the dictates of the Cold War aligned with scientific norms. But as will be explored in the next section, Cold War prerogatives and the globalizing American economy meant that the highest priority for all types of development work was "growthmanship."

²⁹ Seers, "The Birth, Life, and Death of Development Economics," 710; Krugman, "The Fall and Rise of Development Economics." See also Philip Mirowski, *Machine Dreams: Economics becomes a Cyborg Science* (Cambridge: Cambridge University Press, 2002).

³⁰ Hans Singer, "The New Poverty Oriented Development Model and Its Implications," October 8, 1976, pg. 1, IDSA, Hans Singer Papers, Box 6, File 1/2/40.

Part II: “What Are We Trying to Measure?”³¹

In September 1961 President Kennedy visited New York City to address the United Nations General Assembly. He called upon the leaders of the world’s nations to “lessen the gap between the developed and underdeveloped countries [and] to speed up the process of modernization.”³² Following the speech, the General Assembly passed Resolution 1710 to establish the 1960s as the “First United Nations Development Decade.” The faith in the potential of development from the 1950s burgeoned to an even greater level when the entire consortium of UN organizations began coordinating. Idealism aside, this enshrining of the First Development Decade was highly political. Walt Rostow coined the term, which was used in Kennedy’s speech. US officials saw the UN as an extension of their own work; solidifying the call for development and an engagement with new nations would keep them favoring the US over the USSR.

Though ebullient optimism was pervasive at the beginning of the decade, the general sentiment about development by the end of the 1960s was cynicism, skepticism, and frustration.³³ The change in mood did not happen overnight, nor was it precipitated by a single cause. New social movements, global political turmoil, and individual reservations within the field all interacted together over the span of several years to create strong misgivings about the foundational knowledge and goals of development economics. Politically, global student protests and widespread anxiety regarding the

³¹ Dudley Seers, “What Are We Trying to Measure?” *Journal of Development Studies* 8, no. 3 (1972): 21-36

³² John F. Kennedy, “General Assembly of the United Nations,” New York, N.Y., September 25, 1961, *Public Papers of the Presidents: John F. Kennedy, 1961* (Washington, D.C., 1964), 618.

³³ Dudley Seers, “The World Context of Development,” December 1, 1973, pg. 1, IDSA, Dudley Seers Papers, Box 16, File 2.4.14.

continued US involvement in Vietnam cast suspicions about Western neo-imperialism. Economically, rising inflation, a weak dollar, and a trade deficit for the US triggered fears of a recession that would become fully manifest in the 1973 oil crisis. Furthermore, the tandem of persistent inflation and rising oil prices put additional pressure on the global strength of the US economy.³⁴

On top of political and economic anxieties, new social concerns cast serious doubts about the benefits of prosperity in the West. Apprehensions over widespread pollution precipitated by Rachel Carson's *Silent Spring* compelled the Western public to consider the environment and its protection as a political issue; the text specifically condemned the widespread use and negative environmental effects of DDT against a surprisingly resistant mosquito-borne malaria.³⁵ As will be explored in chapter five, first world fears of a "population-bomb" added to this environmentalist critique as well. The worry was that overpopulation, especially in South Asia, might lead to food shortages, famine, instability, and revolution.³⁶ Other traditional symbols of progress also lost some of their appeal. Technology, which had been viewed as a positive marker of progress until the 1970s, now appeared as a contributor to smog, nuclear proliferation, and weapons use.³⁷ Together, these fears highlighted deep-seated concerns about the unfettered expansion of capitalism and the goals of modernization.

³⁴ Jeffrey Frieden, *Global Capitalism: Its Fall and Rise in the Twentieth Century* (New York: W.W. Norton, 2006), 360.

³⁵ Rachel Carson, *Silent Spring* (Boston: Houghton Mifflin, 2002), 20-3.

³⁶ Paul Ehrlich, *The Population Bomb* (New York: Ballentine Books, 1968), 1-3.

³⁷ Thomas Hughes, *American Genesis: A Century of Invention and Technological Enthusiasm, 1870-1970* (Chicago: University of Chicago Press, 2004), 444-446.

Within the practice of development and modernization, officials noticed at the end of the First Development Decade that their economic models did not produce the expected levels of growth for Third World nations.³⁸ After successive five year plans in India, *The Economist* noted that “community development, a growing ‘infrastructure,’ and industrial expansion would not, of themselves, repeat the movement to modernisation already achieved in the developed lands.”³⁹ GNP growth on the subcontinent averaged a dismal 3.5% for much of the 1950s and 1960s.⁴⁰ Though a global economic downturn in the late 1960s did not help, development economists like Hans Singer began to wonder if they were erroneously trying to fit all nations within narrow Western models for modernization, or if their models presumed unrealistic assumptions of socioeconomic change. Some even complained that the high-modernist postwar development models focused on potentially outdated concerns from the Great Depression like full employment, and assumed that Western style practices in household savings would be found globally.⁴¹ Development projects once celebrated became perceived as misguided. Policy makers, especially isolationist Republicans in the American Senate, viewed the billions spent on foreign aid as wasted investments.

³⁸ *Partners in Development* (also known as “the Pearson Report” after its author, Lester Pearson) written for the World Bank to assess the state of development planning in 1968, is especially critical of the failure of postwar development planning. See Commission on International Development, *Partners in Development* (New York: Praeger, 1969).

³⁹ “A Revolution of Falling Expectations?” *The Economist*, July 6, 1968, 45.

⁴⁰ Arvind Virmani, *Economic Reforms: Policy and Institutions: Some Lessons from Indian Reforms* (New Delhi: Indian Council for Research on International Economic Relations, January 2004), <http://ideas.repec.org/p/ind/icrier/121.html>

⁴¹ Hans Singer “The New Poverty Oriented Development Model & Its Implications,” 1-2.

These critiques, as well as civil rights protests within the supposedly ideal America, were a serious challenge to modernization theorists in particular.

In the midst of disillusionment about the effectiveness of overseas aid, two development economists separately articulated jarring critiques of the style, content, and applicability of research in the field. Their questioning focused on what counted as legitimate development knowledge and how success was defined. The work of Gunnar Myrdal and Dudley Seers set off a critical introspection within development circles for the first half of the 1970s that changed many of the field's fundamental beliefs and practices.

Gunnar Myrdal – Swedish economist, sociologist, trade minister, UN official, and Nobel Prize winner – had written extensively about economics in the colonial and developing world since the 1930s.⁴² It was, however, his controversial *Asian Drama*, mentioned at the beginning of this chapter, which offered a fresh and timely critique of development economics in 1967, even though it began as a research project at the end of the optimistic 1950s. The text was not so much a quantitative analysis of the changes in markets in South and Southeast Asia after British imperialism as it was a wide ranging sociological and anthropological investigation of every aspect of life in these

⁴² See especially Gunnar Myrdal, *Economic Theory and Underdeveloped Regions* (London: G Duckworth, 1957), Gunnar Myrdal, *The Political Element in the Development of Economic Theory* (New Brunswick, NJ: Transaction Publishers, 1990), Gunnar Myrdal, *Increasing Interdependence between States but Failure of International Cooperation* (Goteborg: Gothenburg University, 1978), Gunnar Myrdal, *The Challenge of World Poverty: A World Anti-Poverty Program in Outline* (New York: Pantheon Books, 1970), Gunnar Myrdal, *Population, A Problem for Democracy* (Gloucester, Mass.: Peter Smith, 1962), Gunnar Myrdal, *Economic Nationalism and Internationalism* (Melbourne: Australian Institute of International Affairs, 1957), Gunnar Myrdal, *Development and Under-development: A Note on the Mechanism of National and International Economic Inequality* (Cairo, 1956). For Myrdal's work on the United States, see Gunnar Myrdal, *An American Dilemma: the Negro Problem and Modern Democracy* (New York: Harper & Brothers, 1944).

areas on their own terms.⁴³ Myrdal was interested in showing how the sheer complexity and cultural difference of life in East Pakistan or Thailand precluded the easy measurement of abstract Western economic concepts like underemployment or capital-output ratios. He was also concerned about the on the ground lived experience of poverty, and how extensively it affected economic choices.

At 2,284 pages, *The Asian Drama* was huge; several reviewers admitted to selectively reading less than a quarter of it.⁴⁴ The text contained a 150 page section on population policy, and over 300 pages on the social interactions between health, education, and labor force quality. The sheer enormity of detail was an attempt to defamiliarize South and Southeast Asia from the Western planner. This sweeping condemnation relied heavily upon a sociological critique of how knowledge of the developing world was created and validated within academic policy circles. Myrdal argued that neoclassical economic models, relying increasingly on abstracted analysis, did not capture the everyday cultural and behavioral factors that shaped preferences, or the extent to which the impoverished lived outside of formal markets analyzed from afar. The framework of analysis should “conform to the people on the ground” rather than “conform to the model.”⁴⁵ Established notions of success, he asserted, were not simply normative but patently political: the exportation of Western ways of life could be viewed as simply in the interests of Western foreign policy and businesses.

⁴³ Myrdal, *Asian Drama*, 10-11.

⁴⁴ Ib Jørgensen, “Review,” *Acta Sociologica* 12, no. 3 (1969): 159-161.

⁴⁵ Myrdal, *Asian Drama*, 14-5.

The Asian Drama was praised for its “encyclopedic detail” but criticized for its contradictory conclusions.⁴⁶ In one part of the text he advocated that a country like India continue its five year plans as before while the rest of the global economic system reorder its practices to promote more equal partnerships between the developed and developing worlds. At another point in the text, he advised the nations of South and Southeast Asia to abandon religion, caste systems, and other backward “non-rational” values to enable unfettered progress.⁴⁷ Despite these pronouncements, his students and colleagues noted that they took two critical ideas from the text. First was a skepticism of the easy applicability of Western economic models in non-Western settings lacking similar market structures; the second was an interest in “investing in man” and the intertwined role of health, education, population control, poverty, and other social factors contributing to socioeconomic change.⁴⁸

Alongside Myrdal, the other individual who forced a critical reexamination of development economics was Dudley Seers, a British development economist. Like many of his colleagues working in the midst of decolonization Seers began his career in colonial economics and worked at various UN institutions. After teaching at Oxford, he helped to found the Institute for Development Studies – a think tank based at the

⁴⁶ Malcolm Caldwell, “Review,” *Journal of the Royal Asiatic Society of Great Britain and Ireland*, no. 1 (1971) 115-118

⁴⁷ Jørgensen, “Review,” 160

⁴⁸ Richard Jolly, interviewed by the author, August 2009, Brewis, Francis, “Bibliography on Health Planning in Developing Countries,” Dudley Seers, “The World Context of Development,” Emanuel de Kadt, “Inequality and Health,” April 1, 1975, IDSA, Staff Papers, Record 942 Milton Roemer, “Health, Income Distribution, and Source of Health Expenditures in Developing Countries,” In *A Compendium of Papers on Health and Economic Development International Health Planning Methods Series, 10* (Rockville, Md U S Dept of Health, Education, and Welfare, Public Health Service, Office of the Assistant Secretary for Health, Office of International Health, 1979)

University of Sussex in the United Kingdom. Since the early 1950s, Seers had been concerned with issues of unemployment, income, and inequality. However, it was a paper he presented in late 1969 that gave him the most notoriety.

In November 1969, Seers was invited to give the keynote address at the Eleventh Annual World Conference of the Society for International Development in New Delhi, India. The title of the paper captured his simple but penetrating critique of development economics: “What Are We Trying to Measure?” In his talk, Seers noted that since the end of World War II, economic growth and development had been wrongly conflated in the interest of expanding industries. “Development means creating conditions for the realization of human personality. Its evaluation must therefore take into account three linked economic criteria: whether there has been a reduction in (i) poverty; (ii) unemployment; (iii) inequality.”⁴⁹ Gross national product (GNP) had served as the traditional marker for economic growth and thus development; however, he asserted, it could increase rapidly without any change in the other three criteria (mentioned above), thus making it tangential to tracking improvements in lifestyles.⁵⁰ In asking what development planners were actually trying to measure, Seers noted that they avoided the important fact that development was necessarily a normative judgment about how people lived their lives and wanted to improve as individuals and a collective society over the long term.⁵¹

⁴⁹ Seers, “What Are We Trying to Measure?” 1.

⁵⁰ Elizabeth Stanton, “The Human Development Index: A History” (UMass-Amherst Political Economy Research Institute Working Papers, February 2007), 11.

⁵¹ Seers, “What Are We Trying to Measure?” 22.

The speech also argued that tangible indicators close to one's daily life – getting enough food, living in a clean physical environment, having access to clean water – were necessary conditions for physical wellbeing, and thus the capacity to be productive laborers. Such indicators also highlighted concrete interventions that could address the burdens of endemic poverty – a widespread issue that largely had heretofore been overlooked in postwar development planning. The challenge Seers put to his colleagues was to move to a more human centered approach to development by following a three step process: dispelling the belief that development equaled growth; defining desirable values and policies to achieve worthwhile ends for national planning; and replacing GNP as the lead measure of positive economic development with some other metric of social change.⁵²

Though substantially different in scope and topic, Seers and Myrdal advocated similar measures of reform. Both called upon their colleagues to evaluate the meaning and purpose of the conceptual tools they were using for implementing and tracking development. Rather than having a narrow focus on material growth, the two economists encouraged development policies to position human wellbeing and employment as necessary preconditions for eliminating poverty and spurring productivity. If such an agenda were adopted, improvements in the social determinants of health and wealth would be more accurate than GNP as indicators of human wellbeing, equitable social change, and productivity of the entire population.

These criticisms helped to set off a period of introspection and revision in the field of development economics. But change and adoption of these new ideas were not

⁵² Ibid., 32-33.

given. The arguments of the two economists were deemed convincing not on any quantitative grounds. Rather, they were persuasive because they connected the broader political turmoil and negative sentiment about the state of the field with questions that examined the normative goals of development, rather than with questions of refining efficiencies of older modeling devices. None of their ideas were particularly new, but they had been neglected amidst Cold War political imperatives for rapid, planned growth. In this sense, Seers and Myrdal were significant as clear, persuasive spokesmen against conventional orthodoxies.

The effects of these ideas could be seen in literature across the field within a few years. In this instance, the story of intellectual change and adoption in this historical circumstance was a story of the diffusion of ideas happening on the pages of academic journals, in the conversations of scholars and practitioners at disciplinary meetings, and in the proceedings of conference presentations.⁵³ Scholars remarked that “Seers had

⁵³ P. Dorner, *Land Reform and Economic Development* (New York: Penguin Books, 1972), R. H. Cassen, “Population and Development: A Survey,” *World Development* 4, no. 10-11 (1976): 785-830, F. Stewart, “Choice of Technique in Developing Countries,” *Journal of Development Studies* 9, no. 1 (1972): 99-121, T. Killick, “The Possibilities of Development Planning,” *Oxford Economic Papers* 28, no. 2 (1976): 161-184, A. Portes, “On the Sociology of National Development: Theories and Issues,” *The American Journal of Sociology* 82, no. 1 (1976): 55-85, G. S. Fields, “Who Benefits from Economic Development? A Reexamination of Brazilian Growth in the 1960’s,” *The American Economic Review* 67, no. 4 (1977): 570-582, J. Friedmann and F. Sullivan, “The Absorption of Labor in the Urban Economy: The Case of Developing Countries,” *Economic Development and Cultural Change* (1974): 385-413, H. Arndt, “The ‘Trickle-Down’ Myth,” *Economic Development and Cultural Change* (1983): 1-10, J. Friedmann, “Basic Needs, Agropolitan Development, and Planning from Below,” *World Development* 7, no. 6 (1979): 607-613, K. Dopfer, *The New Political Economy of Development: Integrated Theory and Asian Experience* (New York: Macmillan, 1979), R. L. Bach, “Methods of Analysis in the Study of the World-Economy,” *American Sociological Review* 42, no. 5 (1977): 811-814, T. S. Epstein and D. Jackson, *The Feasibility of Fertility Planning: Micro Perspectives* (New York: Pergamon, 1977), T. Baumgartner and T. Burns, “The Structuring of International Economic Relations,” *International Studies Quarterly* 19, no. 2 (1975): 126-159, D. Colman and F. Nixon, *Economics of Change in Less Developed Countries* (New York: Rowman & Littlefield, 1986), P. Ehrlich and A. Ehrlich, *Population, Resources, Environment: Issues in Human Ecology* (New York: Wiley, 1970).

dethroned GNP,” and Myrdal had reconsidered “modernization’s goals and values.”⁵⁴ *The Economist* noted that “The Institute for Development Studies as a clearing house for ideas . . . under Mr. Dudley Seers has quickly proved its worth.”⁵⁵ Policymakers and practitioners themselves also noticed these new approaches, and began to consider the viability of the ideas as policies. However, this revolution in development economics was neither universal nor complete. Orthodox development economics – which still closely resembled a thriving macroeconomics with its models, assumptions about market efficiency, and focus on GNP – continued in parallel. Myrdal and Seers gladly went on their own, not trying “to be good mainstream economists.”⁵⁶ Many would follow, and the 1970s in development economics would be characterized by the new worldview they helped to instigate. Their rise is more a shift in the focus of priorities rather than a wholesale rejection of older established facts.

Though the critiques of Seers and Myrdal did not offer a coherent, systematic set of policies to reorder the actual institutional programming for development planning, they did instigate two broad, conceptual changes that would underline future policy in the decade. First was the “fuller recognition of the integrated nature of economic development, nutrition, health, population growth, world stability, and ecological integrity – [and an emphasis on] the need for interdisciplinary planning in the

⁵⁴ Oscar Gish, “The Political Economy of Primary Care and ‘Health by the People’ An Historical Explanation,” *Issue A Journal of Opinion* 9, no. 3 (Autumn 1979) 6-13, Lee Howard, “Three Dilemmas in International Health,” *American Journal of Public Health* (January 1972) 73-8

⁵⁵ “The Limits of Economics Review of Development in a Divded World Edited by Dudley Seers and Leonard Joy,” *The Economist*, March 13, 1971, 57

⁵⁶ Krugman, “The Fall and Rise of Development Economics”, P. Bardhan, “Economics of Development and the Development of Economics,” *The Journal of Economic Perspectives* 7, no. 2 (1993) 129-30

development process.”⁵⁷ Older postwar models, by contrast, focused on broader economic indicators and prioritized vertically designed, technology driven interventions like dam construction or DDT based malaria eradication. These practices failed to consider the larger social context of interventions, as well as the way underlying determinants of economic change were interconnected in a “web of causation.”⁵⁸

The new approach that was emerging asserted that interventions for health, sanitation, population control, nutrition, employment, housing, education, and water could all be coordinated and used attendant to the immediate needs of the people.⁵⁹ This new perspective was a move away from the idea that development was strictly about creating industrial factories (a development of industries and countries) to a strategy that began to more directly engage people, assuring that they obtain the social and financial benefits of growth (a development of people) By the late 1960s, many in development aid circles had noted that nearly 40% of the populations of the developing world did not receive the benefits of economic planning in the postwar decades.⁶⁰ For

⁵⁷ John Knowles, “Thoughts on Health, Population, and Development,” 6-7

⁵⁸ Charles E. Rosenberg, “Holism in Twentieth Century Medicine,” *Our Present Complaint*, 146 This perspective was also evident in medicine regarding the interconnectedness of health, environment, population and social change, as well as the role of technology and reductionistic models of disease transmission in medicine See Porter, “How Did Social Medicine Evolve, and Where Is It Heading?” 1667, Thomas McKeown, *The Role of Medicine Dream Mirage or Nemesis?* (London Nuffield Provincial Hospitals Trust, 1976), James Colgrove, “The McKeown Thesis A Historical Controversy and Its Enduring Influence,” *American Journal of Public Health* 92, no. 5 (May 2002) 725-729, Nancy Krieger, “Epidemiology and the Web of Causation Has Anyone Seen the Spider?” *Social Science & Medicine* 39, no. 7 (1994) 889

⁵⁹ “Basic Needs A New Development Strategy” (International Labor Organization, 1976), pgs 3-4, UNARMS, CF/RA/BX/ED/DR/1984/T017, BHN2000 Working Papers

⁶⁰ Irma Adelman, “Growth, Income Distribution and Equity-oriented Development Strategies,” Oscar Gish, “Resource Allocation, Equality of Access and Health,” *World Development* 1, no. 12 (1973) 37-44, James P. Grant, “The End of Trickle Down?” *Foreign Policy* 12, no. 3 (1973) 43-65, Harry G. Johnson, “The Western Model of Economic Development,” *World Development* 2, no. 2 (1974) 9-10, Hans Singer, “The New Poverty Oriented Development Model & Its Implications ”

the British economist Barbara Ward, the Baroness Jackson of Lodsworth, this resulted in a growing gap between the rich and the poor across the world.⁶¹ The new understanding was that a redistributive development (“growth from the bottom up”) specifically targeting the underlying social and economic patterns of life the poor would begin to correct this oversight.⁶²

Alongside a perspective emphasizing human development the other closely related conceptual change ushered in by Seers and Myrdal was an interest in directly addressing poverty. Over the course of the 1970s, it would come to be a central policy objective for the theory and application of development economics. However, what it actually meant was never universally established. Definitions were surprisingly fluid and interchangeable. One described an absolute “line of poverty” demarcating an income level under which one’s ability to avoid deprivation was in jeopardy.⁶³ Another defined the term solely in reference to access to resources and the sociopolitical barriers to food, water, clothing, and shelter.⁶⁴ A third framed poverty in terms of inequalities in comparison to the wealthy. Governments largely defined poverty in terms of productivity: the lack of individual physical, economic, and social capacities of the

⁶¹ Barbara Ward, et al., *Widening Gap Development in the 1970's* (New York: Columbia University Press, 1971)

⁶² Streeten, interviewed by Richard Jolly, May 28-29, 2001, transcript, *The United Nations Intellectual History Project*, The City University of New York, New York City, NY

⁶³ The poverty line has variously been attributed to Charles Booth at a Royal Statistical Society meeting in March, 1887, as well as Seebohm Rowntree in 1901. See Alan Gillie, “The Origin of the Poverty Line,” *The Economic History Review* 49, no. 4 (November 1996): 715-730.

⁶⁴ Robert F. Clark, *Victory Deferred: the War on Global Poverty, 1945-2003* (Lanham, Md.: University Press of America, 2005), 9

impoverished signified an underutilization of labor for the political and economic expansion of their states.

While poverty alleviation became a new priority of development economics, it was not an entirely new idea. Concerns for pauperism and the provision of welfare have deep, premodern roots that connect to concerns about the obligations of the state, individual moral character, and the distribution of wealth. In the colonial context, officials in the early twentieth century had discussed the social welfare of native populations from time to time; this was most evident during the interwar period, when the British saw low standards of living – a lack of material goods, low incomes, and malnutrition – as a problem of preventing the growth of communism in colonial territories.⁶⁵ After World War II, the realization of the global economic influence of the Great Depression, combined with the Atlantic Charter's call of "freedom from want . . . everywhere in the world" made poverty a global issue.⁶⁶ But as discussed in section one, poverty control was a fairly marginal topic for postwar development planning; the goals of increasing overall GDP allowed for and even expected temporary inequality as capital was invested.⁶⁷

⁶⁵ Michael Worboys, "The Colonial World as Mission and Mandate: Leprosy and Empire, 1900-1940," *Osiris* 15 (January 1, 2000): 209-11.

⁶⁶ Martha Finnemore, "Redefining Development at the World Bank," in *International Development and the Social Sciences: Essays on the History and Politics of Knowledge*, 203.

⁶⁷ One major exception to this cited by many development economists was John Kenneth Galbraith. His tenure as US Ambassador to India from 1961 to 1963 influenced his perspective on the topic. See John Kenneth Galbraith, *The Affluent Society* (London: H. Hamilton, 1958); John Kenneth Galbraith, *The Causes of Poverty: A Clinical View, Address on 23rd March, 1962, at the Gujarat University, Ahmedabad*. (Ahmedabad, India: Gujarat University, 1962); John Kenneth Galbraith, *The Nature of Mass Poverty* (Cambridge: Harvard University Press, 1979).

What was new in the 1970s was the explanatory framework that oriented the understandings of poverty. The loss of confidence in overseas development assistance and subsequent critiques fostered a perspective that the aim of development was no longer simply the accumulation of wealth but social transformation that would enhance the wellbeing of individuals – what Seers called “the realization of human personality.”

⁶⁸ These prescriptions for human improvement focused on providing tangible commodities or services, as well as eliminating physical and social barriers that discouraged employment. If such ends were met, people could have the means and opportunities to participate in society and lead fulfilling lives.

In these discussions poverty is described as “extreme,” in need of “eradication,” and originating in the gross aberrations of the modern global economy that prohibited the participation of the most marginalized. This poverty was different than the benign pauperism that existed historically alongside the wealthy in the West. Policy makers described the material deprivation as “inhuman.” Their efforts were not about recreating the lifestyle of the wealthy New York City inhabitant in Accra; rather, it was about having individuals get through daily routines without debilitating disease and physical suffering. As Robert McNamara, President of the World Bank from 1968-81, noted, the poorest had not been helped by previous focused, top-down financial interventions because they “remain entrapped in conditions of deprivation which fall below any rational definition of human decency.”⁶⁹ The global socioeconomic

⁶⁸ Seers, “What Are We trying to Measure?” 21

⁶⁹ Robert S. McNamara and the World Bank, *The McNamara Years at the World Bank Major Policy Addresses of Robert S. McNamara, 1968-1981* (Baltimore: the Johns Hopkins University Press, 1981), 217.

transformations in the early 1970s created a unique set of socio and environmental changes that would come to further shape understandings of the nature and effects of poverty.

Section III: “Systems Overload”

For the first time in the postwar environment, military security was no longer the main international political concern.⁷⁰

-James P. Grant

In the 1970s, much like other decades characterized by economic and political crises, the international political economy itself became identified as a source of risk that could negatively affect an individual’s health, well being, and security. But the nature of the instability was such that its effects were not isolated in location or sector, but felt in an interconnected fashion in numerous contexts. In this way, the ideas originating in the late 1960s critique of development found additional meaning in an environment of new systemic social risks. James P. Grant of the Washington, D.C. based think tank the Overseas Development Council articulated an insightful framework for thinking about and giving meaning to this broad crisis. From this perspective, the seemingly rapid and extreme changes appeared as a “systems overload” of the globalizing planet.⁷¹ Dangerously rapid global fluctuations in consumption and waste patterns produced extremes of wealth and famine that escalated political tensions between the developed and developing world.

⁷⁰ James P. Grant, “The Mid-1970’s: Global Crisis and Emerging Historical Discontinuities,” in *Towards a Redefinition of Development: Essays and Discussion on the Nature of Development in International Perspective*, ed. Alain Birou and Paul-Marc Henry (New York: Pergamon Press, 1977), 293.

⁷¹ Grant, “The Mid-1970’s: Global Crisis and Emerging Historical Discontinuities,” 292.

The most prescient concern of the “system overload” in the popular media was the global economy. The harmony of the international trade of the 1950s and 1960s was replaced in the early 1970s by fierce trade competition, erratic capital flows, and every nation looking out for itself in benefiting from a collective rise in the global economy (from 1970-3) and from major currencies floating off the gold standard after 1973.⁷² The oil crisis that same year, followed by economic stagflation and a subsequent move back to global economic interdependence exacerbated increasingly complex challenges for economic stability. Grant asserted that people could not adjust to the unprecedented transformations precipitated by boom and bust cycles, and that the gaps between the wealthy and poor would only increase.⁷³

The back and forth shifts in the global economy compounded emerging concerns about “the pollution of the natural environment, the congestion of urbanism, and newly perceived threats to the carrying capacity of the biosphere.”⁷⁴ In light of the effects of economic growth, an emerging ethic of ecology reacted against such excesses by trying to popularize socially-determined limits to the damage people should do to their physical environment, the dangers of industrial technologies, and the use of non-

⁷² The last change marked the dissolution of the systematic order of the global capitalist system erected through the 1944 Bretton Woods Treaty. However, in many respects, by the late 1960s, the postwar economic order had achieved the goals of its architects: the developed world got international economic integration, national welfare states, and macroeconomic management. The developing world had some degree of industrialization and protection from foreign influence. Socialist nations had rapid industrial and economic growth and some equitable distribution of income. However, managing and extending all three of these joint achievements became too difficult, and each began to impede the other by the 1970s. See Frieden, *Global Capitalism: Its Fall and Rise in the Twentieth Century*, 360-2.

⁷³ James P. Grant, “The Mid-1970’s Global Crisis and Emerging Historical Discontinuities,” 293-5.

⁷⁴ James P. Grant, “Growth, Values, and Quality of Life: A Note on Substance” (speech, Aspen Institute Seminar, Aspen, Colorado, 1977), pg. 2, UNARMS, CF/RA/BX/ED/DR/1994/T045/G0080-1994-539150674.

renewable resources.⁷⁵ The challenge in this context included assessing risks of resource depletion, understanding the interconnectedness of environmental determinants, and analyzing the influence of the disease burdens of global pollution.

The “systems overload” spared no part of the globe as the developing world was pulled in two directions with a famine across Africa in 1974 and continued population growth. Food and fertilizer shortages were coupled with rising global demand that came from an annual 2% rise in global population in the first several years of the 1970s.⁷⁶ The problem of population growth, which will be explored in greater depth in chapter five, was cast by demographers as a Cold War security issue; angry teeming millions had the potential to riot and may be more vulnerable to communism. In the 1970s, its underlying environmental and social risks came to the fore.

One prominent pessimistic analysis in the early 1970s of the confluence of these global problems was the Club of Rome’s *Limits to Growth*. The manifesto asserted that only zero population growth and curtailed economic growth would prevent the world from environmental ruin.⁷⁷ Though it was focused on long run problems of population, environment, and resource scarcity, the report actually highlighted increasing political antagonisms between the developed and developing world. *Limits to Growth*, like many Western commentators, asserted that the developing world should bare a larger share of responsibility for implementing change to stave off environmental and economic chaos.

⁷⁵ Ibid This ethic, combined with cynicism of the Vietnam War, helped to popularize a grassroots style of intervention that distrusted top-down heavy-handed government intervention

⁷⁶ James P. Grant, “Food, Fertilizer, and the New Global Politics of Resource Scarcity,” *Annals of the American Academy of Political and Social Science* 420 (July 1975): 14

⁷⁷ Donella Meadows and Club of Rome, *The Limits to Growth A Report for the Club of Rome's Project on the Predicament of Mankind* (New York: Universe Books, 1972).

But after the 1973 oil crisis, a consortium of developing world diplomats in the UN called the Group of 77 saw OPEC's political maneuvering as an example to acquire more influence; they subsequently put forth a manifesto in the UN General Assembly in late 1974 advocating for a "New International Economic Order" (NIEO) of economic and trade relations. The group called for a greater say and more equal partnerships in global trade, technology and development. The West saw it as a completely unreasonable request and did little to alter its international relations. Nonetheless, the NIEO and its proposal for restructuring the global political order would frame all subsequent development work in the 1970s. These interconnected changes were, for Theodore Hesburgh, chair of the board of the Overseas Development Council in the 1970s, a "recasting [of] old international systems and the development of new ones."⁷⁸ These rapid global sociopolitical transformations dismantled older sureties of the postwar system, leaving in its place a broken but increasingly globalizing world pulled in different directions by the competing interests of multinational corporations, developing countries, and citizen advocacy groups.

Given the tumultuous political changes of the decade, Grant's diagnosis of "system overload" highlighted the way arguments about global order and political alignments were embedded in discussions of what counted as success in the new paradigm of economic development. At this time, the international political system itself was the source of risk that could negatively affect individual's health, well-being, and social security. And though the critique of development in the late 1960s responded

⁷⁸ Theodore Hesburgh, "International Fair Play" (speech, presented at the International Development Conference, Washington, D.C., October 24, 1973), pg. 1, UNARMS, CF/RA/BX/ED/DR/1994/T045/G0080-1994-539150674.

to the perceived longstanding failures of the postwar decades, the application of the new ideas found additional meaning in an environment of new explicitly systemic social risks. But the new ideas argued for mitigating these hazards not by reordering international relations, but by being attentive to social changes and poverty on the ground. While this type of response in some ways connected international development of the 1970s to the type of colonial responses of the interwar period, the concerns of the Cold War were the destructive excesses of global consumption and environmental pollution, rather than global destructiveness of war.

Overall, the goal of the new front originating with Seers and Myrdal was *equitable* development. Impoverished individuals should not be disadvantaged from wellbeing, and efforts for creating access and opportunities meant mitigating the negative effects of global risks. Eliminating factors that led to poverty and poor health were interpreted as improving the most basic needs for food, shelter, and health.

Part IV: “The Most Basic Human Needs”

What is needed, in my view is a basic understanding . . . a ‘global compact’ if you will – [that] would make clear in overall terms both the additional trade and aid support to be provided by the developed nations and the policy reforms and structural changes to be undertaken by the developing nations. These should have as one of their major objectives the meeting of the basic human needs of the absolute poor in both the poorest and the middle income countries within a reasonable period of time, say by the end of the century.

-Robert S. McNamara, Address to the Board of Governors of the World Bank, Manila, Philippines, October 4, 1976⁷⁹

At first glance, getting fired after orchestrating the Vietnam War - arguably one of the most unpopular wars in American history – might mean fading away from power

⁷⁹ McNamara and the World Bank, *The McNamara Years at the World Bank*, 359.

and influence in government. But for Robert Strange McNamara, the situation was the opposite. Though sacked by President Lyndon Johnson from his position as Secretary for Defense in 1968, McNamara immediately moved to a new office on H Street, just two blocks northwest of the White House, to become the fifth President of the World Bank. McNamara's thirteen year tenure at the Bank would transform the Bretton Woods financial organization from a conservative lending institution to a progressive multilateral development agency; his presidency would also shape the broader priorities of both development planning and international health. One central manifestation of his influence at the Bank was a new focus on poverty eradication, as well as the rise of that policy that McNamara himself would coin "The Basic Needs Approach."⁸⁰

The previous sections of this chapter sketched many of the key ideas to the new approach to development economics in the 1970s; they looked at how these ideas originated in reaction to the failures of postwar development programs and the perceived socioeconomic risks of the late 1960s and early 1970s. These new principles were appealing to development policy makers and reframed the questions they asked and solutions they considered viable. However, these ideas were not appropriated indiscriminately; rather, they were molded and interpreted according to specific institutional needs, political realities, and immediate policy problems on the ground. The Basic Needs Approach was one of many development policies that emerged in this period, and it came to define the principles and practices of economic development in

⁸⁰ There is some overlap between the Bank's interest in Basic Human Needs in this chapter and its creation of the Population, Health, and Nutrition Division that is discussed in chapter five. Policies like the Basic Human Needs approach helped to justify lending for health as an ancillary project, not as a stand-alone project. Additionally, this chapter is more about translation of academic ideas while chapter five discusses project development.

the 1970s. A study of the creation of this policy, to reiterate the broader goals of the chapter and dissertation, is to explore how health concerns came to both shape and reflect broader policy and political imperatives in late Cold War multilateral lending. There were many facets to the Basic Human Needs Approach; here its creation will be studied to see how social determinants of health and wellbeing become significant in explaining the logic of development. This section will frame the codification of Basic Needs policy, and the way it articulated a place for health, as a direct result of attempts to rectify three different types of problems inside and outside of the new approach to development: the problem of reorienting criticized development programs; the problem of reconciling continued desires for policies for economic growth with new ideas for redistribution; and the problem of global politics surrounding the push for the “New International Economic Order.”

Robert McNamara’s arrival at the World Bank in 1968 coincided with a crucial external evaluation of all of the Bank’s policies and programs institutionalized since its inception. Lester Pearson – Nobel Peace Prize winner and former Prime Minister of Canada – was tasked with leading a commission to assess the state of development aid and the lending practices of the World Bank. The institution was at a crossroads: though the perceived failure of development in the late 1960s precipitated a new school of thought on the meaning and goals of development, it also left many institutions, like the Bank, and large-scale foreign assistance programs, like USAID, searching for new direction and focus. The Pearson Report, officially titled *Partners in Development*, noted that donor countries and aid organizations were becoming disenchanted with development for a number of reasons: the savings-oriented, capital-intensive approach

(i.e., “trickle-down”) to industrialization didn’t seem effective; earlier Cold War tensions that justified interventionist planning had subsided; the Vietnam conflict looked increasingly perilous; and domestic problems within Western nations appeared far more problematic.⁸¹ To improve the efficacy of development during this time of donor fatigue, the report actually recommended scaling up programming; the postwar approach to Third World modernization did not go far enough. The Bank’s programs, while numerous, were deemed not extensive enough and too fragmented.⁸² Additionally, the Bank, much like Western overseas aid programs, needed to increase the volume of assistance and target “more than just economic growth.”⁸³

McNamara did not see these recommendations simply as suggestions for greater coordination amongst donors. He viewed them as an opportunity for reorienting the Bank to more fully engage with the Third World as a multilateral development agency. Since its inception in 1944, the World Bank acted like many other banks – as a fairly conservative lending agency that focused on profit and avoided risky projects as a creditor.⁸⁴ When McNamara arrived at the helm, he immediately began suggesting programs ranging from literacy campaigns to population control.⁸⁵ Becoming a

⁸¹ James P. Grant, “Forging the Will Required for Effective Cooperation in World Development” (speech, Eleventh World Conference of the Society for International Development, New Delhi, India, November 17, 1969), UNARMS, CF/RA/BX/ED/DR/1994/T045/G0080-1994-539150674, Commission on International Development and Lester B. Pearson, *Partners in Development* (New York: Praeger, 1969)

⁸² McNamara and the World Bank, *The McNamara Years at the World Bank*, 115-21

⁸³ Grant, James P., “Forging the Will Required for Effective Cooperation in World Development,” 1-2

⁸⁴ It should be noted, though, that Eugene Black, McNamara’s predecessor, also thought that the Bank should diversify its programming. In his final years in the mid 1960s, he began suggesting policies to focus on studying the effects of agricultural reform, educational improvement, and population control.

⁸⁵ In her study of McNamara’s poverty eradication programs, Martha Finnemore has suggested that many of the ideas McNamara brought to the Bank immediately upon arrival were “lessons” of Vietnam and that his progressive programming throughout the 1970s was an attempt to remedy his mistakes from his

multilateral development agency would mean expanding the scope and volume of development projects to address riskier social issues like poverty, population control, and education. Though McNamara would battle more traditional bankers inside the organization his entire tenure over this issue, poverty eradication would become the new, central mission of the Bank in the 1970s.⁸⁶ But the World Bank's approach to alleviating poverty was also shaped by the institutional changes at the beginning of the decade, and the way Bank officials interpreted how they could address the issue given the institution's strengths and long-term vision.

Armed with his business management expertise and years of overseeing the vast multibillion dollar operations of the Pentagon, the new President of the Bank set about implementing numerous changes to the institution's organization. In response to the Pearson Commission's suggestion, he reached out to more developing countries by increasing the amount of aid money distributed thirteen fold; from the time he arrived in 1968 until the time he stepped down in 1981, lending went from \$883 million to \$12 billion. He prioritized geographic foci rather than sectoral organizational divisions, switched to problem based grants (ie, illiteracy, family planning) and loans rather than general assistance projects, and expanded the independent monitoring and evaluation division. All three of these changes aimed to ensure greater efficacy and efficiency of lending. Convinced that large scale development would never occur if investments simply focused on urban reform, McNamara instituted the Rural Integrated

tenure at the Pentagon See Finnemore, "Redefining Development at the World Bank " Those who interacted with him personally at the Bank have suggested otherwise – he was genuinely interested in these ideas on their own, and took great personal pleasure in studying them The development specialists who worked with McNamara or under him generally note that his involvement in Vietnam unfairly overshadows his far more successful career at the World Bank, Richard Jolly, interviewed by the author

⁸⁶ Richard Jolly, interview by the author, August 2009

Development Project, which increased policy emphases on agricultural modernization and “human capital development.” Since the approach was multi-sectoral in design, projects included supplemental grants for agriculture, education, health services, and nutrition programs.

Though McNamara highlighted poverty reduction as a policy in his earliest days at the Bank, the institutional changes mentioned above preceded the implementation of the new policies. The actual programming for eradicating poverty, while ideologically drawing basic tenets from the new worldview in development, was specifically designed with rural development and long term economic growth in mind. Poverty eradication in rural sectors meant enhancing agricultural economic productivity, ensuring stable jobs, increasing food distribution, and establishing social services for health, nutrition, and education.⁸⁷ And though social services underpinned these policies, poverty reduction was not seen as an expansion of welfare, but infrastructure to foster productivity among the poor.⁸⁸ These were new topical areas of work it played to the Bank’s strengths by focusing on measuring economic change. In these ways, the solutions to institutional restructuring shaped the scope and goals of programmatic priorities.

McNamara’s evocation for poverty eradication policies were noticed by others in the development and foreign aid community; not long after his first articulation in 1973 of a multisectoral poverty eradication program did internationalist minded

⁸⁷ All of these policies required substantial financial input. Changing the daily practices, agricultural technologies, and quality of products of farms throughout the developing world was expensive, and would use up the new expanded lending budgets.

⁸⁸ Robert F. Clark, *Victory Deferred*, 11

American Senators push for a redesign of US foreign aid. Formal American foreign assistance had been a product of wartime lend-lease agreements and postwar European reconstruction. The Foreign Assistance Act of 1961 had institutionalized a plan for continued foreign aid after the Marshall Plan by establishing the US Agency for International Development (USAID) within the US State Department. Though the American public was optimistic about the potential for US foreign aid at the beginning of the 1960s – especially the spreading of “American know-how” through the Peace Corps – the prolongation of the Vietnam War overturned the positive sentiment and traditional bipartisan support by the end of the decade. The disillusionment with American foreign intervention became so widespread that the Senate refused to fund foreign assistance at all in 1971 and 1972, though year-end catchall resolutions did cover the USAID budget.⁸⁹ Well-established justifications for aid like fighting communism, mining raw materials, and increasing trade were all outweighed by the fallout of the war, concerns that aid was too militarized, and the belief that foreign assistance was a give-away that did not actually economically help other countries.

In 1973 Congressional leaders interested in foreign aid argued that a successful, new foreign assistance bill would require a vastly different approach in order to address development problems on the ground and appeal to members of the House and Senate. In the debate on Senate Resolution 2335 for the Foreign Assistance Act of 1973, Senator Hubert Humphrey (D-MN) explained his perception of the problems and potential solutions. According to the former Vice-President, the billions in aid only reached the elites in developing countries. In light of continued population growth and

⁸⁹ The defeat of the 1971 bill was the first time that either House had rejected a foreign aid authorization.

a famine in the African Sahel that might upset global security, the “basic human needs” of the poor needed to be addressed. If they could have access to basic education, health care, nutritious foods, “appropriate technology,” and rural development, then, Humphrey argued, “increased growth and social justice [could] go hand in hand, and the prospect for a stable international order [would be] enhanced.”⁹⁰ A comprehensive approach that targeted multiple social determinants was necessary, because, according to Humphrey, it was “clear that family size, poor health, low nutrition and poverty are interrelated. Making progress in any one of these areas without an equal effort in the other will fail to break the poverty cycle which grips so many hundreds of millions of people.”⁹¹ Senator Robert Taft, Jr (R-OH) noted that he had just returned from Nairobi, Kenya, where he heard Robert McNamara address the World Bank Board of Governors at their annual meeting. The Bank was reorienting itself to focus on poverty alleviation and population control, and Taft strongly suggested that US foreign aid follow its lead and do the same.⁹²

With little objection, the US Foreign Assistance Act of 1973 – coined the “New Directions” policy – redesigned American foreign aid to target what was perceived to be the social determinants that underpinned poverty and poor economic growth. Meeting basic human needs that would improve the individual wellbeing, spur production, and preserve security. In this sense, both the Congressional bill and the World Bank policy responded to the failures of the 1960s by reorienting institutional

⁹⁰ *Foreign Assistance Act of 1973*, SR 2335, 93rd Cong , 1st sess , *Congressional Record* 119 (October 1, 1973) S 32244-6

⁹¹ *Ibid* , S 32246

⁹² *Ibid* , S 32251

priorities. They prioritized security concerns through a logic that equated development with a socioeconomic transition of developing peoples, and focused increasing individual productivity. This new institutional worldview by two of the most powerful and well-endowed foreign aid programs legitimated these ideas and further justified increased state and non-governmental organization intervention into the lives of developing populations.

Though the ideas of Seers and Myrdal were innovative, questions arose on how to orient these values into a policy framework that could underpin realizable projects. Older programs had clear, well-defined processes that resulted in measurable economic change: savings of capital would become investments that would spur industrialization measured through changes in GNP. New ideas, however, critiqued this logic: economic growth was seen as unevenly distributed; while it could lead to an increase in living standards, in other cases it contributed little to the alleviation of the misery of the masses.⁹³ The challenge was to reconcile new calls for redistribution to the poor with the traditions for maximization of economic growth – the latter still being a strong desire for the wealthy and their governments.⁹⁴ The question was how to design growth to serve as a means of social change and increased living standards without having the unwanted effects that led to increased inequality. Could there be policies to foster redistribution *with* growth?⁹⁵

⁹³ McKeown, *The Role of Medicine*

⁹⁴ It wasn't that growth was in question, the critique focused on GNP as the prime metric for change

⁹⁵ Emanuel de Kadt, "Inequality and Health," 1

To answer this question, the International Labor Office (ILO) – a League of Nations division integrated into the UN – began examining the nature of unemployment in the developing world, and how economic growth affected income distribution. The project consisted of country based studies – Columbia in 1969, Ceylon (Sri Lanka) in 1971, and Kenya in 1972 – managed by three development economists from the Institute for Development Studies at the University of Sussex: Dudley Seers, Richard Jolly, and Hans Singer. Based on the new ideas on development originating at the IDS, the team focused on specifically analyzing the employment circumstances of the poor, many of whom often had no choice but to be employed in the informal sector with low-skill, labor intensive, low productivity work. The lack of access to productive assets, low wages and population growth kept their earnings low. The country reports, especially the Kenya report, articulated two solutions for improving national level productivity and employment. First, redistribute incomes to allow the poor to buy food, clothing and shelter, thereby generating more employment and providing them with necessities to become more productive and contribute to the overall economy. The second option was to directly ensure that workers’ most basic needs in health, nutrition, and education were attended to. Funds allocated for these social services would not be welfare for the indigent or a safety net, but targeted, equitable investments that would contribute to growth. The policy would aim at increasing long-term self-generating development amongst a group of people traditionally on the margins of modernization. On this point, McNamara noted that “If . . . a more equitable distribution of income results in a somewhat lower gross rate of savings, but more investment in the production of essential commodities, the lower rate of growth in national income may

be accompanied by an increase in the incomes of the bulk of the population.”⁹⁶ Both redistribution and growth could go together, but the former could not be a by-product of the latter but a conscious and explicit element of policy.⁹⁷

By the mid 1970s, the sentiment that alleviating poverty by attending to the physical needs of the poor became more widespread. The ideas underlining the ILO reports and the World Bank’s anti-poverty programs were being echoed by other policy makers and academics in aid and international relations circles the developed and developing world. The Argentinean Bariloche Foundation issued a response to the Club of Rome’s bleak *Limits to Growth*, arguing that meeting the minimum human nutritional, health, and housing requirements were prerequisites for the ability of every individual take part in the socio-cultural environment.⁹⁸ The Nobel Prize economist Jan Tinbergen’s *Reshaping the International Order* stated that steps needed to be taken for a more humane and equitable international order for the benefit of marginalized individuals and not simply the elite; this was echoed by the Dag Hammarskjöld Foundation’s *What Now? Another Development*.⁹⁹ The ILO President Louis Emmerji, who worked closely with the IDS economists, the World Bank, and the UN Secretariat,

⁹⁶ McNamara and the World Bank, *The McNamara Years at the World Bank*, 221.

⁹⁷ Premnath, “The Meaning of Development,” 27; James P. Grant, “A Proposal for Meeting the Most Basic Essential Human Needs of the Poorest Billion within Our Generation” (Overseas Development Council, 1976), pgs. 1-2, UNARMS, CF/RA/BX/ED/DR/1984/T017, BHN2000 Working Papers; Hollis Chenery and the World Bank *Redistribution with Growth Policies to Improve Income Distribution in Developing Countries in the Context of Economic Growth* (London: the Institute of Development Studies, 1974)

⁹⁸ Amílcar Herrera, *Catastrophe or New Society?* (Ottawa: International Development Research Centre, 1976).

⁹⁹ Club of Rome, *Reshaping the International Order A Report to the Club of Rome* (New York: Dutton, 1976); *What Now? The 1975 Dag Hammarskjöld Report* (Uppsala: Dag Hammarskjöld Foundation, 1975).

linked these conclusions to the ILO reports. Given the widespread calls for targeting on basic needs, he called for a 1976 ILO employment conference with the theme “Meeting Basic Needs.”¹⁰⁰

While government leaders in the UN in New York were arguing fruitlessly about international relations for a “New International Economic Order,” a consortium of nongovernmental study groups and international organizations met at the ILO in Geneva, Switzerland in June of 1976 to draft a declaration and program of action for meeting basic needs.¹⁰¹ The conference delegates began by stating their perception of their own historical context: past development strategies had failed to eradicate poverty, and left most developing countries with large proportions of their labor forces in rural areas without jobs. The problem of employment, as the participants saw it, was also the problem of poverty. Many of the poor in fact had jobs, but they still faced massive challenges. “Because of their poverty [the poor] suffer from a lack of basic needs like food, education and housing. Most of them work, so the ‘problem of employment’ is really one of a lack of basic needs.”¹⁰² The satiation of basic needs, the elimination of poverty, and the generation of employment for those without jobs were also seen as connected. The conference declaration stated: “enabling the poor to increase their income will provide them with the means to purchase essentials like food, clothing, and

¹⁰⁰ Richard Jolly, interviewed by the author, August 2009

¹⁰¹ Conference delegates included participants came from Argentina, Barbados, Canada, Hungary, Iran, Italy, Mexico, Morocco, the Netherlands and the United States and from the World Bank, ILO, OECD, and the United Nations. See Tripartite World Conference on Employment, Income Distribution, and Social Progress and the International Distribution of Labor, *Meeting Basic Needs: Strategies for Eradicating Mass Poverty and Unemployment: Conclusions of the World Employment Conference, 1976* (Geneva: International Labor Office, 1977)

¹⁰² “Basic Needs: A New Development Strategy,” 1

shelter. This in turn will generate employment.”¹⁰³ This argument was a close retelling of the conclusions of the ILO Kenya Report.

The conference declaration divided basic needs into two categories: minimum requirements for a normal family’s consumption, and essential services. The minimum requirements included: adequate food, shelter and clothing, as well as certain household equipment and furniture.” The essential services – “provided by and for the community at large” – included “safe drinking water, sanitation, public transport and health, [and] educational and cultural facilities.”¹⁰⁴ This formulation relied upon a proactive government that played a major role in creating employment, providing goods and services, redistributing income and power, and transforming social and political institutions. The logic of these conclusions was deceptively straightforward: the poor could become productive workers and contribute to development if they could escape the physical, social, and economic conditions which prevent them from development. The entire process did not need to change; the poor just needed to be included in the process to both benefit and contribute. Direct interventions into their lives would facilitate this process.

The sentiment was mixed about the ILO conference. On one hand, Robert McNamara echoed the call at the World Bank Board of Directors meeting in the Philippines in 1976 to treat “the most basic human needs of the absolute poor in both the poorest and the middle income countries.”¹⁰⁵ The Organization for Economic Co-

¹⁰³ Ibid.

¹⁰⁴ Ibid.

¹⁰⁵ McNamara and the World Bank, *The McNamara Years at the World Bank*, 359.

operation and Development (OECD) adopted the principles of Basic Needs in 1977, and the UN also hailed the treaty. However, members of the G77 arguing for the New International Economic Order saw it as welfare and a diversionary tactic away from the goals of equitable trade relations *between nations*. This latter, top-down approach was framed by country leaders as the best way to mitigate the problems of global socio-political risks. Despite this sentiment, the international organizations favored basic needs.

The conference report addressed many social interventions to improve basic needs: education housing, and employment. While all of these were longstanding topical interests in development, one relatively new framework of intervention in this literature was the health of populations. But in a holistic, bottom-up program for social change, “health” as a concept and intervention had many meanings. In the most easily recognizable and accessible way, the problem of poor health was a problem of inadequate healthcare provisions. Promotional literature for Basic Needs noted that “1,600 million people lead unhealthy lives and lack access to proper health care . . . some diseases like malaria of course need conventional health remedies. But the developing countries are chronically ill-equipped to provide them: a thousand new hospitals a day need to be built between now and 2000 A.D.” Moreover, geographic distribution of resources favored the urban elite in developing countries, for “health care is normally based in cities, and thus of little use to the rural poor.”¹⁰⁶ The change in thought on healthcare delivery in the developing world will be discussed in greater depth in the chapter on primary healthcare.

¹⁰⁶ “Basic Needs: A New Development Strategy,” 1.

In this literature, healthcare delivery usually introduced the topical discussion on health, but was quickly followed by longer analyses of social determinants of illness and disease. While there were long traditions of epidemiological research on the social determinants of health, health as a socioeconomic determinant of development had only begun to arise as a topic in development economics in the late 1960s.¹⁰⁷ Paul Streeten, a World Bank economist in the 1970s, framed interventions into the socioeconomic determinants of health in Basic Needs literature as priorities within programs for agriculture, housing, water supply and education.¹⁰⁸ He noted that these new policies drew upon contemporary literature in malnutrition, population control, and infectious disease treatment to find interdisciplinary ways of addressing the “health of the poorest.”¹⁰⁹ Mahbub ul-Haq, a senior economist at the World Bank under McNamara and major proponent of Basic Needs, argued that “curative medical services are likely to be ineffective if people are chronically malnourished, drink germ-infested water, have no sanitation facilities, and follow poor health practices in their personal lives.”¹¹⁰ Carl Taylor at the Johns Hopkins School of Public Health asserted that in such circumstances “it has become apparent that, where health conditions are worst, relatively simple and low-cost health programs can produce dramatic lessening of

¹⁰⁷ Davidson Gwatkin, “Health Inequalities and Health of the Poor: What do we know? What can we do?” *Bulletin of the World Health Organization* 78, no. 1 (2000): 4.

¹⁰⁸ Paul Streeten, “Basic Needs: Premises and Policies,” *Journal of Policy Modeling* 1, no. 1 (1979): 136-7

¹⁰⁹ Streeten, *First Things First*, 128-9.

¹¹⁰ The World Bank, *Poverty and Basic Needs* (Washington, D.C.: World Bank, 1980), 14.

debility and disability of the labor force. In these situations major increments in productivity are most readily seen.”¹¹¹

But the conceptual framework of Basic Needs wasn't simply looking at two-way relationships between health and development; these policies conceptually connected health, development, population and poverty together, making health both a means and objective of development. While the global problem of population control had initially caused doubts about the significance of health, the interest in addressing poverty and health reframed debate. In discussing Basic Needs literature, James P. Grant argued that “there is a major correlation between the poverty problem and the population explosion: that where there is extreme poverty, birth rates remain high, and that family planning programs while they may be necessary and be of great value, alone are not sufficient without effective address of poverty problems.”¹¹² Grant's comments highlight the underlying complexity that had been overlooked in assessing population growth. Decision about fertility were shaped by multifaceted socioeconomic conditions. Stemming the effects of poverty, especially those related to poor health, while providing efficient health services might change the balance of the relationship between fertility and mortality. The exploration of these new causal connections did not offer a quantifiable solution whereby a universalized balancing of all three factors would ensure equitable development and low population growth. However, they did recast debates about population control as a matter of equitable social development rather than simply the diffusion of fertility technologies. Such a framework at least suggested that

¹¹¹ Carl E. Taylor, and Marie-Francoise Hall, “Health, Population, and Economic Development,” *Science* 157, no. 3789 (August 11, 1967): 653.

¹¹² Streeten, *First Things First*, 129

all three – health, population control, and development could improve simultaneously.¹¹³

In the transformation of development thought in the 1970s, the Basic Human Needs Approach became a theoretical model to naturalize a link between poverty eradication, individual wellbeing, and development. Its ordering of the knowledge of development theory presented a way of explaining social change and modernization that could be applied to individuals rather than countries, and dismiss earlier development models. This model had several components. First, the experience of poverty and poor health became ahistorical, acultural global experiences. They defined and mutually were defined by linked, transnational norms of interconnecting minima of nutritional, demographic, and socioeconomic change. This made poverty and poor health central parts of the explanatory framework of development, rather than an unfortunate byproduct as seen in earlier models. Second, Basic Needs ordered socioeconomic determinants of health – and the influence of health on socioeconomic change – as a holistic foundational prerequisite to development. However, explaining socioeconomic change holistically implied that multiple interventions to the “web of causation” was sufficient for improvement rather than first knowing the all of the constituent elements. This “incompleteness” typical of holistic explanations would allow for additional influences – human rights, gender equality, environmental sustainability – to be added with little difficulty. Third, as was true of social medicine in the interwar period, the health and wellbeing of lower classes was justified as a security concern; in the 1970s,

¹¹³ Taylor and Hall, “Health, Population, and Economic Development,” 653-4.

this problem was global in nature, and thus directed as a response to calls for a New International Economic Order.

The only part missing from this framework was a way to measure and track the type of socioeconomic development that was now the focus of attention. The metric that came to be most closely associated with the Basic Human Needs approach grew out of the work of a small organization based in Washington, D.C. that had close ties with all of the major development agencies. The development of this new “yardstick” would both reflect and orient the aspirations of the broader Basic Needs approach.

Part V: “Measuring the Condition of the World’s Poor”¹¹⁴

The PQLI gives us a stereoscopic view – a way of looking behind the façade of the GNP numbers.

-James P. Grant, Statement before House Select Committee on Population¹¹⁵

The Overseas Development Council (ODC) was a Washington, D.C. based foreign policy think tank co-founded in 1969 by James P. Grant and Lester Brown. Grant was an unusual figure in the way that he perfectly represented how the concerns of international health and development were increasingly overlapping by the late 1970s. First, he literally grew up at the intersection of these two fields; Grant was born in 1922 in Beijing, China at the Peking Union Medical College (PUMC). He was the son of John B. Grant, a physician working at PUMC for the Rockefeller Foundation.

¹¹⁴ Morris D. Morris, *Measuring the Condition of the World’s Poor: The Physical Quality of Life Index* (New York: Pergamon Press, 1979).

¹¹⁵ James P. Grant, “Statement before the House Select Committee on Population,” April 20, 1978, UNARMS, CF/RA/BX/ED/DR/1984/T015/Z1022-1984-000073714: PQLI.

The elder Grant's research sought to develop a healthcare system in rural China that could provide a broad array of basic services for Chinese villagers. From time to time, the younger Grant studied his father's work during the 1930s. During the 1940s, he was an aide to General Stilwell in the China Theater during WWII, worked under General Marshall in 1946 to negotiate a treaty between the Chinese Nationalists and Communists in Beijing, and headed the UN Reconstruction and Recovery Administration in North China from 1946-1949. After attending Harvard Law School and practicing law in Washington DC for a few years, he spent the postwar decades working as Assistant Deputy Secretary of State for Near East and South Asian Affairs, and headed the USAID mission in Turkey to implement the Green Revolution agricultural reforms. When Nixon assumed the presidency, Grant "voluntarily" resigned his commission; he proceeded to found the ODC at the request of the World Bank's Eugene Black, the Rockefeller Foundation's David Rockefeller, and Harvard's economics professor Edward Mason, all three of whom were concerned that the foreign affairs discourse was too focused on military matters. The ODC was a key institution in the fields of international health and international development, hosting seminars, publishing circulars, and working with leading journals to provide fora for discussion on pressing issues in the field; it was a back-end way for Washington officials to address critical issues in foreign aid without needing to wrestle with UN protocols. Grant's position at the helm of this influential organization enabled him to sit on boards of foundations like Rockefeller and Ford, and travel easily within the elite, close knit Western circles of international health and development that spanned the UN, the World Bank, WHO, and other intergovernmental organizations.

The work of Grant and the ODC touched upon, and shaped, many key foreign aid and development debates in the 1970s. The topics ranged from the US Foreign Assistance Acts to the impact of fertilizer distribution in relieving the 1974 African famines.¹¹⁶ However, one of the most prominent and controversial measures proposed by the ODC in 1976 was an alternate “yardstick for development” called the Physical Quality of Life Index (PQLI). The new theories on development and the Basic Needs Approach criticized the traditional devotion to the metric of GNP; however, they did not offer a replacement. The construction of the PQLI was an attempt to fill the gap. This metric was styled as a composite of social indicators that showed individual well-being and the distribution of the most elemental human physical needs by combining measurements of life expectancy, infant mortality, and literacy. Though it aspired to serve as an alternate measurement of a development focused on meeting Basic Needs, it failed to become adopted. The concept of Quality of Life came to function not as a well-defined tool for generating knowledge about developing countries, but rather as a disciplining framework for thinking about and packaging together the idea of health equity. The Physical Quality of Life Index blackboxed normative goals of promoting equity, well-being, and health, but served as a conceptual device to advance a common ideological agenda across disciplinary and institutional boundaries, bringing together development economists and public health specialists.

The idea of creating quality of life indices to track broad, socioeconomic development arose from two trends – one within domestic US politics, and the other

¹¹⁶ Grant, “The End of Trickle Down?”; Grant, “Food, Fertilizer, and the New Global Politics of Resource Scarcity;” Grant, “The Mid-1970’s: Global Crisis and Emerging Historical Discontinuities;” James P. Grant, “Basic Needs, Food, and the World’s Poorest Billion - What Future Prospects?” October 1977, UN/UNICEF Archives, CF/RA/BX/ED/DR/1994/T045/ G0079-1994-539150673.

within the UN system. In the United States in the mid 1960s, the improvement of life quality was a central theme of Lyndon Johnson's vision of the "Great Society." The goals of "quality, not quantity" defined the administration's program for social improvement.¹¹⁷ With generous federal support, new sociological techniques arose dedicated to collecting indicators of the non-economic condition of the American people. From studies of race to investigations of income, sociologists employed these practices to generate an image of the country which in form may have looked like economic indicators, but in content was radically different. With knowledge from new "social indicators," policies could be developed to address specific social problems.¹¹⁸ But if policy was to be built around making people's lives better, it was necessary to determine what exactly "better" was. Measures of the externally evident aspects of an individual's life could not provide an account of how such a person might define happiness, for example; in compliment, studies of subjective well-being Quality of Life (QOL) research was born.¹¹⁹

Within the UN, it became socially and politically acceptable to measure social change in the late 1960s. In the postwar decades, the US – the largest funder of the UN – remained skeptical of the need or desirability of any social measurements; data that prioritized social rights over economic growth could reflect communist agendas.¹²⁰

¹¹⁷ Lyndon B. Johnson, "Text of the President's Economic Report Outlining Nation's Gains and Problems," *New York Times*, January 17 1969, 14.

¹¹⁸ Mancur Olson, *The Public Interest*, no. 15 (1969).

¹¹⁹ United States Department of Health, Education and Welfare, *Toward a Social Report* (Ann Arbor: University of Michigan Press, 1970): 2.

¹²⁰ Michael Ward, *Quantifying the World: UN Ideas and Statistics* (Bloomington: Indiana University Press, 2004), 141-3.

Though the technical branches like the WHO and FAO produced more specific metrics on morbidity or nutrient content of food, the UN Statistical Office (UNSO) largely opposed social statistics outside of demography. Additionally, at the beginning of decolonization, the UN Secretariat thought that it shouldn't make "social assessments" of member countries; such judgments would imply a global ranking of development and critique internal sovereign politics.

These sentiments changed for several political and technical reasons. First, the failures of development of the 1960s meant that the developing world would not simply be measured by its replication of the West's social and economic patterns; social change, especially as it was articulated in the 1970s development thought, would need to be more carefully measured on the ground. Second, many newly decolonized governments adopted the System of National Accounts framework for analyzing the total economic activity of the nation; this methodology required a wide variety of detailed statistical data on household and corporate activity.¹²¹ Many of these new nations in reality, though, did not have the institutional capacity to process this information, and asked the UNSO to help.¹²² Third, many non-governmental organizations and outside donors became concerned with tracking impact of their investments, and demanded, and sometimes supplied, more detailed social statistics on socioeconomic growth. Together, these factors produce a culture that supported a rationalized tracking of social changes across a society.

¹²¹ System of national accounts is a set of accounting techniques to broadly measure all activities involved in production, income, and expenditure for a country.

¹²² Ward, *Quantifying the World*, 146.

Noting the usefulness of the quality of life indices used domestically within the US, Grant and M.D. Morris, an economist at the ODC, proposed a “Physical Quality of Life Index” to measure human well-being, and the achievement of conditions that would “allow for longer life expectancy, reduced illness, and greater opportunity” in the developing world (i.e., Basic Needs).¹²³ To quantify this spread of fulfilling basic human achievements, they proposed compiling a metric that, in one numerical value, would show national averages for life expectancy at birth, infant mortality, and literacy for a country.¹²⁴

$$PQLI = \frac{(\text{Average life expectancy at birth} \times \text{Infant mortality} \times \text{Literacy})}{3}$$

Morris, who wrote the initial proposals and subsequent book about the PQLI, noted that it was a “physical” quality of life index in that it was not focused on psychological interpretations of happiness, in part because in the end “economic development may not really increase human happiness.”¹²⁵ In the initial internal memo

¹²³ Morris D Morris, “A Physical Quality of Life Index” (Washington, D C Overseas Development Council, December 1976), pg 1, UNARMS, CF/RA/BX/ED/DR/1984/T015/Z1022-1984-000073714 PQLI

¹²⁴ The value for the literacy variable was simply the value set between zero and one hundred (i.e., 67.5 for 67.5% of a country that was literate). For life expectancy and infant mortality, the highest values in the world in 1975 were assigned the value of 100 and the worst figures in 1950 assigned value of 1 (e.g., for life expectancy, the highest figure in 1975 (75 years for Norway) was scaled at 100 and the lowest in 1950 (28 years for Guinea-Bissau) is scaled to 1). Each variable was given equal weight. Grant and Morris argued that countries would be ranked according to their PQLI value, with the higher the better. A *New York Times* article on the PQLI highlighted the rankings in comparison to GNP, while Western developed countries like the US and the Netherlands received high marks, two surprises were Cuba at 88 and Sri Lanka at 83. Such results overturned traditional rankings of Western development, and suggested that physical wellbeing might not be tied to economic prosperity. See Anne Crittenden, “A New Index on Quality of Life,” *New York Times*, March 13, 1977.

¹²⁵ Morris D Morris, “A Physical Quality of Life Index,” 11

proposing the PQLI, Morris argued that the ODC was focusing on outputs that could be manifest in on the ground realities – “visible signs of human development,” which he stressed as a “broader spread of health and socioeconomic equity.”¹²⁶ Grant and Morris rejected using other indicators for the following reasons: the death rate was too complicated to compare across populations of various sizes; for morbidity, it was too hard to define illness; birth rate initially seemed compelling, but despite the contemporary focus on fertility, they believed it was not indicative of well-being.¹²⁷ The inclusion of literacy was a pragmatic choice outside of a narrow definition of physical well-being, included out of interest in how “poor groups . . . will share in the possibilities and advantages of development activity,” and because measurements of school attendance did not say anything definite about results.¹²⁸ But the use of infant mortality and life expectancy in particular stemmed from an assumption of achieving a holistic improvement in social wellbeing through rationalistic quantified measurement. That is, these two independent measurements would sum up the effects of nutrition, public health, income, and the environment.

In 1977 Grant publicized the metric widely inside and outside health and development circles; articles on the PQLI appeared in the *New York Times*, the *Washington Post*, the *Times of London*, and all of the major journals in the field. Grant even testified before Congress on the usefulness of the metric, and gave presentations on it to USAID and the World Bank. It was praised widely: John Knowles, then head

¹²⁶ Ibid , 3

¹²⁷ Ibid , 10-11.

¹²⁸ Ibid , 10

of the Rockefeller Foundation, attested that it “looked to results of meeting the needs and desires of change,” and “reminds us in a simple fashion of the interconnectedness of development and health outcomes.”¹²⁹ USAID and the World Bank seriously considered it as a possible tool that could help in assessing social indicators of growth. In Congress, Donald Fraiser of Minnesota, one of the original creators of the “New Directions” foreign aid program, connected it to larger Cold War politics, and noted that it is not only about health but also “human rights . . . and could lead to new paths in foreign aid.”¹³⁰ Grant and Morris expressed interest in the PQLI not only being used to show “clear results,” but also promote equity through human well-being. These concerns, alongside the public connections to human rights, underpinned causal linkages that grouped social well-being with individual prosperity. However, in the proposals for the PQLI, Grant stressed that he did not want it to be ethnocentric, so as to allow for identities and development to happen in a greater variety of fashions.¹³¹

Nonetheless, it was extensively criticized as well by those working in international health and development then.¹³² The methodological flaws of the PQLI were glaring: infant mortality and life expectancy were not statistically independent; all three variables were equally weighted and selected on no theoretical basis; and there were no explicit targets. (Grant would counter that progress in health and the physical

¹²⁹ John Knowles, “Thoughts on Health, Population, and Development,” 10

¹³⁰ Representative Donald Fraser (MN), “Measuring Basic Human Needs: A Physical Quality of Life Index,” *Congressional Record* (March 21, 1977), p E1616.

¹³¹ Morris D. Morris, “A Physical Quality of Life Index,” 11.

¹³² Mahbub ul Haq, *Reflections on Human Development: How the Focus of Development Economics Shifted from National Income Accounting to People-centered Policies* (New York: Oxford University Press, 1995).

quality of life should be “realistic.”)¹³³ Charts ranking PQLI went against established Western ideas of the political order of nations, but more broadly, they really did not show any major new insights into the socioeconomic differences between peoples. People also complained that it was an extremely simplistic way of understanding socioeconomic development. However, focusing on these critiques misses sight of the larger historical moment for international health, and the specific values and ideas about health, development, and their interrelationship in the PQLI.

One common critique from 1970s development focused on the inadequacy of metrics: experts believed that the statistical indicators they had did not capture change that mattered or on the ground inequalities. Grant’s fashioning of the PQLI responded to two indicators commonly criticized at the time: GNP and caloric intake. GNP continued to be critiqued for its focus on economic production over social good.¹³⁴ And though discussion of calories and nutrition were especially important in international health in the wake of the international food crises of the early 1970s, caloric intake, it was argued, did not correspond to distribution of food, physical health, and physical performance. Moreover, baseline caloric intake levels of 2000 calories per day presented a perspective of ‘healthy if above, sick if below.’ By this logic, both GNP and calories were inputs that did not capture a more holistic picture of health. And as international health practitioners began to focus on community healthcare and Basic Needs, new techniques for implementation of the long-term on the ground programs

¹³³ Morris, M.D., *ODC Research Project: Development of a Physical Quality of Life Index* (Washington, D.C.: Overseas Development Council, December 1976), pg. 13, UNARMS, CF/RA/BX/ED/DR/1984/T015/Z1022-1984-000073714: PQLI.

¹³⁴ See especially Gunnar Myrdal, *Against the Stream: Critical Essays in Economics* (New York: Pantheon Books, 1973).

necessitated new measures of evaluation. The ODC's PQLI valued what it perceived to be quantitatively rigorous yet holistic social indicators to align with the larger focus on correcting underlying social factors of growth, which for this time was considered more representative of development.

The metric of quality of life in international health that was pushed by Grant, Morris, and the ODC was intended to generate new knowledge and provide new insights for social improvement through the development and link together the work of health and development specialists. However, as many complained at the time, the PQLI rankings did not say much that was new or interesting, and could not be readily appropriated into development policy. A central tension in its reductionistic design was that it obscured and "blackboxed" key concerns for social welfare. Nonetheless, its popularity as a new disciplinary construct was more evident as part of broader trends where developmental economists and international health specialists shared common understandings about health, poverty, and development.

Conclusion

In December of 1978, John Knowles, President of the Rockefeller Foundation, took a broad survey of the state of international health in a seventeen page internal memo called, "Thoughts on Health, Population, and Development."¹³⁵ The personal reflection was framed as an assessment of why, over the course of the decade, international health gradually moved from a rather marginal position in development circles to a central role in international foreign policy.

¹³⁵ Knowles, John, "Thoughts on Health, Population, and Development," RFA, RF, Group 3.2, Series 900, Box 58, Folder 317

At the end of the 1960s, according to Knowles, international health was marginalized politically for several reasons. First, public health sanitation measures were too successful and caused the massive population boom. Second, he believed that political leaders found more prestige in importing high-end clinical technology for urban hospitals rather than designing rural health programs for the masses. These circumstances contributed to the public sector's inability to compete with private sector medicine, and the lack of infrastructure for health education. And even those working in international health were unable to "expand beyond the anecdotal, rhetorical, or emotional pleas based on 'my successful experience in the field.'" Knowles also bemoaned the failure of malaria eradication programs at the end of the 1960s, which cast serious doubt on the viability of international health programming. Outside of the field, Knowles noted that the dominant development view focused on economic growth that emphasized free markets and private enterprise but overlooked state-based social services.¹³⁶

Despite these numerous critiques, broader changes in development thought and new programs in international health repositioned the field politically. According to Knowles, the first change was a replacement of the "growth with trickle down" pattern with "growth from the bottom up," where people, not countries, were central to the development process. Second was a recognition of the interconnectedness of social factors like health, population, nutrition, education, housing, and employment in the process of economic development. Third was a focus on the alleviation of poverty and the promotion of equitable care. Fourth was the promotion of new metrics of social

¹³⁶ Ibid., 5.

change like the PQLI.¹³⁷ These ideas were strongly debated by the highest leaders in development planning, as evidenced by discussions at the World Bank, the ILO, and the US Congress of the negative effects of development on health and the significance of Basic Needs policies.

Knowles' meditation was a detailed survey of changes in the field in the 1970s. However, it is equally important as a way of understanding what international health specialists considered important new ideas in their discipline. The changes highlighted – the Basic Needs approach and the links between health, population and development – had roots in new ideas, programs, and institutional orientations in development. Economic planners fundamentally shaped the way international health specialists thought about the role and significance of socioeconomic determinants of poor health and disease.

John Knowles was insightful for his clarity of historical analysis, but he was not the first and only international health specialist to take note and adopt the new ideas in development. As early as 1971, the WHO sent Socrates Litsios to observe the ILO employment study in Columbia to learn their approach to conceptualizing the social links of health and poverty.¹³⁸ The WHO also issued technical papers in the early 1970s supporting this new development framework and links between health and development.¹³⁹ One of the key reports for precipitating a move to primary healthcare in 1975 at the WHO was framed by new development thought and was titled, “Alternative

¹³⁷ *Ibid.*, 7-10.

¹³⁸ Socrates Litsios, interviewed by the author, January 2010.

¹³⁹ World Health Organization, “The Contribution of Health Programmes to Socio-economic Development,” *Public Health Papers* 49 (1973): 11-26.

Approaches to Meeting Basic Needs.”¹⁴⁰ Carl Taylor, the chairman of the Division of International Health at the Johns Hopkins School of Hygiene and Public Health, wrote frequently on the connections between health, population, and poverty.¹⁴¹ The Institute of Medicine’s “Health in a World of Mutual Dependency,” a 1978 report for the Senate Committee on International Health on US involvement in the field, supported Basic Needs, poverty eradication, and malnutrition interventions as key underpinnings of new policies needed to address the global burden of disease for the coming decade.¹⁴²

However, the clearest articulation of this new scenario was in the opening paragraph of the Summary of the WHO’s Sixth Report on the World Health Situation, 1973-1977:

Perhaps nothing arisen during the period covered by the Sixth Report of the WHO more significant than the explicit recognition of the view that health development is a reflection of conscious political, social, and economic policy and planning, and not merely an outcome (or by-product) of technology . . . It is important to point out that the changing definition of development itself – that is, as something more than the mere growth of the national product – lends critical support to the view that an increase in technological and economic capacity will not automatically produce health.¹⁴³

By the end of the 1970s, many leading figures in international health spoke broadly about the connections between health, poverty, and development. In

¹⁴⁰ *Alternative Approaches to Meeting Basic Health Needs in Developing Countries*, A Joint WHO/UNICEF Study (Geneva: World Health Organization, 1975).

¹⁴¹ See especially: Carl E. Taylor, Jeanne S. Newman, and Narindar U. Kelly, “Interactions between Health and Population,” *Studies in Family Planning* 7, no. 4 (April 1, 1976): 94-100; Carl E. Taylor, “Economic Triage of the Poor and Population Control,” *American Journal of Public Health* 67, no. 7 (July 1977): 660-3; Carl E. Taylor, “Changing Patterns in International Health,” *American Journal of Public Health* 69, no. 8 (August 1979): 803-808.

¹⁴² *Health in a World of Mutual Dependency: International Health Research: Review and Recommendations for Strengthening US’ Involvement* (Washington, D.C.: Institutes of Medicine, National Academies of Science, May 23, 1977), UNARMS, CF/RA/BX/ED/DR/1984/T015/ Z1021-1984-000073713: Health.

¹⁴³ World Health Organization, *Sixth Report on the World Health Situation, 1973- 1977* (Geneva: World Health Organizations, 1980), 1.

assembling a bibliography of international health articles of the past decade, Francis Brewis of the IDS noted that “these are not just interrelationships between health and development, health is part of development – improving health is part of economic development, and better health is an aspect of a higher standard of living. Myrdal’s *Asian Drama* [mentioned earlier] has a good chapter on health, which emphasizes the relations between health and other development goals and the importance of nutrition, environment, living standards, hygiene and sanitation to health.”¹⁴⁴ Though the specifics of the connections were not easily definable, the two fields had a common way of identifying problems, relating concepts, and proposing solutions. These frameworks were shaped by specific historical and political challenges in the late 1960s and early 1970s.

Basic Human Needs came to define development in the 1970s, but faded in popularity by the mid-1980s. World Bank officials in particular wanted to see more rigorous cost-benefit analyses. They also worried that too much investment in Basic Needs would impede other investments for economic growth.¹⁴⁵ Other organizations found that it wasn’t specific enough in its suggestions for interventions, and gravitated toward programs for health care delivery and childhood survival. In this way, Basic Needs was a useful conceptual tool for articulating and ordering new ideas about the new sorts of problems, solutions, and metrics significant to the sorts of health and development projects central to the new style of late Cold War multilateral aid.

¹⁴⁴ Francis Brewis, “Bibliography on Health Planning in Developing Countries,” 8.

¹⁴⁵ Howard Stein, *Beyond the World Bank Agenda: An Institutional Approach to Development* (Chicago: University of Chicago Press, 2008), 16.

But Basic Needs was also significant as a political response: it was able to give Western aid organizations a new way of engaging with developing countries without fundamentally changing the dynamic of international relations. The US and UN organizations could try to rectify the negative image of Western interventions created in Vietnam and find a different approach to planned social change without capitulating to the new political demands for a “New International Order.” This tension of the scope, meaning, and goals of health and development projects was nowhere more evident than in the topic of the next chapter: primary health care.

Chapter 2

Diagramming the Revolution: The Rise of Health Systems Analysis and Primary Health Care in International Health

Introduction: “Health for All”

Since the 1970s, one of the most identifiable elements of the skyline of Nairobi, Kenya, has been the mammoth Kenyatta National Hospital. Fortress-like in design and slightly off-white in color, it is a modern ziggurat for the practice of medicine. The hospital began as the forty bed Native Civil Hospital in 1901, and was renamed the King George VI Hospital in 1952; in the 1960s it was renamed again as the Kenyatta National Hospital to honor Jomo Kenyatta, the first leader of the newly independent nation. Until 1967 Kenya lacked its own medical school, and all physicians in East Africa – Kenya, Tanzania, and Uganda – trained at the Makerere University School of Medicine in Kampala.¹ In the late 1960s the decision to build a medical school in Nairobi affected the Kenyatta National Hospital, as political and medical leaders saw this hospital as a place to train the new, native physicians. To accommodate this increase in future doctors, a £5 million investment in 1968 expanded the hospital from 700 to 1500 beds. The compound further expanded to 2000 beds in 1982, producing the sprawling complex seen today.²

Within Kenya, officials viewed this hospital expansion as a positive response to an increase in the local number of medical professionals and the construction of a new

¹ John Iliffe, *East African Doctors* (New York: Cambridge University Press, 1998), 174

² *Ibid*, 175. Also, by comparison, in 2010 Massachusetts General Hospital in Boston has approximately 900 beds. The hospital containing the most beds in the US is New York-Presbyterian Hospital/Weill Cornell Medical Center with just over 2200 beds, and it is one of four US hospitals with more than 1500 beds. “Centers for Medicaid and Medicare Services – Hospital Center,” <https://www.cms.gov/center/hospital.asp>

educational institution. However, internationally, Kenyatta National Hospital was criticized extensively, and became a symbol for all that was wrong with the health sector in developing countries. For many in international health, the construction of “disease palaces for doctors” was an old colonial practice that channeled government money to elite, urban, technologically-based curative medicine.³ These critics also argued that healthcare policy in developing countries focused on tertiary hospital based-care ignored a wider burden of disease, excluded a majority of urban and rural populations, and left little government money for other curative and preventative resources.⁴ John Bryant of the Rockefeller Foundation attacked the trend of constructing imposing and capital-intensive hospitals by noting that “large numbers of the world’s people, perhaps more than half, have no access to health care at all, and for many of the rest the care they receive does not answer the problems they have.”⁵ The pattern of replicating Western style care, especially by extending colonial medical services, was seen as ill-suited for the needs of geographically expansive, rural populations of developing countries.⁶

This line of reasoning contributed to a growing consensus in international health in the 1970s regarding the strategies for healthcare delivery in developing countries.

According to many international health practitioners, the best way to equitably attend to

³ P H Rees et al , “Medical Care in a Tropical National Reference and Teaching Hospital Outline Study of Cost-Effectiveness,” *British Medical Journal* 2, no 6130 (July 8, 1978) 102

⁴ Even though Nairobi urbanized substantially beginning in the 1970s, the city population only represented about 5% of the total population of Kenya during that decade *The World Factbook 2009*, (Washington, D C Central Intelligence Agency, 2009), <https://www.cia.gov/library/publications/the-world-factbook/index.html>

⁵ John H Bryant, *Health and the Developing World* (Ithaca Cornell University Press, 1969), ix

⁶ Halfdan Mahler, “Health for All by the Year 2000,” *WHO Chronicle* 29 (1975) 458

the health of as many people as possible, develop national healthcare services, and address the interconnected burden of malnutrition, population growth, and infection was through community health strategies called “primary health care.”⁷ Though there were many definitions of the term, health officials most commonly described primary health care as low-cost curative and preventative services provided by minimally trained community health workers. WHO leaders framed this as a way to ensure universal access to basic care, equitable distribution of medical resources, and local participation in health care delivery.

The principles of primary health care were formally presented to the world by WHO and UNICEF at the International Conference on Primary Health Care, held in Alma Ata, USSR, in September, 1978. Alongside the global eradication of smallpox, this meeting and its radical calls for achieving “Health for All by the Year 2000” were arguably the most public and visible elements of international health since the founding of WHO in 1948.⁸ The conference leaders, especially the Director-General of WHO, Halfdan Mahler, urged national leaders and NGOs to develop services that would allow all “peoples to achieve a level of health to enable them to lead productive lives.”⁹ The principles of primary health care were enumerated in the ten point Declaration of Alma Ata, a document that also proclaimed health as a human right and called for global lists

⁷ The primary health care that developed in international health in the 1970s is different than “primary care.” Primary care refers to the sort of local care that physicians in family practice or general practitioners may provide. Primary health care, as will be discussed, refers to a specific way of ordering auxiliary health workers in rural settings in developing countries.

⁸ The endorsement of PHC by WHO and UNICEF made it a predominant way of talking about healthcare delivery in international health in the 1970s. Alma-Ata was discussed in the popular press at the time and continues to be highlighted historically. See “[Untitled],” *New York Times*, September 9, 1978, 21.

⁹ “The Alma Ata Conference on Primary Health Care,” *WHO Chronicle* 32 (1978) 410-11.

of essential medicines.¹⁰ At the time, this announcement implied radical social and political transformations for the sake of global access to basic care. In the depths of the Cold War, the Declaration of Alma Ata also had deep political allusions, and the implications of a UN message crafted in Soviet territory focusing on government-based welfare provisioning was not lost on the West.

The Alma Ata Conference on Primary Health Care was not a working conference. It was a well orchestrated, international publicity event showcasing policies that had been debated within WHO throughout the 1970s. The Declaration was crafted to have a feel of consensus and certitude so as to rally global political will across East-West divisions. However, these statements only referred to the meanings and rationale for primary health care. At the time of the conference, many of the organizers admitted that considerable research was still needed on how to implement primary health care around the world; Alma Ata was only a starting point. The WHO background paper that informed the official declaration and internal discussions about primary health care noted that “there are big gaps in knowledge, experience, and methods which will have to be filled.”¹¹

Given the overt political implications of primary health care, it might be surprising to discover the highly technical conceptual framework that organized the language of healthcare delivery, the critiques of transplanting Western hospitals, and even the very principles of primary health care. In the background report, Dr. Kenneth

¹⁰ World Health Organization and the United Nations Children’s Fund, *Primary Health Care: Report of the International Conference on Primary Health Care, Alma-Ata, USSR, 6–12 September, 1978* (Geneva, World Health Organization, 1978).

¹¹ Kenneth W. Newell, “Second Draft of the Joint WHO/UNICEF Report for the International Conference on Primary Health Care: Alma Ata, September 1978,” September 28, 1977, pgs. 47-8, WHOA, P21/87/5, jacket 3.

W. Newell, outgoing Director of the Division for the Strengthening of Health Services, argued that primary health care would be effective and socially transformative if the policies for implementation included “standardized measurement methods distinguishing between input, output, and outcome, . . . operational research for specific management issues with health administrators,” and systems analysis assessments of “large scale programmes with special emphasis on coverage of people, utilisation of facilities, and quality of care.”¹² This language and systematic methodology were new for WHO, and they were consciously adapted from the computer based methodologies of cybernetics and operations management that were developed by US defense sector in World War II and the postwar decades.

Although the Alma Ata Declaration on Primary Health Care was a pivotal moment in the history of international health, its significance in establishing a rational analytical framework for health care delivery has been completely overlooked. Since its promulgation, the historiographic invocations of primary health care have focused on only a few themes. One scholar has surveyed the deep roots of primary health care in the community health programs of nineteenth and twentieth century medical missionaries.¹³ His accounts have focused on understanding how and why missionary traditions promoted an understanding of care that accounted for broader social

¹² Ibid., 48-9.

¹³ See especially: 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 (November 2004): 1884-1893. Socrates Litsios, “Primary Health Care: Not the Best of Beginnings?” (Lecture at WHO Global Health Histories Seminar, February 19, 2007), www.who.int/entity/global_health_histories/seminars/paper06.pdf; Socrates Litsios, “The Long and Difficult Road to Alma Ata: A Personal Reflection,” *International Journal of Health Services* 32, no. 4 (2002): 709–732; “Consensus During the Cold War: Back to Alma Ata,” *Bulletin of the World Health Organization* 86, no. 10 (October 2008): 745-6.

determinants. Another group of historians have examined how the support for primary health care after Alma Ata fractured in the 1980s as competing organizations in the field pushed alternate visions of healthcare delivery.¹⁴ These accounts have focused on how elite politics in international health contributed to the unraveling of political consensus behind Alma Ata. Both of these histories have been important in evaluating key meanings and legacies of primary health care.¹⁵ However, both historiographic trends have overlooked one of the most lasting influences of primary health care in global health: the unexpected popularization of military-inspired, social science-based planning techniques that ordered and validated the expectations, methods, and goals of international healthcare delivery since the 1970s. This chapter will explore the rise of health systems analysis at WHO, how this technical framework defined the scope of primary health care, and how this way of understanding healthcare delivery both shaped

¹⁴ Though the Declaration of Alma Ata was broadly celebrated as a visionary document articulating a clear set of values, admirable goals, and a long term vision, many in international health found it difficult to implement in the near term or at all. The Rockefeller Foundation and UNICEF came to support a specialized form of primary health care (called Specialized Primary Health Care) SPHC focused on delivering practical, specific health interventions, especially immunizations and oral-rehydration tablets, aimed to stem the most easily correctable burdens of disease. Those at WHO who continued to adhere to the original vision of Alma Ata framed their version of primary health care as Comprehensive Primary Health Care. CPHC focused on the concurrent development of affordable, all-inclusive, basic health systems. See especially Marcos Cueto, "The Origins of Primary Health Care and Selective Primary Health Care," *American Journal of Public Health* 94, no. 11 (November 2004): 1864-1874; John J. Hall and Richard Taylor, "Health for All Beyond 2000: The Demise of the Alma-Ata Declaration and Primary Health Care in Developing Countries," *Medical Journal of Australia* 178 (January 6, 2003): 17-20; Caroline Thomas and Martin Weber, "The Politics of Global Health Governance: Whatever Happened to 'Health for All by the Year 2000'?" *Global Governance* 10, no. 2 (April 2004): 187-205; Dimitry Venedictov, "Alma Ata & After," *World Health Forum* 19 (1998): 79-90.

¹⁵ One could argue that the direction of these historiographic debates reflected contemporaneous concerns in global health: debates over market versus government-provided care, the significance of disease based interventions vis-a-vis AIDS, the continued influence of colonial and (late) postcolonial influences after the Cold War, the continued influence in global health of non-establishment actors outside of the UN/nation-state systems, and the place of biomedical interventions in increasingly technologically-based care.

and reflected the internal reorganization of WHO and broader changes in international politics.

The origins of this previously untold story lie in an earlier decade, the 1960s. For much of the postwar era, the central project of WHO was the Malaria Eradication Program. However, even before it was terminated in 1968 due to a lack of progress in curbing disease, senior directors at WHO were searching for new ways to simultaneously expand international health infrastructure and address the changing global prevalence of disease. An optimism in reductionist scientific methods led them to believe that increasingly rigorous quantitative tools would help improve the efficiency of eradication interventions and mitigate the risk of what were seen as ever more complex biological and social hazards. With these goals in mind, WHO Director-General Marcolino Candau became interested in 1965 in the popularization of new, analytically sophisticated practices like operations research and systems analysis in the American corporate and military sectors. These tools promoted a rigorous and methodical evaluation of organizational administration, operational efficiency, and the quantitative impact of programming. Candau pushed for their appropriation at WHO, at which point they were applied to numerous programs, including health care delivery. The use of cybernetically based practices fostered new ideas of healthcare as a “system” that could be abstractly planned, managed, and evaluated. Such control, it was imagined, would allow more efficient – and thereby effective – care and prevention of disease burdens.

But “health systems analysis,” as it came to be called, wasn’t a natural expression of an objective, rational ordering of healthcare delivery.¹⁶ Nor did it exactly replicate the original high-modernist hegemonic style of “command-and-control” military systems analysis seen in virtual war games or planning for the Vietnam War.¹⁷ Rather, this chapter will show that it reflected a mixture of social science values, institutional priorities of WHO, and political concerns in international health in the 1970s. At a time when the standard approach of exporting Western-style hospital-based care models came under criticism in international health, the methodology of health systems analysis provided a policy solution that justified such critiques and evaluated local needs in the developing world based on context-specific social determinants, health outcomes, and the burden of disease. In fact, as will be shown, health systems analysis, despite its origins in computer based cybernetics, complimented the worldview of the other contemporaneous influence on primary health care: a style of community health care popularized by medical missionaries and socialist countries. The high-tech planning and low-tech participation responded to starkly different perspectives. However, the worldviews of reductionist planning and evangelization were able to meet in the common of objective of providing health care attendant to the diverse social

¹⁶ Throughout the 1960s and 1970s, numerous terms were used to describe the application of systems analysis thinking to health care delivery. These terms included health systems analysis, the analysis of health systems, project health systems analysis, and systems analysis for healthcare delivery. In this chapter, “health systems analysis” will be used to represent all of these variants, which largely had the same meaning. Where systems terms are used that have different definitions, those definitions will be explained.

¹⁷ For discussions of high modernist planning, see James C. Scott, *Seeing Like A State: How Certain Schemes to Improve the Human Condition Have Failed* (New Haven: Yale University Press, 1998), and Nils Gilman, *Mandarins of the Future: Modernization Theory in Cold War America* (Baltimore: Johns Hopkins University Press, 2003). For discussions of systems thinking underpinning wargame strategy and military planning, see Paul N. Edwards, *The Closed World: Computers and the Politics of Discourse in Cold War America* (Cambridge: MIT Press, 1996). Philip Mirowski, *Machine Dreams: Economics Becomes a Cyborg Science* (Cambridge: Cambridge University Press, 2002).

realities of local context. Both methodologies also came to undermine the traditional primacy of physicians in medical care by recommending minimally trained community health workers to staff local primary care clinics. For the abstract methods of health systems analysis, community volunteers functioned as a more efficient use of manpower for care that only required basic skills. Postwar missionary medicine, on the other hand, came to view community health workers as an effective and efficient use of local resources and it as a method of local empowerment. When the WHO Executive Board embraced primary health care in 1972, they combined of health systems analysis and missionary medicine to develop as a central policy for WHO in the 1970s.

This chapter will explore the values, methodologies, and expectations of health systems analysis, as well as its popularization in primary health care, through the rise of two departments at WHO explicitly created to promote this analytical framework: the Division of Research in Epidemiology and Communications Science (RECS), and the Division of the Strengthening of Health Services (SHS). Many of the physicians, epidemiologists, mathematicians, and computer scientists who staffed these two interdisciplinary departments went on to manage the planning of primary health care policy in the lead up to Alma Ata. Dr. Kenneth Newell, in particular, was a central figure at every step. His ideas shaped much of the early frameworks of health systems analysis and primary health care.

The appropriation of abstract planning and problem solving techniques was not simply a story of WHO trying a new management fad. Rather, the development of health systems analysis became part of the response to the broader changes in international health in the 1960s and 1970s. Cybernetic tools shaped the very

expectations and criteria for success in international health care delivery. In fact, primary health care only made sense within a systems worldview. Though the rhetoric of Alma Ata framed primary health care in a politicized language of social justice, this chapter will show that questions of equity in primary health care became questions about managing complexity and the sociopolitical changes that characterized the 1970s. This worldview shaped WHO as well: the institutionalization of systems analysis, the creation of RECS and SHS, and the rise of primary health care all reflected a broader change in how WHO saw itself and understood the meaning of its own technocratic interventions for developing countries.

The first part of this chapter explores how and why WHO officials in the mid-1960s decided to import military planning techniques like systems analysis and operations research; in looking at this process, this section also examines what these tools meant and how they were institutionalized with the creation of the Division of Research in Epidemiology and Communications Science. The second part explores how RECS came to focus on healthcare delivery, and how its approach compared with the longstanding 20th century traditions of providing basic healthcare services in European colonies and newly decolonized nations. In making this comparison, this section also examines the values, methods, and expectations of health systems analysis in WHO, and how this methodology would shape the evolution of RECS and its eventual inclusion in another division focused on healthcare delivery, the Division of Strengthening Health Services. The third section examines SHS and its health systems analysis tools, and places them in the broader context of WHO at the time. They are analyzed in light of the new interest in the early 1970s in community-based care and

what would become primary health care. The fourth section details the way health systems analysis and primary health care influenced each other, and how both changed in content and meaning in the lead-up to Alma Ata. The chapter concludes by examining legacy of health systems analysis at Alma Ata and beyond.

Part I: “Research Models”

Regardless of what you hear in the corridors, regardless of what some you have been saying, we do not have on the staff of this organization people with mathematical training able to give us anything like the sound foundation in research work that we need in WHO. And when we start talking about computers, I feel myself unable to take responsibility unless I have necessary staff to guide me.

-WHO Director-General Marcolino Candau, Report to the Executive Board on the Proposed Programme and Budget Estimate for 1967¹⁸

With little warning, WHO found itself at a crossroads in 1965. Though its first seventeen years had been characterized by the belief that the improvement of health could be achieved through technologically-based disease eradication, this postwar optimism began to fade by the mid-1960s. Two events within the organization made WHO leaders concerned that they would need to re-evaluate some of their operations. First, the Malaria Eradication Program – ostensibly the central program of the early WHO – lost a major source of operational funding. The Malaria Eradication Special Account, which had funded most of the eradication efforts separately from WHO annual budgets, received less than its usual level of financial donations from

¹⁸ World Health Organization, “Executive Board, Thirty-Seventh Session, Geneva, 18-28 January 1966, Part II: Report on the Proposed Programme and Budget Estimates for 1967, 4.2 Research in Epidemiology and Communications Science,” *Official Records of the World Health Organization* 149 (Geneva, World Health Organization, March 1966), 22.

member states in 1964. Major Western donors began to pull back their contributions as malaria-ridden nations entertained aid from the USSR, and as previously optimistic calculations were re-estimated to suggest that global eradication would occur in the mid-1970s at the earliest. Suddenly, in 1965, the program was unable to cover its budget.¹⁹ WHO drew from its regular operations budget to make up some of the shortfall, but the unexpected attention from the World Health Assembly (WHA) meant greater scrutiny regarding the technical viability of global eradication efforts.²⁰ This questioning was one of many elements over the subsequent five years that precipitated the dismantling of the Malaria Eradication Program, its replacement with much more limited projects for malaria control, and WHO-wide discussions of focused on other policy opportunities.²¹

In addition to concerns regarding the viability of malaria programming, WHO leaders became worried when infectious and chronic diseases appeared more biologically complex than were originally understood at the founding of WHO. This development wasn't by accident: the exponential growth in biomedical research at university and government sponsored labs in the West led to increasing amounts of new knowledge about the biochemical mechanisms of disease.²² A newfound quandary for modern Western medicine was the management of increasingly complex research and

¹⁹ Randall M Packard, *The Making of a Tropical Disease: A Short History of Malaria* (Baltimore: Johns Hopkins University Press, 2007), 169-71

²⁰ Socrates Litsios, *The Third Ten Years of the World Health Organization: 1968–1978* (Geneva: World Health Organization, 2008), 181

²¹ Packard, *The Making of a Tropical Disease*, 169-71

²² The place of biomedical research in international health, especially through the NIH and its Fogarty International Center, will be discussed in Chapter 3

larger volumes of information. According to Marcolino Candau, the long-standing Brazilian Director-General, the challenge for WHO was threefold: organizing the specialized research happening in countless labs, sponsoring research that would address trans-national health problems, and developing a deeper quantitative understanding in “human ecology” – what a group of international epidemiologist advising WHO vaguely referred to as “the expression of the success of man’s adaptation to his changing environment.”²³ He proposed a major departure from standard WHO operations by suggesting that it begin conducting its own basic and clinical research. WHO would have its own institute with “a world centre for communications and information on health research” to allow for “a comprehensive study of those problems of major importance to the world as a whole which are not likely to be explored adequately by purely national efforts.”²⁴ This potential expansion of WHO research activities reflected a perspective that future challenges in international health would require sophisticated biomedical interventions.

The proposal for the World Health Research Centre called for a ten-year budget of \$300 million and a research staff of just over 1200 scientists split between three divisions: epidemiology, communications science and technology, and biomedical

²³ World Health Organization, “Executive Board, Thirty-Sixth Session, January 19-28, 1965, Part I Resolutions and Annexes, Annex 21 Medical Research Proposal for the Establishment of a World Health Research Centre, Appendix 3 Meeting of Scientific Advisers on Research in Epidemiology in the Proposed World Health Research Centre,” *Official Records of the World Health Organization* 140 (Geneva, World Health Organization, March 1965), 105 Marcolino G Candau (1911-83) was a Brazilian physician who at the age of 42, in 1953, was elected as the Director-General of WHO He served in this position until 1973

²⁴ World Health Organization, “Seventeenth World Health Assembly Part II Plenary Meetings & Committees,” *Official Records of the World Health Organization* 136 (Geneva, World Health Organization, December 1964), 2

research.²⁵ The division for epidemiology would study disease patterns in developing countries and construct a more mathematically rigorous underpinning to the science. The division of communication science and technology would leverage the new technology of computers to analyze country demographic data, develop mathematical tools to understand disease processes, and catalog and standardize scientific terminology of environmental contaminants.²⁶ The division of biomedical research would focus on studying mutagens and toxic substances – a subject overlooked in national research labs – evaluating “the heritable, carcinogenic and other pathological effects of such agents.”²⁷

WHO had not previously ventured into basic research for several reasons. Officials found it capital intensive, and a majority of the organization’s financial resources were already devoted to the disease eradication and setting up offices in newly decolonized nations. Moreover, scientists in the West, especially in US labs, already produced a prodigious amount of research; any efforts by WHO to enter the field were seen inside and outside the Organization as duplicating individual country

²⁵ If the \$300 million budget for the center was split evenly into \$30 million/year, the first annual contribution would have been a 60% addition to the 1965 WHO annual budget, and \$202 million per annum in 2008. Litsios, *The Third Ten Years of the World Health Organization*, 89

²⁶ World Health Organization, “Executive Board, Thirty-Sixth Session, January 19-28, 1965, Part I Resolutions and Annexes, Annex 21 Medical Research Proposal for the Establishment of a World Health Research Centre, Appendix 1 Meeting of Scientific Advisers on Work in Communications Science in the Proposed World Health Research Centre,” *Official Records of the World Health Organization* 140 (Geneva, World Health Organization, March 1965), 89-92

²⁷ Litsios, *The Third Ten Years of the World Health Organization* 89, and World Health Organization, “Executive Board, Thirty-Sixth Session, January 19-28, 1965, Part I Resolutions and Annexes, Annex 21 Medical Research Proposal for the Establishment of a World Health Research Centre, Appendix 2 Meeting of Scientific Advisers on Biomedical Research in the Proposed World Health Research Centre Harmful Effects of Therapeutic Agents and Environmental Contaminants,” *Official Records of the World Health Organization* 140 (Geneva, World Health Organization, March 1965), 98

research programs and would take too long to become influential.²⁸ Several ministers of health also noted that their own countries were looking to start their own research programs, and they were fearful that their own talent would flee to Geneva. The UN bodies were generally aware of this phenomenon, and tried to orient policies to foster, rather than hinder, national growth and self-sufficiency. In reviewing the entire proposal, WHO Executive Board and the WHA expressed all of these concerns, questioned the high costs, and politely suggested that a World Health Research Centre “requires further study and consideration.”²⁹

Though the research center had no political support from the Executive Committee, the Director-General nonetheless was advised to investigate the development of “WHO research activities and services in epidemiology and the application of communications science.”³⁰ The members of the Executive Board liked many of the ideas underlying the research center proposal, but found the proposed size and cost extravagant. Their interest in epidemiological research and what was then called communications science – the development of computer based information processing – connected to both older pre-World War II traditions of disease tracking and perceived future needs. WHO framed the epidemiological analysis of morbidity and mortality as an “international concept [that was] an essential feature of [its] activities,” and, in fact, an inheritance of early twentieth century work by the League of Nations

²⁸ David A. Ehrlich, “WHO Begins Research,” *Science News* 92, no. 6 (1967): 130.

²⁹ World Health Organization, “13 Research Proposal for the Establishment of a World Health Research Centre,” *Handbook of Resolutions and Decisions of the World Health Assembly and the Executive Board, Ninth Edition Covering the Period 1948-67*, (Geneva: World Health Organization, December 1967) 136.

³⁰ *Ibid*

Health Organization and other older transnational health bodies.³¹ New basic science research in epidemiology could make the discipline more quantitatively sophisticated and better able to track multiple disease patterns and “health in [its] total ecological context.”³² Candau also believed that the biomedically-based, reductionistic understandings of disease etiology would have to rely upon increasingly rigorous mathematical models that required computers for computation. Even by the mid 1960s, the development of computer based modeling seemed a necessity to understand the changing disease burden.

Director-General Candau highlighted the strategic significance of these topics at the December 1965 meeting of the Executive Board; to address these issues, he resubmitted the proposal for the World Research Centre as a trimmed-down division within WHO for “Research in Epidemiology and Communications Science.” In addition to research in epidemiology, RECS would focus on computer-based analyses of national public health management, global population change, the environmental effects of ever increasing rural to urban migration, and the allocation of medical resources in rural settings of developing countries. These studies would be allocated to a majority of the processing time of WHO’s first computer.³³ The Division of Research in Epidemiology

³¹ World Health Organization, “Executive Board, Thirty-Seventh Session, Geneva, 18-28 January, 1966, Part I: Resolutions & Annexes, Annex 10: Extension of WHO Activities in Research,” *Official Records of the World Health Organization* 148 (Geneva: World Health Organization, March 1966), 58.

³² *Ibid.*

³³ World Health Organization, “Executive Board, Thirty-Ninth Session, Geneva, 17-27 January 1967, Part II: Report on the Proposed Programme and Budget Estimates for 1968, Review by the Board” *Official Records of the World Health Organization* 158 (Geneva: World Health Organization, March 1967): 21.

and Communications Science was formally approved in 1967, became operational in mid-1968.³⁴

The division was unique in its mandate, institutional role, and staff composition. It was not disease based or country focused, as was the case for all other WHO divisions. It also was explicitly tasked with long-term, reflexive analysis of WHO itself: rather than focus on immediate disease projects, RECS would investigate ways that the Organization could reorganize itself as an institution to anticipate emerging health concerns and new types of technological and social interventions.³⁵ In terms of personnel, the division was heterogeneous. The first (and only) Director would be medical epidemiologist Dr. Kenneth Newell; educated in his native New Zealand in medicine and at Tulane for his D.P.H., Newell was an aggressive and pragmatic administrator who tried to utilize his mixed quantitative and social medicine background to advance the interests of his new Division.³⁶ He was accompanied by an Assistant Director who was a communications scientist, and a research staff that was a mix of “epidemiologists, applied mathematicians, demographers, statisticians, operational research specialists, computer scientists, biologist-ecologists, and

³⁴ World Health Organization, “Executive Board, Thirty-Seventh Session, Geneva, 18-28 January 1966, Part II: Report on the Proposed Programme and Budget Estimates for 1967, 4.2 Research in Epidemiology and Communications Science” *Official Records of the World Health Organization* 149 (Geneva, World Health Organization, March 1966): 21.

³⁵ See especially: World Health Organization, “Executive Board, Forty-First Session, Geneva, 23 January – 1 February 1968, Part II: Report on the Proposed Programme and Budget Estimates for 1969, 4.2 Research in Epidemiology and Communications Science,” *Official Records of the World Health Organization* 166 (Geneva, World Health Organization, March 1966): 27-9.

³⁶ Socrates Litsios, interviewed by the author, January 2010; Ralph Adreano, interviewed by the author, March 2010.

behavioural scientists in sociology and anthropology.”³⁷ The main feature of RECS that differentiated it was the methodological tools it employed: operations research, applied mathematics, information analysis, advanced statistics, systems analysis, and decision making analysis.

Though WHO disease eradication and population control programs already reflected Cold War values of “winning hearts and minds,” the mathematical and managerial technologies of RECS further connected the international health organization to the politicized sciences of the postwar decades. This cluster of risk-management tools arose out of wartime planning for complex research programs like the MIT Radiation Lab that developed the radar, and the defense think-tank RAND. Practices like operations research and systems analysis aimed to rationally manage decision making, the efficiency of interdisciplinary collaboration, and the costs and logistics of large-scale military operations. The conceptual origins of these tools were closely intertwined with the wartime cybernetic research of Norbert Wiener on how feedback mechanisms of anti-aircraft prediction devices regulated mechanisms of actions. The “systems” dynamic that Wiener ascribed to information feedback mechanisms became the basis for these quantitative methodologies.³⁸

During the war and the postwar decades, this systems worldview fostered an understanding that large scale human interactions could be abstractly modeled, managed, quantified, and predicted. Such ideas informed practices and concepts ranging from the management of organizations to the modeling of decision making. The MIT

³⁷ World Health Organization, *Official Records of the World Health Organization* 149, 21.

³⁸ Jennifer S. Light, *From Warfare to Welfare: Defense Intellectuals and Urban Problems in Cold War America* (Baltimore: Johns Hopkins University Press, 2003), 37-41.

Rad Lab showcased several such developments. Technical breakthroughs to create radar were attributed to the abstract planning and management of research partnerships; interdisciplinary collaboration between scientists and military officials arose through the diagramming of efficient professional interactions, the formulation of procedural languages for cross-disciplinary information sharing, and the enumeration of concurrent steps for research projects and intermediate goals. RAND, likewise, pioneered systems practices as scientists created abstract simulations of potential future wargames to identify which decisions had the highest likelihood of positive, predefined outcomes. These tools framed organizational efficiency and decision-making to a matter of “systems” and responses to “information flow,” thereby “reducing complex political contingencies to mathematical formulae run through computers.”³⁹ But systems based tools weren’t simply a repeat of early twentieth century Taylorist management practices; they also leveraged stochastic and probabilistic techniques to assess risk and “compare alternative solutions” for projects with no clearly realizable outcomes.⁴⁰ All of this was based on the belief that properly quantified and scrutinized information would help make more objective decisions.

As news about the postwar development of cybernetics and computers filtered out of RAND, WHO, as well as many private corporations, wanted to utilize these new

³⁹ Ibid , 39, Mirowski, *Machine Dreams*, 231 See also Philip Mirowski, “Cyborg Agonistes Economics Meets Operations Research in Mid-Century,” *Social Studies of Science* 29, no 5 (October 1, 1999) 685-718, Thomas Haigh, “Inventing Information Systems The Systems Men and the Computer, 1950-1968,” *The Business History Review* 75, no 1 (April 1, 2001) 15-61, M Fortun and S Schweber, “Scientists and the Legacy of World War II The Case of Operations Research (OR),” *Social Studies of Science* 23, no 4 (November 1, 1993) 595-642, Stephen B Johnson, “Three Approaches to Big Technology Operations Research, Systems Engineering, and Project Management,” *Technology and Culture* 38, no 4 (October 1, 1997) 891-919, Edwards, *The Closed World*

⁴⁰ Light, *From Warfare to Welfare*, 39

technologies. For Candau and his senior staff, computers would increase success in control efforts by processing and analyzing scientific data and modeling epidemiological patterns. But as RECS became established, WHO researchers just focused on the two cybernetically based tools that could be employed in as many different projects as possible: operations research and its derivative, systems analysis. Operations research, as defined in one of its earliest textbooks in 1954, involved the “comparison of values, effectiveness and costs of a set of proposed alternative courses of action involving man-machine systems.”⁴¹ Its approach involved diagramming internal organizational hierarchies to study decision-making procedures; analyzing inventory distributions to minimize cost; and gathering data to understand social impact. System analysis, developed at RAND, had a similar focus; the processes consisted of “specifying values and alternative routes to long-term objectives and values, evaluating objectives in terms of costs and benefits, and choosing among the available alternatives the course of action that will best exploit present and potentially available resources.”⁴² But unlike early postwar operations research, systems analysis focused on utilizing abstract diagrams to compare potential alternatives in circumstances with an unknown outcome

Though these tools appeared as neutral devices to analyze organizational behavior in corporate, military, or government settings, operations research and systems analysis carried their own set of values and assumptions. They utilized a formal,

⁴¹ As defined by Ellis Johnson in one of the first Operations Research textbooks in 1954. Cited in Mirowski, *Machine Dreams*, 178

⁴² Joseph L. Bower, “Systems Analysis for Social Decisions,” *Operations Research* 17, no. 6 (December 1969) 932

theoretical language set apart from experiential, situated knowledge. Their framework and vocabularies prioritized social factors and behaviors that could be understood abstractly and manipulated through mathematics and statistics. And much like epidemiological “webs of causation,” all causal factors in operations research and systems analysis could be leveled, bounded, and set at equal status and influence in abstract diagrams.⁴³ Thus, solvable problems were those that could be quantified and simplified to key, easy to understand elements; interventions were administrative and logistical in character; and solutions were often predictable in advance. Many of these underlying elements of systems analysis came to define the proposals and potential solutions of RECS and what would become health systems analysis.

Part II: “Health Systems Analysis”

Any total planning system would need to have some method of assessing the present health position and predicting future trends, a set of alternative ways of dealing with the problems expressed in quantitative terms, and a way of relating the competing needs so that a decision could be made and implemented.

-*Official Records of the World Health Organization*, no. 190, 1971, “Appendix 11: Activities of the Division of Research in Epidemiology and Communications Science,” assessing the value of a systems analysis approach for health care delivery⁴⁴

From the moment operations began, Newell, as head of RECS, had plenty of work developing an overall divisional strategic plan *sui generis*, experimenting with the

⁴³ Nancy Krieger, “Epidemiology and the Web of Causation: Has Anyone Seen the Spider?” *Social Science & Medicine* 39, no. 7 (1994): 887-903.

⁴⁴ World Health Organization, “Executive Board, Forty-Seventh Session, Geneva, 19-29 January 1971, Report on the Proposed Programme and Budget Estimates for 1972, Appendix 11: Activities of the Division of Research in Epidemiology and Communications Science,” *Official Records of the World Health Organization* 190 (Geneva: World Health Organization, 1971): 137.

scope and range of new types of projects, and managing competing political demands from WHO administrators and Ministers of Health. He had his scientists and mathematicians split their time between several projects: the epidemiology of high risk groups, mathematical theories of disease transmission in a population, the health effects of urbanization, and the epidemiology of disappearing diseases.⁴⁵ All of this research was explicitly grounded in systems analysis, operations research, statistical analysis, and abstract modeling. However, not all of these projects received equal resources and staffing; the study of disappearing diseases, for example, consisted only of theoretical studies by two or three of the twenty-six scientists on a part-time basis.⁴⁶ The one project that unexpectedly came to occupy a majority of resources and staff time was only vaguely mentioned in the initial proposal of the division: research into the scientific planning, organization, and management of health services.

RECS's foray into health service delivery was not the first attempt at planning health services in international health or colonial medicine. There were many instances of organizing health care in the nineteenth and early twentieth century, but these efforts were often haphazard. The earliest colonial medical services had been based upon the immediate needs of the small minority of European military and government officials living in the colonies. By the mid-nineteenth century the pattern of care for settlers segmented into three major components: hospitals in urban centers, minimally staffed dispensaries in both urban and rural settings, and sanitary services that could construct

⁴⁵ World Health Organization, "Executive Board, Forty-Seventh Session, Geneva, 19-29 January 1971, Report on the Proposed Programme and Budget Estimates for 1972, Appendix 11 Activities of the Division of Research in Epidemiology and Communications Science, Annex I Some World Health Organization Multidisciplinary Studies," *Official Records of the World Health Organization* 190 (Geneva World Health Organization, 1971) 140-1

⁴⁶ World Health Organization, *Official Records of the World Health Organization* 190, 137

cordons to contain native populations and ensure unimpeded transport of goods.⁴⁷ Though these three developed in different combinations across colonial possessions, they largely arose “as needed” alongside private care according to local or regional demands.⁴⁸ While early twentieth century officials began to extend services to native populations, the large growth in public healthcare was not seen until decolonization. At that point, “newly independent states embarked on the preparation of medium and long-term health development plans of one sort or another.”⁴⁹ Health planning was integrated with national socioeconomic planning based on the expectations of health officials that policy connections to the broader social services would increase the budget for health.⁵⁰ These states “usually proposed the relatively rapid expansion of virtually all aspects of the health services, essentially in their existing forms.”⁵¹ However, this often meant that urban elites would be the first recipients of new technologies, after which funding usually would run out before resources could reach the wider population. And if international organizations participated in the planning of health services in the postwar decades, such work was not formal, distant, technocratic planning but pragmatic

⁴⁷ Oscar Gish, “The Political Economy of Primary Care and ‘Health by the People’ An Historical Explanation,” *Issue A Journal of Opinion* 9, no 3 (Autumn 1979) 7-8

⁴⁸ Western colonial officials also actively leveraged the powerful social image of the Western healer and medical technologies to impress and “win over” local peoples

⁴⁹ Gish, “The Political Economy of Primary Care and ‘Health by the People,’” 8 Indian and Soviet socialist style national planning were key examples of large-scale postwar planning of economies One notable program for health planning originated at the Center for Development Studies of the Central University of Venezuela through PAHO It served as a heavily quantitative system for health care analysis for Latin American countries Though it was taught extensively in medical schools, its use faded by the late 1960s See Litsios, *The Third Ten Years of the World Health Organization*, 63

⁵⁰ *Ibid* , 127

⁵¹ Gish, “The Political Economy of Primary Care and ‘Health by the People,’” 8

planning in the field, “project-by-project” while “bounc[ing] along a dirt track in a Land Rover.”⁵²

Another novelty of RECS applying scientific management and systems thinking to health service delivery was that it was a technology in search of a problem. The initial 1965 proposal that created RECS only mentioned in passing in a concluding paragraph that systems analysis might also be useful for health care planning. There were no obvious events in the field or institutional imperatives that spurred concerted efforts for new ways of planning health care; in fact, as will be detailed in the next section, the political imperative to address the widespread deficiencies in health services in the developing world began at the end of the 1960s. Rather, RECS planners thought that long-standing realities of life in the developing world – scarce resources and a shortage of funds – might benefit from a new approach, and they might improve their professional status.

The former sentiment was evident in the WHA committee that approved the initial budget for RECS at the 1968 annual meeting. One member, Dr. Ademola of Nigeria suggested that activities in the division “might be directed towards research on the best use . . . of the limited resources available for the organization of health services.”⁵³ Assistant-Director General Payne concurred, noting that RECS could help in “defining the factors that could strain health services, developing effective means of measuring health problems . . . and relating feasible aims to the expected health

⁵² H. E. Hilleboe, “Approaches to National Health Planning,” *Public Health Paper No. 46* (Geneva: World Health Organization, 1972): 18; Bryant, *Health and the Developing World*, 112.

⁵³ World Health Organization, “World Health Assembly, Twenty-First World Health Assembly, Geneva, May 6-24 May 1968, Part II: Plenary Meetings Verbatim Records and Committees Summary Records and Reports, Section 4.2 Research in Epidemiology and Communications Science,” *Official Records of the World Health Organization 169* (Geneva: World Health Organization, 1968): 289.

gains.”⁵⁴ Internal divisional interest began to match this high level support; as early RECS reports detailed, members of the division began to see that research on health services provided an opportunity to combine several other studies – from how governments used health data to how changing disease burdens shaped the services provided at health institutions.⁵⁵ This commitment to “planning for health,” by both administrators and planners meant that research on health services became the central activity of RECS.⁵⁶

From the first proposal, systems analysis made health care delivery intelligible and solvable by simplifying complex delivery scenarios across diverse locations into abstract models and diagrams.⁵⁷ Numerous practices – the creation and orientation of health institutions, the management of professional and non-professional personnel, the distribution of medical resources, the financing of care, the measurement of health statistics – all became subsumed within the rubric of the “system” to be managed in relation to each other and explicitly as a whole. The countless actions and measurements involved in planning and delivering health services were also meant to be assessed from afar as part of a whole delivery method.

⁵⁴ Ibid , 290

⁵⁵ See especially World Health Organization, *Official Records of the World Health Organization* 149, 21-9

⁵⁶ World Health Organization, “Executive Board, Forty-Seventh Session, Geneva, 19-29 January 1971, Part II Report on the Proposed Programme and Budget Estimates for 1972,” *Official Records of the World Health Organization* 190 (Geneva, World Health Organization, March 1971), 31-2

⁵⁷ The phrase, “the application of systems analysis to health services,” was seen in WHO papers as early as the initial proposal for the creation of RECS in 1965. The terms “health systems” and “health systems analysis,” however, were not used in official WHO documentation until 1971. See World Health Organization, *Official Records of the World Health Organization* 149, 27-9. The use of health systems analysis was also present in the Johnson Great Society programs, see S. M. Amadae, *Rationalizing Capitalist Democracy: the Cold War Origins of Rational Choice Liberalism* (Chicago: University of Chicago Press, 2003), 27-8

The process of health systems analysis consisted of several steps, the first of which shaped all of the other procedures. The starting point, and one implicit goal of the whole process, was setting clear, tangible, and quantifiable objectives for the health system itself (i.e., reducing the prevalence of a disease in a community by 10%). Planners believed that the process of rigorously teasing out and articulating the goals of policy would facilitate better management, and foster greater transparency and consensus of the ultimate ends of what they were trying to achieve. To attain these objectives, planners would then list proximate goals through “action-oriented” projects (i.e., retraining staff, modifying organizational arrangements, improving capacity of disease surveillance). Each project would also contain detailed steps for implementation, and each iterative and more specific action to achieve the larger project would extend back to initial tasks of information collection and epidemiological analysis. All of these steps would be oriented toward achieving pre-stated final aims (see Figures 2.1 & 2.2 below). Alongside these step-wise charts, planners also diagramed networks of interrelationships between institutions, resources, and actors in a health care system (see Figures 2.3 & 2.4 below). The goal of this task was to analyze and evaluate via feedback control mechanisms how the interactions between institutions, treatments, and broader social-environmental influences affected each step in the delivery of care. Unlike early twentieth century “scientific management” of hospitals, where administrators strove for efficiency to maintain institutional control apart from physicians, health systems analysis extended its scope to an entire national or regional delivery network, and actively intervened in the actual provision of care.⁵⁸

⁵⁸ Rosemary Stevens, *In Sickness and in Wealth American Hospitals in the Twentieth Century* (New York: Basic Books, 1989), 71-5. for another example of social interventions that utilize systems analysis,

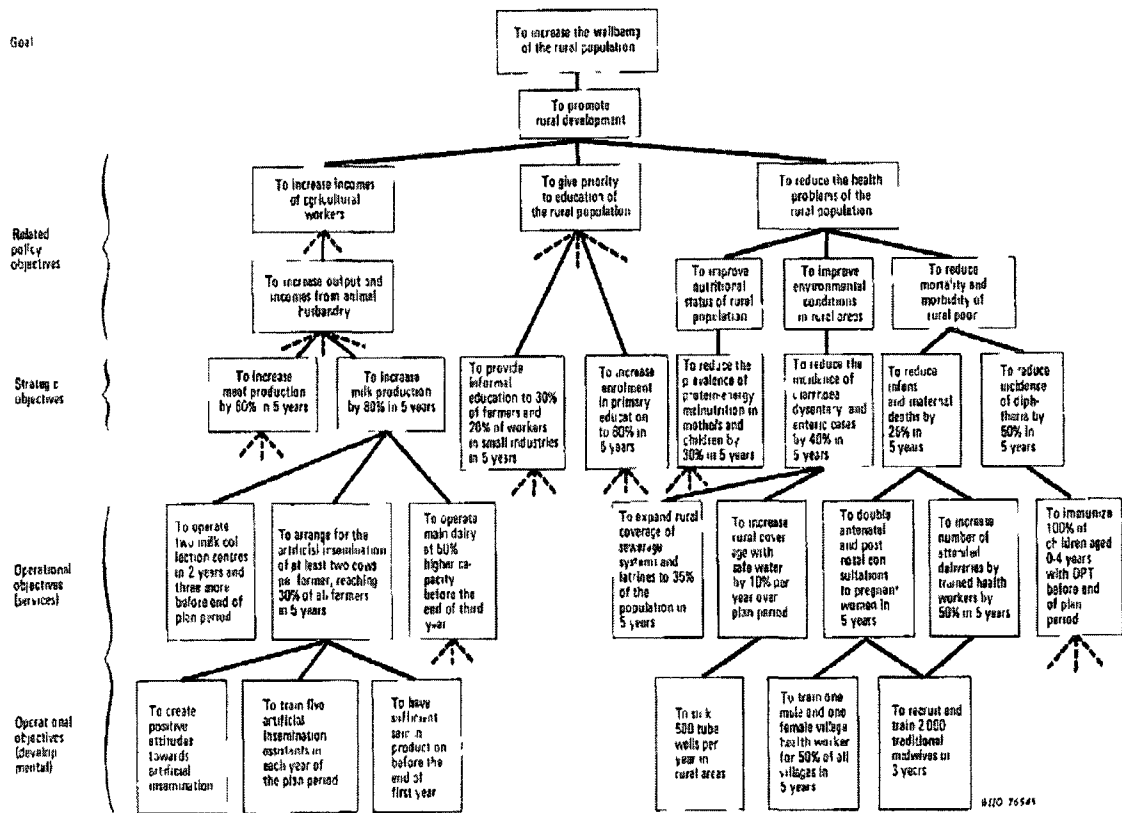


Figure 2.1. "Example of Goal Hierarchy." This chart demonstrates how goal iteration was connected to various actions. From *Application of Systems Analysis to Health Management Report of a WHO Expert Committee*, World Health Organization Technical Report Series (Geneva: World Health Organization, 1976), 26. Figure copied with permission of WHO.

see Jennifer Light, "Taking Games Seriously," *Technology and Culture*, 49 (April 2009) 347-75

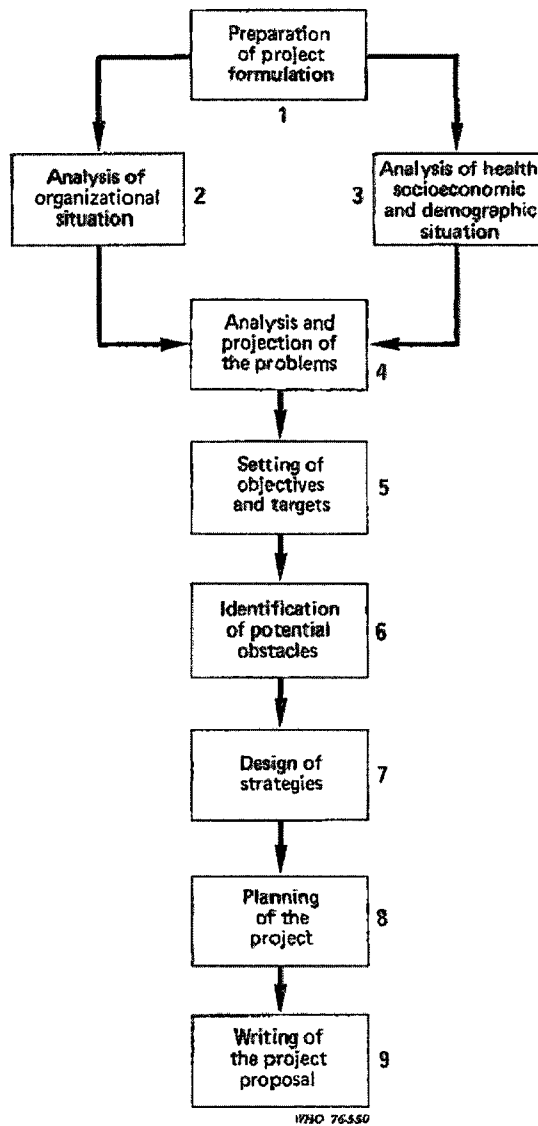


Figure 2.2. “Steps in Project Formulation.” This chart highlights how socioeconomic and organizational analyses were initial steps that shaped the scope and detail of a project’s goals. From *Application of Systems Analysis to Health Management: Report of a WHO Expert Committee*, World Health Organization Technical Report Series (Geneva: World Health Organization, 1976), 53. Figure copied with permission of WHO.

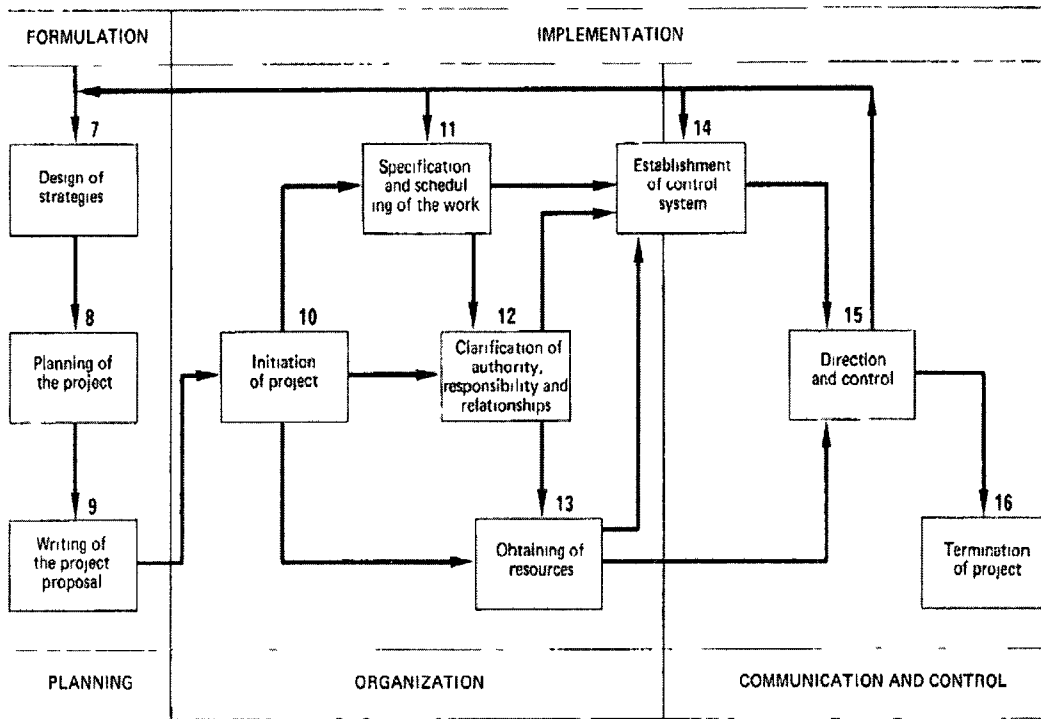


Figure 2.3. "Steps in Project Management." This is a continuation of the chart presented in Figure 2.2, but abstractly diagrams how implementation occurred and was evaluated with information feedback loops. From *Application of Systems Analysis to Health Management Report of a WHO Expert Committee*, World Health Organization Technical Report Series (Geneva: World Health Organization, 1976), 55. Copied with permission of WHO.

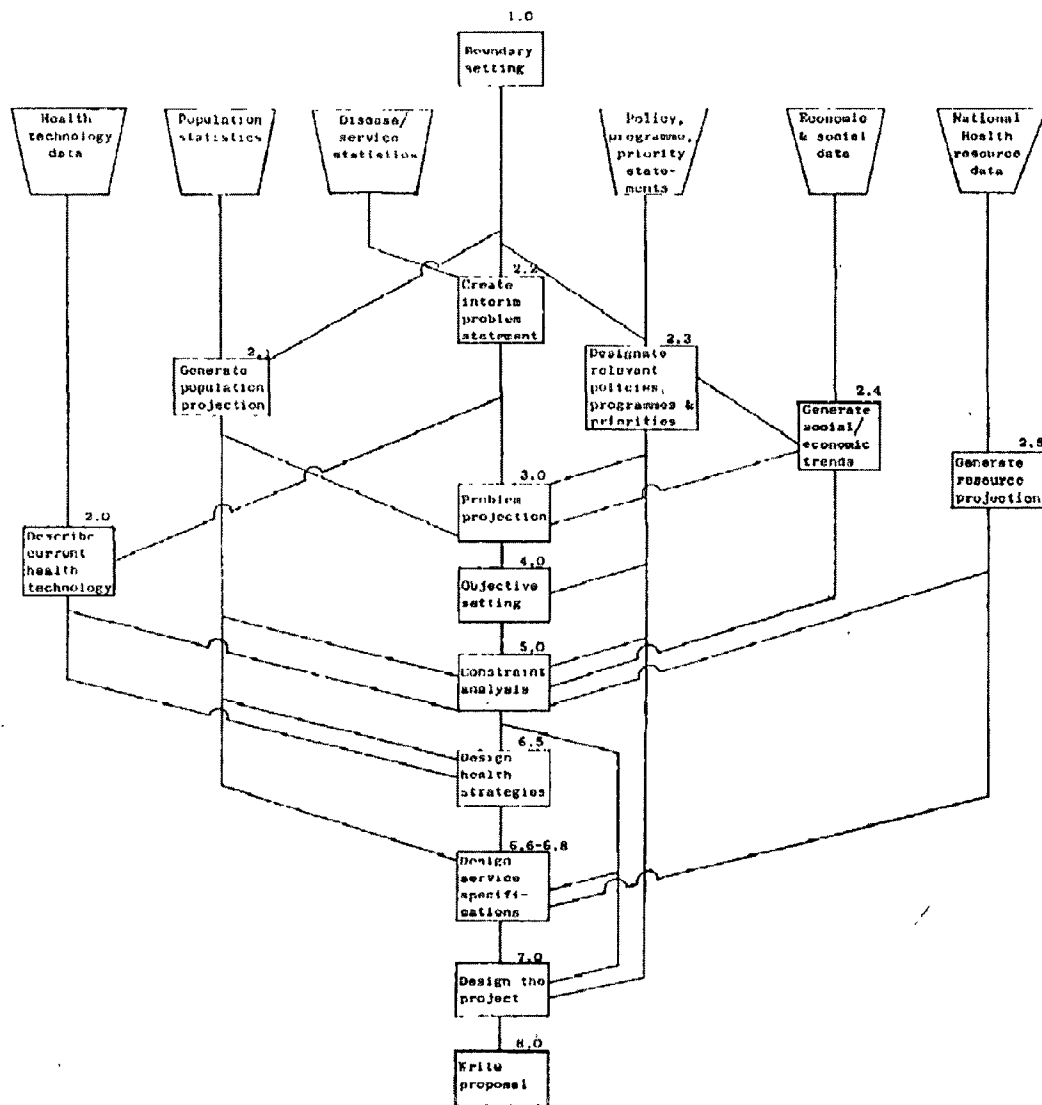


Figure 2.4. “Project Formulation Activities.” This diagram also illustrates how broader socioeconomic data was integrated into project and policy formulation. From World Health Organization, *Modern Management Methods and the Organization of Health Services* (Geneva, 1974), 31. Figure copied with permission of WHO.

The systems tools employed to analyze health care included cost-benefit analyses, statistical calculations, sociological analyses of behavior, and abstract simulations of the influence of social determinants. However, such analyses were not oriented toward descriptive critiques of past failures; rather, health systems analysis directed decision-makers to examine ways that the relationships and the arrangement of individual elements in a health care delivery system could be altered or rearranged to better achieve the main objective articulated at the beginning of the analysis. Though this orientation of diagnosis and intervention actively considered sociopolitical influences, they were framed as calculable and interchangeable elements. The task of the systems planner was defined in both behaviorist (how the “inputs” of available health technologies, socioeconomic data, and institutional arrangements “resulted in” various “outputs” such as disease prevalence, demographic change, and service usage) and functionalist terms (how professionals utilized a diverse set of health resources in providing care, and how different institutional actors interacted within local and national healthcare settings). In short, the goal of health systems analysis was to identify more efficient courses of action and decisions than what might otherwise be considered. If these re-evaluative measures succeeded, all parts of the system would be harmonized and working together towards one goal.

As it started operations in 1968, RECS launched a major three part study that highlighted the way Newell and his staff performed health systems analysis. The first part examined “the structure and distribution of health services at the village and district level” in the Cape Bon area of Tunisia.⁵⁹ The second part examined “the type of

⁵⁹ World Health Organization, “Executive Board, Forty-Third Session, Geneva, 18-28 February 1969, Part II: Report on the Proposed Programme and Budget Estimates for 1970, Research in Epidemiology

national data required on both needs and resources for the national [health] planning process, and the method of collection” for national health surveys in Iran.⁶⁰ The third part studied “how data collected could be assembled and used by a decision maker in evolving a national health plan.”⁶¹ Overall, the project was exploratory, assessing the way systems-based information could be used to help decision making and the development of a “theoretical self-correcting health planning process [to] into account needs and relationships in the field of health services.”⁶²

By 1970, the Division had over twenty systems analysis-based projects scattered across its areas of research focus. While such breadth was seen as “commendable,” an Advisory Committee on Medical Research suggested in a review of divisional operations that RECS was spreading resourced too thin and should be reoriented around three operational foci: 1) the organization and strategy of health services; 2) scientific studies of single diseases with well-defined mechanisms, for which the population dynamics could be described in some detail; and 3) scientific studies of complicated multifactorial problems, with special emphasis on human ecology.⁶³ According to the report, a single theme would bridge together these three projects: “developing the

and Communications Science,” *Official Records of the World Health Organization* 174 (Geneva World Health Organization, March 1969) 21, World Health Organization, “The Work of the WHO 1968 Annual Report of the Director-General to the World Health Assembly and United Nations, Chapter 10 Research – Developments in Epidemiology and Communications Science” *Official Records of the World Health Organization* 172 (Geneva World Health Organization, April 1969) 71

⁶⁰ Ibid

⁶¹ World Health Organization, *Official Records of the World Health Organization* 174, 22

⁶² World Health Organization, “The Work of the WHO 1969 Annual Report of the Director-General to the World Health Assembly and United Nations, Chapter 9 Research – Developments in Epidemiology and Communications Science” *Official Records of the World Health Organization* 180 (Geneva World Health Organization, March 1970) 79

⁶³ Litsios, *The Third Ten Years of the World Health Organization*, 92

knowledge, skills, and resources necessary for ‘planning for health’ in the overall context of social, economics, and environmental planning.”⁶⁴ This refocusing arose from new interest in RECS from national health ministers who readily wanted to see the quick application of new research methods.⁶⁵

As its application spread throughout RECS divisional ventures, health systems analysis evolved beyond the simple unadulterated application of systems analysis in the health sector. An evaluation of RECS noted that:

The development of an overall methodology is a number of steps further on than the direct application of manpower studies, systems analysis investigations of existing programmes, or economic assessments of the effects of successful programmes. It could be said to involve the application of operational research, social science, and epidemiological techniques to the health services. Steps such as further studies on meaningful measures of health and health problems would need to be combined with improved definitions of the complex institutional, technical, economic, social, and other factors influencing health service strategies.⁶⁶

The expansion of resources for “planning for health” reiterated an essential feature of systems based thinking: creating a holistic way of managing interconnected processes to assess the changing disease burden and the delivery of care. Like other social science methodologies, health systems analysis prioritized analyses that could achieve holistic ends of assessing complex interconnected sociopolitical and environmental factors through quantitative and reductionistic means. However, as RECS scientists continued to employ HSA, holism also came to mean combining quantitative and qualitative

⁶⁴ World Health Organization, *Official Records of the World Health Organization* 190, 39.

⁶⁵ World Health Organization, “The Work of the WHO 1970: Annual Report of the Director-General to the World Health Assembly and United Nations, Chapter 9: Research – Developments in Epidemiology and Communications Science” *Official Records of the World Health Organization* 188 (Geneva: World Health Organization, March 1971): 99.

⁶⁶ World Health Organization, *Official Records of the World Health Organization* 190, 141.

methods of investigation within their own system. Interdisciplinarity in this instance meant framing social and epidemiological health risks as complex systems that could be matched by equally logistically complex research systems.

This methodological transformation attempted to predict future complex challenges also revealed the experimentalist orientation of RECS as a division within WHO. Systems based planning allowed WHO officials to think critically about the way operations helped to align the Organization toward potential future problems and long-term objectives. For Newell and RECS researchers, international health challenges were no longer simply the immediate threats of whatever epidemic was raging or the provision of maternal and child care; new concerns also included the anticipation of future risks and the obligation of developing long-term health solutions.

In the fifth year of operations, RECS' was repositioned within the divisional structure of WHO. In the early 1970s, RECS was encouraged to collaborate closely with other divisions, especially the Division of the Organization of Health Services and the Division of Family Health; both of these sections had supported the expansion of health services in new nations.⁶⁷ By 1972, Assistant-Director Halfdan Mahler pushed the use of health systems analysis for "planning for health," in these other divisions, as the "Organization had been under constant pressure to assist governments in making the best possible use of their planning techniques."⁶⁸ At the end of 1972, RECS merged with the Division of the Organization of Health Services to form the Division for the

⁶⁷ World Health Organization, "The Work of the WHO 1971: Annual Report of the Director-General to the World Health Assembly and United Nations, Chapter 6: Organization of Health Services – Project Systems Analysis" *Official Records of the World Health Organization 197* (Geneva: World Health Organization, 1972): 122.

⁶⁸ Litsios, *The Third Ten Years of the World Health Organization*, 94.

Strengthening of Health Services (SHS). The existing RECS units “for research in epidemiology, communications science, behavioural sciences, ecology, operational research, mathematics, statistics, numerical analysis, community health services and nursing were disestablished.”⁶⁹ However, as will be detailed in the next section, SHS would serve as the institutional space where health systems analysis flourished, and came to shape the new, major focus at WHO: primary health care.

Part III: “Health by the People”

If there is a moral to this book it is that possibilities for change exist for all people but that there is no one method that is universally applicable. It is possible that the world is now at a stage when it should no longer cause surprise that something can be done and that simple primary health care works. Health by the people may have come of age.

-Dr. Kenneth Newell, 1976, on his *Health by the People*⁷⁰

The creation of the Division for the Strengthening of Health Services was not simply a matter of bureaucratic reorganization for the sake of avoiding duplication between different parts of WHO. It was a response to a broad array of sociopolitical changes within the Organization, across the field of international health, and in international politics. SHS became a site for synthesizing disparate ideas about the nature of healthcare delivery and, like RECS, the scope of operations of WHO. These characteristics were especially evident in the reorientation and expanded application of health systems analysis in healthcare planning and what quickly became the centerpiece of health service delivery – primary health care. By the mid-1970s, systems analysis

⁶⁹ Ibid.

⁷⁰ Kenneth Newell, “Health by the People,” *WHO Chronicle* 29 (1976): 167.

was no longer simply a tool for research, but an analytical framework for simultaneously ordering health planning and validating global social change.

The divisional structure of SHS embodied the very knowledge and ways of knowing that arose from abstract simulations of healthcare delivery and the research of RECS. An iteration of the SHS mission statement, produced by reflexively applying systems analysis upon the division itself, argued that SHS should “assist Member States to develop resources and mechanisms by which progressive changes in health service delivery can take place over time in light of increasing resources, changing priorities, and the wishes of the population.”⁷¹ To achieve this objective, SHS would “encourage and assist countries to develop a health service system as an entity consistent with the resources available (including health manpower) . . . [develop] methods of planning for health as a component of overall socio-economic development . . . [and] promote the application of project formulation methods in the implementation and management of health projects.”⁷²

SHS also had a second half to its mission statement. This part oriented the division to correct specific shortcomings in health services not previously discussed in the work of RECS. This second objective was to “assist Member States to develop further their health institutions and services in order that as large a proportion of their populations as possible, urban as well as rural, will have access to a co-ordinated health service which is acceptable to them and which provides the level of health technology considered suitable to fulfill national health goals at an acceptable cost under prevailing

⁷¹ World Health Organization, “Strengthening of Health Services Programme Statement for 1976-1977,” n.d., pg. 2, WHOA, SHS/Reg.Adv.74/WP.

⁷² *Ibid.*, 2-3.

social and economic conditions.”⁷³ Thus, SHS explicitly aimed to extend health services to populations and geographic areas of developing countries that had been previously neglected.

These objectives of SHS synthesized several changes in the norms and newly articulated, interconnected problems in the field of international health that arose in the late 1960s and early 1970s. By the late 1960s, as WHO’s Malaria Eradication Program came to a premature halt, many in international health questioned the scope and content of international health interventions for developing world populations. In the span of roughly seven years, from 1967 to 1973, international health leaders inside and outside WHO voiced concerns about nearly every major aspect of the postwar international health apparatus: who should provide medical care, whom should be cared for, what therapeutic techniques and devices should be utilized, and how such tools should be leveraged. Much like the discussions about the relationship between health, development, and basic human needs in Chapter 1, changes in ideas about health systems analysis and what would be called primary health care arose from the series of crises and critiques that characterized global politics and international health at the turn of the 1970s.

The most publicly discussed critique was Jack Bryant’s *Health in the Developing World*, a study commissioned by the Rockefeller Foundation to survey the range of health programs in newly independent countries. Bryant was a hematologist trained at Columbia, NIH, and Washington University in St. Louis. In the 1960s, he had risen through the ranks of the medical faculty at the University of Vermont. Bryant was

⁷³ Ibid., 2.

an unassuming academic physician whose career was changed by this Rockefeller Report. He switched to teaching about community medicine in international settings. In the early 1970s, he became director of the Columbia School of Public Health, and in 1978 he joined US Surgeon General Julius Richmond in the US delegation at Alma Ata. At that time, he was also Director of the Office of International Health within the Department of Health, Education, and Welfare.⁷⁴

The text framed many of the shortcomings of international health through the perspective of the poor on the ground and the structural barriers that created difficult choices regarding their health and survival. Despite well-meaning efforts, Bryant argued that the programs of postwar international health had largely failed to reach a majority of the world's populations.⁷⁵ "Health services [were unable] to achieve a level of national coverage to meet stated demands and the changing needs of different groups within countries."⁷⁶ Though he offered many policy solutions for the inefficiencies in treatments and access to resources, one suggestion that gained support and was echoed by others in the field was normative: the total population of the country must always be the denominator that framed all policy choices. Healthcare delivery, for example, could not be focused on a minority elite.

⁷⁴ Bryant's biographical details are from John H Bryant and Carl E Taylor, "The Christian Community's Contribution to the Evolution of Community-Based Primary Health Care," (Presentation at Christian Connections for International Health (CCIH) 2008 Annual Conference, Buckeystown, MD, May 24, 2008), <http://www.mmh-mms.com/downloads/ccihchristiancontribution.pdf>

⁷⁵ Bryant, *Health and the Developing World*, 10

⁷⁶ World Health Organization, "Proposed Programme Budget for the Financial Years 1976 and 1977, 3 I Strengthening of Health Services," *Official Records of the World Health Organization* 220 (Geneva World Health Organization, 1974) 114

Part of the reason, Bryant and others argued, that a majority of populations did not receive care lay in the allocation of national health budgets. As was explored in the introduction to this chapter, many developing nations devoted considerable portions of health budgets on urban hospital projects. In WHO, several Health Ministers noted to Director-General Mahler that in 1974 they were spending up to 85% of their ministry's budget on the financing and construction of major metropolitan hospitals that would only service a small portion of their countries' populations.⁷⁷ In the 49th Executive Board of WHO, Professor Sulianti Saroso, Minister of Health for Indonesia, bluntly stated that the transplantation of "Western" medicine produced "doctors with a clinical approach . . . [who would demand] modern hospitals, despite the fact that the majority of the population required a different type of health service."⁷⁸ The simple copying of Western medical institutions satisfied the craving for prestige and technology amongst the urban elite, but not the health needs of developing populations. Bryant noted in *Health in the Developing World* that "the influence of American and Western European 'physician models,' systems of medical education, and hospital-centered delivery systems upon developing countries has been nothing short of disastrous, and children have been the greatest sufferers."⁷⁹ This critique produced a two-fold response: the promoting alternative health institutions to serve the needs of the majority of

⁷⁷ World Health Organization, "Executive Board, Fifty-Third Session, Geneva, 15-25 January 1974, Part II Report on the Proposed Programme and Budget Estimates for 1975, Programme 3 1 Strengthening of Health Services," *Official Records of the World Health Organization* 216 (Geneva World Health Organization, 1974) 11

⁷⁸ World Health Organization, "Twenty-Fifth World Health Assembly, Geneva, 9-26 May 1972, Part II Plenary Meetings Verbatim Records and Committees Summary Records and Reports, Committee A Second Meeting, 1 – Research in the Organization of Community Health Services," *Official Records of the World Health Organization* 202 (Geneva World Health Organization, 1972) 282

⁷⁹ Bryant, *Health and the Developing World*, 9-10

populations, and the development of health plans to more efficiently allocate scarce resources for larger and larger segments of a country's population.

But this argument about the export of Western medicine not only questioned the allocation of financial and institutional resources, but the appropriateness of the types of technologies utilized for care. As the 1970s began, many in the West had begun to question the centrality of technology in tertiary patient care. Patients, whose voice was only beginning to be heard, complained about the dehumanizing process of medical care administered by overly specialized physicians who spent more time managing machines and writing prescriptions than attending to those in their care. Texts such as Ivan Illich's *Medical Nemesis* and Thomas McKeown's *The Role of Medicine* bolstered public critiques about medicine's overreliance on technology, the resulting neglect of patient autonomy, and the major determinants of the burden of disease. In international health, the concern was that Western technology could not operate in low resource settings, and did not focus on the disease problems of the developing world. Rather than continuing to blindly send Western technology abroad, WHO leaders such as Halfdan Mahler and Kenneth Newell argued that "appropriate technology" that was context specific, inexpensive, easy to use, and "simple" should be created to solve the most pressing problems in the global burden of disease.

While the push for appropriate technology drew upon these types of critiques and the nascent environmentalist movement's concern for the depletion and pollution of natural resources, the perspective underlying appropriate technology was an application of systems analysis: technologies should be "planned" to "fit" in a context where they could efficiently produce desired results that were "appropriate" for a given local socio-

environmental system. Newell, in this way of thinking, argued for a highly rationalized approach to the management of health technology, with “a decision making process that ranks health problems in order of importance, considers for each problem where in the chain of disease causation and expression the health intervention or treatment should occur, and then determines which health tools should be used, and upon whom.”⁸⁰

Director-General Mahler noted that, “technology for the sake of technology is a dangerous addiction-producing drug. We must always bear in mind the practical application of existing and new scientific knowledge for the benefit of the masses of the world’s population.”⁸¹ Mahler’s position on this was unsurprising. He was a Danish physician who spent the 1950s and 1960s outside of the Malaria Eradication Program, working on tuberculosis and community health in Ecuador and India. His close understanding of the livelihood of the poor was also shaped by the missionary zeal and interest in social justice he inherited from his father, a Baptist preacher.⁸² At WHO headquarters, he ran the tuberculosis unit, and, as Assistant Director-General, oversaw the health systems analysis work of RECS and SHS. When he rose to Director-General in 1973, he began pushing programs that were more closely connected to the everyday health needs of rural, developing country populations.

⁸⁰ World Health Organization, “Health Technology Relating to Primary Health Care and Rural Development: Report of the Director General,” (World Health Organization, April 12, 1976), WHOA, A29/23.

⁸¹ World Health Organization, “Twenty-Ninth World Health Assembly, Geneva, 3-21 May 1976, Part II: Verbatim Records of Plenary Meetings and Summary Records and Reports of Committees, Committee B: Twentieth Meeting, Health Technology Relating to Primary Health Care and Rural Development,” *Official Records of the World Health Organization* 234 (Geneva: World Health Organization, 1976): 624-5

⁸² Cueto, “The Origins of Primary Health Care and Selective Primary Health Care,” 1865.

While these critiques began to dismantle some of the support of postwar “magic bullets” like DDT, ideas about healthcare delivery emerged from the increasing prominence of alternative forms of rural, basic healthcare from medical missionary ventures or socialist experiments. The medical clinics established and managed by evangelizing physicians had been a central aspect of international healthcare since nineteenth century colonial expansion. While these clinics provided treatment for colonial officials, medical missions were the first institutions, alongside plantation-based company medical services, to provide Western medical care to native colonial populations⁸³ These older traditions in missionary medicine promoted rural, basic healthcare that was not directed by a distant government, did not rely upon sophisticated medical technology, and analyzed diseases within a holistic framework of social determinants. These rural experiments also encouraged local villagers to partake in community medical care to supplement, or even replace, the work of medical professionals in handling easily treatable illnesses and injuries.

The missionary practices of the late 1960s and early 1970s continued much in the same manner. Religious organizations sponsored physicians and nurses that set up village-centered healthcare centers specifically on the periphery. The diagnosis of illness originated within a holistic assessment of the local socio-environmental context, and individual treatments and preventative services were connected to broader reforms

⁸³ Socrates Litsios, interviewed by the author, January 2010 Many of the central figures in early and mid 20th century international health started their work in medical missions John Grant, father of James Grant of the ODC and UNICEF, was a son of missionaries who erected rural health services in Republican China through the Rockefeller funded PUMC in the 1930s Selskar Gunn, a contemporary of John Grant at Rockefeller who also developed rural health care in China in the 1930s, started as a medical missionary Sidney Kark was a medical missionary who promoted novel community medical centers in South Africa and Israel in the 1950s, and Tom Dooley developed religiously motivated (and CIA funded) clinics in French Indo-China in the fifties and sixties

in education and self-sufficiency in agriculture. Medical personnel worked closely with the local people, and villagers would often provide paramedical services themselves. This work could be found everywhere from Costa Rica to Sri Lanka, from Guatemala to Indonesia.⁸⁴ What set apart medical missions at the turn of the 1970s was a new international concern for the social welfare of the marginalized, and the close connections between WHO and the Christian Medical Commission, the Geneva-based umbrella organization for many worldwide medical missions.

In 1970, on behalf of a joint ILO/WHO committee investigating connections between personal health and social security, Halfdan Mahler noted that it seemed “timely to develop a concerted approach to the planning, administration, and financing of personal health services.”⁸⁵ The trans-national economic recessions occurring at the turn of the decade highlighted the social and health-related personal risk that the marginalized faced in light of socio-economic crisis. Disease based programs like the recently curtailed Malaria Eradication Program could not provide a “safety net” for potential economic and health hardships. And for many within WHO, as previously explained, the previously existing health services of many countries were considered disorganized and unable to care for changing populations. The committee “recommended that studies be carried out to determine the approximate levels of development of national economies and basic health services suitable and appropriate for extension of social security systems for the delivery of personal health care.”⁸⁶

⁸⁴ These were the locations of some of the cases in *Health by the People*. Kenneth W. Newell, *Health by the People* (Geneva: World Health Organization, 1975).

⁸⁵ Halfdan Mahler, quoted in Litsios, *The Third Ten Years of the World Health Organization*, 128.

⁸⁶ *Ibid.*

To pursue this matter, the Executive Board of WHO in January 1973 began looking into ways of assessing the viability of national health services and the place WHO might play in assisting member states in improving the delivery of healthcare. It summarized its finding in a report produced with the staff of the newly formed SHS. The report shifted away from the universalism of postwar modernization theory and concluded that no one single template of health care delivery could handle the diverse needs of the world's varying populations. In fact, the document stated that "each country will have to possess the national ability to consider its own position (problems and resources), assess the alternatives available to it, decide upon its resource allocation and priorities, and implement its own decisions."⁸⁷ Such a statement reflected the broader sentiment of international health and development in the 1970s: rather than all nations converging on a single apex in a grand teleological narrative of improvement, socio-economic change would be a piecemeal and protracted affair based upon more localized needs and desires. By the end of the year, a joint WHO/UNICEF discussion pushed for research in diverse and "promising approaches to meeting basic health needs," with a specific focus on "community involvement in financing and controlling health services."⁸⁸

As Socrates Litsios has shown, one of first places WHO consulted for alternative approaches to basic healthcare delivery was the Christian Medical Commission (CMC), located in Geneva along with its affiliate, the World Council of

⁸⁷ World Health Organization, "Documents for 55th Session of the Executive Board," January 1975, pg 4, EB55/9, cited in Litsios, "The Christian Medical Commission and the Development of the World Health Organization's Primary Health Care Approach," 1892

⁸⁸ Quoted in Litsios, *The Third Ten Years of the World Health Organization*, 34

Churches. The CMC network of medical missionaries could describe how physicians throughout the world were actively delivering rural medical care to peripheral populations. Fortuitously, many senior members had close connections to WHO and actively promoted basic health services. Carl Taylor, a longtime consultant for WHO and head of the Division of International Health at the Johns Hopkins School of Hygiene and Public Health, was a well-regarded American member of the CMC who also wrote extensively about village healthcare services in India and Sri Lanka.⁸⁹ Jack Bryant, while serving as chairman of the CMC in the early 1970s, leveraged his leadership position to actively promote public discussions to address ethical questions on the nature of the right for health and the moral justification for equal distribution of health resources. Additionally, Kenneth Newell knew of many senior members in the CMC while director of both RECS and SHS at WHO; he actively used their missionary projects as examples of successful healthcare delivery in his celebrated *Health by the People*, a key text influential within WHO.⁹⁰

As mentioned before, Newell was the personified intersection of all the major ideas and influences underlining health systems analysis and health care delivery at WHO in the 1960s and 1970s. In addition to his technical research in epidemiology and health systems analysis, he was actively involved in postwar British social medicine, and was influenced by both the community-health promoting physician Sidney Kark

⁸⁹ Carl E. Taylor, "The Health Sciences and Indian Village Culture," *Science and the Human Condition in India and Pakistan*, ed., Ward Morehouse (New York: Rockefeller Press, 1968): 153-6; Carl E. Taylor, William A. Reinke, and Robert L. Parker, "Functional Analysis of Health Needs and Services," in *Uses of Epidemiology in Planning Health Services*, Proceedings of the Sixth International Scientific Meeting, International Epidemiological Association, August-September 1971, Primosten, Yugoslavia. (Belgrade: Savremena Administracija, January 1973); "C.V.," n.d., CTP, Box 4, Folder 7 "Narangwal."

⁹⁰ P. Dorolle, "Memo to All Regional Directors" (World Health Organization, July 25, 1973), WHOA, N61/348/77.

and the social epidemiologist, John Cassell, both of whom were South African.⁹¹ The work Newell was best known for, *Health by the People*, grew out of several experiences: his position as secretary to the WHO Executive Board on the committee for basic healthcare, his own work in healthcare delivery as head of SHS, and his earlier experiences as a young New Zealand physician stationed amongst an isolated tribal population in Western Polynesia.⁹²

Newell's text consisted of nine descriptive case studies of different types of basic healthcare services and an extended analysis by Newell synthesizing together generalizable characteristics. Three cases – projects in India, Guatemala, and Indonesia – “started with overseas financial assistance from religious bodies, but evolved into mainly self-supporting projects.”⁹³ The Indonesian project, run by Dr Gunawan Nugroho, was referred to Newell through CMC contacts.⁹⁴ Three of the remaining six – projects in the People's Republic of China, Cuba, and Tanzania – highlighted revolutionary socialist movements that treated equitable universal healthcare as an essential expression of political agendas. In particular, the mass mobilization of barefoot doctors in China fascinated WHO officials. At a time when Western based care was being criticized, this Chinese example presented what was perceived to be a highly successful non-Western alternative to healthcare delivery, even though it was

⁹¹ Socrates Litsios, interviewed by the author, January 2010; Theodore M. Brown and Elizabeth Fee, “Sidney Kark and John Cassel: Social Medicine Pioneers and South African Emigres,” *American Journal of Public Health* 92, no. 11 (November 1, 2002): 1744-1745.

⁹² Kenneth W. Newell, “Technical Presentation: Primary Health Care in the Western Pacific” (World Health Organization, August 5, 1976), 2-4, WHOA, WPR/RC27/TP/1.

⁹³ Milton I. Roemer, “Review: [untitled],” *Medical Care* 14, no. 1 (January 1976): 93-4.

⁹⁴ Litsios, “The Christian Medical Commission and the Development of the World Health Organization's Primary Health Care Approach,” 1889.

depoliticized and poorly understood within the context of the Cultural Revolution. The remaining three examples in *Health by the People* – in Venezuela, Iran, and Niger – analyzed basic health service projects developed in specific regions of the respective countries with the support of strong national leadership.⁹⁵

In his epilogue, Newell drew different lessons from each of the three sets. First, he argued that the success of the missionary-funded programs lay in the fact that healthcare was considered as part of a holistic assessment of the community, and placed on equal footing with other social service objectives for community change. For the socialist cases, Newell noted that the starting point was a national political will to ensure health equity as part of a broader socialist agenda; this meant that health was not confined to the medical sector and considered vital to the dominant political ideology. Moreover, these examples, along with the final three examples, demonstrated that, under specific political conditions, resources and manpower could be marshaled quickly. Overall, the common thread through each of the reports was that health problems had their roots in the sociopolitical determinants of community life and could not be solved by medical interventions alone. Newell also emphasized that the village health worker was the central element to the case studies in *Health by the People*, and that “the key to success of auxiliaries in developing lands is twofold: their identity with and understanding of the people they care for, and the overwhelming prevalence of a few easily treated conditions ”⁹⁶

⁹⁵ Newell, *Health by the People*, Anthony B. Zwi and Anne Mills, “Health Policy in Less Developed Countries: Past Trends and Future Directions,” *Journal of International Development* 7, no. 3 (1995) 299-328

⁹⁶ John G. Freymann, “Health by the People (Book),” *Annals of Internal Medicine* 83, no. 6 (December 1975) 911

In assessing Newell's cases and the work of the CMC, the community medicine that emerged during the changes of the late 1960s and early 1970s presented a specific vision of care that was holistic in its diagnosis of social determinants of disease, oriented to those on the periphery of society, and focused on treating the most common ailments with simple, low cost solutions. In this framework, the problems of health were not simply biological pathogens, but the social organization of medical services, the over-reliance on biomedical treatments, and the political arrangements that prevented access to care. However, the rationale for this type of care was mixed: some argued that the expansion of treatment options to previously neglected populations was done for its own sake; others pushed these measures for the simple improvement of demographic statistics. Newell and those inspired by the barefoot doctors viewed basic health services as a means for political empowerment. In the Cold War, such sentiments had broader political meanings; they implied collectivization of the masses who use the health system to usurp political control from elites and manage their own affairs in a socialist fashion. These ideas favored socialist agendas of propagating communism worldwide.

The worldview of basic health services that emerged in the late 1960s and early 1970s was similar and different in many ways to the health systems analysis used in SHS projects. First, both encouraged a careful approach to utilizing limited local resources and budgets for health service delivery. Health systems analysis framed this as a matter of operational efficiency and a means of providing information feedback in managing the system; missionary medicine framed this as a pragmatic action, but also as a means of encouraging participation. Second, both encouraged a holistic diagnosis

of the structural problems of poor health and the potentials for improvement. Health systems analysis pushed this as a way of understanding all inputs and outputs that affect the system dynamic; missionary medicine drew upon this as part of traditions in social medicine and its social embeddedness in community development. Third, both advocated for experimentation to find the best possible health services that could meet community needs. Health systems analysis was oriented to be open ended and the means to success were secondary to achieving health outcomes. Additionally, the stochastic and game theoretic underpinnings that helped systems analysis in wargame simulations posited that there was a potential range of “right decisions” for every pre-stated objective; the challenge lie in finding an acceptable balance of trade-offs for a given local context. Missionary medicine, in its own fashion, likewise focused on understanding the lived experience of local communities and worked in a trial-and-error fashion to build appropriate health services. Thus, both of these methods rejected the simple blind exportation of Western style tertiary hospital care to developing countries. However, where missionary and socialist community health services pushed anecdotally-based analyses of best practices (*Health by the People* was a compilation of these), health systems analysis was based around abstract simulations and diagrams that could produce efficient solutions not attempted beforehand.

The broader changes in the values underlying basic health services were evident in the early projects of SHS, as well as the division’s use of health systems analysis. For example, a May 1973 study on basic healthcare for the WHO Executive Board and SHS articulated five main principles for promoting basic health services and utilizing health systems analysis:

- a) while health may be considered an individual matter, the organization of health services must be largely collective and thought of in both local and national terms;
- b) health services must be regarded holistically, embracing public and private, national and international, curative and preventative, peripheral, intermediate, and central services
- c) indicators for describing the problem and evaluating performance ultimately rest upon health status, but indicators in terms of operational factors, the degree of use of an accepted technology, cost, and consumer approval are also needed;
- d) health services development project or programmes should be judged by such criteria;
- e) no international model for health services exists and each country needs to have available the special skills required for planning, programming, and management⁹⁷

These guidelines synthesized many of the main changes of the previous seven years:

local and national context matters, delivery must be regarded holistically, and underutilized international templates could not be easily applied in diverse settings.

Many principles of health systems analysis were also prioritized: quantitative indicators and evaluative measures should focus on health outcomes, and the local management of delivery is shaped by predefined outcomes. This report revealed the tremendous changes that both health service delivery and health systems analysis underwent in their mutual development. As the next section will show, this was only one step in the way primary health care and health systems analysis evolved in tandem.

Part IV: “Managing Primary Health Care Systems”

Primary health care is essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and

⁹⁷ World Health Organization, “The Work of the WHO 1973, Annual Report of the Director-General to the World Health Assembly and to the United Nations, Chapter 7 – Strengthening of Health Services,” *Official Records of the World Health Organization* 213 (Geneva: World Health Organization, 1974): 95.

self-determination. It forms an integral part both of the country's health system, of which it is the central function and main focus, and of the overall social and economic development of the community.

-Article VI of The Declaration of Alma Ata⁹⁸

As the Division of Strengthening of Health Services continued operations in 1973 and 1974, broader political and institutional interests in the delivery of basic healthcare further reoriented the significance and practice of health systems analysis. The challenge of implementing what would become known as primary health care came to frame health care delivery as a matter of rallying national political will, rather than as a technical puzzle of discovering the most efficient organization of a system. Some of this sentiment was already present back in 1972 when Halfdan Mahler, still as Assistant Director-General, addressed the final WHO Executive Committee assessment of the work of RECS. At the time, he noted that “there was a tendency to believe that mathematical gymnastics would provide health care to people. They would not . . . Managerial methodologies could only accelerate the delivery of health care if there was a strong political and social will to provide such care.”⁹⁹ This reframing of health systems analysis within the political character of primary health care was not about the analytical toolkit fading in significance behind Cold War rhetoric. Rather, it was about setting health systems analysis within a new set of values and broader social and institutional context. Within the context of primary health care, health systems analysis remained a central vocabulary and worldview for health care delivery at WHO in the

⁹⁸ “Declaration of Alma Ata: International Conference on Primary Health Care, Alma Ata, USSR, 6–12 September 1978,” www.who.int/hpr/NPH/docs/declaration_almaata.pdf (15 July 2010).

⁹⁹ *Official Records of the WHO* 209, (Geneva: World Health Organization, 1973), WHA26/SR/A/11, quoted in Litsios, *The Third Ten Years of the World Health Organization*, 94.

1970s, and, in turn, it shaped the very logic and goals of public statements about primary health care, including the Declaration of Alma Ata itself.

The New International Economic Order, described in Chapter 1, became an external confirmation for WHO that it should embrace its newfound concern for the health of the marginalized in the developing world. As representatives from seventy-seven non-aligned developing nations stood up at the UN General Assembly in May 1974 to call for greater equalization of global trading policies, WHO expanded upon its rationale and goals for pursuing the delivery of basic health services. As Director General Halfdan Mahler noted in his address before the 28th World Health Assembly in 1975, the NIEO – in light of prolonged global recessions, famines, and oil shocks – was a call for a “New Development Order” that would bring more equitable care to the entire world.¹⁰⁰ In fact, according to Mahler, primary health care would serve a “code word describing a health related response to the international and national cry for social equality and justice with equal emphasis upon the developing world and the underserved groups of many countries.”¹⁰¹

The codification of primary health care as a concept and term in WHO arose as much from international politics like the NIEO as it did internal WHO politics. The WHO Soviet delegation, led by Dimitry Venedictov, tried to direct the increasing interest in basic health services at WHO toward a high-profile, international conference of government leaders that would attempt to gather political support for expansion of national health services outside of WHO. Venedictov’s interest in basic health services

¹⁰⁰ Halfdan Mahler, “Health for All by the Year 2000,” *WHO Chronicle* 29 (1975): 457.

¹⁰¹ “Working Paper on the International Conference on Primary Health Care 1978” (World Health Organization, January 1977), 1, WHOA, P21/87/5, jacket 1, A1399.

began as early as 1972 when he saw the topic surreptitiously come up in the WHO Executive Committee as a possible new priority for WHO activities. He continued to push for programming for health services grounded in local participation – which began to be called “primary health care” in 1974 –and his delegation marshaled support of other country representatives over the next two years. Despite the fact that WHO had little experience in primary health care, Venedictov’s 1974 proposal for a conference was not officially deemed “desirable” by WHO Secretariat until 1975. However, this was not simply an attempt to gather more interest outside of the usual UN channels and annual WHA. For Venedictov, the promotion of primary health care was a highly-political, Cold War event. The USSR and socialist countries could showcase the strengths of collectivized healthcare delivery compared to what was viewed as a flagging, disorganized, market-based Western healthcare.

The realities of defining the relationship between primary health care and health systems analysis, however, were not as clear-cut as the Cold War “East vs. West” political symbolism constructed around the Soviet sponsorship of the topic. The 1974 Annual Report of WHO Activities noted that “initial work was done on the adaptation of the project systems analysis methodology to the strengthening of health services. Some previous exercises using this technique have been directed to problems encountered by countries in the organization and delivery of health services, and the need for this process of project formulation to be applied in most countries following the introduction of country health programming is recognized.”¹⁰² While earlier systems analysis procedures had focused on initial model design and formulating the perfect

¹⁰² World Health Organization, *Official Records of the World Health Organization* 213, 96.

theoretical model of balanced inputs, outputs, and actions, health systems analysis by 1974 had begun to focus more on implementation and developing procedures that could operate in settings characterized by incomplete information and a lack of resources.¹⁰³ The transition to practical solutions arose from a continuing increase in interest by ministers of health in applying health systems analysis to their own countries.¹⁰⁴ This sentiment also because Newell and SHS members were assigned to help prepare for the conference and articulate how primary health care would work; health systems analysis became one tool to help in this policy formulation.

Starting in 1974, health systems analysis focused on new types of activities designed to help create functioning primary health care systems. The influences between primary health care and health systems analysis were bidirectional: health systems analysis drew upon the policies and values of primary health care to describe the practice of implementing systems based policies, the distribution of activities and resources for primary health care within national health services only made sense in a systems context. From 1974 until the Alma Ata Conference in 1978, those working in SHS on health systems analysis interpreted “implementation” of efficient management practices as: foregrounding the national development of coordinated peripheral healthcare, diversifying and training auxiliary health workers, rationalizing intersectoral coordination of social services, managing resource scarcity, rationally combining curative and preventative services, and developing national and regional information feedback loops to evaluate local performance.

¹⁰³ *Application of Systems Analysis to Health Management: Report of a WHO Expert Committee*, World Health Organization Technical Report Series (Geneva: World Health Organization, 1976), 9-10.

¹⁰⁴ World Health Organization, *Official Records of the World Health Organization* 220, 114.

As early 1970s WHO primary health care documents like Newell's *Health by the People* and Djukanovic and Mach's *Alternative Approaches to Meeting Basic Health Needs in Developing Countries* stressed the viability of basic service clinics as an alternate to hospital care in rural settings, those working in SHS interpreted a central task of health systems work as networking such alternative services together and bringing "resources available to the community" into "harmony" with "the resources available to the health services."¹⁰⁵ In the health systems analysis framework, coordinated health service delivery would occur on two levels: within a community, and among the national system of rural and urban communities. However, in a radical departure from traditional hospital centered-care, primary health care and systems analysis would build new series of peripheral structures – rural clinics, store-front dispensaries – "designed for the context they are to serve."¹⁰⁶ This type of systems context –the opposite of early military projects – required that the health planning apparatus create decentralized systems whereby basic, equitable care could be available to all.¹⁰⁷ While political considerations inside and outside WHO would push this expansion of rural services as a matter of attending to the health needs of marginalized populations, health systems analysis could also rationalize such an action as a matter of national coordination and efficient use of local resources.

¹⁰⁵ *Organizational Study of the Executive Board on Methods of Promoting the Development of Basic Health Services* (Geneva: World Health Organization, 1972), EB49/WP/6.

¹⁰⁶ Ibid.

¹⁰⁷ World Health Organization, "Executive Board, Fifty-Fifth Session, Geneva, 20-31 January 1975, Part II: Report on the Proposed Programme Budget for 1976-1977 (Financial Year 1976), Programme Sector 3.1 Strengthening of Health Services," *Official Records of the World Health Organization* 223(Geneva: World Health Organization, 1975): 166.

Closely tied to managing resources and developing rural services was manpower coordination. In systems analysis, one part of creating efficient operations involved assessing which type of worker would be most suited for a specific type of work, given their training, skills, and the larger objectives of the program. Primary health care literature emphasized “community involvement . . . auxiliary staff, community health workers . . . and permanent supervision and support from the intermediate echelons to the periphery.”¹⁰⁸ Health systems analysis research had covered this matter this in the past; for example, an early project of SHS involved “the analysis of systems applied to the formulation and management of . . . auxiliary personnel in Kenya and the development of the health infrastructure in North Western State, Nigeria.”¹⁰⁹ But in the context of primary health care, the larger political concern focused on supplementing or displacing even physician-based care in the interests of community participation. One highly touted SHS project in 1975 demonstrated how health systems analysis implemented a strategy of prioritizing auxiliary health workers in primary care:

In Iran, the objective of the West Azerbaijan project under the Health Services Development Institute [was] to increase the health services coverage of the population by setting up an integrated health care network at the provincial level. This involve[d] establishing a system of front line health workers and defining the relationship between these workers, the health centers, and the hospitals. Output indicators [would] be based on both the coverage and the productivity of health services and on changes in health status. The major project activities in the three districts now involved [were] concerned with the training of front-line health workers and their introduction into the health services system, care being taken to ensure that utilization and training [were] closely integrated. The first batches of these health workers [were] working in rented or newly built “houses of health” in the villages surrounding the rural

¹⁰⁸ Litsios, *The Third Ten Years of the World Health Organization*, 121.

¹⁰⁹ World Health Organization, “The Work of the WHO 1975, Annual Report of the Director-General to the World Health Assembly and to the United Nations, Chapter 1 – Strengthening Health Services” *Official Records of the World Health Organization* 229 (Geneva: World Health Organization, 1976): 12.

health centers; a physician serve[d] as the first referral and supervisory point, while staff assigned to the project by the Ministry of Health responsible for management and training in each district.¹¹⁰

In this case, community health workers ensured basic perhiperal care; however, their productivity, management, and ability to refer complex cases to specialists was necessarily connected to their place in a national and tiered system of health care that systematized objectives and resources between health centers, larger hospitals, and the Ministry of Health

Coordination of diverse disciplinary activities had been a foundation aspect of operations research and systems analysis; one of the seminal traits of the Rad Lab at MIT in WWII was interdisciplinary collaboration between physicists, mathematicians, engineers, and military officers. Health systems analysis, likewise, had focused on abstractly managing supply chain-distributions, collaboration of health officials at varying administrative positions, and understanding the social determinants (“inputs”) that affected the use of services and the burden of disease. As evident in the above Iranian case, all of these concerns continued in primary health care. But three additional coordinating tasks arose in SHS reports and WHA discussions in the mid 1970s. First, WHO officials imagined health systems work would help coordinate relevant social sector activities that touched upon health care delivery.¹¹¹ The diagnosis of a broad range of social determinants would be matched by the national intersectoral harmonization of education, agriculture, nutrition services, and population control

¹¹⁰ World Health Organization, *Official Records of the World Health Organization* 229, 13.

¹¹¹ World Health Organization, “Twenty-Eighth World Health Assembly, Geneva, 13-30 May 1975, Part II: Verbatim Records of Plenary Meetings and Summary Records and Reports of Committees, 3.1 Strengthening of Health Services” *Official Records of the World Health Organization* 227 (Geneva: World Health Organization, 1975): 349.

toward primary health care objectives. Second, traditional medicine would be encouraged to continue, but planners thought it could be rationalized and managed as a discreet, bounded entity within a larger national health system.¹¹² Finally, in the interests of streamlining divisions within medicine, officials applying health systems analysis to primary health care advocated combining curative and preventative health services in primary health care. Whatever divisions had arisen over the 19th and 20th centuries from specialization were imagined to be surmountable, despite the history of professional antagonism between curative and preventative health services.¹¹³ These additional coordinating policies highlight the expectation that efficient systems frameworks could extend the scope and quality of care.

While primary health care and broader WHO and global politics shaped the orientation of health systems analysis, the language and values of this analytical toolkit also became more pervasive in general primary health care literature leading up to Alma Ata and at the Conference itself. National healthcare services were repeatedly referred to as holistic “systems” that required “scientific management” and the “evaluation” of projects through “information processing.”¹¹⁴ In describing the rallying cry of “Health for All by the Year 2000,” Halfdan Mahler made great pains to emphasize that the “centralized health system chain” required “constant monitoring and training of local

¹¹² Amor Benyoussef and Barbara Christian, “Health Care in Developing Countries,” *Social Science & Medicine* 11, no 6-7 (April 1977) 401

¹¹³ Allan M Brandt and Martha Gardner, “Antagonism and Accommodation Interpreting the Relationship between Public Health and Medicine in the United States during the 20th Century,” *American Journal of Public Health* 90, no 5 (May 2000) 707-715, *Application of Systems Analysis to Health Management Report of a WHO Expert Committee*

¹¹⁴ World Health Organization, “The Work of the WHO 1974, Annual Report of the Director-General to the World Health Assembly and to the United Nations,” *Official Records of the World Health Organization* 221 (Geneva World Health Organization, 1975) 180

agents, as well as resource coordination.”¹¹⁵ An expert committee assessing the role of systems analysis in WHO noted that such analytical methods were part of the future of healthcare that rested with greater “scientization;” the “operational value defining procedure” was argued to be better than the “discussion of principles that permeates development planning or the procedural directions that are so common in particular program categories.”¹¹⁶ Kenneth Newell, in a *World Health* article on primary health care titled “Healthcare as an Agent of Change,” noted that even the broadest goals of WHO were articulated as a homeostatic system: “Mahler described the mission of WHO as ‘achieving a more stable equilibrium between man and his environment.’”¹¹⁷

The First Conference on Primary Health Care in September, 1978, in Alma Ata, Kazakhstan, USSR, represented years of planning and debate; over 3000 delegates from 134 governments and sixty-seven NGOs attended.¹¹⁸ There were many larger political and technical goals of the conference and the potential primary health care movement that might follow. Health systems analysis was most especially evident in two places: the language of the Alma Ata Declaration itself, and the questions that were supposed to guide discussion of discussion committees at the conference. In the Declaration, the first part of Article VI stated that: “Primary health care is essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full

¹¹⁵ Halfdan Mahler, “Health for All by the Year 2000,” *WHO Chronicle* 29 (1975): 458.

¹¹⁶ *Application of Systems Analysis to Health Management: Report of a WHO Expert Committee*, 16.

¹¹⁷ Kenneth Newell, “Healthcare as an Agent of Change,” *WHO Chronicle* 30 (1976): 182.

¹¹⁸ “The Alma-Ata Conference on Primary Health Care,” *WHO Chronicle* 32 (1978): 409-30.

participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination. It forms an integral part both of the country's health system, of which it is the central function and main focus, and of the overall social and economic development of the community." Article VII stated: "All governments should formulate national policies, strategies and plans of action to launch and sustain primary health care as part of a comprehensive national health system and in coordination with other sectors. To this end, it will be necessary to exercise political will, to mobilize the country's resources and to use available external resources rationally."¹¹⁹ In both of these examples, the delivery of equitable care on the periphery was part of a national system of care, and the training and coordination of resources was managed and monitored through feedback mechanisms with the aim of efficiency and nationally defined goals. The questions to guide two of the three committee discussions at the conference framed health systems analysis as a matter of national coordination and support of the periphery, rather than in the local context. The agenda for Committee B ("Technical Operational Questions") included an item on "Possible methods of defining and measuring objectives and results of actions in development, health service coverage, health status, effectiveness, costs."¹²⁰ The agenda for Committee C ("Useful Steps in Furthering Primary Health Care Activities in Countries") began by asking, "On what basis can a country decide

¹¹⁹ "Declaration of Alma Ata: International Conference on Primary Health Care."

¹²⁰ "Committee B: Technical and Operational Aspects of Primary Health Care," (World Health Organization, September 1977), pg. 2-4, WHOA, P21/87/5, jacket 1, A1399.

that change is required in a health system? By information on health status? Economic criteria? Coverage? Cost?”¹²¹

Conclusion

Alma Ata represented the culmination of a movement in international health in the 1970s to address concerns for international poverty and to critique older policies that favored urban care delivered by elite physicians. As the conference drew to a close in late September, 1978, the participants and their supporters around the globe focused on several key ideas and policies that emerged from the meeting. Above all else, the central idea of care based around community participation was roundly celebrated; officials departed the USSR discussing idealized scenarios where community members would take initiative and volunteer their own resources and time to provide basic care.¹²² This potential future, people believed, demonstrated another key idea of the conference: that the expansion of empowering and equitable care could help fulfill the promise of the NIEO for greater international political and social equality. However, these changes would not happen without the third topic of discussion amongst health leaders: the marshalling of global will, especially in developing countries, for transformative political change.¹²³ Many historians documented have these sentiments, and have framed the historical significance of Alma Ata around these beliefs.

¹²¹ “Committee C National and International Role in Primary Health Care Promotion, Development, and Support,” (World Health Organization, September 1977), pg 1-3, WHOA, P21/87/5, jacket 1, A1399

¹²² Theodore M Brown, Marcos Cueto, and Elizabeth Fee, “The World Health Organization and the Transition From ‘International’ to ‘Global’ Public Health,” *American Journal of Public Health* 96, no 1 (January 2006) 62-72

¹²³ Halldan Mahler, “Health for All by the Year 2000,” 457

Nonetheless, a focus on these publically proclaimed priorities overlooks health systems analysis, a key influence that shaped the orientation, expectations, and values of health care delivery in the 1970s. As this chapter has shown, the unique mix of social, political, and institutional influences that characterized international health, WHO, and missionary and socialist health services in the 1960s and 1970s provided a framework for the application of Cold War social sciences to health care. This refashioning of health care delivery was situated in a broader environment distinguished by a turn away from optimistic postwar modernization policies and concerns about personal economic insecurity arising from global socioeconomic crises. As a result, the creation of national health services was no longer a simple matter of blind transplantation of established practices, but the careful consideration of diverse local circumstances and the specific needs of various developing populations. In these circumstances, the delivery of basic health services in developing countries was fundamentally about applying sophisticated quantitative management practices to systematize the avoidance of risk, coordinate networks of care, and foster the efficient use of scarce resources. Questions about equity in health care delivery were ultimately questions about rationally managing complexity.

In tracing the role of health systems analysis in the development of primary health care delivery at WHO, this chapter has shown that primary health care was fundamentally systems-based in its orientation and expectations. Community health services would be expanded and coordinated along the periphery; minimally trained auxiliary health workers would efficiently treat simple but pervasive health problems in the community; and monitoring and evaluation would be conducted at a national level.

While some of the political posturing of Alma Ata would suggest tensions in primary health care between the emancipatory rhetoric and technocratic systems-based management, there were shared values that allowed health systems analysis to integrate into and support WHO's broader mission of care delivery; the prioritization of holistically evaluating interconnected social determinants and moving away from the prestige of physicians in favor of community workers were two of the many examples of the logic of health systems analysis supporting some of the politically radical ideas underlying primary health care in the 1970s. Previous scholarship on primary health care has stressed fundamental differences between the "comprehensive" primary health care of WHO and the "specific" primary health care advanced by UNICEF and the Rockefeller Foundation. However, the latter program continued the employment of the values and language of "systems" based care. This suggests far more continuity between two rival approaches whose difference has been exacerbated by institutional difference, personal disputes, and changing interpretations of access and equity.

The language and ideas of "health systems" remains a central part of the vocabulary of global health care delivery today. However, its story from the 1970s to the present was not a simple one of uncontested relevance to policy. The place of systems-based management tools changed with perceived needs and political context. Though the language of "systems" and concern for cost-effectiveness continued as the UNICEF and Rockefeller Foundation sponsored selective primary health care became the predominant orientation for health care delivery, there was considerable doubt about other aspects of health systems analysis in the 1980s. As Zwi and Mills have explored in their comparative study of health care systems, systems based planning produced

prodigious amounts of information, but the plans were neither affordable nor implementable. “Decisions made bore little relationship to plans, and technical analysis was increasingly recognized to be only one input to decision making.” New policies for national health service delivery explicitly avoided the term “planning,” and “the political and incremental nature of planning decisions was more explicitly recognized. In addition, planning systems which had been developed in the context of a strong public presence in health care financing and provision were less relevant in the context of a reduced state role, deregulation and liberalization.”¹²⁴ However, by the 1990s and early 2000s, the growing effects of globalization, a changing burden of disease in the developing world, and a desire for outcomes based care that was not compartmentalized into community participation or disease eradication based delivery models revived interested in systems based management in global health.

The rise of health systems analysis in international health care delivery in the 1970s presented a story of how an unlikely influence from military research came to shape widely-held understandings about the role of medicine in the social arrangement of communities around the world. Systems based thinking also revealed new ways that WHO officials came to understand the orientation and values of their organization. WHO became an instrument of far-reaching social change, and focused on calculating potential risks and future health burdens. The propagation of health systems analysis illustrates the broader practice of international health in the Cold War, where norms of equity were conflated with imperatives for efficiency. The norms and underlying tensions in the delivery of health care raise many lingering questions. One of them –

¹²⁴ Zwi and Mills, “Health Policy in Less Developed Countries: Past Trends and Future Directions.” 312.

who is best suited to attend to the disease problems in international health and why – will be explored in the next two chapters.

Chapter Three

Experiments in Internationalism: The Fogarty International Center and Biomedical Research

Introduction: “Transplants”

In the early months of 1968, one of the biggest celebrities to catch the attention of the Western press was not a musician, a politician, or an actor. It was a white South African surgeon. The previous December, news emerged of a pioneering – and to many, quite astounding – surgical operation: the heart transplant. In the midst of apartheid policies and violent police crackdowns, Dr. Christiaan Barnard replaced a dying patient’s heart with a new one at the Groote Schuur Hospital at the University of Cape Town. Though physicians came to consider the operation so controversial and risky that another was not performed for nearly ten years, Barnard enjoyed exceptional praise and admiration for the first few months after his breakthrough.

The celebration of his achievement was nowhere greater than in the United States. In mid-December, 1967, Barnard graced the cover of *Time*.¹ In March, 1968, CBS aired an extended, hour-long episode of *Face the Nation* with Barnard. The network anticipated more than twenty million viewers would watch the South African answer questions about heart transplantation alongside prominent American cardiac surgeons Michael DeBakey and Adrian Kantrowitz.² There was such notoriety about the procedure that even President Lyndon Johnson asked to meet Barnard. At a press conference at Johnson’s retreat near Stonewall, Texas, the surgeon touched on many

¹ “Surgery: The Ultimate Operation,” *Time*, December 15, 1967.

² Ayesha Nathoo, *Hearts Exposed: Transplants and the Media in 1960s Britain* (Basingstoke: Palgrave Macmillan, 2009), 82.

issues: how the historic operation was performed, how it could be improved, and the tantalizing opportunities for treating a whole range of cardiac diseases. Additionally, Barnard went out of his way to publicly acknowledge “his indebtedness to NIH [the National Institutes of Health] for supporting his studies at the University of Minnesota which prepared him for his pioneering heart-transplant operation.”³ NIH Directors back in Bethesda, Maryland were jubilant that such positive publicity connected the Institutes to this grantee-cum-celebrity. In fact, the National Institutes of Health, the division of the Public Health Service (PHS) and Department of Health, Education and Welfare (HEW) that funded basic and clinical biomedical research, had supported Barnard at several key points in his career. It paid for his schooling in Minneapolis, provided three years of funding for exploratory research back in Cape Town, and covered the cost of the heart-lung machine used in the historic operation.⁴

The surgeon’s personal story reveals the numerous international aspects of a major postwar medical innovation. Barnard was a physician who was born to Dutch missionary parents, educated in the US, collaborated with researchers in the UK, and received funding from the US Government to develop a new surgical procedure at a hospital in South Africa.⁵ In fact, Barnard was one example of countless international scientists, physicians, and public health officials who had received financial support

³ “National Institutes of Health: Institute Directors Meeting Minutes,” January 4, 1968, pg. 7, NIHA, NIH 2679. In historical and contemporary literature on the National Institutes of Health, the organization is referred to as both “NIH” and “the NIH” when abbreviated. The former usage is more common, and will be used in this chapter. The Fogarty International Center (FIC), on the other hand, is always described as “the FIC.”

⁴ Nathoo, *Hearts Exposed*, 76.

⁵ Lawrence K. Altman, “Christiaan Barnard, 78, Surgeon for First Heart Transplant, Dies,” *The New York Times*, September 3, 2001, sec. World. <http://www.nytimes.com/2001/09/03/world/christiaan-barnard-78-surgeon-for-first-heart-transplant-dies.html>.

from NIH to pursue research and training in labs and clinics in the US and around the world. In the few historical accounts that address it, NIH is framed as the munificent government agency that funded and, in part symbolized, the institutionalization and rapid growth of biomedical research in the US.⁶ However, the leaders of this research organization also actively developed programming in the postwar decades to sponsor disease-focused research around the world.⁷ As a marker of such commitments, NIH in the late had erected a center on its campus – the John E. Fogarty International Center for Advanced Study in the Health Sciences (FIC) – to manage the Institutes’ sponsorship, training, and organization of scientists and physicians around the world.

While many historical accounts of international health have focused on health care delivery in rural clinics or militarized eradication campaigns, equally central to the field has been the globalization of the production of scientific knowledge and the concomitant creation of transnational networks of information exchange. Whether for the administration of colonial empires or the global response to an epidemic, the organization of prevention and cure have depended on comparisons across time and space of bodies, disease experiences, treatments, natural substances, and environmental conditions. Within the paradigm of twentieth century reductionist biomedicine, these

⁶ See, for example, Robert Cook-Deegan and Michael McCreary, “Jewel in the Federal Crown? History, Politics, and the National Institutes of Health,” in *History and Health Policy in the United States Putting the Past Back In*, eds., Rosemary Stevens, Charles E Rosenberg, and Lawton R. Burns (New Brunswick: Rutgers University Press, 2006); Robert Bud, “Biotechnology in the Twentieth Century,” *Social Studies of Science* 21, no. 3 (1991). 415-457; Adele E. Clarke, et. al., “Biomedicalization: Technoscientific Transformations of Health, Illness, and U.S. Biomedicine,” *American Sociological Review* 68 (April 2003): 161-94, Buhm Soon Park, “The Development of the

Intramural Research Program at the National Institutes of Health after World War II,” *Perspectives in Biology and Medicine* 46, no. 3 (summer 2003):383–402.

⁷ One example that begins to examine this is Warwick Anderson, *The Collectors of Lost Souls Turning Kuru Scientists into Whitemen* (Baltimore: Johns Hopkins University Press, 2008).

pursuits have been oriented by concerns for the global standardization of knowledge and treatment. International health practitioners have engaged in numerous activities in pursuit of these ends, including the collection, exchange, and commodification of tissues, genes, and organic materials found in nature.

Questions regarding the international production of biomedical knowledge – where it could and should be produced institutionally and geographically, what type of training was appropriate for research, how it would shape interventions and treatments – became central in the broader realignment of international health in the 1970s. During this decade, the perceived emergence of uniquely transnational disease burdens and changes in funding spurred efforts to encourage the global coordination of research and the promotion of research infrastructure in developing countries. This chapter will explore the way biomedical research became important to international health by exploring the story of one of the organizations central to this transformation: the Fogarty International Center at NIH. Named after one of NIH's Congressional patrons who died unexpectedly in 1967, the FIC was designed to bolster the international reputation of the US government in the era of the Vietnam War; rationalize funding for complex practices of international grant distribution; and more firmly situate NIH and biomedical research within a changing global disease burden and shifting expectations about technologically driven care. An analysis of the ideas, policies, and practices involved in the creation of the FIC can help reveal some of the broader institutional and political tensions that underline the significance of state-sponsored biomedical research in international health.

The institutional framework of the FIC was shaped by several concerns. The desires to increase knowledge about the world was situated within changing ideas about the connection between science and foreign policy, as well as shifts in the configuration of institutional relationships between divisions of the US government involved in international affairs.⁸ While the narrative of the FIC is located within the matrix of these issues, the founding and work of the FIC is primarily framed by two other themes: the professionalization of those working in international health, and the global distribution of research facilities. First, starting in the late 1960s, NIH officials began to articulate new ideas about professionalization in international health that called for training in experimental research for those working in developing countries. These American government scientists saw the scientifically derived problem-solving skills honed in the lab as the underpinnings of the innovative thinking necessary for working in unpredictable, resource-poor settings. Second, the worldview of the FIC in the 1970s was closely tied to changing ideas about the sponsorship of research by the state. New interests in managing transnational environmental risks and understanding the molecular basis of “neglected” infectious diseases (like malaria, schistosomiasis, filariasis, trypanosomiasis, leprosy, and leishmaniasis) spurred a new vision at FIC that all countries, regardless of their economic resources, should begin to develop their own national “capacity” to conduct biomedical research.

Underlying the FIC’s commitments to professionalization in experimental science and the promotion of laboratory research in developing countries were specific ideas about the virtue of biomedical knowledge and the disease ecology of developing

⁸ Clark A. Miller, “An Effective Instrument of Peace: Scientific Cooperation as an Instrument of US Foreign Policy, 1938-1950,” *Osiris* 21 (2006): 133-4.

countries. This chapter will argue that the FIC promoted research training as a way of institutionalizing adaptability against an unpredictable and changing disease burden. Rather than inculcate physicians with another set of facts about disease patterns that might no longer be relevant when new and different problems arise, experimental training would cultivate problem solving abilities that could help one reason through any challenge that may emerge. Alongside this agenda, the FIC, and by extension NIH, came to reverse its earlier policy and financially support the development of a research capacity in other countries because it came to see the study and elimination of infectious disease as a way of eliminating poverty and encouraging economic growth. Developing countries could build their own infrastructure for tropical disease research because they would avoid duplicating research in the West and also because the local reduction of such diseases would improve health.

The FIC had deep roots in the historical traditions of government sponsorship of research; its work was also shaped by the extensive international grantmaking the NIH conducted during the 1950s and 1960s. As such, the first section of this chapter explores the origins of biomedical research as an activity of the US Government. It will also examine the founding of the NIH and how and why this government body began funding international research in the early postwar decades. The second section will detail the founding of FIC, its initial proposals for projects, and how it related to other organizations within the US government and international health community. As the FIC began its programming, the issue of professional training became one of its central concerns. The third section explores the types of skills and knowledge that NIH officials thought physicians and scientists around the world should possess. The fourth section

analyzes the other conversation that framed FIC policy work in the 1970s: the global distribution of research and how and why nations should support their own biomedical research programs. The fifth section explores how, at the end of the 1970s, NIH officials reorganized the FIC as part of efforts by the Carter Administration to create uniform policy for international health programming across the government. The section identifies the values underlying this new vision and how the role of biomedical research differed from earlier policy positions. Under this new framework, the FIC explicitly acknowledged the goal of helping other peoples in ways that might not readily support the health of Americans. This policy shift, complete by 1980, where this chapter's investigation ends, marked a complete reorientation of NIH international activities which had earlier only served narrowly defined domestic interests. The chapter concludes with a broader analysis of the role of biomedical research in international health.

Additionally, this chapter's analyses of professionalization in international health are set up in comparison to the next chapter, which describes a skill set that the Rockefeller Foundation urged international health practitioners to cultivate to address the challenges of the global disease burden.

Part I: "Biomedicine and Bethesda"

The basic rationale underlying this growing expenditure for the support of medical research in foreign countries is that there is specific reason to believe that the work supported will significantly contribute to the achievement of the program objectives of the NIH. These program objectives, in the first place, relate to progress in understanding and controlling major categorical diseases of national significance and, in the second place, to strengthening and advancing the medical and health sciences and the basic sciences related thereto.

-Report on International Activities of the National Institutes of Health,
Fiscal Year 1961⁹

While the Fogarty Center became a site in the 1970s for new ideas about the significance of biomedical research in international health, two of its central activities – the sponsorship of individual research and fellowships for study and training abroad – had been key elements of government, philanthropic, and privately sponsored research in the US since the mid nineteenth century. As early as 1862, the US Government took interest in promoting the study of the useful agricultural and industrial arts by sponsoring the establishment of land-grant universities. By 1887, the USDA started agricultural research centers and the Public Health Service (PHS) established its own bacteriology lab; both intended to apply the new ideas underlying the germ theory of disease to sanitary and agricultural knowledge.¹⁰

In 1930, the Ransell Act sequestered the PHS bacteriology laboratory from the rest of the organization's bureaucracy, renamed it the National Institute of Health, and reoriented it to focus on the research of disease etiology. A second institute, the National Cancer Institute, was added seven years later. Even in some of this initial government sponsorship of research, an international dimension was present. The Ransell Act provided \$75,000 for new research facilities at the National Institutes in Washington, D.C., and "fellowships [to send] American scientists overseas for training

⁹ "International Activities of the National Institutes of Health, Fiscal Year 1961," March 17, 1961, pgs. 1-2, NARA, Box 143, Folder 3 "INTL-3 International Health Activities Supported by NIH, 1959-1971."

¹⁰ Toby A. Appel, *Shaping Biology: the National Science Foundation and American Biological Research, 1945-1975* (Baltimore: Johns Hopkins University Press, 2000), 10

and to carry on investigations in foreign localities or in collaboration with foreign scientists.”¹¹

Throughout the late nineteenth and early twentieth centuries, the promotion of international study and collaboration was actually a key characteristic in the development of the basic science aspect of American medicine. Studying abroad in the emerging chemistry and biology labs in Germany became a rite of passage for elite American physicians. For many of these doctors, a six month fellowship at a lab in Göttingen could also be supplemented by a colonial post in Manila or Havana. American’s own growing empire was a fertile “laboratory” to track disease prevalence or study the effects of treatment on non-Western peoples.¹²

In the early twentieth century, the Rockefeller Foundation’s support of biomedical research and international health programming became the model that defined the practices of the US government’s domestic and international sponsorship of research. The Foundation, oriented by an early interest in international health and a mission to “promote the well-being of humanity around the world,” built schools, funded journals, provided grant-in-aid for individual scientists, and administered postdoctoral fellowships at universities within the US and all over the world.¹³ Oversight of research was minimal, and scientists were given considerable freedom to pursue their interests. The Foundation was also happy to support both disease-focused applied research and basic biological research. However, as will be explored in greater

¹¹ Ransdell Act (Public Law 71-251, Stat 379, enacted May 26, 1930)

¹² See Warwick Anderson, *Colonial Pathologies: American Tropical Medicine, Race, and Hygiene in the Philippines* (Durham: Duke University Press, 2006)

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), 1-3

depth in the next chapter, the Foundation was unabashedly elitist, and focused on directed the “best minds” through a handful of well-respected biomedically oriented research universities in the US and Western Europe.¹⁴

While Rockefeller defined biomedical research in the interwar period, NIH defined it in the postwar decades. In the aftermath of World War II, NIH began the exceptional expansion that has defined it as an institution ever since. Its unabated growth developed from the unique mix of postwar social mores, institutional arrangements, and personal relationships among the D.C. elite. First, the war demonstrated that basic research could be leveraged to further the ends of the state. Though nuclear weapons revealed the destructive power of science, wartime developments such as DDT, penicillin, and new vaccines showed that research could improve and extend lives.¹⁵ This realization created a faith in technology and helped to foster the public sentiment that the government should fund research in science, especially as it relates to medicine. In this logic, sustained investment could extend the positive wartime record and foster new technological breakthroughs. Second, while national health insurance was not politically feasible, medical research and hospital construction easily won bipartisan support. Politicians might have chafed at socialized medicine, but they gladly backed the public support of research. And after the launch of Sputnik, the financial and political support of research in the physical and medical sciences only continued to increase. Essentially, the promise of the discovery of new

¹⁴ Ibid.

¹⁵ Randall M. Packard, “Visions of Postwar Health and Development and Their Impact on Public Health Interventions in the Developing World,” in *International Development and the Social Sciences: Essays on the History and Politics of Knowledge*, eds., Frederick Cooper and Randall M. Packard (Berkeley: University of California Press, 1997), 96-7.

cures framed biomedicine as a peacetime weapon: one could combat disease, buy health, and possibly delay death.¹⁶

The sustained expansion of NIH in the postwar decades— twelve new institutes and centers between 1947 and 1966 and an increase in the annual budget during the same years from \$8 million to \$1 billion – was made possible by the long-standing collaboration of a small number of figures on each side of the appropriations process.¹⁷ The “noble conspiracy” had three parties: NIH senior scientists, Democratic Congressmen, and two wealthy and well-connected public advocates. James A. Shannon, a NYU-trained nephrologist, served as the Director of NIH from 1955 to 1968; he and Institute Directors went to great lengths to highlight in public and before Congress the potential and promise of NIH funded research for the well-being of Americans. Alongside the scientists, Mary Lasker, the wife of pioneering advertising executive Albert Lasker, worked together with Frances Mahoney to become what might be considered the first American health-oriented lobbying group. They devoted their husbands’ personal fortunes to the reelection campaigns of countless Congressmen and lavish dinner parties for the political elite at the Lasker’s Georgetown home; this two-pronged approach was to persuade Congressmen of the political significance of medical research.¹⁸ On Capitol Hill, Senator Lister Hill (D-AL) and Representative John E. Fogarty (D- RI) controlled key committees that ensured smooth passage of medical

¹⁶ Cook-Deegan and McCreary, “Jewel in the Federal Crown?” *History and Health Policy in the United States*, 180

¹⁷ “A Short History of the National Institutes of Health,” n d , http://history.nih.gov/exhibits/history/docs/page_06.html

¹⁸ Judith Robinson, *Noble Conspirator Florence S Mahoney and the Rise of the National Institutes of Health* (Washington, D C Francis Press, 2001), 3-5 See also Elizabeth Drew, “The Health Syndicate Washington’s Noble Conspirators,” *The Atlantic Monthly*, December 1967

research legislation. Hill, a six term Senator, was known for steering through legislation expanding the physical plant of the U.S. hospital system. Fogarty, a former bricklayer promoted as a union candidate, came to support health legislation largely out of idealism and humanitarian reasons.¹⁹ Both of these Congressmen frequently chided NIH Directors for not being ambitious enough in the fight against disease and allocated more money than was requested by the scientists.

This disbursement of research funding was evident with the rapid expansion of the Bethesda, Maryland campus of NIH. However, it was also manifest at the scores of medical schools across the country that became unequivocally committed to research. This institutional transformation was made possible through the unique funding mechanisms for health research. During World War II, Surgeon General Thomas Parran secured authority for the PHS, and thus NIH, to award grants for deserving research outside of its own government institutes.²⁰ Unlike the Office of Naval Research, the wartime hub of scientific funding, NIH funding determinations did not rest with governmental program officers but with committees of academic scientists called “study sections.” These peer committees were closely connected to universities and could, in theory, easily identify who was doing the best research and which institutions could support new programming. As one historian has noted, “American medical schools, like their parent universities, were created and molded by aspiring scholars [. . .] To educate most effectively, to determine the standards of patient care, and to improve the level of

¹⁹ John P. Crowley, “Health for Peace: John E. Fogarty’s Vision of American Leadership in Health Care and International Biomedical Research. A 25th Year Perspective,” *Rhode Island Medicine* 75, no. 12 (1992): 561, 566.

²⁰ Appel, *Shaping Biology*, 30

practice for future patients, it was necessary for medical schools to be staffed by creative faculties actively engaged in scholarly inquiry.”²¹ Achieving these goals and developing new biomedical knowledge meant pursuing federal support. The American public didn’t seem to mind. A combination of a greater acceptance of the expansion of the federal government alongside an interest in leveraging universities for national goals prevailed over lingering suspicion toward the prospect of federal money shaping academic research priorities. Countless medical schools expanded in physical plant size, graduate training programs, operating budgets, and research specialties; by 1970, medical schools accounted for 10% of total expenditures for higher education, employed 10% of personnel, but enrolled only 0.5% of students.²²

But the effect of NIH funding was not simply felt in American medical schools. Since the earliest days of postwar NIH expansion, James Shannon and Institute Directors pursued research beyond American borders. However, Shannon made great efforts to restrict funding to a handful of fellowships that would advance explicitly defined domestic health needs. In 1962, he noted that:

Since the primary objective of the NIH international program is to advance the status of the health sciences in the US, our grants are most frequently made in countries where adequate research resources are available and where original and productive ideas arise. This means that NIH relationships have been most extensive with the countries which are more advanced in the medical sciences, such as Canada, Japan, Australia, Israel, and the Western European countries. The fact that we do not frequently support scientists in newly-emerging countries also recognizes that their limited scientific manpower must not be

²¹ Kenneth M. Ludmerer, *Time to Heal: American Medical Education from the Turn of the Century to the Era of Managed Care* (Oxford: Oxford University Press, 1999), 139.

²² *Ibid.*, 142.

diverted from the high-priority problems of that country by our support of projects of interest to us.²³

He frequently expressed no interest in NIH taking on the global disease burden. Additionally, the Institutes, as a part of PHS and HEW had no statutory authority to formally engage in American foreign policy.

The first of the small number of NIH international programs was a research fellowship created in 1947 that would enable US scientists to study in foreign countries for one year, only 300 grants were awarded in its first ten years.²⁴ In 1950, a visiting scientist program began inviting American and foreign scientists with “very special qualifications” to participate in research at the Bethesda campus so as to “increase the utility of NIH as national resource, strengthen relations with the broader scientific community, and advance particularly complex and specialized research.”²⁵ The guest worker program, established in the mid 1950s, was less formal than the visiting scientist program, and made NIH labs available for internships for foreign scientists so long as their home institutions provided partial financial support.

Finally, in 1957, Shannon started a foreign fellowship for the “exceptional circumstances” of sponsoring citizens of foreign countries who did research outside of the US that was still in the interest of American health. Although he openly avowed to restrict this fellowship to domestic health interests, NIH granting committees actually

²³ James A. Shannon, “Special Report The Impact of NIH International Activities Abroad,” January 31, 1962, pg 3, NARA, Box 142, Folder 1 “INTL 2-1 NIH Office of International Research 1960-1968 ”

²⁴ James A. Shannon, “Medical Research An International Program,” March 28, 1958, pg 6, NARA, Box 141, Folder 2 “INTL 1 International Organizations Dealing with Medical Research 1942-1971 ” One notable recipient of this award was Carlton Gajdusek, see Warwick Anderson, *The Collectors of Lost Souls: Turning Kuru Scientists into Whitemen* (Baltimore: Johns Hopkins University Press, 2008)

²⁵ Shannon, “Medical Research An International Program,” 6

funded a wide range of diseases that Americans might only encounter when traveling in tropical countries; grants included research on filariasis in Tahiti, onchocerciasis in Guatemala, and schistosomiasis in Egypt.²⁶ This grant also became a de facto discretionary fund for the extensive international exchange of infectious organisms, biologics, and chemicals between scientists at NIH and their counterparts in academic, government, and industrial laboratories around the world.²⁷

Overall, these grants represented less than 2.8% of NIH disbursements between 1955 and 1965; their administration was decentralized, uncoordinated, and based upon the individual needs of various Institutes or Centers.²⁸ If NIAID (the National Institute of Allergy and Infectious Diseases), for example, wanted to support a promising malariologist working in Australia, it could do so as long as the project was deemed technically sound and scientifically important by NIAID's grant review committee.²⁹ In other words, there was no attempt to formulate a policy across NIH for international funding that prioritized specific diseases or international health issues.

However, in 1958, Lister Hill and John Fogarty proposed legislation to coordinate international research at NIH. They wanted to establish a center at Bethesda and give it an initial \$50 million lump sum (roughly the same as the overall WHO

²⁶ The US military had its own extensive programs to track the international disease burden and conduct research

²⁷ Joseph Murtaugh, "Institute Directors Meeting, October 27, 1959, and Discussion of Institute Programs Involving the Support of Research in Foreign Countries," October 27, 1959, pg 3, NARA, Box 143, Folder 3 "INTL 3 International Activities Supported by NIH 1959-1971 "

²⁸ Out of the \$2,708,941,578 given in these years, \$73,267,749 (2.705%) was for international grants "OIR Program Review," January 11, 1967, pg 21, NARA, Box 142, Folder 7 "INTL 2-1-E International Centers for Medical Research & Training (ICMRT) Program "

²⁹ NIAID and NCI were the two Institutes that awarded the most international fellowships, the former was interested in tropical disease etiology and the latter pushed for comparative studies of national chronic disease prevalence. See Ibid

budget at the time) to promote the more active involvement of the US Government in international health. This legislation and the ensuing Congressional debate became a major turning point for the international programming of NIH. The bill's inspiration was not a new disease outbreak or medical breakthrough; it was Eisenhower's promotion of East-West scientific collaboration in physics and chemistry for the 1957-8 International Geophysical Year and his new commitment in 1958 to the eradication of malaria for a similar "Works of Peace" Campaign for transnational scientific cooperation.³⁰ As with nearly every major postwar decision on scientific funding in the government, these programs had origins in Cold War politics and efforts to "win the hearts and minds" of peoples in developing countries. Though Eisenhower's policies spoke of peace, they were not meant to surrender power and influence by renouncing military ambitions; they were calculated moves to collect information on the USSR and assert more control over UN projects that required international collaboration.³¹ A program such as the International Geophysical Year also highlights a tension that was continually renegotiated with the scientists who participated in international programs. They were Cold War soldiers meant to advance explicit political interests and, at the same time, professionals in what sociologist Thomas Merton has described as the transnational "Community of Science" defined by the norms of universalism, internationalism, disinterestedness, and anti-authoritarianism.

³⁰ Carl Yordy, "Meeting with Representatives of National Academies of Science - NRC on Cross-Cultural Studies on Health Problems in Primitive Societies on March 4, 1960," March 8, 1960, pgs 4-5, NARA, Box 141, Folder 2 "INTL 1 International Organizations Dealing with Medical Research 1942-1971 "

³¹ Efforts to eradicate malaria were framed as in American economic interests and important for opening new markets in the developing world

International research at NIH shared the same tensions as the Works for Peace or International Geophysical Year. When Lister Hill and John Fogarty proposed legislation for a center for international research at NIH, they explicitly touched upon the professional tension that Cold War scientists faced. Hill believed that research that can lead to better health internationally “is a wonderful opportunity for the free world. If we are to win the peoples of the world over to our side, what better way is there than by offering them the priceless boon of health and long life? Communism breeds disease, poverty, and human suffering. We must strengthen the diseased and afflicted peoples, so they can stand up and make a free choice between democracy and Communist despotism.”³² Fogarty echoed this sentiment, arguing that support of research abroad would enable developing nations to “develop values and institutions that will help to strengthen the cause of democracy.”³³ However, the Congressman from Rhode Island argued that at the same time, “just as disease knows no national boundaries so also the benefits of medical research and indeed research itself can know no boundaries.”³⁴

In the summer of 1958, a parade of prominent witnesses at committee hearings for the center set off a series of debates regarding the division of international authority in the government and the potential scope of American support for international research. The Executive Office of the President, the Secretary of HEW, the Surgeon General, the Director of NIH, individual NIH Institute Directors, and the State Department all argued over which office should have the statutory authority to support

³² Senator Lister Hill (AL), “Health for Peace,” *Congressional Record* 104 (January 23, 1958), S777.

³³ Representative John E. Fogarty (RI) *Congressional Record* 104:14, H17911.

³⁴ Representative John E. Fogarty (RI) *Congressional Record* 104:14, H17909.

biomedical research in foreign countries.³⁵ The earliest debates regarding the “Health for Peace” bill, as Fogarty and Hill called it, revealed the competing perspectives.³⁶ HEW Secretary Fleming believed an international research center at NIH would improperly delegate his own authority to the Surgeon General and Director of NIH. Many individual Institute Directors believed they could operate autonomously in foreign countries without reporting to the Director’s Office, much to Shannon’s dismay.³⁷ State Department officials in its Office for Science & Technology Policy protested what they claimed was a “mini-State Department” emerging within NIH.³⁸ While the delegation of power obviously shaped these competing interests, the debate raised the question of the relationship between scientific and foreign policy expertise. Did authority in judging a scientist or the scientific merit of a project correspond to the ability to promote strategic interests abroad, even if such interests were scientific? Conversely, would strategic political value mean the production of useful scientific knowledge?

At an NIH meeting to formulate a response to the bill, Shannon was ambivalent about a new research center, but saw the new public scrutiny as a sign to add more structure to NIH international lending. He asked his senior staff how to organize it

³⁵ John A. Sherman and James A. Crowley, “John E. Fogarty and His Role in Medical Research,” 18-27, unpublished manuscript, JEFP

³⁶ Sherman and Crowley, “John E. Fogarty and His Role in Medical Research,” 18-9

³⁷ James A. Shannon, “Health for Peace Legislation - Memo for Institute Directors, Division Chiefs, OD Staff,” September 9, 1958, pgs 1-2, NARA, Box 141, Folder 2 “INTL 1 International Organizations Dealing with Medical Research 1942-1971 ”

³⁸ As much as State Department officials would argue, international policies of the US Government were never completely centralized or rationally organized. The Departments of Agriculture, Treasury, Commerce, and the National Oceanic and Atmospheric Administration all had international activities and de facto shaped the socioeconomic circumstances in other countries, the source of persistent tension and debate was how to interpret the bounds of devolved power and what constituted formal foreign policy

Frederick Murtaugh, Director of NIH's Office of Program Planning, wondered if NIH should only consider grants of highest merit, or those that would help strengthen the research capacity of a country – especially if it was one the US wanted to support more broadly.³⁹ Dr. James Watt, head of the National Heart Institute, on the other hand saw three categories for international research opportunities: support of research where there was no equivalent in the US, support of carefully defined collaborations between US and foreign labs, or support of the chance great proposal that was not within program interests but too good to pass up.⁴⁰

Shannon, however, “suggested that [these policies] in a sense would be an after-the-fact rationalization of . . . activities rather than a purposefully guided selection of grants directed toward the achievement of previously prepared and agreed upon objectives.”⁴¹ The impression of seemingly bottomless coffers combined with the possibility that NIH would get an international research center led Shannon to worry that “a logical extension of present concepts and attitudes towards the support of foreign investigators conveyed the impression that our range of operation was worldwide and without a limitation. This could result in the development of unlimited budget requirements as applications flowed in from foreign investigators.”⁴² While he was happy to preside over the exponential growth of American medical research, he balked

³⁹ Murtaugh, “Institute Directors Meeting, October 27, 1959, and Discussion of Institute Programs Involving the Support of Research in Foreign Countries,” 2

⁴⁰ *Ibid*

⁴¹ *Ibid*

⁴² *Ibid*

at NIH becoming a de-facto WHO that would coordinate international medical research. The NIH did not support Hill and Fogarty's bill.

Nonetheless, on July 12, 1960, the House and Senate passed a version of the bill, creating Public Law 86-610, the International Medical Research Act of 1960. This was the White House's version of the bill, and it differed in key points from the original Congressional proposal. It did not provide NIH with a new center for international medical research or a \$50 million fund for international projects. Rather, it simply articulated more explanation of the division of authority for international research in the US Government. The NIH had the statutory authority to support individual research projects that aligned with American health interests; however, it could not formally construct new schools or research institutions abroad. That responsibility would be left to USAID if and when it decided to pursue health programming.⁴³ NIH could not focus on public health, medical care, or other operations that directly involved the provision of services to patients. However, it was given a program for collaborative international research supported with US owned foreign currency obtained through sale of agricultural surpluses for collaborative research in foreign countries.⁴⁴

NIH Directors changed their position and came to support the official act, and formalized their international research lending. Shannon created the Office of International Research (OIR) within his own Office of the Director. This modestly expanded programming within statutory limits and more substantively coordinated

⁴³ After the Foreign Assistance Act of 1961 and the creation of USAID, Shannon openly wondered on several occasions what the division was between AID supported development to further American foreign policy and "neutral" NIH support that "only" supported research agendas "International Activities of the National Institutes of Health," July 31, 1962, NARA, Box 143, Folder 3 "INTL 3 International Activities Supported by NIH 1959-1971 "

⁴⁴ Crowley, "Health for Peace," 573

research. The NIH OIR also set up branch offices in Buenos Aires, New Delhi, Paris, and Tokyo to check up on the progress of NIH sponsored research on each region.⁴⁵

Thus, by the mid 1960s, the mix of Cold War politics and extensive financial resources created a complicated and extensive arrangement of programs for international research to promote the health and stated well-being of US citizens. The chronic disease burdens and health concerns of Americans were framed as largely separate from the rest of the world. Funding decisions were also tightly controlled and discussed apart from Cold War foreign policy concerns at the State Department. This alignment of norms and programming represented one perspective on transnational biomedical research that would change significantly in the late 1960s.

Part II: “The International Center for the Advanced Study in Health Sciences”

Instead of a curtailment of the programs and activities of the United States in the field of international health research, I should like to see a plan to bring into being at Bethesda a great international center for research in biology and medicine dedicated to international cooperation and in the interests of the health of mankind as so boldly envisaged by the President. This center would encompass conference facilities, laboratory and study space, and living quarters to permit the assembly for discussion, study and research of the outstanding health scientists of the world. I visualize this center associated with the great facilities of the NIH and the NLM as representing the visible and tangible embodiment of this Nation’s devotion to the use of science for peaceful purposes and the good of mankind.

-John E. Fogarty, before the Panel on Health for Peace, Citizens Committee for the World Health Organization, Mayflower Hotel, September 26, 1963⁴⁶

⁴⁵ “Highlights - Meeting of the Advisory Committee to the Office of International Research,” February 24, 1962, pgs. 4-5, NARA, Box 142, Folder 1 “INTL 2-1 NIH Office of International Research 1960-1968.”

⁴⁶ Remarks of Representative John E. Fogarty before the Panel on Health for Peace, Citizens Committee for the World Health Organization, Mayflower Hotel, September 26, 1963. From Sherman and Crowley, “John E. Fogarty and His Role in Medical Research,” c68.

Though John Fogarty continued to push for a major center for the study and promotion of international research at NIH, it remained politically unfeasible. His fellow Congressmen repeatedly stated that they were not willing to make amendments to the International Health Research Act of 1960.⁴⁷ Out in Bethesda, James Shannon was happy with the Office of International Research in his own office. As the 1960s progressed, he did not want to sacrifice any political capital needed to ensure the creation of other disease-focused National Institutes.

However, all of this changed on January 10th, 1967, the day before the beginning of the 90th Congress, when an aide found Fogarty dead at his desk. The fifty-three year old Congressman from Rhode Island had suffered a massive heart attack. Amidst the eulogies on the first day the term, Melvin Laird, a Republican Representative from Wisconsin and close friend of Fogarty, suggested that “I can think of no more fitting and lasting a tribute to this great humanitarian than the establishment of [an international research] center” at NIH that the Democrat had pushed since the late 1950s.⁴⁸ The idea that was once easily dismissed now gained quick support. LBJ included a proposal for an NIH international center with an annual budget of \$500,000 in a special address to Congress on health and education in February, 1967.⁴⁹ After House and Senate approval, he followed this action with an Executive Order on July 1st, 1968 to create the John E. Fogarty International Center for Advanced Study in the Health Sciences at NIH.

⁴⁷ Sherman and Crowley, “John E. Fogarty and His Role in Medical Research,” 30-32.

⁴⁸ Philip H. Abelson, “John Edward Fogarty,” *Science* 155, no. 3762 (February 3, 1967): 523.

⁴⁹ Lyndon B. Johnson, Special Message to the Congress: “Education and Health in America.” February 28th, 1967, *Public Papers of the Presidents of the United States: Lyndon B. Johnson, 1965*, vol 1, entry 54 (Washington, D.C.: Government Printing Office, 1966), 155-165.

NIH Directors gladly accepted this unexpected gift that included a guaranteed budget. However, a new center for the study and promotion of international research was not something they had planned for or even requested. The way that they came to rationalize and embrace its usefulness helps to reveal what problems the directors believe had emerged in the late 1960s, and how new international biomedical research could address such issues.

In the initial proposals delineating the mission and operations of the FIC, NIH Directors justified the Center not in terms of the global production of scientific knowledge, but for political and even quotidian reasons. From their perspective, an increase in the American sponsorship of international research could help win back “the hearts and minds” of the developing world when the Vietnam War ended. Charles Hutterer, the Special Assistant to Joseph Murtaugh, argued that “the White House and Congress will realize that the end of the Vietnam War will require a profound economic reorientation at home, and that moral and economic pressures will force the U.S. government into lending significant assistance not only to Vietnam, but to other developing countries as well.”⁵⁰ One consultant called in to strategize new FIC policy suggested that “a program which offers a non-political liaison among international scientists, dedicated solely to the advancement of world health, would be a vital ‘humanitarian antidote to the war in Vietnam.’”⁵¹

⁵⁰ Charles Hutterer, *Plans for the John E. Fogarty International Center for the Advanced Study in the Health Sciences* (National Institutes of Health, January 29, 1968), pg 5, NARA, Box 142, Folder 10 “INTL 2-2 Fogarty International Center 1967-1970 ”

⁵¹ Quoted in *Ibid* , 6

In other words, new scientific collaborations against global diseases could help the US government recover its positive postwar image lost in Southeast Asia. The Mertonian norms of disinterestedness and internationalism were also seen as significant; the same consultant continued his argument, noting that the FIC ““would be committed to principles of cooperation, but removed from the struggle of national rivalries since its activities would not be contingent on international consensus’ (such as in WHO).”⁵² Juxtaposed alongside these goals were more also mundane concerns. NIH Directors were excited that the FIC offered the opportunity to create a large conference center on the Bethesda campus that could serve the needs of all of the Institutes. Initial reports and letters repeatedly raised this issue; in a letter to Peter Condliffe, the Chief of the NIH Paris Office, Joseph Murtaugh affirmed that “this [conference center] had been considered for several years.”⁵³

But in terms of operations, NIH planners explicitly structured the FIC as a biomedically-focused version of the Institute for Advanced Study in Princeton or the Center for Behavioral Sciences at Stanford University. It would be a site for scholarship and discussion that was on the Bethesda campus but removed from the lab and policymaking.⁵⁴ Earlier institutional goals of leveraging international talent for the production of biomedical knowledge would be supplemented with priorities that would come to define FIC in the 1970s: the contextualization of the social impact of science, professional training, and the transnational coordination of research. As was explained

⁵² Ibid.

⁵³ Joseph Murtaugh to Peter Condliffe, April 13, 1967, NARA, Box 142, Folder 10 “INTL 2-2 Fogarty International Center 1967-1970.”

⁵⁴ “NIH Policy Advisory Meeting - FIC - Notes of Meeting June 17, 1969,” June 17, 1969, pg. 1, NARA, Box 142, Folder 10 “INTL 2-2 Fogarty International Center 1967-1970.”

to Philip Lee, Assistant Secretary for Health and Scientific Affairs in HEW, in a report that Joseph Murtaugh's office prepared, new programs for scholars in residence, mid-career and post-doctoral fellowship recipients, visiting researchers, and regular conferences would operate alongside the already established international grantmaking machinery to "foster [the] synthesis of existing knowledge, generate the evocation of new concepts, and . . . delineate the implications of current scientific development for the further progress of science and the further evolution of social institutions and public policy."⁵⁵ Dr. Heinz Specht, the NIH Tokyo Bureau Chief brought back to Bethesda to advise on the creation of FIC, argued that "A major focus of attention would be on the socio-economic matrix within which contemporary science is embedded. The substance of science would be dealt with both in its practical aspects and in its philosophical considerations."⁵⁶

The FIC agenda of contextualizing the role and influence of the internationalization of biomedical research originated in immediate, domestic political concerns. The center began during the years when NIH scientists faced steep budget cuts and needed to justify to the President, Congress, and American taxpayers the rationale for spending millions on basic research; Hill retired shortly after Fogarty died, and few Congressmen were willing to facilitate the unfettered expansion of NIH. Though Shannon insisted that NIH basic research contributed to the health of

⁵⁵ Joseph Murtaugh, *A Proposal for an International Center for Advanced Study in the Health Sciences*, April 5, 1967, pg. 13, NARA, Box 142, Folder 10 "INTL 2-2 Fogarty International Center 1967-1970." Also, the work of the OIR – the mid-career fellowships, postdoctoral scholarships, the P.L. 480 foreign currency program, and other grants for international research – was transferred over to FIC and the older office disbanded.

⁵⁶ Heinz Specht, *Summary of Planning Proposals for the International Center for Advanced Studies in the Health Sciences*, October 30, 1967, pg. 2, NARA, Box 142, Folder 10 "INTL 2-2 Fogarty International Center 1967-1970."

Americans, politicians wanted more applied work that would result in more “cures.” For the FIC, the solution to these problems wasn’t in promising a shift in research agendas or educating the public on the connection between experimental knowledge and treatments. Rather, the goal for FIC was to articulate the broader significance of biomedicine to social change, foreign policy, education, and economic development. Milo Leavitt, the Director of the FIC from 1968-1978, reasoned that this type of contextualizing would be in the greater interests of all of the other Institutes at NIH and the overall postwar expansion of biomedicine: the public could see the myriad ways that biomedical knowledge was already shaping society. This contextualization would directly benefit NIH in turn as it could strengthen its ability to collect and systematize knowledge about the world by extending its purview to analyzing the socioeconomic impact of biomedicine.

The call for “relevant” and “contextualized” research appeared in nearly all early FIC documents, and provided rhetorical grounds to justify a broad array of programming beyond the sponsorship of benchwork.⁵⁷ The examples are numerous. Conferences covered basic science topics like “The Molecular Mechanism of Genetic Recombination,” but also investigated “Ethical Issues in Genetic Counseling and Genetic Knowledge” and “The Medical Assistant: Intermediate Levels of Health Care Personnel.”⁵⁸ White papers and conference reports on “The Teaching of Preventative

⁵⁷ Murtaugh, *A Proposal for an International Center for Advanced Study in the Health Sciences*, Specht, *Summary of Planning Proposals for the International Center for Advanced Studies in the Health Sciences* “NIH Policy Advisory Meeting - FIC - Notes of Meeting June 17, 1969,” Hutterer, *Plans for the John E. Fogarty International Center for the Advanced Study in the Health Sciences*, Cliff Metzner to Joseph Murtaugh, “Some Major Questions and Answers Related to the Proposed International Center,” October 6, 1967, NARA, Box 142, Folder 10 “INTL 2-2 Fogarty International Center 1967-1970 ”

⁵⁸ John E. Fogarty International Center for Advanced Study in the Health Sciences, *National Institutes of Health Annual Report of International Activities* (Bethesda: U.S. Dept. of Health and Human Services,

Medicine” were one of the central monograph series of FIC in 1970s.⁵⁹ New diplomatic programs would also gather more evidence on the practice of medicine abroad; there were State Department sanctioned bilateral exchanges of scientists and physicians from the USSR, Japan, and, after Nixon’s visit to Beijing, the People’s Republic of China.⁶⁰ This range of engagements highlighted the diverse and extensive efforts of NIH to address the international contexts of scientific research and the relationship between biomedicine and the social sciences. The bilateral exchanges became particularly important as an additional venue for Cold War détente.

The initial policy documents written to orient FIC operations clearly described the aims of the Center. It would reflexively study the influence and context of the biomedical research that NIH supported in Bethesda, across the US, and around the world. Such insights would help justify the funding of basic science during an era of

Public Health Service, National Institutes of Health, 1972), Ibid, 1973, Donald M Pitcairn and Daniel Flahault, *The Medical Assistant An Intermediate Level of Health Care Personnel Proceedings of an International Conference Sponsored by the John E Fogarty International Center for Advanced Study in the Health Sciences, National Institutes of Health, Bethesda, Md, USA, and the World Health Organization, Geneva, Switzerland, National Institutes of Health, Bethesda, Md, USA, June 5-7, 1973*, Public health papers, 60 (Geneva World Health Organization, 1974)

⁵⁹ See especially Robert L Kane, *New Health Practitioners A Conference Sponsored by the John E Fogarty International Center for Advanced Study in the Health Sciences and the Association of the Teachers of Preventive Medicine National Institutes of Health, Bethesda, Maryland, May 14-15, 1974*, DHEW publication no (NIH) 75-875 (Bethesda National Institutes of Health, 1975), William H Barker, *Preventive and Community Medicine in Primary Care Conference Sponsored by the John E Fogarty International Center for Advanced Study in the Health Sciences and the Association of the Teachers of Preventive Medicine*, DHEW publication, no (NIH) 76-879 (Bethesda National Institutes of Health, 1976), Alonzo S Yerby, *Community Medicine in England and Scotland An Evolving Specialty and Its Relationship to the Reorganization of the National Health Service*, DHEW publication no (NIH) 76-1061 (Bethesda National Institute of Health, 1976), *Theory, Practice and Application of Prevention in Environmental Health Services Social Determinants of Human Health, Sponsored by The John E Fogarty International Center for Advanced Study in Health Sciences, National Institutes of Health and the American College of Preventive Medicine* (New York Prodist, 1976), *Preventive Medicine USA Task Force Reports* (New York Prodist, 1976), *Theory, Practice, and Application of Prevention in Personal Health Services* (New York Prodist, 1976)

⁶⁰ John E Fogarty International Center for Advanced Study in the Health Sciences, *National Institutes of Health Annual Report of International Activities* (Bethesda U S Dept of Health and Human Services, Public Health Service, National Institutes of Health, 1974)

budget cuts. However, as FIC began its work, Milo Leavitt and his staff refined the Center's mission. Rather than simply contextualize the content of biomedical knowledge, the FIC would also study the role and significance that training in biomedical research had on physicians and scientists around the world. This was an unsurprising extension of the FIC's purview. Since NIH funding developed the research capacity of medical schools, training in basic and clinical research had come to shape medical education and professionalization. The FIC's management of grants to foreign scientists and physicians meant that NIH influence on training and education extended internationally.

The need for the FIC to focus on training became evident during one of the first conferences the Center hosted.⁶¹ In 1967 and 1968, medical students joined the broader student protests happening around the world. While the War in Vietnam was one concern, the medical students focused their critiques on the profession they were joining. They accused contemporary medicine of being insensitive to the needs and social realities of the urban poor and called for formal training in community medicine.⁶² Leavitt wanted to address these concerns, and organized a series of conferences on the "Reform of Medical Education." The first, "The Effects of Student Unrest," brought together student leaders and medical school deans from Belgium, England, France, Japan, the Netherlands, New Zealand, Peru, the US, and West Germany to discuss if and how their profession should address these demands. At the conference, the passion

⁶¹ John E. Fogarty International Center for Advanced Study in the Health Sciences and National Academy of Sciences, *Reform of Medical Education; the Effect of Student Unrest*, Fogarty International Center. Proceeding no. 1 (Washington: National Academy of Sciences, 1970).

⁶² *Ibid.*, 3-4.

and idealism of the students startled the senior scientists. Leavitt openly supported some sort of instruction in community medicine. However, the government officials had no clear answers for the larger questions of what should constitute the training of a physician, and how one should reconcile benchwork with social action. Leavitt wondered aloud to the conference participants if student unrest and the demands for community medicine were critiques “aimed at research, or the health care system as a whole.” In assessing the conference proceedings, he asked “what ought to be the relationship between research and the training of a student destined for a life as a practitioner? What are the responsibilities of the university for the solutions to society’s health needs?”⁶³ NIH staff had no immediate answers, but they knew they needed to contextualize and connect training in biomedicine with new international social demands and disease burdens. The answers they developed reflected and responded to many of the challenges of practicing medicine internationally and the formal participation in international health.

Section III: “With Nothing More than a Bucket and a Dip Stick”⁶⁴

Remove research from medical education and we have minor refinements of old procedures and continued complacency with inadequate diagnostic and therapeutic procedures.

-J.E. Rall, “The Value of Research in Medical Education,” Reform of Medical Education: The Role of Research in Medical Education⁶⁵

⁶³ Ibid , v-vi, 1-2

⁶⁴ Richard Krause to John H Bryant, “International Health Policy for HEW,” August 23, 1977, pg 3, NARA, Box 141, Folder 13 “INTL 2 Coordination of Intl’ Health Activities by NIH & DHEW 1958-1979 ”

⁶⁵ John E Fogarty International Center for Advanced Study in the Health Sciences and National Institutes of Health, *Reform of Medical Education The Role of Research in Medical Education* (Bethesda National Institutes of Health, 1971), 18

What sort of value did biomedical research offer to the budding physician? Did it instill useful skills or an insightful perspective? Leavitt and NIH scientists considered these questions as biomedicine was beset in the late 1960s with student frustration, budget-checking politicians, and a public increasingly concerned with care that over-emphasized technology. One answer they articulated was that training in experimental research fostered an important and dynamic set of skills uniquely oriented to respond to the transnational social, environmental, and knowledge-based challenges expected to define the 1970s. This was not a conservative plea that the status quo of postwar scientific training and care should be maintained in the face of criticism. In fact, as mentioned above, the FIC readily supported conferences and studies on community medicine.⁶⁶ Rather, this was an argument that the best long-term response for addressing the emerging and unpredictable transnational risks from pollution and social determinants of disease was cultivating in medical professionals the scientific problem solving abilities honed in biomedical research. By their logic, training in a lab was not an activity that would keep one away from the pressing needs of patients in developing countries; on the contrary, it would provide international health practitioners with the worldview and adaptable skills to develop appropriate solutions for each new problem that would constitute the international disease burden.

The second conference in the “Reform of Medical Education” series was in July 1970 and framed in response to the meeting on student unrest and broader questions on whether changing the length of medical education to counter the global shortage of physicians. The title of the conference was “The Role of Research in Medical

⁶⁶ Barker, *Preventive and Community Medicine in Primary Care*, 1-3.

Education;” the meeting was a weekend retreat that included ten NIH senior scientists , four members of FIC staff, and about thirty-four prominent medical educators and medical school deans from the US and Europe.⁶⁷ It was during the talks and the group discussions that Milo Leavitt and NIH scientists began to advance an argument on the significance of research skills. NIH Directors like DeWitt Stetton, the Director of the National Institute for General Medical Sciences, and Joseph Murtaugh, Director of the NIH Office of Policy Planning, argued that the emerging challenges in domestic and international medicine were threefold: managing the increasing complexity and variety of medical knowledge, addressing the increasing international prevalence of chronic and environmentally derived burdens of disease, and expanding the quantity of caregivers in both developed and developing countries.⁶⁸ Cecil Watson from the University of Minnesota seconded this argument, and noted that over the previous twenty years, the rapid expansion of scientific knowledge had changed the range of treatment options and understanding of risk factors; countless older physicians faced the challenge of being out of date, and simply keeping up with journals alongside the daily caregiving was increasingly difficult.⁶⁹ New risks stemming from the influence of environmental pollutants, the role of personal behavior, and, in the international context, the interaction between chronic and infectious diseases meant that caregivers needed to attend to a broader array of problems and assimilate even more information at a quicker pace.

⁶⁷ Fogarty International Center, *Reform of Medical Education; the Role of Research in Medical Education*, 1.

⁶⁸ *Ibid.*, 20.

⁶⁹ *Ibid.*, 7-8.

In wide ranging debates that spanned a dozen talks over two days, the conference participants, especially NIH officers, came to a consensus that in the face of these challenges, the best course of action was to reinforce “the medical graduate’s ability to solve problems and that came from exposure to the scientific method in a research-oriented medical school.”⁷⁰ Pedagogy in experimental science and laboratory research would cultivate a specific skill set: the ability to problem solve, test hypotheses, rigorously examine scientific evidence, and assess quantitative data. For DeWitt Stetton, these skills were more important than gaining an “encyclopedic knowledge” that would quickly be exhausted with new discoveries, new diseases, or travel to another country where the disease burden was different.⁷¹ Lawrence Welt from the UNC-Chapel Hill School of Medicine agreed, arguing that scientific problem solving skills could last longer than specific facts, and a rational framework would more systematically judge new and unexpected evidence.⁷² He noted that the study of mathematics, chemistry and physics would underpin skills developed in biomedical research, and the “kind of primary medical education a physician receives determines to a great extent his need for, ability to utilize, and desire to participate in a continuous learning process.”⁷³ By this logic, scientifically-grounded problem-solving skills would provide one with the tools to deal with an expanding knowledge base and changing disease burden. Conference participants agreed that these types of cognitive skills were transferrable to social circumstances outside of the lab, and were especially useful in international contexts

⁷⁰ *Ibid.*, vii.

⁷¹ *Ibid.*, 21.

⁷² *Ibid.*, 72.

⁷³ *Ibid.*

where the infrastructure for care, management, and knowledge discovery was unpredictable and not as developed.

Richard Krause, Director of NIAID in the mid 1970s, echoed many of these points throughout the decade. As head of the National Institute concerned with infectious disease, he was closely connected with physicians and scientists who dealt with the major disease burdens of the developing world. Krause's institute also brought in the greatest number of international researchers to Bethesda and worked closely with Leavitt to distribute funding internationally. From his perspective, the skills cultivated in experimental research in biomedicine were even more useful in the developing world than in the West. Though a rotation in a lab in the US might cover some topical matter that was overspecialized, the training international scientists received was still appropriate for the work they would do upon their return. He argued that "those from developing countries who are trained in the USA will face difficult problems in the field upon return to their native country, and the solutions to these problems will require innovation. And that innovation must come from individuals with agile and original minds. Thorough training in the biomedical sciences is, in my view, one of the best preparations for those who will face problems which will require innovation and versatility. Such training provides an intellectual rigor which the individual can apply to a broad display of future responsibilities."⁷⁴

In a letter to John H. Bryant, the new Director of the Office of International Health for HEW, dated August 23, 1977, Krause further justified this argument by

⁷⁴ Krause to Bryant, "International Health Policy for HEW," 1.

describing in detail the personal experiences of a colleague “in the field” who was able to leverage his biomedical training. It is worth quoting at length:

For several years prior to WWII, Dr. Robert Phillips was a superb kidney physiologist and electrolyte physiologist at the Rockefeller Institute for Medical Research working with Dr. van Slyke. The war came and Dr. Phillips was drafted into the Navy and sent to the South Pacific. He immediately saw that one of the major problems was the shock associated with severe wounds and blood loss. And one of the major problems right there in the field was to determine how much blood and plasma should be given to these patients. But how to do this in the middle of nowhere without instrumentation?

Dr. Phillips put his mind to it and he came up with a most elegant and simple method to determine blood loss. Simply drop a drop of the patient’s blood into a copper sulfate solution. If the hematocrit was below critical level, the buoyant density of the blood drop was less than the copper sulfate and the drop rose to the surface, an indication that transfusion was necessary. If the hematocrit was above the critical level, the drop of blood fell rapidly to the bottom of the copper sulfate solution, indicating transfusion was unnecessary. An elegant application to health problems in the field this, but an application achieved by one steeled in the rigors of the biomedical sciences.

And I could go on. Dr. Robert Phillips, later in his career was the Commander of the Naval Medical Research Unit on Taiwan. And here and later in Dacca he developed the brilliant techniques for the fluid replacement therapy for the treatment of cholera. He pushed his technique to the point where it could be used in the field with nothing more than a bucket and a dip stick to measure the stool output, hour by hour, and then infuse a concomitant volume of an appropriately balanced salt solution. Again brilliant. Again application to the problems in the field. Again, creative versatility by one who is steeled in the biomedical sciences. Incidentally, in recognition for his fine work in the treatment of cholera, Dr. Phillips received the Lasker Award several years ago.⁷⁵

Krause’s argument stressed that a grounding in experimental research methods developed flexible skills that one could not only use in any environment, but were necessary for caregiving in developing countries. Even though NIH provided extensive funding for research that was resource-intensive and expensive, the production of useful scientific knowledge and treatment of patients did not always require this context so

⁷⁵ Ibid., 2-3.

long as individuals could propagate its practices of rational ordering, analysis, and experimentation “in the field.”

Krause’s colorful stories, the conference debates on the international role of research education, and the repeated discussion in early FIC annual reports that NIH international fellowships would help disseminate innovative research techniques around the world all underpin a broader response to the debate about what constitutes the most suitable professional training for international knowledge production and caregiving.⁷⁶ Other organizations and individuals have argued that epidemiological training, knowledge about tropical diseases, logistics management, instruction in the social sciences, or cultural competency were all beneficial for international health work. The FIC response was no different. For government scientists at NIH, creative problem solving honed through biomedical research was important because it would allow one to manage the increasing scientific knowledge base, develop an etiological understanding of the changing burden of disease, and function in a variety of social and economic circumstances. Instruction in experimental science would also facilitate a worldview that could manage unpredictable situations ranging from unexpected data to the management of rural healthcare. This perspective would also leverage the scientific method to innovate as needed.

In one sense, FIC perspectives on training in experimental science reflect broader changes in international health. World War II had brought new technologies and a strident faith in their efficacy. However, as DDT and malaria eradication failed in

⁷⁶ John E. Fogarty International Center for Advanced Study in the Health Sciences, *National Institutes of Health Annual Report of International Activities* (Bethesda: U.S. Dept. of Health and Human Services, Public Health Service, National Institutes of Health, 1970-2), 12.

the late 1960s, there were many questions about the universality of interventions and the role of adaptation. As such, physicians and scientists working in international contexts were not focused on trying to learn about one set of tropical diseases. Rather, they aimed to be flexible in their analyses and interventions. This was especially prescient as the Vietnam War ended; Americans needed to be sensitive to social changes in local contexts around the world.

Part IV: “Duplication and Disease”

Biomedical research is as difficult to define as are the issues pertaining to a definition of international health or geographic medicine. Biomedical research can range all the way from the intricacies of molecular biology to the evaluation of new interventions for diagnosis, treatment and prevention. So again, it is necessary to break down the category of biomedical research. I suspect you would find that the bulk of biomedical research supported by NIH is in the developing countries is “proximal” rather than “distal” to the immediate health problems in those countries. These research efforts are, in general, thoughtful efforts to find new solutions to intractable problems. I therefore, think it is misleading on page 36 to state “it is widely felt that this highly skewed distribution of HEW international health activities toward biomedical research may be inappropriate in view of the concomitant imbalance of funds available to develop programs in other complementary areas.

Richard Krause, “International Health Policy for HEW”⁷⁷

The debates about “relevant” research that grew out of budget cuts to NIH in the late 1960s extended beyond questions regarding the context of biomedical knowledge or the role of laboratory training in medical professionalization.⁷⁸ They also came to

⁷⁷ Krause to Bryant, “International Health Policy for HEW,” 1

⁷⁸ Robert Q Marston, who succeeded James A Shannon as NIH Director in 1968, noted that even though a sentiment of austerity characterized the research community in the 1970s, the budget cuts actually only lasted about two years, “after a transient dip in 1970, the NIH budget for the research institutes and divisions increased about 40% in 2 years to a total of almost \$1.5 billion in 1972.” See Robert Q Marston, “Influence of NIH Policy Past and Present on the University Health Education Complex,” in *Documentation Planning for the US Health Care System*, ed Joan D Krizack (Baltimore: Johns Hopkins University Press, 1994), 80-81

concern where research should be done and if and how it should be coordinated. The significance of these latter two concerns were seen in the changing priorities of the scope, authority, and mission of the Fogarty Center. In 1968, Charles Hutterer noted when helping to articulate the initial FIC operations that:

[the] Foreign Fellowship Program is . . . presently justified as a means for strengthening domestic research activities and building useful bridges to the future leaders of medicine in foreign countries. While it undoubtedly helps to relieve a shortage of domestic scientific manpower, it provides, in reality and primarily, research training to gifted foreign postdoctorates. If the program were really and completely oriented towards furthering domestic objectives, many of the participating 43 nations would have to be excluded. If, on the other hand, it has as its main objective, the training of foreign scientific manpower, this would require delegation of authority under PL86-610 [the International Health Research Act of 1960].⁷⁹

From its inception, FIC officers were constantly negotiating between competing concerns. On one hand, there was Congressional oversights and the demands of the disease burden of Americans. On the other hand, there was money to spend, competing demands of a growing number of Institutes and Centers that had their own requests for promising scientists that might do good work if supported. This situation was further complicated by another tension. NIH and the FIC were not allowed to formally exercise their own foreign policy in developing other countries; this activity was reserved for USAID and other divisions of the State Department. However, from World War II to 1969, that NIH had made over 14,600 international research and research training awards, an average of over 600 per year, with an expenditure of over \$212 million.⁸⁰

The munificence of government disbursement meant that NIH and the FIC had

⁷⁹ Hutterer, *Plans for the John E. Fogarty International Center for the Advanced Study in the Health Sciences*, 10.

⁸⁰ Milo Leavitt, "A Proposal for Informal Inter-governmental Cooperation in Biomedical Research," August 28, 1969, pg. 1, NARA, Box 141, Folder 13 "INTL 2 Coordination of Int'l Health Activities by NIH & DHEW."

significant influence over other nations' research programs and extensive de facto engagement in extensive international development.

Debates about these tensions underpinned FIC work throughout the 1970s. However, the values and social circumstances that framed the place of biomedical research in international health changed such that by the end of the decade FIC could operate within its statutory authority and encourage and support other nations to develop their own research capacities. These changes related to two issues. The first was the new prioritization of coordinated research, especially research focused on “high priority projects” within the US and in international health organizations. The second was the new prominence of understandings about the relationship between disease and economic development.

As Stephen P. Strickland has shown, a key characteristic that defined American biomedical research in the early 1970s was its promotion of targeting specific disease burdens rather than research on a broad range of basic science concerns. Domestically, this was seen with the Nixon Administration directing research funding to the War on Cancer.⁸¹ Internationally, the Fogarty Center began to more seriously fund research and conferences on what were considered the emerging issues of “environmental pollution, the use of pesticides, and permissible food additives.”⁸² At the FIC conference titled “Medical Education and the State,” Leavitt noted that “in the US the emphasis recently has been a shift toward grants for ‘high priority programs’ in clinical areas at the

⁸¹ Stephen P. Strickland, *Politics, Science, and Dread Disease: A Short History of United States Medical Research Policy* (Cambridge: Harvard University Press, 1972).

⁸² World Health Organization, “WHO’s Role in the Development and Coordination of Biomedical Research,” March 18, 1974, pg. 1, WHOA, EB53/5/Rev.1.

expense of general research funds. In other countries there has been the same urge to take a closer look at the practical benefits that are coming from medical research.”⁸³

Implicit in programming for targeted, applied projects was an assumption that research could be clearly planned and coordinated to help ensure a greater predictability of results. The idea, common in international health in the 1970s, was that “medical research [was] an applied science that [should] be planned as in any engineering project.”⁸⁴ This assumption that planners could direct the course of research, had not always been present. The US Senate Appropriations Committee stated in 1967 that “the committee continues to be convinced that progress of medical knowledge is basically dependent upon full support of undirected basic and applied research effort of scientists working individually or in groups on the ideas, problems, and purposes of their selection and judged by their scientific peers to be scientifically meaningful, excellent, and relevant to extending knowledge of human health and disease.”⁸⁵ Leonard Laster at the 1970 FIC “Reform of Medical Education: The Role of Biomedical Research” conference told the audience that “with regard to basic natural science, to the extent that it was discussed at all in the past, it was generally agreed that science should grow according to its own internal logic as dictated by the structure of evolving knowledge and the criteria and judgments of the scientific community.”⁸⁶

⁸³ Ronald V. Christie, *Medical Education and the State: The Changing Pattern in Ten Countries* (Bethesda: National Institutes of Health, 1976), 2.

⁸⁴ *Ibid.*

⁸⁵ Quoted in *Ibid.*, 15.

⁸⁶ Fogarty International Center and National Institutes of Health, *Reform of Medical Education; the Role of Research in Medical Education*, 140.

However, in the early 1970s, NIH scientists argued that complex and pressing topics such as cancer or the effects of pollution required coordinated research.⁸⁷ This meant favoring centrally organized, large scale research directed by technocratic planners rather than decentralized, uncoordinated efforts dictated by the curiosity of individuals. The implications of this line of thinking were that the careful management of manpower and resources would help ensure the quickest and most predictable results. For international disease problems, this argument had two implications. First, duplication of research across national boundaries engendered by unilateral interests was to be avoided.⁸⁸ Additionally, the global maximization of manpower and the local prevalence of a transnational disease would require the development of a nation's research capacity where their previously may had been none. If, for example, a disease was endemic in a region where the country that had the greatest burden had little research infrastructure to study and manage it, international support would help fund and coordinate domestic research for the greater interest of the region and the international community. The tangible results of this thinking are best seen in an effort the FIC came to support in the mid 1970s: the WHO Special Program for Research in Tropical Diseases.

While international health practitioners in the 1970s grappled with understanding the social determinants of health and emerging threats of pollution, they increasingly returned to the fact that infectious diseases remained a major factor that

⁸⁷ Marston, "Influence of NIH Policy Past and Present on the University Health Education Complex," 80-1.

⁸⁸ "Scope of Work on International Activities," December 22, 1972, pg. 1, NARA, Box 143, Folder 4 "INTL 3 International Health Activities Supported by NIH 1972-1977."

affected the health of the poor in developing countries.⁸⁹ Despite exceptional attention to infectious diseases during the mid-century international health campaigns, almost all efforts focused on control and not the development of new etiological knowledge. Physicians increasingly thought that surprisingly little was known about the biological mechanisms of these diseases, that hardly any new research was done on the vectors since the 1950s, and that few scientists in the West actually studied the topic.⁹⁰ In 1974, WHO officials proposed a program to increase emphasis on and to coordinate research efforts for six “neglected” diseases: malaria, schistosomiasis, filariasis, trypanosomiasis, leprosy, and leishmaniasis.⁹¹ Researchers working in labs in different countries would be recruited to work together on this disease burdens. Alongside primary health care and smallpox eradication, the Special Program for Research in Tropical Disease was one of the major WHO initiatives of the 1970s. The Rockefeller Foundation contributed to this transnational tropical disease research by initiating its Great Neglected Diseases campaign a year before launching INCLEN (see Chapter Four).

The FIC’s rationale for supporting this effort as one of the global “centers of excellence” included a desire to coordinate research, target specific diseases, and avoid the duplication of research between different nations. These reasons were articulated in light of growing desires by developing country officials to build research capacity in

⁸⁹ World Health Organization, “1.16.4 Tropical Disease Research,” *Handbook of Resolutions and Decisions of the World Health Assembly and the Executive Board* (Geneva: World Health Organization, December 1976): 149.

⁹⁰ NIAID efforts for basic research in tropical disease were small in comparison to the amount of resources allocated to other disease burdens like cancer. See “Overview of NIH International Research Activities,” April 22, 1981, NARA, Box 141, Folder 14 “INTL 2 Coordination of Int’l Health Activities by NIH & DHEW 1979-1982.”

⁹¹ World Health Organization, “1.16.4 Tropical Disease Research,” *Handbook of Resolutions and Decisions of the World Health Assembly and the Executive Board* (Geneva: World Health Organization, 1976), 149.

their own countries.⁹² While these physicians and scientists reasoned that a more equitable distribution of research infrastructure would help prevent “brain drain,” Leavitt and the FIC supported this WHO plan because it would encourage coordinated research on tropical diseases – the major burden of these very countries – satisfy these new demands, and avoid the duplication of research programs in the West.

But more critically, the FIC’s participation in international research outside of the American disease burden arose from a change in perspective at the Center on the broader social circumstances of disease. As the Center continued to contextualize its research and the disease problems it addressed, it came to leverage contemporaneous intellectual developments in international health that asserted the relationships between tropical diseases and poverty. As poverty eradication became a broader goal of multilateral aid, international health practitioners asserted that tropical diseases, more so than other health burdens, were major determinants of poverty. With support of research in developing countries on tropical diseases, Leavitt came to see the work of the Center as more than knowledge production and training; research was equated with poverty control. An increase in research infrastructure specifically on tropical diseases would help facilitate a decrease in diseases and promote economic development – both of which by the logic of the times would help promote health. An HEW report advocating research in Latin America alluded to this very argument:

There is a strong logical argument for support of biomedical research in Latin America. Disease is debilitating. It is both a result and a cause of poverty. Determination of the causes of disease through research can lead, and has led, to reductions in rates of sickness and death. Indigenous research is necessary to judge which health technologies should be developed internally and which

⁹² See especially *Biomedical Research in Latin America: Background Studies*, NIH publication no. 80-2051 (Bethesda: National Institutes of Health, 1980).

should be imported. Furthermore, delivery of health services can be made more effective and less costly by research.⁹³

Policy creation, implementation, and oversight are, in reality, straightforward or logical processes. The evolution of thought at the FIC for encouraging other nations' self-guided pursuit of research highlights this point. The change was a subtle but significant one: new norms of coordination; WHO sponsored programming; the assertion that research, health, and poverty are related; and the fact that the FIC continued to focus on fellowships meant that it began to take a more active role in the global development of research infrastructure. However, any lingering doubts about the Center's authority or mission were erased when a new administration in the White House reoriented the government's international health policy.

Section V: "New Directions"

We feel that the current focus of the NIH intl activities fails to acknowledge and reflect adequately the increasingly important need to address the special health problems of the less developed countries. Accordingly, the Task Force believes that the FIC should make every effort . . . to address the problems and issues arising from the special needs of the less developed countries and to serve as an advocate in encouraging and promoting additional activities by the categorical Institutes in support of this goal.

-Task Force to Assess the Missions and Functions of the Fogarty International Center⁹⁴

By the end of the 1976 fiscal year, NIH had expended over \$387 million for international research and research training activities since such grantmaking began in 1947. This amount was closer to \$500 million if one included grants provided to

⁹³ Ibid , 31

⁹⁴ Task Force to Assess the Missions and Functions of the Fogarty International Center, *Report to the Director, NIH*, January 22, 1979, pg. 4, NIHA, NIH 9732.

domestic labs involved in international activities.⁹⁵ While this commitment to funding would continue to shape FIC's programming and international impact, the more significant change to shape the Center in the final years of the 1970s was the Carter Administration's integration of all NIH international activities into the first formal government-wide international health policy. This Democratic administration presented a new set of values and policy imperatives that firmly connected FIC to international health and expanded the center's purview. The Fogarty Center was still charged with investigating disease burdens pertinent to the domestic health concerns. However, the White House encouraged the FIC to study topics that would help developing countries manage their own disease burden and become self-sufficient for medical research and training.

Since the FIC's inception, HEW officials had suggested that the Center needed a formal review to more clearly articulate its responsibilities and to streamline programming.⁹⁶ Such reorganization would help cut costs and focus FIC on the key priorities of coordinating transnational research. That review did not come until late 1976, at which time HEW administrators suggested to Leavitt that "the Center [redirect] its efforts towards a greater emphasis on biomedical research."⁹⁷ The conferences and fellowships used to study the socio-cultural context of American and international medicine would be cut, along with monograph series. FIC would simply focus on

⁹⁵ Joseph Quinn, *National Institutes of Health Initiatives in International Research*, August 31, 1977, pgs. 1-2, NARA, Box 141, Folder 13 "INTL 2 Coordination of Intl' Health Activities by NIH & DHEW 1958-1979."

⁹⁶ Task Force to Assess the Missions and Functions of the Fogarty International Center, *Report to the Director, NIH*, 2.

⁹⁷ Milo Leavitt, statement to DHEW on FIC, January 26, 1977, pgs. 2-3, NARA, Box 142, Folder 12 "INTL 2-2 Fogarty International Center 1975-1982."

coordinating the international research programs of the individual Institutes, and develop the domestic manpower pool with foreign experts in key specialties.

Just as this reorganization got underway, a memo from Peter Bourne, Special Assistant to the President on Health Affairs, on February 15th, 1977 signaled that an even larger review of international research activities would begin. The new Democratic leaders in the White House saw international health as “an integral part of this administration’s foreign policy,” and wanted all relevant government departments to be more actively involved in the field. A clear strategy for international health would overcome what Carter framed as the historic failure of the American government to articulate an over-arching policy on the subject.⁹⁸ A coordinated international health policy would also help support the Administration’s broader promotion of human rights and interest in projecting new American leadership in helping the West recover from the economic crises that defined the 1970s.⁹⁹ As Carter noted in a letter read to the World Health Assembly in Geneva in 1978, the US would aim to bridge “the growing international scientific gap” and support the new imperative of helping nations become more self-sufficient in matters of healthcare and research.¹⁰⁰

Two documents came to define the FIC’s new connections to international health and Carter’s broader commitments to the field. The first was the Institute of Medicine report “Health in a World of Mutual Dependency” (briefly mentioned in

⁹⁸ Peter G. Bourne, *US Global Health Strategies in an Age of Interdependence* (APHA Annual Meeting, October 31, 1977), pgs.1-2, 4, NARA, Box 141, Folder 13 “INTL 2 Coordination of Int’l Health Activities by NIH & DHEW 1958-1979.”

⁹⁹ Daniel T. Rodgers, *Age of Fracture* (Cambridge: Belknap Press of Harvard University Press, 2011), 21.

¹⁰⁰ “The Alma-Ata Conference on Primary Health Care,” *WHO Chronicle* 32 (1978): 410-1.

Chapter 1).¹⁰¹ In what is further evidence of the interconnectedness of the major international health organizations in the West, the report's authors included many figures already discussed or who will be highlighted in subsequent chapters. Contributors included James Grant, John Knowles, Walsh McDermott, Nevin Scrimshaw, Carl Taylor, and Fred Golladay. The IOM report itself echoed the Tropical Disease Research program's policies being formulated at the same time and called on NIH and the US research sector to formally commit to international disease burdens. The authors argued that the US biomedical research capacity was exceptional in its size and sophistication, and that it could easily be applied to the neglected and interconnected problems of world health.¹⁰² Their chief concern was disease surveillance, as they declared that "in our intensely interdependent world, today's disease of one region is tomorrow's disease of another. Surely it is in our own interest to develop a high level of competence in tropical diseases, nutrition, and human production – as well as a contribution to general human welfare."¹⁰³

The second document to shape FIC policy carried more weight than the IOM Report; it was Peter Bourne's summary recommendations for Carter's international health policy, "New Directions in International Health" The "Bourne Report," as it was called, was wide ranging and touched upon all international health work of every government department. Among its many points, the Bourne Report argued that while

¹⁰¹ *Health in a World of Mutual Dependency International Health Research Review and Recommendations for Strengthening US' Involvement*, Submitted to the Subcommittees on Health of the Senate and House by Committee on International Health, IOM, NAS (Washington, D C Institutes of Medicine, National Academies of Science, May 23, 1977), UNARMS, CF/RA/BX/ED/DR/1984/T017/Z1030-1984-000073723 Health

¹⁰² *Ibid* , 33

¹⁰³ *Ibid* , 6

USAID had a wider jurisdiction for developing programs to advance American foreign policy, biomedical research should still play an active role in the Government's efforts to promote international health and development.¹⁰⁴ The report was significant in its strong recommendations for aligning NIH activities with international health work; the section on the role of NIH in international health opened with the declaration that "overall US priorities for international health research should be compatible with, and complimentary to, US international health policies."¹⁰⁵ Bourne went on to specifically argue that the "US Government should adopt an overall administrative and program strategy for cooperation with other countries in international health research. This strategy should include clearly defined priorities among categories of basic and applied research; should support increased attention to research on health, nutrition and population problems in the Third World; and should foster developing countries' self-reliance in health research."¹⁰⁶ Carter adopted this as a formal orientation during his first year in office.

Subsequent policy statements within NIH, and HEW more broadly, echoed these suggestions. As Leavitt was stepping down as Director of FIC, a meeting in early 1979 that included Surgeon General Julius Richmond and Dr. John H. Bryant, the new Director of the Office of International Health and Deputy Assistant Secretary for International Health in HEW noted that the FIC, to align with new policies, would focus on the recommendations of the Task Force:

¹⁰⁴ *New Directions in International Health Cooperation: A Report to the President* (Washington, D C White House, U S Government Printing Office, 1978), 144

¹⁰⁵ *Ibid*, 146

¹⁰⁶ *Ibid*

(1) the training of foreign health professionals and allied health personnel, (2) the strengthening of institutional capability in foreign countries and the development of linkages to US institutions, (3) the provision of direct technical assistance to countries engaged in the conduct of disease control and eradication efforts, (4) the promotion of the capacity of less developed countries to develop and implement primary care delivery systems, (5) the improvement of world-wide systems of disease surveillance, (6) the acceleration of the transfer of food technology, and (7) the conduct of research and research training in the biomedical and behavioral sciences.¹⁰⁷

With this, both the policies and norms of what the FIC should do and the role of international research had shifted to become key constituents of international health policy.

Conclusion

During the late Cold War, biomedical knowledge production became an important facet of international health. In the aftermath of the failure of the Malaria Eradication Program, its significance was evident in its ability to help practitioners manage disease in individual encounters and on a global scale. Training in experimental sciences became valued because it offered the skills to engender flexible and adaptable thinking in the face of changing disease patterns. The transnational coordination of tropical disease research came to be seen as a way of attending to contemporaneous concerns for poverty. This type of coordination of research across borders also provided a response to political demands of developing countries for their own research infrastructure; these new nations could focus on neglected infectious diseases, disease burdens that were largely their own, thereby preventing duplication of research across borders.

¹⁰⁷ Task Force to Assess the Missions and Functions of the Fogarty International Center, *Report to the Director, NIH*, 10.

The FIC, and by extension NIH, by the sheer volume of disbursements, were central to the way that biomedical research became important to international health in the late Cold War. By telling the story of the creation of the Fogarty International Center, this chapter had shown some of the ideas of political pressures that shaped this broader change in the field. The propagation of the NIH's vision on the globe was characterized by extensive negotiations within the bureaucracy of the US government. Decisions at the Center of whom to fund, how to fund them, and why such research was important were all shaped by the relationships of government departments, the mandates accorded by Congressional legislation, and the very funding mechanisms created within NIH itself.

The story of knowledge production was important to the broader changes in international health at this time. the propagation of biomedical research presented another view of what counted as problems, solutions, and professional training. It also demonstrated a way that late Cold War disease research stressed systems management practices and the significance of context-sensitive interventions. The next chapter will show a contemporaneous, but different approach to the very same issues.

Chapter Four
Counting the Costs:
INCLLEN and the Rockefeller Foundation's Re-entry into International Health

Introduction: "A New Diagnosis"

Though comfortably settled into his plush 37th floor office in midtown-Manhattan, the new President of the Rockefeller Foundation frequently turned his thoughts to the uncertainty in the public below. The economic and social crises beginning to define the 1970s suggested to him that greater uncertainties lay ahead. This would require an extensive rethinking of the type of research and policy used to govern; "the fact is that we are passing from an era of hard science into a time . . . where there is a paucity of measurement and control."¹ In light of these grim realities, Dr. John H. Knowles stressed to the Foundation's Board of Directors in December of 1973 the world, and by extension the Foundation, faced three types of challenges. The first was the need to develop new practices and ideas to ensure future predictability of society, "a massive scientific and technological machine [that had] run wild." The second was the call to mitigate emerging threats of social inequalities and environmental hazards. The final charge was to improve the training and knowledge of professionals in science, education, and government to deal with an increasingly complicated world where "progress was no longer inevitable."²

After his appointment as Assistant Secretary for Health and Scientific Affairs in the Nixon Administration had been blocked by the American Medical Association,

¹ Rockefeller Foundation, *The President's Review and Annual Report* (New York: The Rockefeller Foundation, 1973) ² As is custom within the Rockefeller Foundation, this chapter will utilize common variations when referring to the organization. These include: The Rockefeller Foundation, Rockefeller, the Foundation, and RF.

² Ibid

Knowles was called to the helm at Rockefeller in 1972 “to shake things up.”³ The Foundation was besieged both domestically and abroad. In the late 1960s the philanthropy was under unwanted Congressional scrutiny regarding possible misuse of its tax exempt status; at the same time, the extensive educational programming that had trained governments around the world seemed to only have a marginal effect.⁴ Knowles’ mission was challenging, as he himself admitted. He needed to reorient the philanthropy and reassert its expertise in developing stable institutions and training adept professionals to prevent further economic and social crises.

Knowles and his staff proceeded to fund scores of new projects in the Foundation’s education, agriculture, humanities, and sciences divisions. However, the President also suggested that the philanthropy return to its roots and revive a sector terminated twenty years earlier: international health. During a thorough review of the Foundation’s Biomedical Sciences Division, Knowles noted “I have a feeling that we all believe that our activities in developing countries vis-à-vis health should be strengthened and increased. It is something that our history provides for us in a unique way and that practically no other foundation can equal.”⁵

In the first half of the twentieth century, the Rockefeller Foundation had been the central funder and primary institutional actor in international health. It established schools of public health in more than a dozen countries, sponsored cutting-edge biomedical research, and managed multi-continent eradication campaigns against

³ Rockefeller Foundation, *The President’s Review and Annual Report* (New York: The Rockefeller Foundation, 1972): 2

⁴ Ibid.

⁵ John H. Knowles, “BMS ‘Status Report,’” July 19, 1972, pgs. 4-5, RFA, RF, Group 3.2, Series 926, Box 1, Folder 1.

hookworm, trypanosomiasis, onchocerciasis, schistosomiasis, and malaria.⁶ Though many vector-borne diseases persisted, the Foundation was remarkably successful in decreasing the incidence of major infectious diseases. Many historians have chronicled this early twentieth century work of the International Health Division of the Rockefeller Foundation, exploring how its worldview, operations, and institutional prerogatives fundamentally shaped the international health work of WHO and other international health actors in the immediate postwar decades.⁷ However, with the exception of a handful of institutional histories by Rockefeller employees themselves, there have been few historical explorations of the Foundation's work in international health in the latter half of the Cold War.⁸ During the Presidency of John Knowles from 1972 to 1979, the Foundation formally re-entered the field of international health; by the end of his tenure at the end of the decade, Rockefeller had again become a central institutional player. In fact, the boardroom of the Rockefeller Foundation became the central forum for exchanging ideas for all of the most senior leaders in international health in the 1970s and 1980s. In addition to Rockefeller staff – who became influential figures in their

⁶ 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), 1-3

⁷ See: Farley, *To Cast Out Disease. A History of the International Health Division of the Rockefeller Foundation (1913-1951)*; John Farley, *Bilharzia A History of Imperial Tropical Medicine* (New York: Cambridge University Press, 1991); Anne-Emanuelle Birn, *Marriage of Convenience Rockefeller International Health and Revolutionary Mexico* (Rochester: University of Rochester Press, 2006); Marcos Cueto, *Missionaries of Science the Rockefeller Foundation and Latin America* (Bloomington: Indiana University Press, 1994); William H. Schneider, *Rockefeller Philanthropy and Modern Biomedicine International Initiatives from World War I to the Cold War* (Bloomington: Indiana University Press, 2002); Mary Brown Bullock, *An American Transplant The Rockefeller Foundation and Peking Union Medical College* (Berkeley: University of California Press, 1980).

⁸ Rockefeller is briefly mentioned in Theodore M. Brown, Marcos Cueto, and Elizabeth Fee, "The World Health Organization and the Transition From 'International' to 'Global' Public Health," *American Journal of Public Health* 96, no. 1 (January 2006): 62-72; Marcos Cueto, "The Origins of Primary Health Care and Selective Primary Health Care," *American Journal of Public Health* 94, no. 11 (November 2004): 1864-1874.

own right – David Bell of the Ford Foundation, Jack Bryant of HEW, John Evans of the World Bank, James Grant of the ODC and UNICEF, Halfdan Mahler of WHO, Robert McNamara of the World Bank, Nevin Scrimshaw of MIT, and Carl Taylor of Johns Hopkins University consulted for the Foundation, attended private meetings at the Rockefeller Conference Center in Bellagio, Italy, or sat on the Foundation’s Board of Directors.⁹

But a common dialogue in the 1970s did not foster a single vision of how to address problems in international health. The Rockefeller Foundation, accordingly, pushed its own programs for what its employees saw as the major challenges in the field. One project, called the “Great Neglected Diseases Program,” was similar to the work of the FIC and the Special Program for Research in Tropical Diseases based at WHO; it aimed to increase knowledge about the biological basis of infectious diseases by training more biomedical researchers in these subjects. The second major Rockefeller project of the 1970s, and the subject of this chapter, was the creation of the “International Clinical Epidemiology Network,” INCLIN. INCLIN as it is known, established programs at medical schools in the West, and subsequently in developing countries, that would train physicians in clinical epidemiology. This training would provide health professionals with a population based perspective that would help them make better decisions about resource allocation in light of a country’s overall burden of disease.

This chapter will explore how and why the Rockefeller Foundation formally re-entered international health, and why it promoted professional training in clinical

⁹ See especially Rockefeller Foundation, *The President’s Review and Annual Report* (New York: The Rockefeller Foundation, 1975-1982)

epidemiology as a solution for shortcomings in the field – and thus for transnational diseases that defined the 1970s and 1980s. In the handful of historical surveys of late-twentieth century international health that mention Rockefeller Foundation programming, the focus is on the article, “Selective Primary Health Care; An Interim Strategy for Disease Control in Developing Countries,” by Ken Warren of the Rockefeller Foundation and Julia Walsh of the Harvard School of Public Health.¹⁰ This article argues for an “interim” solution to the Alma Ata vision of primary health care by targeting specific disease burdens with self-contained, technologically driven, “vertical” interventions. This article was a key influence on the “selective primary health care” that came to dominate many international health efforts in the mid to late 1980s. This chapter will show that this piece by Walsh and Warren was only one small part of the Rockefeller vision and programming for international health during the late Cold War. An exploration of the founding of INCLEN will demonstrate that the Foundation’s goals at the time were not simply about selecting high impact, inexpensive disease programs; Rockefeller also aspired to creation professionals who could link together understandings of disease prevalence and cost-effectiveness.

The Rockefeller Foundation’s INCLEN program supported a type of professionalization in international health that differed from the one promoted by NIH. Though the network was small and the impact of its personnel has remained limited, it represented an important perspective and the re-entry of a major institution. INCLEN stressed three issues. First, it promoted epidemiology as the most suitable form of

¹⁰ Julia A. Walsh and Kenneth S Warren, “Selective Primary Health Care: An Interim Strategy for Disease Control in Developing Countries,” *Social Science & Medicine, Part C: Medical Economics* 14, no. 2 (1980): 145–163.

knowledge to analyze and address the disease burdens and newly emerging environmental risks of the 1970s and 1980s. Second, it positioned physicians conversant in population-based thinking as the best individuals to manage scarce resources in developing countries. Third, it tried to partially rectify the longstanding division between medical and public health education that the Foundation itself had helped to create with the Welch-Rose report nearly sixty years earlier. Overall, the Rockefeller Foundation's response, through INCLEN, to the global challenges of the 1970s and the legacy of Alma Ata was to encourage organized planning and rational management of health resources for regional and global populations. As this chapter will argue, this worldview asserted that the best way of managing the needs of patients was orienting health systems around national disease burdens.

The first part of this chapter explores why the Rockefeller Foundation stopped formally supporting international health programs in the early 1950s, how it came to re-embrace the topic in the 1970s, and how INCLEN emerged from numerous internal discussions as a new institutional prerogative. The program was a mix of ideas from new employees, attempts to reconnect with older Foundation traditions for medical professionalization, and interests in promoting an international version of the contemporaneous clinical scholar programs initiated in the 1970s by the Milbank Memorial Fund and the newly established Robert Wood Johnson Foundation. The second part of the chapter explores the state of epidemiology in the 1970s, what Rockefeller planners imagined clinical epidemiology would offer international health, and why this quantitative discipline would be important. The third part of the chapter examines how INCLEN was launched: what institutions were selected as part of the

network, who was trained, and what they learned. The fourth section briefly analyzes the growth and institutional change of INCLEN; in the mid 1980s, INCLEN leaders added two additional subjects, health economics and the social sciences (broadly construed) to the core instruction in clinical epidemiology. This section will explore how these subjects were positioned to complement each other when training physicians. The chapter concludes by examining how and why INCLEN was made into its own incorporated organization in 1989, and what the legacies of this program are in international health.

Part I: “Missionaries for Science”

Health care professionals are well trained to deal with disease in individuals on the basis of an understanding of physiological, cellular, and molecular mechanisms. Although this approach has been undeniably beneficial, maldistributions of expensive manpower equipment, and facilities are common throughout the world; small numbers of individuals receive costly, high-technology, curative care while the vast majority lacks inexpensive, preventative primary health care. The root cause of this imbalance is the absence of a population-based perspective in the educational, research, and management aspects of the health-care enterprise.

-1979 Rockefeller Annual Report¹¹

The Rockefeller Foundation decision to support a program in clinical epidemiology in the late 1970s was heavily influenced by the character and scope of the Foundation’s work in international health in the first half of the twentieth century. From the early days of World War I to 1950, the Foundation was omnipresent in nearly every aspect of public health around the world. As Marcos Cueto succinctly put it, the officers of the Foundation’s International Health Division were “missionaries for science,” and

¹¹ Rockefeller Foundation, *The President’s Review and Annual Report* (New York: The Rockefeller Foundation, 1979): 79.

their biomedical worldview was evident in nearly every program.¹² Their projects prioritized the discovery of biological knowledge for disease eradication strategies, funded labs and schools to train professionals in modern sanitation practices, and employed the latest technologies for the control of disease and improvement of health.¹³ Occasionally a director would prioritize a project targeting the social determinants of disease to quell restless workers and maintain political stability.¹⁴ However, for most of its operational history, the International Health Division was the harbinger of modern, scientific medicine to the world.

Generous coffers, zealous leaders, and public adoration by politicians far and wide put the Foundation's ambitious program officers working on every continent. "Rockefeller Men" could be found spraying to control malaria in the hills of Sardinia, erecting new medical schools in colonial Delhi and republican Beijing, sweeping out hookworm in Brazil, tabulating disease prevalence in Egypt, and conducting basic science research in labs of New York City.¹⁵ The International Health Division worked closely with, and in part came to define, the paternalistic colonial medical enterprises of both the British and American empires before World War II.

There were common characteristics to all of these projects. Successful disease campaigns were framed in terms of eliminating or controlling a percentage or absolute quantity of vectors. The erection of labs and research institutes to discover and apply new biomedical knowledge remained important funding priorities. Sanitation and

¹² Cueto, *Missionaries of Science the Rockefeller Foundation and Latin America*

¹³ Farley, *Bilharzia A History of Imperial Tropical Medicine*, 1-3

¹⁴ Farley, *To Cast Out Disease*, 5-10.

¹⁵ *Ibid*, 2-20.

infrastructure projects were styled as pilot programs that governments could take over and scale-up once the Rockefeller men left. Finally, professional training to create elite doctors, nurses, and public health officials was prioritized over quick training for auxiliary volunteers.¹⁶ Nearly all of these characteristics would remain hallmarks of Rockefeller international health programming in the 1970s.

In 1950, the directors of the International Health Division and the Foundation as a whole began to seriously re-evaluate their work in international health. The global colonial political economy that had once facilitated the philanthropy's extensive work had lost American support, British financing, and the acquiescence of newly independent peoples. The erection of new UN bodies, especially WHO and UNICEF, and the rise of other philanthropies like Oxfam meant that Rockefeller was no longer the principal international health institution but one among many. Projects in the natural sciences and agriculture also suddenly seemed like more palatable potential funding opportunities. And one of the last remaining health programs in the late 1940s, bilharzia control in Egypt, appeared to be at a crossroads. Rockefeller officers were pushing for what they imagined was the best method of control a long-term program for environmental management, sanitation, and self care. WHO officials, on the other hand, argued for the targeted killing snails to stop the transmission of the schistosomes.¹⁷ Since Egyptian officials came to favor the latter approach and its promise of quick results, Rockefeller no longer found its local operations politically tenable. In light of the larger changes in the field and the failure of the Egyptian project, the Board closed

¹⁶ Ibid.

¹⁷ Farley, *To Cast Out Disease*, 275-80.

down the International Health Division in 1951, moved its remaining officers to the Medical Sciences Division, and reconstituted the departments as a new unified Division of Medicine & Public Health.¹⁸

Though the International Health Division had been closed, and the mainstay of former the Foundation's international health programming –disease eradication projects – had been terminated, careful analysis of the Foundation's annual reports and internal records suggests that Rockefeller actually remained involved in other aspects of international health. In fact, there were clear continuities between the final operations of the International Health Division, the programming of the 1950s and 1960s, and the revival of health programming in the 1970s. In the 1950s, the Division of Medicine and Public Health, which housed the remaining administrators of the International Health Division along with the old Medical Sciences Division, did little actual work in public health. Instead, it focused most of its efforts on funding basic biomedical research, prompting a further departmental renaming to the Division of Biological and Medical Research in 1959.¹⁹ As did the Foundation's early twentieth century efforts and the new grantmaking of NIH, this funding promoted research housed in schools of medicine and public health. Research support was merit-based, and like NIH, funds could go to worthy projects from medical scientists overseas. The funding of biomedical research intensified in 1962 when the Foundation began supporting the construction of universities in newly decolonized nations. As European empires relinquished control of

¹⁸ Rockefeller Foundation, *The Annual Report for 1951* (New York: The Rockefeller Foundation, 1951): 32-3; the Foundation also severed formal connections with the Peking Union Medical College in Beijing after the People's Liberation Army won the Chinese Civil War. See Bullock, *An American Transplant*, 209-32.

¹⁹ Rockefeller Foundation, *The Annual Report for 1957* (New York: The Rockefeller Foundation, 1957): vi-vii.

colonial possessions, Western development planners prioritized the education and training of a new class of professional elites and civil servants. When creating these universities in developing nations, one of the Rockefeller Foundation's priorities included support for biology, chemistry, and pharmacy departments to study and treat local diseases.²⁰ In this framework, there was a continued interest in funding the discovery of new biomedical knowledge to deploy in the treatment of international disease burdens.

Alongside the support of biomedical research, one of the defining characteristics of Rockefeller funding from roughly 1945 to 1975 was its support of agriculture and population programs. The Foundation's extensive support of population control alongside improvements in agricultural production was seen as complementary.²¹ When assessing the logic of this work in 1977, health program officer Sterling Wortman bluntly stated that "(a) reductions in population growth rates were seen as a prerequisite for resolution of the world food problem and (b) increases of food supply in developing regions of the world, it was hoped, were 'buying time' for governments to deal with problems of burgeoning numbers of people."²²

By the mid 1960s, the success of increasing agriculture production in what was being called "The Green Revolution" impelled the Foundation to expand programming to "eliminate other hurdles in food production." This brought the Foundation

²⁰ Rockefeller Foundation, *The Annual Report for 1962* (New York: The Rockefeller Foundation, 1962) 29-35.

²¹ The topic of population control will be covered in Chapter Five.

²² Sterling Wortman, "Population & Health Statement," October 3, 1977, 2-3, RFA, RF, Group 3.2, Series 900, Box 58, Folder 316.

unofficially back to disease control.²³ The 1966 Annual Report noted that “a program has been undertaken toward the control of schistosomiasis, a disabling parasitic disease which spreads with the development of irrigation in the tropics and thus defeats the purpose of agricultural programs.”²⁴ To this end, the Foundation began supporting “a largescale experimental project based on the island of St. Lucia in the West Indies, aimed at developing methods of controlling schistosomiasis. Using an interdisciplinary approach, the program [would test] the effectiveness of various measures—medical treatment of the victims, provision of clean water, snail eradication, [and] public education.”²⁵ Each measure was tested in a different and fairly isolated valley on the island, setting up a clinical trial of sorts. With this support of experimentation in schistosomiasis control alongside the support of biomedical research, the Foundation continued to concern itself with international health research, medical education, and disease control efforts.

Although the agricultural programs of the Green Revolution had an exceptional impact on access to food in the developing world, the Rockefeller Board of Directors was, by 1971, uneasy with the Foundation’s ability to make a substantive social impact on the US and the world at large. Where there had once appeared clear avenues throughout the twentieth century to influence interest groups and inform “the steering of the ship of state,” the Foundation leaders now only saw fracturing social relations, a

²³ Rockefeller Foundation, *The Annual Report for 1965* (New York: The Rockefeller Foundation, 1965): 29.

²⁴ Rockefeller Foundation, *The Annual Report for 1966* (New York: The Rockefeller Foundation, 1966): 14.

²⁵ *Ibid.*

destabilizing economy, and increased social unrest.²⁶ When C. Douglas Dillion stepped down as President of the Foundation to become Secretary of the Treasury in the Nixon Administration, the Board tapped Knowles in 1972 to lead it. This initiated a series of changes over the next six years that led the Foundation back into the center of international health.

Knowles was a well-respected physician and administrator known for his meteoric rise in American medicine. Educated at Harvard College ('47) and the Washington University (St. Louis) School of Medicine ('51), he spent nearly all of the 1950s and 1960s at Massachusetts General Hospital. Notably, in 1961, at the age of thirty-five, he became Director of the hospital and remained at that post until 1972. During his tenure at MGH, the hospital grew substantially; he told the Rockefeller Board that “annual donors [to the hospital] had increased from 10,000 to 100,000 and our annual gifts from \$250,000 to \$4 million.”²⁷ His one sojourn abroad as a physician was in 1967 when LBJ asked him to tour South Vietnam to report on the health of the civilian population. Aside from this trip, Knowles’ knowledge of medicine largely derived from domestic experience.

One of his first actions upon assuming the Presidency of the Foundation was to review the activities of what was then known as the Biomedical Sciences Division. In a detailed six-page letter dated July 19, 1972 – only roughly three weeks after he started – Knowles made an in-depth analysis of the strategy and programming of the funding for

²⁶ Rockefeller Foundation, *The President's Review and Annual Report* (New York: The Rockefeller Foundation, 1971): 10-12.

²⁷ Rockefeller Foundation, *The President's Review and Annual Report* (New York: The Rockefeller Foundation, 1972): 3.

health and biomedicine. In his mind not only did “our activities in developing countries vis-à-vis health [need to] be strengthened and increased, but they should be more attuned to the interaction of social determinants, and more radical in their correction of outdated institutional arrangements.”²⁸ Projects facilitating population control were judged acceptable and should be continued, but he thought that much more effort should be put into targeting the broader social determinants and extending “the social science of population problems – specifically, the development of a more rational public policy which would enhance the motivation of people in both developed and developing countries to limit their numbers.”²⁹ Knowles also was bothered and surprised that 85% of projects the Foundation turned down in the population sector were funded by someone else; if this was indeed true, he reasoned that there was too much redundancy between foundations, and Rockefeller should expand into a different specialty in the field where it could make an impact autonomously.³⁰ One option was the experimental primary health care delivery program WHO initiated; Knowles, however, thought it was not worthwhile and argued that primary healthcare “was as much a political and ideological [issue] as it [was] a substantial one of knowledge and experiment.” Furthermore, such a program also veered from the Rockefeller tradition of training focused on medical professionals rather than part-time volunteer auxiliaries.³¹

²⁸ Knowles, “BMS ‘Status Report,’” 4-5

²⁹ *Ibid* , 2

³⁰ *Ibid* , 4

³¹ *Ibid* , 5

One idea a staff member mentioned in an initial debriefing with Knowles seemed to catch his attention. A debriefing report for the Foundation's President stated that:

Schools of Hygiene & Public Health need consideration and thoughtful discussion. The RF [Rockefeller Foundation] was largely instrumental in getting these established in American medical schools. Regretfully, they have not changed their academic structure since the early part of this century (the ubiquitousness of a department of maternal and child health – which was a genuine problem in the 1920s – is an example of their fleeting relevance). What the solution is for the situation is not readily apparent but probably several possible solutions should be explored. It might be possible for the Foundation to encourage radical curricular reform at a single school of public health which hopefully would serve as a model. It might be possible, on the other hand, for the RF to sponsor and encourage departments of public policy which included a strong medical component . . . Any one of these approaches or even a variety of them might be truly trail-blazing in their nature and represent a good potentiality for a Foundation contribution.³²

As he began to assess the legacy and potential opportunities for health programming, Knowles stressed that the Foundation had obvious historical strengths for professional training that could contribute to meaningful change that other international health organizations weren't attending to. Though not pursued immediately, the issue of the reform of medical and public health education remained a potential opportunity.

Not long after Knowles arrived and began to explore new avenues for programming, many senior staff from the population and biomedicine programs began to retire. Whether Knowles precipitated the retirement or his arrival coincided with the end of the careers of many longstanding directors is unclear. Nonetheless, within two years of Knowles' arrival, three of the six senior staff members in the Biomedical Sciences Division stepped down from their posts. At the same time, this division was

³² "BMS Program Review and Recommendations; Report for Dr. Knowles," August, 1972, pg. 29, RFA, RF, Group 3.2 Series 926, Box 1, Folder 1.

renamed the Health Sciences Division and given the responsibility for the St. Lucia schistosomiasis program which was moved from the miscellaneous “Allied Interest” Division.³³ Jon Rohde, a staff-physician based in Jogjakarta, Indonesia, noted these momentous changes: “Health Sciences at RF is at a crossroads. One era is finished, its leading actors about to retire. New people are being sought to take their place to begin a new era. But good people will not come to RF merely to supervise ongoing programs. They will require opportunities to make their own mark in world health, to fulfill their leadership potential by creative efforts ‘toward the well-being of mankind’ [the Foundation’s mission statement]. What new directions in health offer this promise?”³⁴ Knowles filled the vacancies by hiring Ken Warren, a well-regarded schistosomiasis specialist from Case Western Reserve University in Cleveland, Ohio, and Kerr White, an epidemiologist and founding chairman of the Department of Health Care Organization at Johns Hopkins.³⁵

When he started, Kerr White encouraged the Health Science staff to look for new program ideas by studying the way that philanthropies working with American medicine were addressing domestic concerns. In several annual reports, Knowles himself highlighted growing concerns in US healthcare, focusing on the uneven distribution of physicians and the way that medical education and medical care were not attentive to the broader social, behavioral, and environmental factors that shaped

³³ Rockefeller Foundation, *The President’s Review and Annual Report* (New York: The Rockefeller Foundation, 1976): 32.

³⁴ Jon Rohde to John Knowles, “Ref. Letter No. AD-23,” December 19, 1975, pg. 1, RFA, RF, Group 3.2, Series 926, Box 1, Folder 1.

³⁵ Rockefeller Foundation, *The President’s Review and Annual Report* (New York: The Rockefeller Foundation, 1976): *xiii*.

individual and community health. In 1978 he noted that “within the medical school curricula the disciplines of population-based medicine are taught in the first two years by departments of preventative medicine, social medicine, community health, public health, etc.; in the next two clinical years of medical school and the three years of house-officership the student is trained to think wholly of the individual patient. Virtually all major attempts to reorient the thinking of the physician occurs after this five year hiatus.”³⁶ In the mid-1970s, two foundations concerned with domestic health policy and health care – the Milbank Memorial Fund and the newly created Robert Wood Johnson Foundation – tried to address this problem. They created training programs to improve “human capital” by providing advanced clinical education to physicians. The goal was to re-orient doctors to think beyond the individual patient and to address the broader challenges in health policy, community-medicine, and health care delivery.³⁷ The Milbank program in particular provided training in clinical epidemiology “in the hope that it could be useful in allocating scarce resources and encouraging more rational decisions about new technologies.”³⁸ Leroy Burney, former Surgeon General and outgoing President of the Milbank Fund at the time, explained that “epidemiology ties together health needs and health services so that various technologies, delivery systems, and financing schemes can be evaluated in terms of both

³⁶ “(P&H) Health Sciences Proposal,” August 22, 1978, pg 1, RFA, RF, Group 3 2, Series 926, Box 1, Folder 1

³⁷ Joel Gardner, “The Robert Wood Johnson Foundation, 1974-2002,” *Anthology To Improve Health and Health Care, Volume X*, The Robert Wood Johnson Foundation, Chapter Nine, 2-5, <http://www.rwjf.org/files/research/anthology2007chapter09.pdf>

³⁸ Daniel Fox, “The Significance of the Milbank Memorial Fund for Policy An Assessment at Its Centennial,” *Milbank Memorial Fund Centennial Publications*, The Milbank Memorial Fund, 23-4, <http://www.milbank.org/quarterly/8304PN.pdf>

their costs and their effects upon the health status of the community.”³⁹ Knowles and his staff found these training programs not only insightful reflections of the latest thought for improving medical care, but also innovative ideas that were closely aligned with longstanding concerns in the Foundation for medical education.⁴⁰

Though he provided extensive analysis, the physician-President of the Foundation did not propose any health projects during the first five years of his tenure. As the staff slowly turned over and Knowles got a better understanding of the scope and potential impact of Foundation operations, he kept older St. Lucia program and population projects in place with little alterations. That time for change came in October 1977 when Sterling Wortman and Laurence Steifel, two senior vice-presidents, prepared a systematic and detailed analysis of the new strategy for population and health. Unsurprisingly, many of Knowles’ ideas were advanced. In their analysis, the St. Lucia program was coming to an end; it won international acclaim in showing how “how to monitor [a] . . . low incidence of infection and prevent new build-ups of the disease” without needing to completely eradicate the snails.⁴¹ With this termination, the Foundation would essentially be starting over in health programming. The two believed that there were many arguments for and against re-entering the international health field. On the one hand, the formal health program was cut years before, and a return would be “retrogression;” this was coupled with the reality that many other major international organizations – UNDP, WHO, the World Bank – all provided funding for the

³⁹ *Centennial Report of the Milbank Memorial Fund*, The Milbank Memorial Fund, 31-2, <http://www.milbank.org/quarterly/centennialreport.pdf>

⁴⁰ “(P&H) Health Sciences Proposal,” 2

⁴¹ Wortman, “Population & Health Statement,” 2

Foundation's traditional strength in health: disease eradication. New Foundation health projects would thus be redundant and "would take away funding from population programs."⁴² However, on the other hand, a private foundation could offer a greater degree of flexibility in comparison to the larger UN institutions that had rigid guidelines and formal obligations to ministries of health. Both Wortman and Steifel also saw Rockefeller's long-standing positive reputation in international health as something that the Foundation had mistakenly avoided leveraging.

Wortman and Steifel's analysis offered several suggestions for potential programs: "[1] [increased basic science research on] the great neglected diseases of mankind . . . [2] medicine oriented to populations of people rather than individual patients in order to enable the physician to view health care in a broader context, and . . . [3] new means of managing and exploiting the burgeoning biomedical literature – a problem in all aspects of population and health work, as well as other areas of science."⁴³ The first proposal would become the "Great Neglected Diseases Program," discussed briefly in Chapter 3 as part of the broader interest in international biomedical research. The third proposal became a small but short-lived program in managing and indexing medical journals. While all three programs received his support, the second proposal particularly interested Knowles; he saw it as akin to the RWJ and Milbank clinical scholar programs, and also within in the Foundation's older tradition of professional medical training. He expanded his thoughts in a letter to the Board, arguing that "the most pressing health issues that the nation faced concerned "population-based

⁴² Ibid.

⁴³ Ibid, 4-5.

factors as the maldistribution [i.e., uneven distribution] of physicians, the high cost of health care, and the dearth of family and primary care practitioners. Under this program component, there would be explorations of means of promoting a quantitative population based approach to medicine by including biometry, epidemiology, and demography as an integral part of clinical medical education.”⁴⁴ However, the key characteristic that would differentiate a Rockefeller program in clinical epidemiology was its international focus and its interest in providing an institutional “career base” for its clinical-scholars by providing funding and support for Divisions of Clinical Epidemiology in Departments of Medicine at medical schools. The initial proposal to the Board by the Population & Health Division called for a network of clinical epidemiology centers that “would provide a career track, a critical mass of individuals working in the same discipline, and a major focus for maintaining constant contact with students and house-officers during the five years of clinical training.”⁴⁵ This type of institutional framework would have population based instruction at several leading medical schools balancing the intense clinical focus on individual patients.

Knowles explicitly saw a program in clinical epidemiology, and the re-entry of the Foundation into international health, as part of the broader institutional realignment and intense intellectual debates in the field in the late 1970s. By the time that Rockefeller’s new programs for grants in health had been proposed, WHO had hosted the Alma Ata Conference on Primary Health Care. Knowles was ambivalent about the conference, and did not particularly favor the programmatic attention on minimally

⁴⁴ Rockefeller Foundation, *The President’s Review and Annual Report* (New York: The Rockefeller Foundation, 1978): 29.

⁴⁵ “(P&H) Health Sciences Proposal,” 2.

trained rural community health volunteers. As he explained to David Bell, Executive Vice-President of the Ford Foundation, in a letter from December, 1978, all of the key terms underlying Alma Ata – “primary health care,” “horizontal programming,” “intersectoral involvement” – were all poorly defined and rife with confusion.⁴⁶ And even though global fertility rates seemed to be declining, he noted that there still was uncertainty about the conceptual relationships between health, development, and population. To begin to reorient major leaders in the field in a different direction, he called for a meeting in mid March, 1979 of several major international health organizations at Rockefeller’s office in midtown Manhattan.

The weekend meeting was notable for the invitee list and the summary points that affirmed that the Foundation should move ahead in training for clinical epidemiology. Many prominent leaders in international health were in represented: David Bell from Ford; John Evans from the World Bank; Parker Mauldin from the Population Council; Carl Taylor from Johns Hopkins; and Kerr White, Ken Warren, and Sterling Wortman from Rockefeller. Additionally, representatives from HEW, IOM, the Institute for Development Studies at the University of Sussex, the Kellogg Foundation, the ODC, and the UN attended.⁴⁷ However, one institution and its leaders were absent. Halfdan Mahler and WHO were not invited. But even more significant was the fact that John Knowles was absent. He had an unexpected heart attack earlier that month. His

⁴⁶ John H Knowles letter to David Bell, December 27, 1978, RFA, RF, Group 3.2, Series 900, Box 58, Folder 317.

⁴⁷ “Health Care Improvement in the Developing World Discussion Summary - March 8-9, 1979,” March 9, 1979, 14-5, RFA, RF, Group 3 2, Series 900, Box 58, Folder 317.

loss was tragic for Rockefeller; however, Sterling Wortman thought the meeting too important to cancel.

The discussion notes repeatedly framed population-based thinking and training as central to managing disease burdens and healthcare inefficiencies in developing countries; summary bullet points noted that “most elite physicians in developing countries have had no epidemiological training and no sense of ‘natural history of disease and the relative distribution of health problems within and among populations.’” Additionally, when “creating training centers for these types of local international health workers, a population/epidemiology perspective is important so that individuals can copy models or apply models to new local circumstances in LDCs [less developed countries].”⁴⁸ This broader discussion with representatives from other international health organizations validated the initial proposals of the Foundation’s Health & Population Division officers. According to the meeting minutes of the Rockefeller Board, a program for an “international network of clinical epidemiologists” was considered in September of 1979, and formally received its first funding in December of that same year.⁴⁹

As this section has demonstrated, the re-entry of the Rockefeller Foundation into the field of international health was not caused by a single factor. Rather, it was a multitude of changes – a physician-President, new program officers, historical interests in professional training over funding for basic care, new health concerns in the 1970s,

⁴⁸ Ibid., 4-5.

⁴⁹ “Minutes of the Rockefeller Foundation,” September 12, 1979, 58-60, RFA, Group A85, reel #10; “Minutes of the Rockefeller Foundation,” December 3, 1979, 79492-5, RFA, RF, Group A85, Series 195, Folder 1

and innovative domestic programs at parallel foundations – that influenced the creation of INCLEN. Though Health & Population Division officers thoughtfully articulated the purpose and scope of INCLEN to get it funding, the more significant analysis of its rationale and goals came one year after it started. At the same meeting where INCLEN was officially approved, the Board allocated a grant to “Dr John R. Evans of the University of Toronto, an internationally recognized authority on medical and health education, to undertake a global review of the demand for planners, organizers, managers, and evaluators of health services and the resources available for their training.”⁵⁰ Evans’ *Measurement and Management in Medicine and Health Services* became the intellectual underpinning of INCLEN; it will be analyzed in the next section as part of a broader analysis of why epidemiology, and clinical epidemiology more specifically, were considered crucial disciplines to correcting the shortcomings of international health and addressing the global prevalence of disease.

Part II: “Measurement and Management”

“Training should deal with the health needs of populations, not just institutions, and with the totality of resources, not just institutional support services. It should include interactions with other academic disciplines, practicing health professionals, and actual problems in the operation of health series. It should include evaluative skills and epidemiological methods to enhance the population perspective and keep administration oriented to outcomes rather than inputs.”

-John R. Evans, *Measurement and Management in Medicine and Health Services*⁵¹

⁵⁰ Ibid.

⁵¹ John R. Evans, *Measurement and Management in Medicine and Health Services: Training Needs and Opportunities* (New York: Rockefeller Foundation, 1981), 34.

At the same time that Kerr White arrived at the Rockefeller Foundation and began articulating some of the programming for what would become INCLEN, he was joining a number of prominent figures in medicine who were supporting epidemiology – especially clinical epidemiology – as a solution particularly attuned to both the shortcomings of the field and health challenges of the time. Lewis Thomas, President of the Memorial Sloan-Kettering Cancer Center and author of *Lives of the Cell* stated in an editorial in *Science* in 1977 that “from here on, as far ahead as one can see, medicine must be building, as an essential part of its scientific base, a solid under-pinning of biostatistical and epidemiological knowledge. Hunches and intuitive impressions are essential for getting the work started, but it is only through the quality of numbers at the end that the truth can be told.”⁵² Donald Kennedy at the FDA argued in the *New England Journal of Medicine* in 1978 that “for too long they [the medical schools] have left the population-based, quantitative sciences to the schools of public health and left them out of a doctor’s education. Perhaps worse, they have left them off their research agenda.”⁵³ Sherman Mellinkoff, Dean of the School of Medicine of UCLA, wrote to Rockefeller stating that “our collective opinion is that the Foundation has hit upon an excellent idea, one that would meet a real need in medical education and would simultaneously foster new research bringing epidemiology, medicine and pediatrics together.”⁵⁴ For these commentators, and the planners of INCLEN, epidemiology was significant in the sort of knowledge it produced, the way it oriented diagnosis and large-

⁵² Lewis Thomas, “Biostatistics in Medicine,” *Science* 198, no. 4318 (November 18, 1977) 675

⁵³ Donald Kennedy, “Creative Tension FDA and Medicine,” *New England Journal of Medicine* 298 (April 13, 1978) 846-850

⁵⁴ “(P&H) Health Sciences Proposal,” 3

scale planning, and the way it could provide much needed public health knowledge in medical education. Understanding its significance first requires examining its origins.

Historically, epidemiology has been a discipline framed by surveillance, prediction, and analysis of disease patterns. Its practitioners have studied why certain individuals or groups of individuals within variously defined populations are ill or healthy, and what the course of a disease experience is for these populations. The notions of disease and causality, however, have hardly been stable concepts. Over the years epidemiologists have pursued changing explanations and increasingly sophisticated quantitative tools to clarify the meanings of etiology, causality, and more recently, risk. Though Hippocrates discussed the significance of environmental influences on health and the course of epidemics, epidemiology's formal disciplinary roots lie in the nineteenth century concerns regarding the social determinants and patterns of illness stemming from industrialization. Efforts by these early practitioners focused as much on developing techniques of tabulation and population-level analysis as they did on defining the etiology and trajectory of infectious diseases. With the ascendancy of laboratory based biomedical research at the turn of the twentieth century, epidemiology became less significant for medical descriptions of disease pathology. Physicians looked more to molecular explanations of causality than broader, less-specific notions of transmission across communities.⁵⁵ As infectious diseases faded in the West in the 1950s, epidemiologists focused their attention and increasingly rigorous statistical tools on the complex interaction of risk factors that led to susceptibility for chronic disease and, beginning in the 1960s, accidents, suicide, and environmental

⁵⁵ Allan M. Brandt, *The Cigarette Century: The Rise, Fall, and Deadly Persistence of the Product That Defined America* (Basic Books, 2009), 118-25.

pollution. In international health, epidemiologists in the postwar decades applied new tools to both traditional and contemporary concerns. They collected data on infectious diseases in developing countries, systematized the infrastructure for global surveillance, and studied chronic disease incidence to explain how Western lifestyles influenced disease burdens and risk patterns.⁵⁶

The framework of analysis and action that underpinned postwar epidemiology prioritized highly quantitative and systems-based styles of thinking. A vast array of variables – disease experiences, treatment results, genetic markers, and behavioral patterns – could be compared on a population level. The key framing device, as Kerr White explained in an address at the University of Leuven in May 1978, was epidemiology’s concern with the denominator of health statistics – i.e., the total population being assessed in a given analysis.⁵⁷ This was in contrast to the clinician, who was only concerned with the numerator – that is, the patients that walk into the consulting room. The epidemiologically minded, on the other hand, possessed a worldview and the statistical tools that could define the range and significance of the incidence of disease, prevalence of risk factors, and effectiveness of treatment for a society at large. For White, these characteristics of epidemiology meant that it was “an extension of the scientific method beyond the laboratory, the bedside and the clinic, to the entire population.”⁵⁸ A broad range of isolated decisions, behaviors, and experiences

⁵⁶ See E. G. Knox, *Epidemiology in Health Care Planning: A Guide to the Uses of a Scientific Method* (Oxford: Published for International Epidemiology Association by Oxford University Press, 1979).

⁵⁷ Kerr White, “Health Care Organization: An Epidemiologic Perspective,” May 12, 1978, 243-4, RFA, RF, Group 3 2, Series 900, Box 58, Folder 317.

⁵⁸ Ibid

could all be rationally assessed, weighed, and organized within an epidemiological framework to determine risk, causality, and effectiveness at large.

By the early 1970s, the surety and rigor offered by the statistical techniques underlying epidemiology were also seen as useful tools for the planning and management of health services.⁵⁹ While the physician devoted to employing whatever means necessary for the care of the patient was the central perspective in curative medicine, increasingly complicated healthcare systems, rising costs, and new challenges in attending to proliferating behavioral and social needs meant that a population-level perspective was increasingly useful for broader decision making. When put to use in healthcare management, an epidemiological worldview offered a means of evaluating resource allocation and care giving practices for individuals against the broader burden of disease across a population. As Leroy Burney noted in the Milbank Memorial Fund's support of epidemiological training, "epidemiology ties together health needs and health services so that various technologies, delivery systems, and financing schemes can be evaluated in terms of both their costs and their effects upon the health status of the community."⁶⁰ Kerr White confirmed these sentiments in Leuven, noting that epidemiology is "the scientific ombudsman of the public, in assisting the politicians, the planners and the professionals, and even the people themselves, to allocate their resources prudently, compassionately, and ever more rationally."⁶¹

⁵⁹ Allan M. Brandt and Martha Gardner, "Antagonism and Accommodation: Interpreting the Relationship between Public Health and Medicine in the United States during the 20th century," *American Journal of Public Health* 90, no. 5 (May 2000): 709-10.

⁶⁰ Daniel Fox, "The Significance of the Milbank Memorial Fund for Policy," 24.

⁶¹ White, "Health Care Organization: An Epidemiologic Perspective," 235.

The mission of INCLEN, as well as the RWJ and Milbank clinical scholars programs, was to have an epidemiological perspective inform the management and treatment of patients. These extra-ordinary funding mechanisms were established because epidemiology was not actively taught to medical professionals. When it was provided in education, epidemiology was part of curricula for schools of public health. While these programs in clinical epidemiology were on one level trying to offer new values in the decision-making for caregiving, they also explicitly sought to address the historically complicated professional and educational relationships between medicine and public health. The way INCLEN came to orient clinical epidemiology to these realities and address these historical legacies was through the Canadian John R. Evans' report for the Rockefeller Foundation, *Measurement and Management in Medicine and Health Services*.

Like many of his contemporaries in international health from this time, Evans was ubiquitous across numerous institutional settings. He traveled intimately amongst the small group of individuals who managed the closely interconnected institutions focused on development and health. After education at Toronto, a Rhodes Scholarship at Oxford, and training in internal medicine and cardiology in Toronto, London, and Boston, he served at a number of influential and groundbreaking posts. He was the founding Dean of McMaster University School of Medicine in Hamilton, Ontario, from 1967-72; the President of the University of Toronto from 1972-79; the founding Director of the Health, Nutrition, and Population Division of the World Bank from

1979-83; the Chair and CEO of Allelix, Canada's first biotech company; and the Chair of the Board of Directors of the Rockefeller Foundation from 1988-92.⁶²

The creation of a medical school in Hamilton, Ontario in the 1960s was part of an effort by Canadian health officials to increase the number of physicians to expand the base of its health manpower.⁶³ Evans was given exceptional freedom in designing the curriculum. Though there were many innovations, the one that most fundamentally shaped McMaster and Evans' reputation was instruction for students in population-based medicine and clinical epidemiology.⁶⁴ At McMaster, the broader push for community medicine in the 1960s translated into the idea that health educators "must balance consideration of quality to the individual with quantity and distribution of health services . . . [when] applying the substantial but not unlimited resources available for health care."⁶⁵ To this end, these Canadian physicians would leverage systems analysis and epidemiological thinking to consider the health needs and resources of the entire community, and "not just the individuals who came to a doctor's office or hospital."⁶⁶ The crucial characteristic of this clinical epidemiology was how physicians

⁶² "Biography of Dr John R Evans, Chair Emeritus, Board of Directors of the MaRS Discovery District," <http://www.marsd.com>

⁶³ John R Evans, "A New Program of Medical Education in Relation to the Changing System of Health Care," *Health of the Nation Summer Lecture Series, University Hospitals*, August 7, 1970, pgs 1-2, JREP, Box 36, File 3

⁶⁴ John R Evans, "The Evolution of International Health Research A Patchy Personal Perspective," Inaugural

John R Evans Lectureship in International Health Centre for International Health, Faculty of Medicine, University of Toronto, May 3, 2002, 1-2, [cih.utoronto.ca/images/JR%20Evans%20pdf](http://utoronto.ca/images/JR%20Evans%20pdf)

⁶⁵ John R Evans, "Educational Trends and Objectives," *National Health Manpower Conference*, October 9, 1969, pg 1, JREP, Box 35, File 11

⁶⁶ Evans, "The Evolution of International Health Research," 2

in this framework would orient daily caregiving practices around the overall needs and resources of the community; with the whole population in mind, they could rationally distribute scarce resources in a manner that would be both efficient and effective. This work at McMaster led Knowles and Kerr White to recruit Evans to help define the goals of INCLEN.

The charge for *Measurement and Management* began from a dictum John Knowles articulated before his death: “new and more effective ways were needed to cope with the broader issues of health in the 1980s. The purpose of the report [is] to clarify the nature of these issues and to comment specifically on the roles of schools of public health and medical schools in addressing these issues.”⁶⁷ As Evans came to argue, the key challenge by the late 1970s was the new reality of the international burden of disease. There was a third burden that affected all nations alongside the chronic disease burden in the West and infectious diseases in developing countries. This was a “social and environmental pathology” that included behavioral choices regarding drugs, alcohol, cigarettes, and food; “the breakdown of traditional community norms;” and environmental risks like “exposure to an increasing number of chemicals, drugs, and other toxic substances.”⁶⁸ Evans’ 1981 Shattuck lecture, “Health Care in the Developing World,” elaborated on this diagnosis of society: “the personal health care system concentrates on the consequences of such processes. New approaches are needed to

⁶⁷ Evans, *Measurement and Management in Medicine and Health Services*, 11.

⁶⁸ *Ibid.*, 10.

encourage health, avoid patterns of behavior that lead to disease, and identify and treat the social and environmental causes of disease that originate in the community.”⁶⁹

To complicate this further, the health “resources now available are not being used effectively to achieve the maximum impact on health . . . This situation may deprive more than half the population of access to the simplest elements of basic care. Although the techniques are available to manage health resources more effectively, the . . . professionals who might have been expected to put the techniques into practice have failed to do so.”⁷⁰ In this context, Evans argued that the biggest problem in developing and developed countries was the antagonism between the orientation of health professionals and the needs of health service management. “Capable as they [were] in the narrower technical fields of medicine and public health, those who might provide leadership in management lack the inclination, breadth of perspective, and analytic skills to respond to the challenge.”⁷¹

Why were no professionals capable of meeting the world’s health challenges? Evans critiqued medical residencies as cultivating too narrow of a biomedical perspective of patient health: “the primary concern is certainty of diagnosis and cure . . . and less consideration of efficacy of the diagnostic or therapeutic procedures and almost no awareness of the real cost in terms of resources used.”⁷² He also accused the antiquated schools of public health of training health leaders in outdated knowledge and

⁶⁹ John R. Evans, Karen L. Hall and Jeremy Warford, “Health Care in the Developing World: Problems of Scarcity and Choice” *New England Journal of Medicine*, 305, (November 5, 1981): 1119.

⁷⁰ Evans, *Measurement and Management in Medicine and Health Services*, 49.

⁷¹ *Ibid.*, 11.

⁷² *Ibid.*

techniques. Public health education, which had been institutionalized in countless countries through Rockefeller support in the early twentieth century, had become too didactic in the classroom, too political in its visions of social change, and too narrow and technical in the government posts graduates sought to fill.⁷³ Several high-level government administrators Evans interviewed complained that public health school graduates were useless: “the schools train[ed] their people to fit bureaucracies, not to face problems”; “policy makers don’t seek their [public health students] advice.”⁷⁴

Evans reiterated these complaints himself:

It is ironic that public health, introduced to address the broader health matters neglected by medicine, is now accused of narrowness of focus and of dealing with technical and regulatory issues at the expense of the major health problems. Preoccupation with the prevention of communicable diseases and environmental hazards – the legacy of the public health movement that began in Europe in the 19th century – has eclipsed the broader health issues that characterize the second and third stages of evolution of health care. The barrier erected between preventative and curative, public and private, and individual and community health services have isolated public health workers from the very institutions and practitioners necessary to achieve their objectives for the public.⁷⁵

Evans drew on his earlier work at McMaster University as a potential solution for reforming health education and making health practitioners more attentive to the contemporary burden of disease. On an institutional level, he suggested that schools of medicine and public health foster greater interdisciplinarity with pedagogy focused on problem-solving with contemporary social issues and systems-based management.

Evans framed the generic capabilities of “measurement and management” as necessary professional virtues. Measurement represented the skills for gathering evidence,

⁷³ Ibid., 20-4.

⁷⁴ Ibid., 30.

⁷⁵ Ibid., 26.

problem solving and evaluating data; management corresponds to the processes necessary to organizing resources in an institute or community in reference to a pre-defined solution. These types of practices were suitable for behavioral and environmental disease problems and the organizational challenges to healthcare in the 1970s. These problems required reorganization of community to limit environmental risk and harmful behaviors while at the same time managing costs.

Training in clinical epidemiology was presented in the report's conclusion as the best current realization of skills for "measurement and management." And while such training was historically located in schools of public health, Evans did not see them as part of the solution to the challenges of international health. "What is needed . . . is not more epidemiologists and health economists, but more epidemiological thinking and concern with cost effectiveness [. . .] The challenge . . . is to move from the use of epidemiology by a small cadre of specialists as a research method or disease identification technique, to its use by policymakers, managers, and practicing physicians as a disciplined way of thinking in quantitative terms and with a population perspective about health problems, the selection of interventions, and allocation of resources."⁷⁶

Evans' report framed clinical epidemiology as a discipline that the Rockefeller Foundation could promote to rationally manage health care in light of the immediate challenges of a changing disease burden and rising costs. However, the analyses and suggestions were also self-consciously placed within two long-standing debates in the twentieth century: the relationship between medicine and public health and the type of

⁷⁶ Ibid., 42.

professional training appropriate for international health. Evans' research, and to a larger extent, the subsequent work of INCLEN, was a direct response to the Rockefeller-sponsored 1916 Welch-Rose Report that institutionalized public health education. In the late 1970s, the early twentieth century foci of sanitation, immunization, and socioeconomic development were not only sequestered from clinical care but were in contrast to the challenges of rising costs and delivery management. Though Evans did suggest a complete reorganization of medical and public health education and practice, he did push interdisciplinary training like clinical epidemiology that would blur the historical divisions. And unlike knowledge of tropical diseases or training in experimental research, instruction in clinical epidemiology would help solve unequal distribution of care in developing countries by rationally managing resources for a whole population (and not just the wealthy) that also considered the overall burden of disease. As INCLEN started operations, its leaders thought they could provide such solutions through clinical epidemiology.

Part III: "Selecting Diseases"

INCLEN was founded on two key principles. First, accurate information about the health needs and priorities of underserved populations and the relative effectiveness and efficiency of health care interventions is needed to guide clinician behaviour as well as health care policy decisions regarding resource allocation. Thus, quantitative measurement skills are needed by physicians and other professionals responsible for the planning, provision and evaluation of health care. Second, an improvement in the quality of evidence upon which health care decisions are made is not sufficient in itself to bring about the needed changes. A broadening of the medical school perspective to include a population based approach to the evaluation of health needs and the provision of care is also required.

-Scott Halstead, "INCLLEN: A Progress Report"⁷⁷

As money was allocated to the INCLLEN program, Kerr White had very specific ideas about who would be funded, what kind of training would be provided, how the network would be organized, and what the program's impact on international health would be. While clinical epidemiologists in developing countries would have to assess the composition and distribution of diseases, White already had a good sense of some of the major burdens they would face. Most INCLLEN Fellows in developing countries would be dealing with infectious diseases, and their studies would complement the Foundation's sponsorship of biomedical research on "neglected" tropical diseases. The basic research would uncover the molecular basis of transmission, while the clinical epidemiologists would "determine the morbidity and mortality caused by these diseases, and the most efficient means of preventing, treating, and controlling them, and measurement and analysis of the projected benefits, risks, and costs of various mixes of health manpower, resources, and available services."⁷⁸ Potential INCLLEN Fellows would then develop a rational ordering of health services by applying "scientific concepts and methods for estimating the burden of illness . . . evaluating the efficacy of alternative methods of intervention . . . [and preventing the] the provision of inappropriate health services and misallocation of health manpower and money."⁷⁹

While the funding mechanisms originated at the Foundation offices in New York City, the centerpiece of INCLLEN was the divisions of clinical epidemiology in

⁷⁷ Scott B. Halstead, Peter Tugwell, and Kathryn Bennett, "The International Clinical Epidemiology Network (INCLLEN): A Progress Report," *Journal of Clinical Epidemiology* 44, no. 6 (1991): 579.

⁷⁸ "Minutes of the Rockefeller Foundation," December 3, 1979, 79492.

⁷⁹ *Ibid.*

departments of medicine at medical schools in the West (the “Clinical Epidemiology Research and Training Centers” – CERTCs). These programs would have a core group of experienced clinician epidemiologists and working with other physicians to design curricula, sponsor meetings, connect with the rest of the medical school, and manage the day-to-day institutional affairs. The CERTCs would recruit physicians from developing countries to spend one year enrolled in classes and participating in an internship. Once the Fellows returned to their own country, they would be encouraged to teach other clinicians epidemiological methods, and conduct clinical epidemiology research that could inform national health policy. If a critical mass of alumni in a developing country trained a substantial number of new students, the Foundation would provide funding to set up a division of clinical epidemiology (a “CEU” – clinical epidemiology unit) within a sponsoring medical school. The network would grow organically according to student involvement, and CEUs in developing countries could even propagate their own spinoffs. Curricular decisions would be made by each CERTC (and eventually, each CEU) at annual meetings of the INCLEN network. Though funding ultimately would come from the Foundation, its decisions would largely follow the recommendations of leaders of the initial CERTCs. Over time, the CEUs would have more autonomy and not receive instruction from the CERTCs or the Rockefeller Foundation. These structural attributes were viewed positively in light of perceptions of the top-down bureaucratic rigidity of WHO.

The three initial CERTCs were selected by a Rockefeller advisory board were the McMaster University School of Medicine, the University of Pennsylvania Medical

School, and the University of Newcastle (Australia) School of Medicine.⁸⁰ The University of Washington School of Medicine also applied, but White turned down the application for reasons not preserved in archival documents.⁸¹ The University of North Carolina at Chapel Hill School of Medicine applied; the application was initially rejected because they wanted INCLEN to serve domestic needs and bolster the RWJ program. Nonetheless, they were added as a CERTC in 1985 after reapplication.⁸²

The program statement for the McMaster CERTC gives a sense of the goals of the training. Coursework included clinical epidemiology, biostatistics, data management, development of health indices, and health operations research; a four month internship with a faculty member was included.⁸³ Upon completion of training, students could “initiate studies of the effectiveness (eg clinical and field trials), availability, and efficiency of health practices and services in their own country.” They would “apply epidemiological and biostatistical methods to study of diagnostic and therapeutic process in order to develop and evaluate untested methods of providing health care.” When possible, they would “expose other physicians to this [clinical epidemiology perspective] during rounds,” and “develop new knowledge on extent to which health

⁸⁰ *Report of the First Annual Meeting of the International Clinical Epidemiology Network* (Honolulu, HI, February 27, 1983), RFA, RF, Group A87, Series 187, Box 1, Folder 1 The board for selecting CERTCs included Robert Ebert, the president of the Milbank Memorial Foundation who started their interest in clinical epidemiology, John Evans, then Director of the Health, Nutrition, and Population Division at the World Bank, Ch'en Wen-Cheih, Assistant Director-General of WHO, Rodrigo Guerrero, Sec of municipal health U del Valle, Frederick Mosteller, professor of biostatistics, Harvard, Sir Kenneth Stuart, medical advisor to the ODA-UK, Clarke Wescoe, chair of board of Sterling Drug Co

⁸¹ Robert Petersdorf to Kerr White, February 27, 1979, RFA, RF, Group 02 1979, Series 200, Box 33, Folder 0759

⁸² Kerr White to Scott Halstead, December 30, 1985, RFA, RF, Group A89, Folder 1

⁸³ “International Programme Design, Measurement, and Evaluation in Health Care,” McMaster University, Ontario, Canada, 1981-2, 15-6, RFA, A84, Series 120

services do more good than harm to those who comply with treatment (efficacy) and those to whom it is offered (effectiveness).”⁸⁴ Once a local CEU was established, it would continue these activities more formally.

Kerr White and clinical epidemiologists from the three CERTCs met in Honolulu in late February, 1983 to assess how INCLEN had developed over the previous three years and what strategies should be employed for continued growth. The meeting highlighted the diversity of programming and the international reach of the network. Twenty-seven fellows from nine countries had spent one year at one of the three CERTCs and went back or were heading back to their native countries to start a CEU at a local medical school. The sixteen CEUs were in the following cities: Beijing, Shanghai, and Chengdu in China; Chulalongkorn, Khon Kaen, and Mahidol in Thailand; Gadjah Mada in Indonesia; Manila, Philippines; Sao Paulo and Rio de Janeiro in Brazil; Temuco, Chile; Xochimilco and Mexico City in Mexico; Ibadan, Nigeria; Addis, Ethiopia; and Madras, India.⁸⁵ Research included “a randomized control trial on the function of village health worker program on immunization in D.I. Yogyakarta Province,” a “field trial of one-vs three-dose HBV mass immunization among Filipino children,” and “the health conditions of workers in a mechanized agricultural industry in Ibadan, Nigeria with reference to workers exposed to modern agricultural chemicals and technology.”⁸⁶

⁸⁴ Ibid.

⁸⁵ *Report of the First Annual Meeting of the International Clinical Epidemiology Network*, 15, 26.

⁸⁶ *Report of the Fourth Annual Meeting of the International Clinical Epidemiology Network* (Shanghai, China, April 6, 1985), 4, 10, RFA, RF, Group A89, Folder 3.

Kerr White argued that training in clinical epidemiology was a timely solution to the problem of rising costs in medicine. He also affirmed John Knowles' earlier statements and framed the network as a direct response to Alma Ata and the broader call for primary health care. But unlike WHO officials, INCLEN participants did not think the addition of auxiliary health volunteers would meet the challenge of "Health for All by the Year 2000." For the clinician epidemiologists, developing countries did not have equitable and effective care because they did not have caregivers who assessed care with the whole population in mind. Village based volunteers might extend access to care for rural populations, but health professionals who could understand the distribution of disease, assess treatment options, and inform national policy would help design the best possible system.⁸⁷ In this way, a well-managed system would allow one to understand and treat the most important needs of a whole population.

This development of a network for professional training and research in clinical epidemiology is the larger context of the often-cited Walsh and Warren paper that helped to advance the disease-focused, technologically-based "selective" primary health care that Jim Grant and UNICEF promoted in the 1980s. The targeted evaluation and attack of specific disease burdens using the most-cost effective methods was but one step of the larger policy formation process that INCLEN Fellows would try to bring about in a developing country. This is evident from the meeting notes of the first annual meeting of the INCLEN in Honolulu in March, 1983. The new Fellows who were still learning about clinical epidemiology were told to prepare for a follow-up meeting five "key content areas" that represented health research priorities for their native country.

⁸⁷ "Teaching Clinicians Epidemiology: Problems and Prospects," May 3, 1982, RFA, RF, Group A84, Series 120.

In case they could not readily think of five targets, a letter informed them that a “simplified method of assigning health research priorities to major health problems is adapted from Walsh & Warren (*Social Science & Medicine* 14C 1980 p 145-63). We suspect that, based on your general knowledge of health in your country, even without library research, a reasonable prioritization of local health / health care problems is possible.”⁸⁸

Part IV: “Social Science and Health”

The INCLLEN model aims to infuse a genuine transdisciplinary perspective into international health through equipping social scientists to speak a common language with clinical epidemiologists and sensitising clinicians to the ways social sciences contribute to research and policy.

-Nick Higginbotham, “Capacity Building for Health Social Science”⁸⁹

While the number of CEUs and Fellows continued to grow, Kerr White came to believe that the aims of training clinicians to manage the diverse challenges of international health care required more than clinical epidemiology. During the second phase of INCLLEN from 1984 to 1989, the network came to supplement the core training with other skills. New Fellows would be trained in health economics and the social sciences.

Much like the initial founding of INCLLEN, the expansion of the program’s training arose from new challenges in international health emerging alongside new topical interests from Rockefeller administration. Kerr White retired from Rockefeller

⁸⁸ *Report of the First Annual Meeting of the International Clinical Epidemiology Network*, 25.

⁸⁹ Nick Higginbotham, “Capacity Building for Health Social Science: the International Clinical Epidemiology Network (INCLLEN) Social Science Program and the International Forum for Social Science in Health (IFSSH),” *Acta Tropica* 57, no. 2-3 (August 1994): 123-137.

in 1985, and another Population & Health Division program officer, Scott Halstead, began managing the foundation's disbursements to INCLEN. The new orientation of the program was justified not so much as a redirection of training efforts, but an attempt to bolster the core planning competencies of the Fellows and connect them more closely with the policy making process.

Since detailed annual epidemiological data was scarce in developing countries, much of the work of INCLEN Fellows was novel. The research provided a detailed quantitative picture of the illness burden that went beyond the broad WHO country profiles that were often extrapolations from neighboring nations. However, Halstead was concerned that the INCLEN research was not actually informing policy. Though the new studies raised awareness of pressing problems and offered thoughtful recommendations, they did not create change in the way developing country health programs managed their funding allocations.⁹⁰ A new approach was needed. For White and Halstead, the larger goals of INCLEN focused on fostering design, measurement, and evaluation practices to produce cost-effective care attentive to the burden of disease. The desired outcome was policy change that would restructure healthcare delivery. Given emerging ideas about the broader determinants of health, the thought was that other quantitative social sciences could inform INCLEN sponsored research; a rigid and dogmatic adherence to the disciplinary boundaries of epidemiology was counterproductive.⁹¹

⁹⁰ "Minutes of the INCLEN Executive Committee," January 24, 1985, pg 2, RFA, RF, Group A89, Folder 1

⁹¹ Ibid

Scott Halstead had already been thinking about how interdisciplinary thinking could inform healthcare delivery for some of his other Rockefeller work. In 1985 he edited and co-published the proceedings and articles from a conference at Bellagio as the volume *Good Health at a Low Cost*. The text explained how sociocultural and behavioral determinants such as “political and social will, education for all and equitable distribution of care” were key underpinnings to cost-effective, rationally-planned health services.⁹² The findings highlighted a number of social sciences in examining how social norms and household behavior could influence health outcomes. The text not only informed a broader debate in international health in the 1980s about social determinants, but it was welcomed by Rockefeller administrators as a way to expand INCLIN. Under this new framework, Fellows should assess a broad and holistic array of factors when analyzing disease burdens and suggesting policy; such insights were seen as especially useful when assessing health burdens shaped by lifestyle choices. At the time of Halstead’s work, Kenneth Prewitt, a political scientist, became a vice-president at Rockefeller after stepping down as President of the Social Science Research Council.⁹³ He encouraged more Foundation programming in the social sciences, including international health projects. As such, INCLIN added health economics and a broadly construed social science-based training to the INCLIN instruction.⁹⁴

⁹² Scott B. Halstead, Julia A. Walsh, and Kenneth S. Warren, Rockefeller Foundation., *Good Health at Low Cost: Proceedings of a Conference Held at the Bellagio Conference Center, Bellagio, Italy, April 29-May 3, 1985* (New York: The Rockefeller Foundation, 1985).

⁹³ Higginbotham, “Capacity Building for Health Social Science.”

⁹⁴ Halstead, Tugwell, and Bennett, “The International Clinical Epidemiology Network (INCLIN).”

The Foundation encouraged this new expansion in programming; however, there was not a pre-determined method that would seamlessly combine the analytical questions and tools of health economics and social science research with clinical epidemiology. Kerr White had noted the problem at the First INCLIN Conference:

There was considerable debate about the extent of health economics course work desirable or essential in the training of clinical epidemiologists. Concern was expressed that many of the assumptions underlying economic appraisal techniques in health care may not be appropriate for developing countries. For example, it was suggested, that techniques such as cost-effectiveness analysis, should not be taught to fellows simply as “value-free technology.” Rather, the clinical epidemiologist working in a developing country needs to be aware of the often controversial assumptions that may restrict the application of health economic analyses in some settings. As to the level of expertise to be expected of fellows in this area, there was general consensus that they should be competent ‘consumers’ of research utilizing health economic techniques.⁹⁵

Though health economics and the social sciences readily became part of the INCLIN curriculum, the initial controversy reveals several important issues. In one sense, the addition of these subjects makes sense for both political and epistemic reasons. Economics could offer entrée into more policy discussions, and its quantitative methods would help facilitate the original intent of the rational planning of healthcare delivery. However, broadening the focus to other topics might dilute the core population-based worldview that defined clinical epidemiology epistemologically and professionally. Health economics could also facilitate planning that slowly began to prioritize cost-management and the maximization of choice over broader disease based threats to a community.

This intersection of concerns for social determinants alongside quantitative planning also highlights one of the broader themes of this dissertation: the interaction

⁹⁵ *Report of the First Annual Meeting of the International Clinical Epidemiology Network*, 10.

between holism and reductionism in the application of social science methodologies to international health. The development of the rationale and methodologies of INCLEN shows a bidirectionality. Interconnected policies that considered social determinants and contextualized case studies can be used for the reductionistic ends of a well managed and quantitatively evaluated system of care. However, the reductionistic means of economic and epidemiologic analysis and categorization can be leveraged for ends of identifying the holistic interconnectedness of social determinants. This feature blurs some of the conceptual division and opposition of these two concepts, and demonstrates how the specific concerns of the 1970s and early 1980s in international health juxtaposed historical (i.e., social) and ahistorical (i.e., systems-based design, measurement and evaluation) methods of thinking about health, disease, and care.

With the adaptation of health economics and social science training, the makeup of each clinical epidemiology unit changed. What had once been an institutional home for groups of clinical epidemiologists and biostatisticians became centers that consisted of “six clinical epidemiologists, one biostatistician, one physician trained in health economics, one health social scientist and one senior facilitator.”⁹⁶

As this arrangement became institutionalized in the programming of annual conferences, Halstead and the Rockefeller staff repositioned their work to more of a caretaker role that could be phased out. As they came to see it, INCLEN appeared to operate autonomously, and, in a pattern similar to nearly all other Rockefeller international health programs in the twentieth century, Foundation staff only wanted to sponsor pilot programs for about a dozen years that could be gradually but permanently

⁹⁶ Rockefeller Foundation, *The President's Review and Annual Report* (New York: The Rockefeller Foundation, 1984): 47.

supported by local governments. The minutes of the Third Annual INCLEN Conference, describe how “Dr Halstead reported on the recommendations of INCLEN II in January 1984 and the Executive Committee in January 1985 to the effect that governance of INCLEN should be transferred gradually to a group of leaders from clinical epidemiology units in developing and developed countries plus representatives of sponsoring funding agencies. In the long run, INCLEN should be free standing, the Council serving to promote the goals of clinical epidemiology and to raise funds for meetings and research activities.”⁹⁷

In 1987, Dr. Halstead reported that INCLEN would be registered as INCLEN, Inc. as a US tax-exempt organization based in Philadelphia.⁹⁸ By 1989, INCLEN was its own non-profit organization separate from the Rockefeller Foundation. The network has continued into the twenty-first century, and has roughly 90 CEUs and a dozen regional networks affiliated with what is now called the INCLEN Trust.⁹⁹ Since its inception, a few thousand clinicians have received training in epidemiology. Although it did not alter the paradigm dividing medicine and public health in a way that the Welch-Rose report did in the early twentieth century, it has offered a different, compelling, and unique agenda for understanding the values and organizational practices that connect health care systems, patients, and the prevalence of disease.

Conclusion

⁹⁷ “Report of INCLEN III for INCLEN Newsletter,” *Report of the First Annual Meeting of the International Clinical Epidemiology Network*, RFA, RF, Group A89, Folder 1.

⁹⁸ Ibid.

⁹⁹ See <http://www.inclentrust.org> for more information.

The promotion of INCLEN and professional training in clinical epidemiology were developments uniquely rooted in the institutional, social, and political circumstances of international health in the 1970s. Most immediately, these stories were shaped by changing disease burdens and the motivations of Rockefeller officers to reorient the Foundation to re-enter international health and address some of the philanthropy's historical legacies. The goal of training physicians in clinical epidemiology rests on a logic that managing the needs of patients was ultimately about managing the health system in an efficient and equitable fashion. The quantitatively minded physicians were deemed the right people because they could refashion two problems – care of the state and care of the patient – into one problem: the management of resources according to the larger disease burden.

The international forays in health in the 1970s by the Fogarty International Center and the Rockefeller Foundation were two approaches to some of the same issues. Both institutions launched programs that were fundamentally about professionalization and what skills and worldview were deemed most suitable for international health. The FIC prized training in experimental science that fostered an intellectual adaptability when facing new disease problems in unfamiliar environs. The Rockefeller Foundation pushed for a population-based perspective that would rationally evaluate caregiving practices based upon the overall needs and resources of a community.

This division largely reflected competing visions of what international health should aspire to in term of the problems it corrects and solutions it should offer. This division is still present in the work of global health in the early twenty-first century. Moreso than other activities, international health has been defined by problems to

address rather than a specified body of knowledge or way of seeing the world. This inherent variability, as stressed in the introduction to the dissertation, has meant that the moral and scientific norms of what counts for international health have shifted and even been conflated to suit particular political and social agendas. For the Fogarty Center, this has included promoting a biomedical vision on the practice of medicine around the world, as well as counterbalancing the political effects of American interventionism in Vietnam. For INCLEN, and by extension, the Rockefeller Foundation, this meant promoting elite professionals who could propagate the political and scientific interests of elite Western medicine. In comparison to other disciplines, professionalization in international health is very much the embodiment of unresolved tensions and questions in the field. This reality is perpetuated by the variability of institutional settings where international health can be practiced. If nothing else, international health during the late Cold War was a time of institutional realignments; long standing international health players like Rockefeller reengaged in the field, and new institutions began to participate. The efforts of one such institution, the World Bank, is the topic of the next and final chapter.

Chapter 5
The Return on Health:
The Founding of the World Bank's Population, Health, and Nutrition Division¹

Introduction: “The Impact of Health”

In early 1980, six months after he started as the founding director of the World Bank's Population, Health, and Nutrition Division (PHN), Dr. John Evans was told that he should make an appointment to visit the Bank's President, Robert S. McNamara.² The Bank's senior directors wanted the Canadian doctor to make a formal presentation of the Division's activities and five-year plan for lending. As he had done in his days at the Pentagon under Kennedy and Johnson, McNamara based his decisions at the Bank upon extensive quantitative and statistical analyses. The PHN staff was aware of this, and worked for weeks assembling the most up-to-date numerical data on global disease patterns and the estimated impact of the lending of this small, brand-new Division. They were intent to show how their work aligned with the latest research from international health experts on small-scale, village-based primary care.

With the report in hand and brimming with confidence, Evans marched up the stairs to the twelfth floor of the Bank, ready to finally speak with the reclusive President. He was quietly ushered into the cavernous office that looked out at the White House two blocks away and the Capitol in the distance. McNamara slowly read the report, page by page, figure by figure. Evans sat across the desk and quietly waited. When McNamara finally looked up, Evans was expecting congratulations on a job well done

¹ The sequence of terms for the title of this division when it was founded was Population, Health, and Nutrition. Starting in 1997, the ordering was switched to Health, Nutrition, and Population. As will be explored, the sequence reveals historically specific policy priorities.

² This entire episode is from the author's interview with Dr. John R. Evans, March 2011.

and confirmation to proceed with the course of lending. Instead, the Bank President threw the report across the desk, and quipped, “Very interesting. Come back when you are dealing with the health of at least a billion people!”

Evans recalled this episode partly in jest, but also as an insight into the World Bank President. McNamara very much wanted to see clear and large-scale results of Bank interventions. But this anecdote also speaks to the broader political, institutional, and epistemic concerns that framed the introduction of health-based lending at the World Bank in the 1970s. As the Bank developed projects focused on improving health indicators and healthcare delivery, its staff constantly debated why it was lending for health, what counted as meaningful improvement, and how such programming fit in with the policies and norms of the institution’s overall development efforts.

This new subject was outside the expertise of the economists, planners, and engineers that populated the Bank, and its impact looked different from anything it had done before. The World Bank was created to help with postwar European reconstruction, provide global access to US capital markets, and finance infrastructure of newly independent nations that had little credit. Still, the World Bank functioned similarly to a commercial bank, and provided loans. Improving health was something, as bankers, outside of their traditional purview. Though McNamara’s tenure at the Bank (1968-81) was defined by an expansion of the practice of development to include poverty eradication, lending for health was still a radical departure for most Bank employees.

But the World Bank’s decision to create PHN and begin loans for health was not an uncalculated risk. It was a policy decision considered by McNamara and his senior

directors since the early days of the President's tenure, and was finally implemented after a series of political, institutional, and epistemic changes within the World Bank and across international health during the 1970s. This foray into health-focused lending by the Bank had far reaching repercussions that are still poorly understood by historians and global health practitioners alike. From 1968 to 1978, the World Bank had already informally lent on average \$110 million per year for health interventions within larger projects; this amount was roughly half the total annual budget of WHO in the late 1970s.³ In 2009, the Bank directed \$3 billion toward health projects, making it the single largest source in the world. (By comparison, that same year the Gates Foundation gave \$1.8 billion, the second largest global health disbursement.⁴)

The few historians who have surveyed the rise of the World Bank in global health have had only minimal access to the Bank's archive.⁵ One exception is work exploring the Bank's effort to combat river blindness in the early 1970s.⁶ Internal histories of the Division by the Bank's Operations Evaluation Department employed all of the archival resources; however, these accounts were created to evaluate retrospectively the success of early health-focused lending based on present day norms

³ Office of Environmental and Health Affairs, Central Projects Staff, *Bank Lending for Health*, April 3, 1979, vii, WBGA, Box 6 of A1994-069, "PPHN – Health 1981/3."

⁴ "HNP Stats," *World Bank HNP Lending*, accessed 3/15/2011, <http://go.worldbank.org/851WC143G0>; "Global Health Strategy Overview," *The Bill & Melinda Gates Foundation*, accessed 3/15/2011, <http://www.gatesfoundation.org/global-health/Documents/global-health-strategy-overview.pdf>

⁵ See especially Jennifer Ruger, "The Changing Role of the World Bank in Global Health," *American Journal of Public Health* 95, 1 (January 1, 2005): 60-70, Howard Stein, *Beyond the World Bank Agenda: An Institutional Approach to Development* (Chicago: University of Chicago Press, 2008); Robert L. Ayres, *Banking on the Poor: The World Bank and World Poverty* (Cambridge: MIT Press, 1983).

⁶ Jesse Bump, "The Lion's Gaze: African River Blindness from Tropical Curiosity to International Development" (Ph.D. diss, The Johns Hopkins University, 2005).

and metrics.⁷ In contrast to this internal evaluation, this chapter will utilize World Bank archival sources to explore the political, social, and institutional concerns that led to the formalization of the World Bank's lending for health and its creation of a Population, Health, and Nutrition Division. Unlike other accounts, it will show that even through the late 1970s, it was not inevitable that the Bank would formally institutionalize and health project lending. Many in the Bank thought it was a controversial subject not of the same significance as traditional infrastructure projects.

PHN was founded in 1979, but its origins lie in social sector projects the Bank had pursued since the early 1970s. Global population control was a formal lending objective since 1969, and had been a focus for McNamara since he arrived at the Bank in 1968. Additionally, programming for malnutrition began in 1972 out of concerns for worker productivity and global food shortages. These concerns, in this context of strategic external partnerships, anti-poverty programs, and agriculture lending translated into occasional loans for rural clinics or disease control. But these health loans were not stand alone projects, but part of larger ventures.

When the Bank finally began lending for health on its own in 1979, it was not out of interest in new disease concerns. Rather, McNamara disliked developing countries' tepid pursuit of population control, and thought that repackaging these programs as health projects would encourage more nations to allow Bank population programming. Additionally, formalizing lending for health was seen as a way to foster fiscal discipline over the unwieldy and substantial health budgets in developing

⁷ Susan Stout, et. al., *Evaluating Health Projects: Lessons from the Literature*, Discussion Paper (Washington, D.C.: The World Bank Group, 1997); Timothy Johnston and Susan Stout, *Investing in Health: Development Effectiveness in the Health, Nutrition, and Population Sector* (Washington, D.C.: The World Bank Group, 1999).

countries. PHN was created to reorient conceptually the Bank's social sector projects to fit within the institution's particular style of large-scale project creation. These agendas codified certain values and norms that shaped how early Bank health projects addressed health and disease concerns in the 1970s and 1980s. This chapter will argue that the Bank's interest in designing health programs was not simply about improving health outcomes or even managing scarce resources. It was about fitting health within the predominant epistemological framework of Bank lending, such that it could be subject to the same norms and methods of evaluation as all other development projects.

Of the three titular concerns of PHN, population was the first to gain acceptance at the Bank. The first part of this chapter traces how and why the Bank focused on family planning, and how concerns within the Bank and across international health shaped its lending practices in this area. The second part of the chapter explores the policy statements and lending patterns for health in the mid to late 1970s. Health interventions would occasionally be part of larger rural development projects, but were never stand-alone ventures. During this time, Bank directors went back and forth on the relationship between health and development and the role the Bank could play. After careful evaluation in 1974, the Bank decided to abstain from lending directly for health, and instead continued with its established policy. In the late 1970s, McNamara's persistent frustration with the Bank staffers' reticence to design population projects, combined with new internal policy reports, led the Bank to creating PHN. The third section of this chapter will analyze these reports and why a formal PHN Division was the result. The fourth section explores the early work of PHN. As operations got underway, PHN officials and Bank Directors repeatedly struggled with how to fit

health-focused lending into the Bank's quantitatively rigorous style of project development and implementation. This section examines how these institutional structures and norms shaped what health-based knowledge claims and practices were deemed valuable for broader development projects. The fifth and final section examines how PHN came to focus on healthcare financing in the mid-1980s. New staffers and the larger focus on Bank-wide structural adjustment reoriented PHN to discourage the expansion of state based care and to support more market-based interventions. The conclusion explores some of the broader legacies of the early operations of PHN.

Section I: "The Bank's Mandate"

Mr. McNamara wondered why the reply had not been given to the opponents of family planning that, in the case of countries such as India and Bangladesh where economic progress would be slow, there is no alternative to a family planning program.

-President's Council Minutes, September 16, 1974; Robert McNamara's reply to the slogan that "development is the best contraceptive" developed at the 1974 World Population Conference at Bucharest⁸

Since the early 1950s, World Bank officials had considered the possibility of targeted loans for social concerns like nutrition, rural clinics, and schools. In 1952, just seven years after the Bank was created at the UN Monetary and Financial Conference at Bretton Woods, a Bank survey mission in Nicaragua argued that investment in the country's public health infrastructure would facilitate rapid improvement in its economy. Their report asserted that "expenditures to improve sanitation, education and public health should, without question, be given first priority in any program to increase the

⁸ President's Council Meeting minutes, September 16, 1974, WBGA, 03-04, Office of the President, Records of President Robert S. McNamara, Series 02, President's Council Minutes, Box 1, Folder 12.

long-range growth and development of the Nicaraguan economy . . . high disease rates, low standards of nutrition, and low education and training standards are the major factors inhibiting growth of productivity.”⁹

The proposal was rejected not because of technical shortcomings, but because Eugene Black, Bank President from 1949 to 1963, believed that the most significant goal for the nascent financial institution was to firmly establish its creditworthiness for investors. Much of the Bank’s budget came from bonds floated on Wall Street, and from Black’s perspective, a AAA credit rating would only come by financing “productive” industrial infrastructure projects that could clearly demonstrate a capacity to expand GDP in the developing world.¹⁰ Social sectors like education and water supplies were grouped together as “consumption” sectors that were not strictly productive in nature; such lending veered away from the “conviction that all Bank investments and advice should seek the maximum contribution to economic growth.”¹¹

This conservative approach confined lending to industrial sectors, but investors found the bonds so attractive that by the mid-1960s the Bank had a surplus and needed to spend more money. George Woods, Bank President from 1963 to 1968, also ran out of big infrastructure projects and was looking for new investment opportunities; he disbursed monies toward more risky programs in agriculture and education. And, like

⁹ World Bank, *The Economic Development of Nicaragua*, (Baltimore Johns Hopkins University Press, 1953), 22–23, quoted in Devesh Kapur, John Prior Lewis, and Richard Webb, *The World Bank Its First Half Century* (Washington, D C Brookings Institution, 1997), 111

¹⁰ Stein, *Beyond the World Bank Agenda*, 10

¹¹ Mollie Fair, *From Population Lending to HNP Results The Evolution of the World Bank’s Strategies in Health, Nutrition and Population*, Background Paper for the IEG Evaluation of World Bank Support for Health, Nutrition, and Population IEG Working Paper 2008/3 (Washington, D C, The World Bank Group, 2008), 18

all of his predecessors before him, Woods pursued projects that would advance the Cold War political interests of the West. India and Pakistan, as such, became major recipients of these funds, as Bank officials saw these warring nations as a regional political bulwark against the perceived expansionist tendencies of Mao's China and the USSR.

Though the World Bank funded massive projects in countries that had little credit, it operated much like any commercial bank. It offered loans for projects that were evaluated for feasibility, return on investment, and effectiveness toward pre-stated goals.¹² Woods reoriented this evaluation process by changing the composition of the Bank staff. Economists were hired to offer quantitative analyses of each country's economy and to develop a technical rationale for each individual loan.¹³ While there were many economic and financial metrics of evaluation, Woods in 1967 began including information on changing demographics and overall population growth for each recipient country. Borrowers' population policies were to be regarded as "one indication of their commitment to economic growth."¹⁴

The World Bank's efforts in the 1960s to monitor or control the growth of populations were hardly new. In fact, they connected to longstanding anxieties that stretched back to Thomas Malthus' 1798 *An Essay on the Principle of Population*.¹⁵ Throughout the nineteenth and twentieth centuries, population control, sometimes known as fertility control or the less innocuous "family planning," sat at the intersection

¹² Ayres, *Banking on the Poor*, 1-5.

¹³ Stein, *Beyond the World Bank Agenda*, 12. These professionals soon came to dominate the Bank demographically and intellectually.

¹⁴ Barbara B. Crane and Jason L. Finkle, "Organizational Impediments to Development Assistance: The World Bank's Population Program," *World Politics* 33, no. 4 (July 1, 1981): 519.

¹⁵ Thomas Malthus, *An Essay on the Principle of Population* (J. Johnson: London, 1798).

of norms regarding the family, individual and collective responsibility, the connection between the labor force and economic growth, the consumption of resources, the role of the state in peoples' lives, and the composition of individual races, socioeconomic groups, and the human race as a whole. Nineteenth century Neo-Malthusians framed population control as a way of improving the condition of the poor; American Nativists saw it as a way of regulating the migration of immigrants; early twentieth century Eugenists argued that the rational regulation of fertility would improve the "fitness" of desired races; and the followers of Margaret Sanger pushed population control as an emerging right of women.¹⁶ In their arguments, many of these parties employed traditional attitudes about gender roles and the family, or stoked fears about teeming masses outside of the West ready to overrun the industrialized world.

After World War II, the population control movement was bolstered by changes in international health, new wealthy institutional patrons, new social science methodologies, new medical contraceptive technologies, and pessimistic popular texts. The partial control of infectious diseases and the modernization of global sanitation measures cut down infant and adult mortality, upsetting the balance of births and deaths, sending global population from 2.5 billion in 1950 to 3.3 billion in 1965¹⁷ International health had been "too successful," and prominent elites in the West pushed to redirect

¹⁶ Betsy Hartmann, "Population Control I Birth of an Ideology," *International Journal of Health Services* 27, no 3 (1997) 523-7 See also S Greenhalgh, "The Social Construction of Population Science An Intellectual, Institutional, and Political History of Twentieth-Century Demography," *Comparative Studies in Society and History* 38, no 1 (1996) 26-66, L Gordon, *Woman's Body, Woman's Right A Social History of Birth Control in America* (New York Penguin Books, 1977), Betsy Hartmann, "Population Control II The Population Establishment Today," *International Journal of Health Services* 27, no 3 (1997) 541-57

¹⁷ Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, *World Population Prospects the 2008 Revision*, <http://esa.un.org/unpp>, accessed April 2, 2011

funding from disease to population control. One of the greatest patrons of the movement to curb population growth was John D. Rockefeller III. He feared for the loss of “civilized values,” the potential global spread of communism, the toppling of the international political system, and popular unrest that could close off markets to US investments. The Rockefeller and Ford Foundations proceeded to devote extensive financial and political resources in concert with the UN to coordinating population control policy for developing countries. These organizations promoted the extensive use of new contraceptive technologies and funded social science research to justify a “machine model of family planning” that enforced predictability and control.¹⁸ Public support for these efforts was heightened by apocalyptic texts such as Paul Erlich’s *The Population Bomb*.¹⁹

While Woods included a measure in the final project approval process to see if countries had enacted some type of population policy, his successor at the Bank, Robert McNamara, placed the Bank at the center of the postwar population movement by initiating projects for population control. Unfettered population growth was an issue McNamara focused on throughout his tenure at the Bank and beyond.²⁰ He would make repeated efforts to have the Bank sponsor population control policies in developing countries. Outside of his annual addresses to the Bank’s Board of Governors, McNamara gave less than a dozen public speeches in his fourteen years as President; the two most widely cited, at the University of Notre Dame in 1969 and MIT in 1977,

¹⁸ Hartmann, “Population Control I Birth of an Ideology,” 527

¹⁹ Paul Ehrlich, *The Population Bomb* (Sierra Club Books and Ballantine Books, 1968)

²⁰ He continued to write about the topic after leaving the World Bank. See Robert S. McNamara, “Time Bomb or Myth: The Population Problem,” *Foreign Affairs*, Summer 1984

both focused on fertility control.²¹ As he would describe upon receiving an award at the University of Chicago in 1979, his focus on this grave concern reflected a continuity in thinking between his time at the Pentagon and that at the Bank; from his perspective, the “concept of security has become dangerously oversimplified . . . as being exclusively a military problem,” which, in turn, was often simplified further to “a weapons-system or hardware problem.”²² McNamara explained that lending for population control and socioeconomic development could be equally viable ways to assuage unrest and placate angry masses. Irving Friedman, senior economist at the Bank when McNamara arrived, echoed these concerns. He argued that underdevelopment “constitutes a threat to international peace and security and should be tackled at the grass roots – better to eliminate social discontent and economic backwardness by helping to create conditions where people can have jobs, food, shelter, and hope than to embroil the world in recurring military and other crises because there are hunger and desperation and hopelessness.”²³

Alongside Cold War security concerns, McNamara argued that an exponential increase in population thwarted the Bank’s efforts to spur economic growth in the developing world. He echoed the 1969 Pearson Commission on International

²¹ Robert S. McNamara, “To the University of Notre Dame, Notre Dame, Indiana, May 1, 1969,” and “To the Massachusetts Institute of Technology, An Address on the Population Problem (one of a series of lectures at MIT on “World Change and World Security,” Cambridge, Massachusetts, April 28, 1977,” *The McNamara Years at the World Bank: Major Policy Addresses of Robert S. McNamara 1968-1981* (Baltimore: the Johns Hopkins University Press, 1981), William Clark, “Reconsiderations: Robert McNamara at the World Bank,” *Foreign Affairs*, Fall 1981

²² McNamara and World Bank, “At the University of Chicago on Development and the Arms Race, upon receiving the Albert Pick, Jr., Award, Chicago, Illinois, May 22, 1979,” *The McNamara Years at the World Bank*, 553

²³ Irving Friedman, “The Need of Developing Countries for a New Development Philosophy,” *The Colorado Quarterly* 17, no. 4 (Spring 1969) 329

Development with the argument that continual increases in fertility rates strained all aid budgets and damped the impact of investments.²⁴ This concern was evident in discussion of the use of a common metric employed by Bank economists. Despite methodological limitations, one of the most widely used measures to track economic change was growth per capita income (i.e., the change in national income, adjusted for change in population). A 1972 Bank policy paper noted that this “relationship between the growth of a nation's income and that of its population is fundamental to the improvement of human welfare. While neither the causes nor the effects in this relationship are fully understood, one central fact is clear: the higher the rate of population growth, the more difficult it is to raise per capita income.”²⁵ It was the use of metrics like this that gave fertility control greater allure. Although the costs of contraceptives and education were comparatively small in comparison to factories, they appeared to have a substantial impact on living standards and economic growth when potential changes in population size were considered.²⁶

Planners in the West believed that the payoff predicted by such calculations was self-evident; however, it was difficult to convince leaders of developing countries to allow fertility control programs. First of all, population change was slow, and most policy planning was confined to very short time horizons; by comparison, concerns like “food deficits, slow economic growth rates, poverty, [and] unemployment” seemed more pressing than long-term demographic change, even if the more immediate

²⁴ James P. Grant, “ODC Introductory Packet” (Overseas Development Council, June 28, 1971), UNARMS, CF/RA/BX/ED/DR/1984/T017, CF/RAF/ZW/Z1032-1984-000073726

²⁵ World Bank, *Population Planning Sector Working Paper* (Washington, D.C. World Bank, March 1972), 3.

²⁶ Hartmann, “Population Control I: Birth of an Ideology,” 530.

concerns were accentuated by past population growth.²⁷ Leaders of developing countries shied away from population control because, “as an objective, [it] tend[ed] to be perceived as incompatible with the socialist and nationalist ideologies.”²⁸ Many newly independent nations saw their own demographic growth as a sign of strength, and outside interference a neo-colonialist intrusion. Thus, to sell family planning to politicians in the developing world, the Bank’s stated position was that population policies would improve living standards and “provide knowledge, the opportunity and the facilities so that individuals could make a rational and free choice on the size of their families.”²⁹ In a memo debriefing Bank staff of a May 1969 meeting for the UN Committee on Development Planning, Andrew Kamarck, the World Bank representative, stated that “this approach, as contrasted to government population ‘control,’ went over extremely well with [officials] . . . from the developing countries . . . [who] had taken a strong stand against any mention of the population problem since they said it had all the implications of rich countries trying to cut down on the numbers . . . in poor countries.”³⁰

On May 6, 1968, within six weeks of starting at the Bank, McNamara proposed to the President’s Council (a group of senior directors, economists and advisors) that

²⁷ World Bank, *Population Policies and Economic Development* (Baltimore: Johns Hopkins University Press, 1974), 133

²⁸ Crane and Finkle, “Organizational Impediments to Development Assistance,” 525

²⁹ Irving Friedman to Robert McNamara, June 2, 1969, WBGA, 03-04, Office of the President, Records of President Robert S. McNamara, Series 18, Presidential Chron Files of Economic Advisor Irving S. Friedman, Box 1, Folder “Jan-Jun 1969 ”

³⁰ Andrew Kamarck, “Bangkok Meeting UN Committee on Development Planning,” May 23, 1969, pg 3, WBGA, 03-04, Office of the President, Records of President Robert S. McNamara, Series 18, Presidential Chron Files of Economic Advisor Irving S. Friedman, Box 1, Folder “Jan-Jun 1969 ”

population programming should be incorporated to the next five year plan.³¹ To gather evidence for these policies, he stated that Columbia and one African country would be designated as “laborator[ies] for population analysis.”³² John D. Rockefeller III welcomed this new agenda at the Bank, hoping that a new institutional player would help “get past the apathy of national leaders.”³³

The first Bank project for population, a loan to Jamaica in 1970, offers several insights into the policies and expectations of Bank officials in this sector. According to a survey mission, leaders of the island nation had been concerned “that rapid population growth had been impeding other aspects of social and economic development, combined with the fact that this growth is taking place in a densely populated economy with a high level of unemployment, considerable rural under-employment and limited possibilities of creating new jobs in industry or agriculture at any foreseeable time in the future.”³⁴ Mr. Chadenet, a member of the President’s Council, reported to the group in March, 1970 that the mission found “that the need for Bank technical assistance and advice in the field of population control was great, but that it would be difficult to

³¹ All of the other names who were not specifically part of PHN sat on the President’s Council. This included William Clark, senior communications director, vice presidents Warren Baum and Ernie Stern, and senior economist Hollis Chenery.

³² President’s Council Meeting minutes, May 6, 1968, and June 1, 1968, WBGA, 03-04, Office of the President, Records of President Robert S. McNamara, Series 02, President’s Council Minutes, Box 1, Folder 1.

³³ John D. Rockefeller, III to Robert S. McNamara, October 2, 1968, WBGA, 03-04, Office of the President, Records of President Robert S. McNamara, Series 08, General Correspondence, Box 1, Folder “1968 July-Dec.”

³⁴ World Bank, *Report and Recommendation of the President to the Executive Directors on a Proposed Loan to Jamaica for a Population Project* (Washington, D.C. World Bank, June 4, 1970), 5, WBGA, <http://go.worldbank.org/DI1Y2S0090>

identify a sizeable project for Bank lending . . . [T]he Bank would be justified to help finance the expansion of a Kingston hospital where 20% of all Jamaican children were born. The Bank contribution to this project, however, would not exceed \$500,000.”

When Chadenet suggested to the Council that the loan could also fund preventative medicine, McNamara said that he was “reluctant to consider financing of health care unless it was very strictly related to population control, because usually health facilities contributed to the decline of the death rate, and thereby to the population explosion.”³⁵

The loan project that was approved consisted of the construction of a new 150-bed wing (“including a delivery suite with [thirty-three] labor and delivery units”), construction of ten rural maternity centers, and appointment of consultant to monitor implementation.³⁶

The Bank’s first foray into population lending closely resembled earlier “productive” projects. Rather than change social norms through education, this was a “hardware” project focused on building institutions. Bank staffers regularly faced conflicting imperatives when designing social sector and poverty oriented projects during the McNamara years. On the one hand, the President followed the recommendations of the Pearson Report, and wanted to increase all lending from the Bank to make a more significant impact in the developing world. However, population control programming did not cost as much as the construction of a power plant or a dam. This meant that either more loans needed to be disbursed, or each loan had to contain large, costly items.³⁷ A 1973 report on the population work of the Bank noted that in all

³⁵ President’s Council Meeting minutes, March 3, 1970, WBGA, 03-04, Office of the President, Records of President Robert S. McNamara, Series 02, President’s Council Minutes, Box 1, Folder 5.

³⁶ World Bank, *Report on a Proposed Loan to Jamaica for a Population Project*, 3.

³⁷ Ayres, *Banking on the Poor*, 10.

of “the population projects to date, the financing of . . . infrastructure has been the largest component in the project ‘package.’” This infrastructure included buildings like “clinics, maternity hospitals . . . , training facilities for medical and paramedical personnel,” hospital equipment, staff training, fellowships for overseas study, and “other large . . . recurrent costs.”³⁸

The population loan to Jamaica highlights that the policy division between health and population programming split on curative and preventative lines, or was not always clear. The Bank gladly funded a multipurpose hospital, but McNamara balked at preventative care. This was the first example in a trend of selectively interpreting the division between health, fertility control and nutritional projects. A 1972 population loan to India followed this perspective. Lending for this project included “health infrastructure, training facilities and [the] linking . . . of family planning service to a supplementary nutrition program concentrating on recently-delivered mothers.”³⁹

From 1972 to 1976, the Bank disbursed over \$65 million for population project loans to seven countries.⁴⁰ However, for McNamara, this was not enough, and he

³⁸ George B Baldwin, George C Zaidan, and Peter C Muncie, “The Population Work of the World Bank,” *Studies in Family Planning* 4, no 11 (November 1, 1973) 295

³⁹ World Bank, *Appraisal Report of a Population Project India* (Washington, D C World Bank, May 15, 1972), 12-3, WBGA, [http //go worldbank org/R6G5D20240](http://go.worldbank.org/R6G5D20240)

⁴⁰ Baldwin, Zaidan, and Muncie, “The Population Work of the World Bank,” 293 On December 13, 1971 WHO Director General M Candau sent a letter complaining about the weakness of Bank/WHO cooperation See President’s Council Meeting minutes, December 3, 1971, WBGA, 03-04, Office of the President, Records of President Robert S McNamara, Series 02, President’s Council Minutes, Box 1, Folder 8 Crane and Finkle in “Organizational Impediments to Development Assistance” state that “of all the U N agencies, WHO was the one that felt most threatened by the Bank’s entry into the population field Its officials feared that the Bank’s involvement would undermine the central role in family planning that WHO had claimed for itself and its clients, the health ministries in developing countries In 1973 WHO and the Bank settled on a ‘memorandum of understanding’ in which the Bank undertook to consult WHO in preparing population projects and to ‘respect WHO’s judgment on health structures and needs ’” Crane and Finkle, “Organizational Impediments to Development Assistance,” 543-4

continually expressed frustration with the “slow progress the Bank was making in its population program.”⁴¹ Despite the interest of the President, the Population Projects Department under Kandiah Kanagaratnam faced several significant institutional challenges. After a McKinsey-designed major reorganization of the Bank in 1972, the department and several other small project departments were placed under a Central Projects Staff that separated them from the regional offices.⁴² This meant there was little opportunity for interaction with country program offices, a powerful constituency within the Bank that helped assemble multi-sector development projects that could promote population programming. Thus, it became difficult for the Population Projects Department to gain attention, support, and consensus for new programming.⁴³

These institutional challenges for promoting population programming were overshadowed in 1974 when the tacit global political acceptance of postwar fertility control programming evaporated at the 1974 World Population Conference at Bucharest. Though Western aid agencies believed their policies were supported with international consensus, developing countries and Catholic constituencies rallied together to publicly critique fertility control, advocate for broader socioeconomic development, and eliminate key family planning language from the conference resolution. Additionally, John D. Rockefeller III reversed his previous position, and argued that development focused on basic human needs would be more effective than stand alone fertility

⁴¹ Ibid., 517.

⁴² John L. Maddux, *The Development Philosophy of Robert S. McNamara*, 14-5, WBGA, 54, Joint Bank/Fund Library Collection on Presidents of the World Bank, McNamara 1979-11 – 1983-12, Box 7; Crane and Finkle, “Organizational Impediments to Development Assistance,” 527.

⁴³ Ibid., 543-4.

control.⁴⁴ William Clark, the Bank's representative at the conference, told McNamara that "he had been appalled by the bad organization of family planning institutions and by the patronizing attitude of the mostly white anglosaxon representatives of those institutions."⁴⁵ Karan Singh, the Indian delegate, uttered the phrase that became the slogan for the conference and subsequently the unofficial policy for the field: "development is the best contraceptive." Many left the conference focused on "integrated development" that combined policies for poverty eradication, family planning, health care, the environment, and education. Others realized that gender equality and the voice of women could not be subordinated further and began organizing what would become the 1975 UN Conference on Women.⁴⁶

Overall, the postwar global population control movement was a mix of Cold War political anxieties, technocratic agendas about economic growth, longstanding interest in population quotas, and medically inspired notions about fertility. The World Bank's entrance into this field was shaped by the ambitions of its President and its institutional frameworks for lending. All of these issues shaped the prerogatives and ideals how the Bank would begin to consider and implement informally lending for health.

Section II: "Considering Options in Health"

⁴⁴ Matthew Connelly, *Fatal Misconception: the Struggle to Control World Population* (Cambridge: Belknap Press of Harvard University Press, 2008), 315-6.

⁴⁵ President's Council Meeting minutes, September 16, 1974, WBGA, 03-04, Office of the President, Records of President Robert S. McNamara, Series 02, President's Council Minutes, Box 1, Folder 12.

⁴⁶ Connelly, *Fatal Misconception*, 316.

The Bank Group's position, that it does not generally finance health activities, has, de facto, been substantially modified.

-1974 World Bank Health Policy Paper⁴⁷

Unlike McNamara's clear and unequivocal push to fund population control, Bank officials' deliberation over health in the early 1970s was haphazard, decentralized, and somewhat controversial. The slow inclusion of health programming was defined by a lack of rigid institutional structure and a broad range of ideas, norms, and policy options often crafted by professional economists and policy specialists not versed in curative or preventative medicine. In 1970, the biochemist James A. Lee began to include health as part of the final evaluation mechanism that the Office of the Environmental Advisor performed for country projects; this consideration of health was similar to the way that George Woods introduced population control policies for Bank project evaluations. In this instance, evaluation of individual and population health in the appraisal process was framed as a means of mitigating environmental and occupational hazards that arose from industrialization. The division was charged with examining "projects under preparation for Bank Group financing with a view to detecting and identifying their impact on the human environment, and on the health and well-being of peoples affected by their presence or operation."⁴⁸ When necessary, this office would recommend relevant health or environmental interventions to remedy the social effects of planned industrialization.

⁴⁷ World Bank, *Health Policy Paper* (Washington, D.C. World Bank, October 29, 1974), 22.

⁴⁸ Robert S. McNamara, Letter to D.A. Davies, September 14, 1971, pg. 2, WBGA, 03-04, Office of the President, Records of President Robert S. McNamara, Series 08, General Correspondence, Box 1, Folder "1968 July-Dec."

Another way the Bank began to address health was through the introduction of lending focused on nutrition. McNamara was intrigued by the International Conference on Nutrition, National Development, and Planning at MIT.⁴⁹ Later that year, he asserted in his address at the Bank's annual meeting that "malnutrition is widespread . . . , it limits the physical, and often the mental growth of hundreds of millions . . . [and] it is a major barrier to human development."⁵⁰ In light of the Bank's interest in spurring employment and productivity, this was a serious concern. Officials praised nutrition projects as a key component for the new poverty eradication lending and as "one of the main ways to improve income distribution since the poorest cannot be helped by merely increasing income."⁵¹ These activities spurred the creation of a nutrition unit in the Agriculture and Rural Development Department in 1972.⁵²

Later that same year, health and nutrition components began to be included as secondary elements in agriculture, population, and education projects. This type of lending was "secondary" or "indirect" because it was not the main focus of a project, but an additional element to strengthen primary objectives. In this schema, a program to modernize farming, for example, would include new agricultural equipment,

⁴⁹ Ruger, "The Changing Role of the World Bank in Global Health," 64.

⁵⁰ McNamara, World Bank, "To the Board of Governors, Washington, D.C., September 27, 1971," *The McNamara Years at the World Bank*, 143. Internal reports and senior level discussion fostered a conceptual framework that described malnutrition as a contributing factor to rather than a consequence of poverty; it was also deemed a quantifiable problem of individual caloric intake separate from aggregate food distribution. See especially Alan Berg, *Nutrition Factor Its Role in National Development* (Brookings Institution Press, 1973).

⁵¹ Memorandum for the Record, November 17, 1973, WBGA, 03-04, Office of the President, Records of President Robert S. McNamara, Series 07, Memoranda for the Record, 1968-75, Box 1, Folder "Memo for the Record 1973."

⁵² President's Council Meeting minutes, March 12, 1971, WBGA, 03-04, Office of the President, Records of President Robert S. McNamara, Series 02, President's Council Minutes, Box 1, Folder 7.

consultations on crop management, training for farmers, nutrition education, and rural health clinics.⁵³ This was significant in the way the Bank recognized well-being as an element of socioeconomic development; social sector lending for Basic Human Needs developed in this framework. However, health in these projects was often defined entirely in terms of increasing economic productivity.⁵⁴ Nonetheless, by late 1973, twenty projects contained some type of auxiliary health element.⁵⁵

The Bank's largest early undertaking in health, onchocerciasis control in the Upper Volta Valley, happened unexpectedly and by accident. As Jesse Bump has described, officials from USAID and WHO convinced the Bank staff to invest in onchocerciasis, or river blindness, control in West Africa. McNamara and other Bank staff were interested in part because intensive transmission and high disease burdens seemed to have led to depopulation in many fertile river valleys. If the potentially productive land were freed of this infective vector, it could be used for local settlement and economic development. McNamara and his senior directors viewed the disease intervention as such an attractive venture that they allocated funds without formally evaluating the economic value of eradication through their standardized cost-benefit analysis procedures, largely because of the difficulty of quantifying human benefits.⁵⁶ The Bank's willingness to serve as the fiscal agent in the venture was leveraged with the technical expertise lent by other sponsoring agencies; these included WHO, which

⁵³ Kapur, Lewis, and Webb, *The World Bank: Its First Half Century*, 394-400.

⁵⁴ Stein, *Beyond the World Bank Agenda*, 209.

⁵⁵ World Bank, *Health Policy Paper* (1974), 16.

⁵⁶ Bump, "The Lion's Gaze," 371; President's Council Meeting minutes, March 14, 1972, WBGA, 03-04, Office of the President, Records of President Robert S. McNamara, Series 02, President's Council Minutes, Box 1, Folder 9.

was charged with eliminating the disease; and UNDP and FAO, which were told to take the lead on development and agriculture projects. McNamara and his Directors celebrated this vertically designed program as a productive, but indirect, means of promoting economic growth. As Bump has noted, this experience opened the possibility that the Bank could collaborate with other agencies on health programs.⁵⁷

By 1974, letters from McNamara to UN Secretary Kurt Waldheim reveal that the Bank President thought health and nutrition were no longer simply subjects for ancillary or unstructured programs, but matters that required thoughtful analysis and possibly even systematized, institutional funding by the Bank. On December 20, 1974, he told the Austrian-born official that “the economic costs of ill health and inadequate nutrition are only just beginning to be realized. Malnourished babies have smaller brains, which may impair their learning ability. Morbidity and mortality reduce the labor force, and weakness impairs labor productivity. Disease also causes wastage of natural resources through under-exploitation of their potential, as in areas infested by the tsetse fly [the vector for sleeping sickness].”⁵⁸ From McNamara’s perspective, various health and nutrition measures could both reflect and shape the productive capacity of a country. Given these interventions, health and development might be more positively related than previously articulated in policy. And contrary to postwar opinion in development circles, health might actually decrease rather than increase population levels.

⁵⁷ Bump, "The Lion's Gaze," 370-2

⁵⁸ Robert S. McNamara to Kurt Waldheim, December 20, 1974, pg 4, WBGA, 03-04, Office of the President, Records of President Robert S. McNamara, Series 09 Chronological Files (outgoing) 1972-07 – 1974-12, Box 3, 1974 (Nov – Dec) Vol 45

The larger challenge, as McNamara explained to Waldheim, was to reorient this programming to target the poor. “Despite low costs and high benefits, nutrition projects are not directed to the most vulnerable groups, and insufficient use has been made of mass techniques. Health services likewise require redesign. They benefit relatively small segments of the urban population, and need to be reoriented from their emphasis on curative to an emphasis on preventative (and environmental) measures, available at low cost to the mass of the population. Community-based programs and greater use of auxiliary personnel are among the reforms needed.”⁵⁹ In these discussions, health and nutrition interventions could address the underlying social determinants that shaped underdevelopment. This perspective was also advanced through the Basic Human Needs Approach discussed in Chapter One. Though McNamara continued to prioritize fertility control measures as an important intervention for development, he also began to consider the way population changes might interact with health and nutrition. But if the Bank might play a role in interrelated funding projects for these three, further study was required. McNamara requested a formal Bank analysis of the health sector.

Two papers were produced: a 1974 “Background Paper on Health,” and a 1974 “Health Sector Policy Study,” expanded and republished in 1975.⁶⁰ The former paper framed health as an important and overlooked factor that could strengthen Bank policies of facilitating a more “balanced” process of socio-economic development. It drew heavily on WHO research and was concerned with explaining the social factors responsible for health outcomes. The opening flourish of the report stressed the

⁵⁹ Ibid.

⁶⁰ World Bank, *Background Paper on Health* (Washington, D.C. World Bank, October 17, 1974); World Bank, *Health Policy Paper*.

significance of health outside of concerns for productivity: “Better health is a legitimate goal in its own right and one which requires no further justification; it can be viewed as ‘consumption’ which is the final aim of economic growth and development . . . Whether or not illness can be cured or even mitigated, health care satisfied a felt human need, one to which people have been prepared to devote substantial manpower and financial resources in nearly all societies at all times.”⁶¹

To satisfy this need, the background paper also explored opportunities for identifying and introducing cost savings. The recommended method of health care delivery, both in terms of costs and applicability to the disease burden was the primary health care framework WHO was developing. Though Bank norms encouraged projects that funded costly institutions, that approach was ill-suited to delivering equitable and cost-effective care in rural settings. “Substantial savings can be secured by curtailing hospital building, regionalizing hospital services, overhauling policies regarding the pricing of health services and reformulating the basic design of health systems appropriate for village communities and the urban poor.”⁶² As was characteristic of McNamara’s approach to development, the report stressed that the rationalization of healthcare delivery through cost-saving measures and policies for efficiency was best handled by the government and not the unconstrained operation of the market. “In the case of projects to control specific diseases on a nationwide basis, the indivisibilities and external economies are such that the market mechanism is most unlikely to function. The application of cost benefit analysis may, however, help to identify a sizeable

⁶¹ World Bank, *Background Paper on Health*, 27.

⁶² *Ibid.*, 43.

volume of government expenditure on health which can be justified as ‘investment.’ Alternatively, cost-effectiveness analysis may provide suggestive evidence. However, even at this level, the possible importance of demographic effects may make a standard economic approach to project analysis hazardous.”⁶³

The latter paper, the “Health Sector Policy Study,” asserted that Bank intervention in health was justifiable for two reasons: the uneven and inequitable distribution of services, and the “prevalence of market failures in the provision and financing of health care.”⁶⁴ Across the myriad socio-economic circumstances of the developing world, the core health conditions of the poor were seen as “basically similar.”⁶⁵ But in spite of this universalism, the major disease burdens of fecal and air-borne infections remained prevalent because curative, preventative, and population-based services were organizationally isolated from each other and only provided in urban environments. The solution employed new research on the relationship of health, nutrition, and population, as well as emerging ideas of epidemiological transitions.⁶⁶ One needed to combine the three so as to mitigate the negative effects of each on the others: “Pushed in isolation, a program to improve health can accelerate population growth and thereby offset any positive gains for development. However, as part of an integrated effort aimed at bringing about the transition from a regime of high mortality-cum-fertility to the more attractive situation in which low mortality is balanced by low

⁶³ Ibid., 44.

⁶⁴ World Bank, *Health Policy Paper*, 31.

⁶⁵ Ibid., 2.

⁶⁶ See Abdel Omran, “The Epidemiologic Transition: A Theory of the Epidemiology of Population Change,” *The Milbank Memorial Fund Quarterly* 49, no. 4 (1971): 509–538.

fertility, health programs can be a vital part of modernization and socio-economic advance ”⁶⁷

The second report asserted that the Bank had two options for designing health policy. On the one hand, it could continue its established programming where health outcomes were secondary objectives of larger projects. “Under this option, health benefits from Bank projects would continue to increase, but patterns of lending would remain basically unchanged. These health benefits would be seen as important supplementary benefits of projects or as a means for achieving the principal purpose of a project or sector program rather than as themselves constituting the main objective of lending.”⁶⁸ On the other hand, the Bank could start lending directly for health, “though what projects were undertaken in a particular country, would, of course, depend on the situation in that country ”

Of the two options, the second fit in McNamara’s larger agenda for poverty reduction; this choice “may well seem to be the logical conclusion of the Bank’s concern with all major aspects of socio-economic development.”⁶⁹ Additionally, if projects focused on the development of health institutions, new health lending could also “generate benefits of obvious ‘human value’ and . . . economic returns similar to

⁶⁷ World Bank, *Health Policy Paper*, 7 The 1975 expanded version of the report explicitly noted four major points regarding the understanding of health care “First consumers of health care will not have sufficient understanding to always make sensible choices Second, there are too many externalities associated with disease for the responsibility for rational decision making to be given to the individual alone Third, there is likely to be little competition in the health sector because hospitals require very large investment to provide any service and are therefore more likely to limit the ability of the poor to gain access to health care through the market ” See World Bank, *Health Sector Policy Paper* (Washington, D C World Bank, March 1975), 29-30

⁶⁸ *Ibid* , 22

⁶⁹ *Ibid*

those from infrastructure investment.”⁷⁰ Nutrition projects were no different, the paper argued, because they had “a redistributive impact through being directed towards the poor, but also an investment orientation, and whose economic returns, though difficult to measure, may well make projects apparently attractive on those grounds alone.”⁷¹ Nonetheless, the report concluded with the recommendation that the Bank keep with the first option, and continue with the already established lending patterns. Bank planners did not yet have enough experience to lend directly in health and nutrition, and further experimentation with projects within the established framework might provide more evidence if and when the option would be reevaluated.⁷²

The usual President’s Council as well a few staff members from the Population Projects Division reviewed the reports on November 25, 1975. Hollis Chenery, the Senior Economist at the Bank, supported the recommendations of the report, pointing out that despite new research, “little is known about the relationship between health and productivity and population growth.”⁷³ Bernard Bell and Daniel Adler, on the other hand, thought the suggestions were too cautious and that the Bank should try new public health ventures. After hearing all arguments, McNamara decided that the Bank would continue with the first option, which “in and of itself is very difficult.”⁷⁴ As he explained in a letter to WHO Director-General Halfdan Mahler, the Bank’s limited

⁷⁰ Ibid., 28.

⁷¹ Ibid.

⁷² Ibid., 30.

⁷³ Memorandum for the Record, November 25, 1975, WBGA, 03-04, Office of the President, Records of President Robert S. McNamara, Series 07, Memoranda for the Record, 1968-75, Box 1, Folder “Memo for the Record 1975 (Jul-Dec).”

⁷⁴ Ibid.

programming would focus on three areas: minimizing the adverse side effects on health resulting from other lending operations; funding water supply, sewerage, nutrition, housing, and basic health education for low-income groups; and experimenting with different arrangements for rural clinics alongside agriculture projects.⁷⁵ In spite of this report, a history of indirect lending, and several letters suggest a slow but recognizable significance of health in development, the Bank President's first priority was still population control. When discussing the health sector reports, he saw this health programming primarily as a way to further the aims of fertility projects: "the Bank can finance family planning and health projects which are solely called health projects for political reasons, provided that the projects are sound from the family planning viewpoint and are judged on demographic criteria."⁷⁶ Tensions between prioritization of health versus population would come to define the founding of PHN at the end of the decade.

Section III: "New Ventures, Old Problems"

Mr. McNamara said that Professor [Carl] Taylor had advised the Bank in his letter to move into health sector lending. In considering the implications of such a change in policy, two issues would have to be addressed: (i) the activities and performance of WHO and how the Bank would relate to this institution; and (ii) the sectoral context of Bank lending for health; he would be reluctant to finance health projects which were not based on a preceding strong sectoral analysis. Mr. Lee pointed out that the Bank already had carried out health sector work on Korea and Tanzania. These sector studies constituted more candid assessments

⁷⁵ Robert S. McNamara to Halfdan Mahler, June 24, 1975, pg. 4, WBGA, 03-04, Office of the President, Records of President Robert S. McNamara, Series 09 Chronological Files (outgoing) 1972-07 – 1974-12, Box 3, 1974 (May – Jun) Vol 41

⁷⁶ Memorandum for the Record, November 25, 1975, WBGA, 03-04, Office of the President, Records of President Robert S. McNamara, Series 07, Memoranda for the Record, 1968-75, Box 1, Folder "Memo for the Record 1975 (Jul-Dec)"

of health sector performance and constraints (particularly as to institutional and financial issues) than WHO's country health programming exercises.

-World Bank Memorandum for the Record, Meeting between Robert S. McNamara and James A. Lee, December 12, 1977⁷⁷

A few weeks after the discussion in the President's Council on the Health Sector Policy Papers, Marshall Green, the US State Department Coordinator for Population Affairs, was invited to the Bank to have lunch with McNamara. The confidential debriefing on the meeting for the State Department revealed a Bank president still focused on population control. As Green recounted, "when the conversation got around to population issues, Mr. McNamara was clear, strong, and unequivocal re the crucial need for greater progress in this field, but he confessed bafflement as to how things could be moved forward. In fact, he felt that the 1970 prospects for advance were brighter than today. Aspirations of that period are not now being fulfilled."⁷⁸ The Bank's official Memoranda for the Record from this time confirm this posture of McNamara; he was frustrated by the entire enterprise of population control. Developing country leaders were hesitant about instituting incentives for sterilization. Government bureaucracies that managed fertility control were corrupt and inefficient. Bank planners were unenthusiastic about population projects, and did not actively incorporate these policies into new country projects.⁷⁹ Green also reported that McNamara "had some

⁷⁷ Memorandum for the Record, December 12, 1977, WBGA, 03-04, Office of the President, Records of President Robert S. McNamara, Series 07, Memoranda for the Record, 1976-81, Box 2, Folder "Memo for the Record 1977 (Jul-Dec)"

⁷⁸ Marshall Green, "Memorandum for the Record Meeting with Robert McNamara, President, World Bank, December 16, 1975," December 16, 1975, pg 1, WBGA, 03-04, Office of the President, Records of President Robert S. McNamara, Series 08, General Correspondence, 1972-77, Box 2, Folder "1975."

⁷⁹ Memorandum for the Record, July 18, 1975, WBGA, 03-04, Office of the President, Records of President Robert S. McNamara, Series 07, Memoranda for the Record, 1968-75, Box 1, Folder "Memo for the Record 1975 (Jul-Dec)."

doubts about integrated health-nutrition-family planning projects, especially where family planning might be of secondary interest or might lose through integration with health services. He did not seem interested in discussing how family planning might ride ‘piggyback’ on IBRD [International Bank for Reconstruction and Development, a division of the World Bank]-supported construction and other projects. He felt that FP [family planning] activities actually involved small sums of money and that we shouldn’t be stymied by cost factors. The real problem was to get governments to put their backs into the job.”⁸⁰ Bank planners also highlighted that the President’s frustration was compounded by the belief that the relationships between health, nutrition, population, and development were more complicated than described in the literature. McNamara would pull out charts and reams of data asking highly detailed questions and micromanaging the projections for demographic trends; at one meeting he cornered external advisors, befuddled as to why “there are several complexities and paradoxes in the fertility/development equation. For example, why is fertility in Mexico higher than in India, despite the higher GNP in Mexico? The role of the status of women, male and/or female education, of female employment, etc in reducing fertility is not fully understood.”⁸¹

McNamara’s uncertainties inspired more studies. In late December 1975, the Board of Directors of the Bank announced the appointment of a 5-member External Advisory Panel on Population, to be chaired by Bernard Berelson, the former head of

⁸⁰ Marshall Green, “Meeting with Robert McNamara” 3.

⁸¹ Kandiah Kanagaratnam, “Meeting of External Advisory Panel on Population with Mr. McNamara, December 17, 1975,” January 14, 1976, pg. 1, WBG, 03-04, Office of the President, Records of President Robert S. McNamara, Series 08, General Correspondence, 1972-77, Box 2, Folder “1976.”

the Population Council. Bank staffers described that “the objective of this panel was to examine Bank policies, strategies, and problems experienced in addressing the population sector and to advise the Bank on how it could best assist member countries in analyzing and dealing with their population problems.”⁸² The August 1976 report from the advisory panel “recommended that the Bank continue direct lending to population because even though early demographic impact of lending was likely to be limited, the Bank’s participation is important in legitimating work in this field at the highest political levels and in locating it squarely within a developmental context.”⁸³ Berelson’s twelve recommendations included support of village-level projects, the financing of population-related health activities, and more coordination between multilateral donors. While McNamara supported these suggestions, Bank staff lost morale with the call to spend more money and speed up the project “pipeline.”⁸⁴ The technical process for project design was slow, and many staff members found the concerns and procedures of population planning more difficult than the traditional, “productive” infrastructure projects that built roads and factories.⁸⁵

The credibility of these efforts by the Bank was seriously called in doubt in April, 1976. Early that month, Sanjay Gandhi, the son of the Indian Prime Minister Indira Gandhi, tried to enforce “emergency” government policies for population control

⁸² Quoted in George B. Simmons and Rushikesh Maru, *Population Sector Review* (Washington, D.C. World Bank, April 9, 1987), 2, WBGA, R1992-054, Other #5, 20154B, “Population Lending Review” folder.

⁸³ Ibid.

⁸⁴ Crane and Finkle, “Organizational Impediments to Development Assistance,” 545-7.

⁸⁵ Memorandum to the Record, November 24, 1976, WBGA, 03-04, Office of the President, Records of President Robert S. McNamara, Series 07, Memoranda for the Record, 1976-81, Box 2, Folder “Memo for the Record 1976 (Jul-Dec).”

by physically forcing Delhi slum dwellers into vans to be forcibly sterilized. Though he denounced these specific coercive tactics, McNamara visited India in November, 1976 to express his support for the overall push by Indian Government: “at long last . . . India is moving to effectively address its population problem.”⁸⁶ The Bank President remained resolute in his focus on population control. Even when new evidence emerged in 1977 that world population rates might be falling, or at least slowing down, he noted that projects couldn’t be stopped overnight, and that the news was a sign that interventions worked and should be continued.⁸⁷

While McNamara continued to push for more population programming, opinions on health began to change in 1977. New research suggested that health projects focused on wellbeing during early childhood might change incentives for large families once parents knew their children would survive.⁸⁸ A 1977 Bank press release on population projects argued that “the world population problem cannot be solved by family planning measures alone but requires social and economic changes. In detail, the World Bank President demanded an effective health-care system in Third World states, improved school education and an increase in the incomes of farmers which would stimulate the wish for higher living standards and smaller families.”⁸⁹ In light of the

⁸⁶ Quoted in Connelly, *Fatal Misconception*, 323.

⁸⁷ See World Bank *Annual Report 1977* (Washington, D.C., World Bank, 1977).

⁸⁸ See especially Carl E. Taylor, Jeanne S. Newman, and Narindar U. Kelly, “Interactions between Health and Population,” *Studies in Family Planning* 7, 4 (April 1, 1976): 94-100; Carl E. Taylor, Jeanne S. Newman, and Narindar U. Kelly, “The Child Survival Hypothesis,” *Population Studies* 30, no. 2 (July 1, 1976): 263-278.

⁸⁹ World Bank, “Press Report, Friday, April 29, 1977,” April 29, 1977, pg. 5, WBGA, 54, Joint Bank/Fund Library collection on Presidents of the World Bank, McNamara 1977-10 – 1979-06, Box 6, Folder “RMcN at Massachusetts Institute of Technology, April 28, 1977.”

work of other institutions in international health, Bank staffers began to believe they could offer unique expertise in addressing these problems.

At the time the Bank was considering more formal lending in health, international health organizations were considering issues of possible interest to the financial organization. In the lead-up to Alma Ata in 1978, the most prescient concerns were the country-wide management of health systems and integrated, cost-effective care attentive to social determinants. Both of these topics aligned with Bank interests for multi-sector country-wide programs. By comparison, WHO had little experience with this type of complex management. In writing about primary health care, Bank economist Fred Golladay argued that the evidence WHO marshaled for its viability lay in unique pilot studies like Carl Taylor's Narangwal, India project or some of the cases in Ken Newell's *Health by the People*.⁹⁰ These efforts were experiments in cost effective community medicine that tried to systematically assess the significance of various curative and preventative interventions for health. While these were successful in self-contained, localized contexts, the issue of scalability, a strength of Bank projects, had never been adequately addressed by international health practitioners.⁹¹ These issues, as well as increasing concerns for cost-benefit analyses in health, were topics where the Bank could leverage its expertise.

⁹⁰ William Reinke, Carl E. Taylor, and Robert Parker, "Functional Analysis of Health Needs and Services," in A Michael Davies, ed., *Uses of Epidemiology in Planning Health Services, Proceedings of the Sixth International Scientific Meeting, August 29-September 3, 1971, Primosten, Yugoslavia* (Belgrade Savremena Administracija, 1973), 69

⁹¹ Frederick L. Golladay and Ciao K. Koch-Weser, "The New Policies for Rural Health: Institutional, Social and Financial Challenges to Large-Scale Implementation," *Proceedings of the Royal Society of London Series B, Biological Sciences* 199, no. 1134 (October 19, 1977) 170-1

In late 1978, Bernard Berelson was called back to Washington, D.C. to assess the Bank's "current activities (in population) in light of the recommendations of 1975-6." His confidential evaluation affirmed that the Bank should continue its commitment to population planning as part of broader socioeconomic development. The report stressed that the Bank's "impact on demographic trends will come from general development efforts and cannot be measured in immediate results."⁹² But this did not mean the Bank should just idly watch and assume its overall programming would somehow translate into a change in aggregate population numbers. There were structural problems it could immediately correct to influence long-term patterns. Berelson was detailed in these suggestions: "loan projects are hard to get, impacts are long-range if determinable at all, adjustment of sector funding to fertility ends is difficult at best, research is small and non-operational, multi-sectoral activities are resisted by the Bank structure, especially between weak and strong sectors."⁹³ Additionally, the report suggested an initiation of outreach and education to Bank staff on the significance of population for all other sectors. But the most far reaching change was hidden in the last paragraph of the report:

The likely development of a Health program within the Bank changes the [population] situation dramatically in almost all respects. The opportunity is clear: FP [family planning] projects could often piggy-back on health, which everyone will want. In time, that in itself could take care of the pipeline problem. But the dangers are also clear: what everyone wants will drive out what everyone needs, so to speak, and population can get submerged and lost in the larger field. Moreover, insofar as Health deals with service delivery (as against preventative measures), the two together will even more tend to define population as family planning (and family planning as health) and further widen the gap with the other developmental sectors, and perhaps even diminish the

⁹² Bernard Berelson and Ronald Freedman, *A Review of the Implementation of the Recommendations of the External Advisory Panel on Population* (Washington, D C World Bank, December 1978), pg 4, WBG, 03-04, Office of the President, Records of President Robert S McNamara, Series 08, General Correspondence, 1978-81, Box 3, Folder "1978 Jul- Dec "

⁹³ *Ibid* , 12

demographic raison d'être. These dangers need not occur, but they do need to be guarded against by management, particularly in the initial critical appointments, in order to assure that the Bank does not get out of Population when it gets into Health.⁹⁴

The report highlighted the initiation of health programming as a key task for the Bank. However, the justifications for this change were strategic: formal lending for health could make population programming more politically palatable and increase the number of projects that included measures to change fertility patterns. Concerns about the disease burden or human-centered development were secondary. McNamara, when reviewing this report in the President's Council, added another political reason that would justify a new health division: the inclusion of population measures within health programs might assuage predominantly Catholic countries in Latin America and Africa to creating fertility policies. In the past, the nations on these continents found the population issue "taboo" and resisted Bank intrusion.⁹⁵

The Berelson Report's push for a health division at the Bank came at a time that made it part of a rapid succession of recommendations over the course of nine months that culminated in the creation of the Population, Health, and Nutrition Division. In April, 1979, two months after senior Bank Directors discussed Berelson's recommendations, the Office of Environmental and Health Affairs issued an update on the 1974-5 Health Sector Policy Paper.⁹⁶ Upon reexamining the topic, the report reversed its earlier position and proposed that the Bank begin regular lending operations

⁹⁴ Ibid., 14.

⁹⁵ President's Council Meeting minutes, January 29, 1979, WBGA, 03-04, Office of the President, Records of President Robert S. McNamara, Series 02, President's Council Minutes, Box 2, Folder 18.

⁹⁶ In 1974, when the report was first written, senior Bank directors asked that the issue be revisited again a few years.

in health. In light of activities since the last report, the Bank was gaining experience and an understanding of the sector. From 1975 to August of 1978, the report identified seventy indirect health programs based in forty-four countries, health sector analyses for seven countries, and population sector analyses in four additional countries. During this time, the Bank “has financed basic health care and vector control activities costing \$440 million; family planning and nutrition activities with total project costs of \$168 million; and water supply and sanitation activities costing an additional \$3.8 billion.” The first figure, basic health care and vector control activities, when averaged over a per annum basis, was nearly half the \$306 million annual budget of WHO in 1978.⁹⁷

The report went on to highlight the ways that direct lending could improve the structure of Bank health projects and the organization of individual countries’ health sectors. First, the major problems facing new national health programs dealt with the expansion of the coverage of care; scalability and the management of country-wide development projects were specialties of the Bank. Second, a “broader policy of lending for health [was] an essential element of the Bank’s [contemporaneous] commitments to alleviating poverty.” Third, the institutionalization of direct lending for health would “rationalize the Bank’s activities in the health sector.” Fourth, a policy of lending for health in countries “which have not adopted formal family planning policies would strengthen the Bank’s opportunities for dialogue on population issues and for provision

⁹⁷ Office of Environmental and Health Affairs, Central Projects Staff, *Bank Lending for Health*, 29. The point is continued at greater length: “WHO has only modest financial resources with which to finance field programs. Its total annual budget for (FY78) was approximately \$306 million, of which about \$141 million was obtained from extrabudgetary sources. Approximately two-thirds of its combined regular and special budgets is devoted to promoting health services, family health, manpower development, control of communicable diseases and environmental health. However, 70% of these expenditures are for staff salaries, benefits and official travel; 19% of expenditures are for supplies, maintenance, rent, purchase of equipment, etc. Funds committed to fellowships, grants and financial contributions to national programs represent only about 11% of total expenditures.”

of family planning services through PHC [primary health care].”⁹⁸ Finally, roughly six to ten percent of GDP in developing countries was spent on health care; this represented about \$75 billion annually across the world that could be spent in a more rational and coordinated fashion.⁹⁹

McNamara and his senior directors agreed with the suggestions of the report, and got an informal “O.K.” from Mahler that this institutional expansion at the Bank would not interfere with the work of WHO.¹⁰⁰ On September 12, 1979, nine months after the second Berelson report, the Bank’s Executive Directors approved the proposal for direct lending for health, reversing the trend of many years of avoiding the sector. The new arrangement brought population and nutrition lending together with health to create the Population, Health, and Nutrition (PHN) Division.¹⁰¹ Dr. John R. Evans, consultant for the Rockefeller Foundation, former president of the University of Toronto, and founding dean of the McMaster School of Medicine, was appointed as the first director

Section IV: “PHN”

After two decades of neglect, health has reappeared as a significant concern among development authorities and financing institutions.

⁹⁸ *Ibid* , *viii*

⁹⁹ *Ibid* , *iv* Also on the same page “The subject matters to fund were nothing unusual in the field at the time basic health infrastructure, training community health workers, logistics/supply chains for essential drugs, nutrition, MCH & family planning, control locally endemic diseases, and management systems ”

¹⁰⁰ Robert S McNamara to Halfdan Mahler, August 6, 1979, WBGA, 03-04, Office of the President, Records of President Robert S McNamara, Series 08 General Correspondence 1978-1981, Box 3, Folder “1979 (Jan – Jun) ”

¹⁰¹ Population is listed first in the acronym to highlight its priority In the 1990s, especially after the World Development Report on health, the acronym is switched to HNP

-Summary page of *Health Problems and Policies in the Developing Countries*¹⁰²

The consensus at the Bank to establish a division covering population, health, and nutrition did not translate into a singular vision about what the new office should do, how it should operate, and what counted as appropriate and effective programming. McNamara imagined PHN would be a politically effective way of introducing policies for long-term demographic change and would also satisfy short term concerns for increasing population projects “in the pipeline.” The goals and the actual lending patterns, however, differed on two accounts. First, Evans and his staff were overwhelmed with the exceptional demand from developing countries for Bank programs focused exclusively on health; in a letter to Senior Vice-President Ernie Stern, Evans noted that “we have found both low and middle income countries very willing to discuss Bank involvement in health projects that are targeted to the most important health problems of under- or unserved rural and urban populations and that are designed with affordability and replicability in mind.”¹⁰³ Second, the number of projects pushed through was an order of magnitude higher than anything senior Bank Directors predicted or even wanted: “the original plan in 1979 called for “one project in FY81 rising gradually to four in FY84.”¹⁰⁴ By the end of the 1982 fiscal year, however, there

¹⁰² Frederick Golladay, *Health Problems and Policies in the Developing Countries*, World Bank Staff Working Paper No. 412 (Washington, D.C. World Bank, August 1980), WBGA, <http://go.worldbank.org/OAVB1CSKP0>.

¹⁰³ John R. Evans to Ernest Stern, “PHN Work Program and Sector Strategy,” January 5, 1983, pg. 2, WBGA, A1994-069, Other 6, Box 210926B, “Population Health and Nutrition – PPHN – General Documents 1981 /1983, Vol I.”

¹⁰⁴ John R. Evans, “PHN Lending Program,” January 25, 1982, WBGA, A1994-069, Other 6, Box 210926B, “Operational Policy – Population, Health and Nutrition [PPHN] – General 1981 / 1983.”

were already eleven stand-alone PHN projects; only one included fertility control measures, and the remaining ten were exclusively for healthcare and sanitation.¹⁰⁵ Additionally, in an early 1982 letter to Warren Baum, the Senior Vice-President for Central Projects, John Evans explained that the orientation of new projects “in the pipeline” differed little from this precedent. PHN was preparing thirty-seven projects for 1983 through 1987, of which only ten included measures for population, and one devoted to malnutrition.”¹⁰⁶ Though PHN was trying to meet demand, even Evans expressed surprise to Baum: “the present approved lending program [of thirty-seven projects] is fairly ambitious, given that health is a sector which Bank experience is limited.”¹⁰⁷

This tension between expectations at the Bank and demand from countries was further complicated by entrenched personnel problems. PHN staff consistently felt unable to allocate enough time to design the types of sophisticated projects expected of the Bank. In 1980, PHN had three divisions with a total thirty-nine professional staff (i.e., economists, demographers, public health practitioners); this number grew to forty-four in 1982, and fifty-six by early 1983.¹⁰⁸ Nonetheless, Evans noted that the staff still could not cover all of the projects that countries demanded. Additionally, he believed that there were no real advocates for health at the Bank. Employees who had worked on

¹⁰⁵ “HNP Stats,” *World Bank HNP Lending*, accessed 3/15/2011, <http://go.worldbank.org/851WC143G0>

¹⁰⁶ Evans, “PHN Lending Program.” Also, from FY80 to FY1983, PHN on average accounted for 1% of overall World Bank lending. In FY84, it accounted for 1.6%, and dipped to 1.3% in FY85 before rising again. Also, according to Measham, “The Bank became the largest lender for health in FY83, PHN loans or credits totaling over \$100 million have been approved in every year since then. Only Japan and the U.S. provide as much assistance for health, in both cases largely as grants.” See Anthony Measham, *Review of PHN Sector Work and Lending in Health, 1980-85* (Washington, D.C.: World Bank, March 1986), iv.

¹⁰⁷ Evans, “PHN Lending Program.”

¹⁰⁸ Simmons and Maru, *Population Sector Review*, 4.

population, health, and nutrition in the 1970s when these topics were secondary parts of larger projects did not believe that this new Division would ensure the sort of broader organizational approval and policy integration evident under the old infrastructure. These staff also did not see clear metrics for success as they did with the larger infrastructure projects that dominated Bank lending. Previously, an effort to build a clinic as part of a rural development project would have success justified by increases in productivity or crop yield. But stand alone projects for health had different metrics that were harder to translate into expectations about a country's overall economic growth. Most of the broader Bank staff did not understand why this new division mattered. McNamara might have approved, but few people ever saw him.¹⁰⁹ Evans explained to Ernie Stern that "it became clear following the Attitude Survey [an internal questionnaire for Bank staff] that we had to restate PHN goals and objectives for the guidance, first, of PHN staff and, later, of other Bank staff."¹¹⁰

Perhaps the most difficult question the Bank finally had to confront as PHN began operations was how to integrate health-focused lending into its multi-sector project design process.¹¹¹ The Bank had longstanding but evolving methods for the identification, appraisal, and supervision of the large-scale interventions it funded. The 1982 paper *Economic Appraisal in the Health Sector in LDCs* [Least Developed Countries] noted that "health resource allocation decisions are notoriously inefficient and inequitable . . . [The] sector continues to operate, to an extent that is unmatched in

¹⁰⁹ Evans, interviewed by the author, March 2011.

¹¹⁰ Evans, "PHN Work Program and Sector Strategy," 1.

¹¹¹ Evans, interviewed by the author, March 2011.

any other sector, without the guidance of systematic project appraisal criteria which could help to reconcile these health objectives with other social objectives in the face of increasingly severe resource constraints.”¹¹² The challenge the Bank faced was aligning the epistemological frame of reference for what counted in health with the Bank’s broader frame of reference of economic development such that the activities and outcomes for health interventions could be compared with the same criteria against the activities and outcomes in other sectors.¹¹³ John North, the Assistant Director of PHN, stressed this point to divisional staff in a January 1981 memo; the central issue for PHN would be “the importance of ensuring that economic and sector work, project identification and appraisal in PHN use an approach similar to that employed in other major sectors in the Bank.”¹¹⁴

For typical Bank projects – building a factory, for example – planners assessed feasibility of implementation, the return on investment, effectiveness in achieving expected goals, and the ability to promote economic growth. A key challenge in translating this process to health projects was measuring impact and selecting dissimilar interventions across sectors to achieve specific objectives. Though vaccine distribution could be measured, or morbidity and mortality tracked, health was otherwise a difficult concept to assess, especially in relation to the economy. There were few easy ways to

¹¹² Nicholas Prescott and Jeremy Warford, *Economic Appraisal in the Health Sector in LDCs*, February 10, 1982, pg. 2, WBG, A1994-069, Other 6, Box #210926B, “Population, Health, and Nutrition [PPHN], Health Documents, 1981-1983.”

¹¹³ Richard Rottenburg’s *Far-Fetched Facts* begins with a discussion of frames of reference in development. See Richard Rottenburg, *Far-Fetched Facts: A Parable of Development Aid*, 1st ed. (The MIT Press, 2009), ix.

¹¹⁴ John North, “Framework for Investment Decision Making in Health Projects,” January 19, 1981, pg. 1, WBG, A1994-069, Other 6, Box #210926B, “Operational Policy – Population, Health, and Nutrition [PPHN] – General 1981-1983.”

quantify the economic benefits of health in the way one could quantify the impact of a factory. Planners would often employ multivariable health indices or cost-benefit and cost-effectiveness analyses.¹¹⁵ A rural development program in Malaysia, for example, used multivariable regression analyses to compare the impact of health projects against those in other sectors.¹¹⁶ *Analyzing the Impact of Health Services* describes the value of cybernetic tools like linear programming analysis and computer based simulations.¹¹⁷ However, the most common ways of measuring impact was simply setting up the bureaucratic structures for information gathering for future planning as well as cost-effectiveness analysis.

One way of comparing the activities of different sectors was through relations of costs to potential impacts.¹¹⁸ But another way of comparing and integrating disparate activities involved analyses that focused on outcomes, assigned value to specific activities, and then tested, combined, and substituted different combinations of interventions to see if and why they would lead to expected outcomes. As Prescott and Warford explain, creating “the optimal mix of interventions” was a formidable problem since “most health plans formulate health objectives in terms of desired resource inputs

¹¹⁵ Prescott and Warford, *Economic Appraisal in the Health Sector in LDCs*, 21, North, “Framework for Investment Decision Making in Health Projects,” 2-4

¹¹⁶ Clive Bell, Peter Hazell, and Roger Slade, *Project Evaluation in Regional Perspective* (Baltimore Johns Hopkins University Press, 1982), 114-20

¹¹⁷ Rashid Faruqee, *Analyzing the Impact of Health Services Project Experience from India, Ghana, and Thailand*, World Bank Staff Working Paper no 546 (Washington, D C World Bank, 1982), 3, WBG, <http://go.worldbank.org/0S7BX80EW0>

¹¹⁸ Ted Porter in *Trust in Numbers*, argues that cost-benefit analysis is not a natural elite or quantitative language. However, it was useful as a decision-making mechanism between heterogeneous elements in a pluralistic society where trust was not readily evident. See Theodore M. Porter, *Trust in Numbers* (Princeton University Press, 1996), 141-90

instead of health improvement targets.”¹¹⁹ In a sense, this process was a controlled experiment to study decision making and the causal relationships between interventions and outcomes. The aim was to develop a universal template for creating multi-sector projects where one could group together diverse activities to reach desired outcomes. Underlying this objective was a sensibility that interchangeability and experimentality implied universality.

John North asserted that since “the objective of Bank health lending was to improve health status and not to provide health services per se, non-health sector interventions need to be considered if they seem likely to be competitive alternatives.” For example a mix of interventions to “maximize infant mortality reduction in very poor communities may include the provision of improved water supply and sanitation, in addition to immunization, basic MCH care and curative services and health promotion activities. Similarly, an efficient long run schistosomiasis control policy may emphasize environmental modification instead of chemotherapy, either in the form of water supply and sanitation improvements or of irrigation engineering measures to reduce snail densities.”¹²⁰

PHN staffers encountered many unresolved difficulties in trying to translate health interventions into the Bank’s style of project management. These individuals also encountered skepticism from other Bank employees about the viability of health lending. Evans recalled that the best way for PHN to establish institutional legitimacy at the

¹¹⁹ Prescott and Warford, *Economic Appraisal in the Health Sector in LDCs*, 14.

¹²⁰ North, “Framework for Investment Decision Making in Health Projects,” 2.

beginning was to simply produce more studies.¹²¹ One topic of research in particular – health care financing – would foster a reorientation of PHN that would define it through the rest of the 1980s and into the 1990s.

Section V: “Cost and Access”

“Present policies need to be substantially reoriented in many countries. The conventional and still growing faith that health care should be totally paid for and administered by government needs to be vigorously challenged.

-David de Ferranti, *Paying for Health Services in Developing Countries*¹²²

From the earliest discussions and policy papers about health at the Bank, officials considered questions of healthcare financing. The 1975 Health Sector Policy Paper, for example, stated that “The private market cannot be expected to allocate to health either the amount or the composition of resources that is best from a social perspective. The most critical failure of the market derives from the inability of consumers of health services to choose rationally. This inability is in part a consequence of the extraordinary complexity of medical problems and the consumer's lack of experience as a patient.”¹²³ In the 1980 *Health Problems and Policies in the Developing Countries*, Fred Golladay argued that income did not correspond to healthcare needs,

¹²¹ And PHN devoted many resources to various studies and reports “Three-quarters of the sector work consisted of broad initial surveys, usually of population, health and nutrition. The remainder dealt with a single topic, for example, health costs and financing, or were part of public investment reviews. Sector work confirmed the validity of the principal sector problems described in the 1980 Health Sector Policy Paper: lack of access to health services, emphasis on curative and hospital care, insufficient and inappropriate training of health personnel, lack of essential drugs and supplies, and above all, weak management.” From Measham, *Review of PHN Sector Work and Lending in Health, 1980-85*, 5

¹²² David de Ferranti, *Paying for Health Services in Developing Countries: An Overview* (Washington, D C , World Bank, February 1985), 1, WBGA, <http://go.worldbank.org/WLIY30WES0>

¹²³ World Bank, *Health Sector Policy Paper*, 29

consumers were not well qualified to select the best services, cost was not a sound basis for choice, and “the use of prices and markets to allocate healthcare is not desirable.”¹²⁴ By the mid-1980s, however, PHN and the Bank would take a very different approach to healthcare financing, and became the most forceful advocate in international health for market-based reforms in health care. Just as John Evans was stepping down as Director of PHN in 1983, a series of institutional and political changes within the Bank shifted the focus of PHN operations and research toward health care financing. This topic would come to define the division and its work for the subsequent decade of “structural adjustment.”¹²⁵

The lending for population, health, and nutrition during the 1970s and the first years of PHN was extensive in comparison to the smaller sums that WHO could allocate. However, the haphazard nature and informality of the Bank projects precluded a thoughtful and systematic examination of the overall health budgets of developing countries. But according to Evans, by the early 1980s Bank officials were beginning to realize that many governments never considered in much detail how to finance health care, or the relationship between cost and access.¹²⁶ This lack of planning, growing evidence of the rising cost of care, and interest in quantifying the impact of lending spurred a broader consideration of national healthcare financing. In a letter to Warren Baum, John Evans argued that in light of tightening budgets, it would “be increasingly

¹²⁴ Frederick Golladay, *Health Problems and Policies in the Developing Countries*, 47-9

¹²⁵ Evans noted in his interview that he had only planned on staying at PHN for one year to help it get started. However, in his perspective, the Bank moved exceptionally slowly, and he instead decided to stay a few more years to see the initial projects through. He left in frustration in 1983 independent of the shift in the Bank to neoliberal policies. Evans, interviewed by the author, March 2011

¹²⁶ *Ibid*

difficult to bring about noticeable improvements in the health status of the poorest people in developing countries, or even to maintain the fragile gains that have recently been achieved. It is therefore necessary to consider: (a) the scope for effecting improvements in the way that public funds budgeted for health purposes are actually spent, and (b) the opportunities for mobilizing additional resources from the non-government sector.”¹²⁷ For some PHN officials, financing reform was a logical next step for the field of international health to take. As Jeremy Warford of the PHN Policy Research Section explained, WHO’s push to extend primary health care beyond urban centers meant a distribution of financing. The “decentralization of decision-making aimed at achieving primary health care goals, instilling a sense of community participation, and providing an indication of the value that beneficiaries place upon health services all suggest that increasing reliance upon local financing, user charges, and private sector activity may be appropriate.”¹²⁸

Health care financing was appealing to Bank planners because they could easily recast financing practices and norms. Warford explained that “policies have yet to be evolved in the Bank regarding our approach to the establishment of financial accounting, reporting systems, the role of financial incentives, and cost recovery mechanisms in the health sector. It would however appear that the Bank has a comparative advantage in conducting the analysis necessary to determine such policies; thus far the World Health Organization has devoted little attention to this subject.” He went on to note that PHN

¹²⁷ Evans, “PHN Lending Program,” 2.

¹²⁸ Jeremy Warford, “Health Care Financing in Developing Countries: Policy Brief,” November 9, 1981, pg. 2, WBGU, A1994-069, Other 6, Box #210926B, “Population, Health, and Nutrition [PPHN] – Nutrition 1981-1983.”

could extrapolate financing policies from other sectors where the Bank had decades of experience. “The general framework for analysis of cost recovery mechanisms should be similar to that already developed for revenue-earning entities, in which efficiency, [and] fiscal and equity objectives are traded off for the various services provided.”¹²⁹

But these initial suggestions for cost recovery mechanisms went against some of the earliest assumptions expressed in the writings of Fred Golladay, the author of the 1980 *Health Policy Paper* for the Bank. Susan Foster from PHN’s Policy Research Unit stressed that such market based measures might inhibit equitable care. In a review of a draft PHN policy paper on health care financing, she argued that in developing countries, cost recovery practices might actually cost more than the amount of money recovered by the poor; additionally, the preponderance of urban based care meant that many already paid for services they didn’t receive.¹³⁰ Her concerns highlighted an increasingly central question in health care: whether the market or the state provided the best outcomes and equitable care for a population. However, PHN officials struggled to adapt economic tools to health analysis, as evident in the project design process. There were few alternatives to market based allocation.

At the time she expressed her concerns, Foster’s perspective was increasingly became the minority at the Bank. A series of personnel and political changes came to redefine both the whole Bank and PHN in particular. First, McNamara left in 1981 and was replaced by the President of the Bank of America, A.W. “Tom” Clausen. Though

¹²⁹ Ibid.

¹³⁰ Susan D. Foster, “Comments on Policy Brief for Health Sector Financing in Developing Countries,” Letter to Ms. Ishrat Husain, November 12, 1981, WBG, A1994-069, Other 6, Box #210926B, “Population, Health, and Nutrition [PPHN] – Nutrition 1981-1983.”

structural adjustment policies were first introduced by McNamara and Ernie Stern, Clausen championed these programs that decreased public sector spending and reduced country deficits. This orientation for the Bank aligned with the conservative economic policies of the Reagan Administration, which had appointed McNamara's successor at the Bank. Anne Kreuger, who replaced Hollis Chenery as the Bank's Chief Economist, saw the promotion of fiscal responsibility in developing countries as the primary challenge for the World Bank. Within PHN, the Princeton-trained economist David de Ferranti wrote persuasively on the need for market-based healthcare financing. His *Paying for Health Services in Developing Countries* was promoted both inside and outside the Bank. This systematic change in perspective was combined with the World Health Assembly freezing WHO's budget in 1982, and U.S. pharmaceutical companies persuading the U.S. government to withhold its annual contribution to WHO in 1985 in protest to its Essential Medicines policies.¹³¹ All of this meant that the World Bank assumed a far more prominent role in international health.¹³²

In terms of policy, there were many similarities and differences in PHN between Evans' tenure and the period that followed. Population control was still the elusive topic that the Bank President promoted with great fanfare, but pursued programmatically with variable success. It was the principal theme of the 1984 *World Development Report*, where Clausen promised that by 1990 lending would double to almost \$500 million for projects in fifty countries.¹³³ However, in 1989, Fred Sai, a PHN population expert

¹³¹ Theodore M. Brown, Marcos Cueto, and Elizabeth Fee, "The World Health Organization and the Transition From 'International' to 'Global' Public Health.," *American Journal of Public Health* 96, no. 1 (January 2006): 67.

¹³² Ibid.

¹³³ World Bank, *1984 World Development Report* (Washington, D.C., The World Bank, 1984)

declared that the Division had a mixed record in population control policies during the previous ten years.¹³⁴ Alongside this longstanding pursuit, PHN followed de Ferranti's lead to pursue lending for market-based healthcare financing. The Division also focused its operations and abandoned projects not directly dealing with healthcare delivery.¹³⁵

While many personnel and political changes reoriented PHN to the neoliberal structural adjustment policies of the 1980s, this change also had deeper roots in longstanding discussions about financing and concerns regarding measurable impact aligned to the Bank's worldview.

Conclusion

The tenure of Robert S. McNamara at the World Bank was defined by numerous ideological and institutional changes regarding the nature of global economic development. A host of factors – the personal proclivities of the President, new ideas from the staff, changing Cold War political demands, and new socioeconomic realities in developing countries – all reoriented institutional norms and practices. During the 1970s, the Bank was known for expanding its viewpoint on what counted as development, and how a lending institution might foster socioeconomic change. Specifically, there was new interest and engagement in lending to curb extreme poverty and develop the economies of rural communities. Underlying this approach was a

¹³⁴ Fred T. Sai, "Population in the World Bank: Personal Reflections," July 1990, pg. 23, WBG, R2002-41, Other #2, 172690B, Folder "HDNHE – Sectoral Analysis and Policy Reports – Population in the World Bank: Personal Reflections by Fred T. Sai – 1v."

¹³⁵ Measham, *Review of PHN Sector Work and Lending in Health, 1980-85*, ii.

worldview that framed social determinants of economic change in an interconnected fashion.

The inclusion of health in such a mix of social factors, however, should not be taken for granted. As this chapter has shown, it was only after changes in institutional norms, political concerns, and personal interests that health became a topic of direct lending at the Bank. The creation of PHN arose out of interests to advance older programs of population control while extending the Bank project design policies to the health sector. However, planners struggled to adapt the norms and practices of improving health to the regulations and style of the Bank's project design. The main challenge was reorienting the frame of reference of health to the multi-sector frame of reference of Bank projects. Much like the efforts that Ted Porter describes to institutionalize cost-benefit analyses, the push to adapt the norms of international health projects to the structures of Bank loans was driven by a belief that the Bank's practices and frame of reference was a natural, neutral framework that would foster universal applicability because health and non-health interventions could be interchanged as needed in pursuit of pre-defined socioeconomic outcomes.¹³⁶

The legacies of early PHN work are evident in key changes at the Bank after the end of the Cold War. Despite early frustrations, health lending became important enough that the Bank promoted it as a key institutional activity in the 1993 World Development Report (titled "Investing in Health").¹³⁷ While the report's celebration of health interventions was something new, many legacies of the challenges of

¹³⁶ Porter, *Trust in Numbers*.

¹³⁷ World Bank, *1993 World Development Report: Investing in Health* (Washington, D.C., The World Bank, 1993)

McNamara's Bank and early PHN are evident. In order to reconcile differences in expectations between the field of global health and the Bank, DALYs (disability adjusted life years) were introduced as a way of measuring and standardizing the impact of health projects. Additionally, the Bank continued to emphasize the significance of market-led health care financing for promoting cost-effective interventions. In many ways, these issues – concern with measurement, management, and the promotion of efficient systems of care – were some of the most far reaching legacies that defined the transformation of international health in the 1970s.

Epilogue

At first glance, early twenty-first century global health appears starkly different in comparison to the international health work of the late Cold War. New actors now include countless NGOs, philanthropies like the Gates Foundation, and global funds set up through public-private partnerships. Governments explicitly frame global health as a national security concern, and UN bodies and academic commentators likewise discuss health interventions in terms of “biosecurity.”¹ Funding is directed to HIV/AIDS and complex emerging infectious diseases like SARS and avian flu. Increasingly these concerns are being supplemented with new fears about the rising burden of chronic disease in the developing world, and how to allocate money and attention accordingly.

But upon closer inspection, global health actually shares a great deal with the earlier instantiations of international health. Many of the older problems and questions still linger. Infectious diseases and malnutrition have remained major burdens. The Millennium Development Goals prioritize interventions to correct the linked social determinants of poverty and disease. Planners continue to debate about how to deliver health care, whether funding for disease vectors or sanitation should receive greater priority, and what metrics show meaningful change and why. Educators repeatedly return to questions regarding the design, length, and geographic and institution location of curricula and research programs. Projects are still often expectantly based around some type of technology, be it a vaccine designed in a lab or a management practice. Much of the planning and implementation is done with little consultation of those who

¹ Andrew Lakoff and Stephen J. Collier, *Biosecurity Interventions: Global Health and Security in Question* (New York: Columbia University Press, 2008).

would be the supposed beneficiaries. And the major health programs continue to be expressions of broader geopolitical interests and desires for the creation of new markets.

To be certain, many of the norms and expectations present in early twenty-first century global health were first advanced and enshrined during the late Cold War. The contemporary concern for the measurable, evidence-based, cost-efficient planning of health systems emerged at the time. The World Bank's contemporary mission statement of "working for a world free of poverty" was a product of McNamara's tenure. WHO showcased primary health care in its 2008 World Health Report on the thirtieth anniversary of Alma Ata.² And much like in the late 1970s, the NIH frames its international research activities as important global health priorities.

But the persistence of such activities alongside longstanding problems speaks to the nature of continuity and change in global health. In one sense, this dissertation has been a history of goal setting in the policy making process. It has sought to uncover some of the expectations and logic of the design, creation, and evaluation of programming. In repeated settings, health has been an elusive and indeterminate concept; as problems are identified and solutions proposed, many of the rubrics to address health needs have only regrouped concerns, rather than solving them. The enduring challenge for global health simply lies in defining what it is as a field and what it is trying to do.

² World Health Organization, *World Health Report: Primary Health Care (Now More Than Ever)* (Geneva, World Health Organization, 2008).

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ISDA	Institute for Development Studies Archive, Institute for Development Studies, University of Sussex, Brighton, United Kingdom
JREP	John R. Evans Papers, University of Toronto Archives, University of Toronto, Toronto, Ontario, Canada
JEFP	John E. Fogarty Papers, Providence College Archives, Providence College, Providence, Rhode Island
NARA	Office of the Director, National Institutes of Health Central File, 1960-1982, Records of the National Institutes of Health, Record Group 443, National Archives and Records Administration, College Park, Maryland
NIHA	Archives of the Office of the Director, National Institutes of Health, Bethesda, Maryland
RFA	Rockefeller Foundation Archives, Rockefeller Archive Center, Sleepy Hollow, New York
UNARMS	UNICEF and United Nations Archives, United Nations Archives and Record Management Services, Long Island City, New York City, New York
WBGA	World Bank Group Archives, The World Bank Group, Washington, D.C.
WHOA	World Health Organization Archives, World Health Organization, Geneva, Switzerland

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